

2014-2015

**CLARION
UNIVERSITY**

UNDERGRADUATE CATALOG



COURAGEOUS.

confident.

CLARION.

Message from the President



Message from the President

Welcome! In choosing to study at Clarion University, you have access to a wide array of high quality academic programs, many of which have earned specialized accreditation or approval. This undergraduate catalog is a valuable tool that can unlock the wealth of learning opportunities that await you here at Clarion. It has detailed information about the university's policies and requirements, general descriptions of courses of study and individual course content, and information about our faculty, administrators, and academic support programs.

Used in conjunction with regular academic advising, this catalog will help you make informed choices about your degree and major as well as elective courses that will provide you with a well-rounded course of study. Meeting with your advisor on a regular basis is an important part of accepting

responsibility for your own education and progress. Our faculty and staff are committed to helping you develop your talents, expand your knowledge and creative abilities, and develop an enthusiasm for life-long learning. But remember—the completion of your degree must be your top priority.

May this catalog serve as a key resource as you consider and develop your educational goals. I look forward to shaking your hand when you cross the stage on your graduation day!

Karen M. Whitney
President

Clarion University of Pennsylvania
840 Wood Street, Clarion, PA 16214
814-393-2000
www.clarion.edu

Navigating the Catalog

Organization

Clarion University is comprised of three colleges (Arts, Education and Sciences, Business Administration and Information Sciences and Venango College). Each of these units consists of smaller subunits called departments or programs. The academic year is divided into two terms: (Fall, Spring), three summer sessions and one winter intersession.

Where to find it

The catalog is composed of two main sections. The first contains information about the academic calendar, admissions, registration, tuition and fees, financial aid, student services, and student activities.

The second section describes the university's academic programs. The curriculum section begins with a description of the General Education program, which every student receiving an undergraduate degree from Clarion completes. Next, each of the three colleges of Clarion University is described. Each unit's description is composed of a brief overview of the division followed by more in-depth descriptions of the departments and programs making up that division. Programs are presented in alphabetical order. Course descriptions for all academic programs are available on the web at www.clarion.edu/coursedescriptions.

Still can't find it?

In addition to the Table of Contents, an index is included at the back of the catalog. If you are having trouble finding information about an academic program, consult the Index.

Definitions

The academic terms defined below are used throughout this catalog.

Academic credit. A measure of the total time commitment an average student is expected to devote to learning per week of study. Generally, one unit of credit represents a total of three hours per week of in-class and out-of-class work (Carnegie Unit of Credit). At Clarion University, a three-credit lecture class is generally required to meet for 2,250 minutes, including the final examination period.

Course. A subject, or an instructional subdivision of a subject, offered through a single term. Each course offered by the university is assigned a course level. Courses numbered 000-099 cannot be applied toward graduation; courses numbered 100-299 are lower division, and courses numbered 300-499 are upper division.

Curriculum. An organized program of study arranged to provide integrated cultural or professional education.

Discipline. A branch of learning or field of study, e.g., mathematics, history, psychology.

Electives. Courses that students may choose to take, as contrasted with required courses.

Grade-Point Average (GPA). GPA is a grade-point average. It can range from 0.00 (all Fs) to 4.00 (all As).

Interdisciplinary or Multidisciplinary. A course of study from two or more academic disciplines.

Major. A primary undergraduate or graduate field of specialized study.

Minor. A secondary undergraduate field of specialized study.

Prerequisite. A course or other educational requirement that must be completed prior to another course or before proceeding to more advanced study.

Semester. One-half the academic year, excluding summer sessions and intersessions. At Clarion, an academic year is comprised of a Fall and Spring semester.

Seminar. A small group of students studying a subject with direction from a faculty member. Although practices vary, students may do original research and exchange results through informal lectures, reports, and discussions.

Sequence. Two or three closely related courses that typically must be taken in a specified order.

Student Responsibility for Academic Requirements

Provisions in the Clarion *Undergraduate Catalog* cannot be considered an irrevocable contract between the university and the student.

The university makes every effort to keep information in the catalog current. It must reserve the right, however, to amend any academic, administrative, or disciplinary policies or regulations and to update fees or service charges described in this catalog without prior notice to people affected. Students are held responsible for reading and understanding the academic, administrative, and disciplinary policies or regulations and for understanding general education requirements. They are held responsible for the requirements of a major in effect at the time they officially declare a major. If students change majors, they are responsible for the requirements of the major in effect when they officially change majors.

Requirements for graduation as well as those for various curricula and degree programs may change after students matriculate at Clarion. In most instances, such changes will not be retroactive, although students will have the option to elect to meet the new program requirements, if desired. Exceptions may be necessary when changes in professional certification or licensure standards mandate such changes in requirements or programs.

For the most recent catalog, please go to our website at www.clarion.edu/catalog

Clarion University of Pennsylvania is authorized under federal law to enroll non-immigrant alien students.

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Accreditations, Approvals, Certifications, Affiliations and Registrations

AACSB International—The Association to Advance Collegiate Schools of Business
College of Business Administration/Baccalaureate and Master’s degree programs

Accreditation Association for Ambulatory Health Care
Keeling Student Health Center

Accreditation Commission for Education in Nursing, Inc. (ACEN)
Associate Degree Program
Baccalaureate Degree Program
Master’s Degree Program

American Bar Association (ABA)
Paralegal Studies

American Chemical Society
B.S. Chemistry (approved)

American Library Association (ALA)
Master of Science in Library Science

Association of Small Business Development Centers (ASBDC)
Small Business Development Center

Certified Financial Planner Board of Standards, Inc.
BS Business Administration

College Reading and Learning Association (CRLA)
Writing Center Tutoring Program (certified)
Center for Student Success Tutoring Program (certified)
Venango College/Learning Support Centers (certified)

Council for Exceptional Children (CEC)
Special Education

Council for Standards in Human Service Education
Bachelor and Associate Human Services

Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA)
of the American Speech Language Hearing Association
Master’s Degree in Speech Language Pathology

Council on Academic Accreditation of the American Speech Language Hearing Association (ASHA)
Master’s Degree in Speech Language Pathology

Council on Rehabilitation Education (CORE)
B.S. Rehabilitative Science

International Association of Counseling Services Inc. (IACS)
Department of Counseling Services

International Reading Association (IRA)
Reading Specialist

Middle States Commission on Higher Education
3624 Market Street, Philadelphia, PA 19104-2680
Phone: 215-662-5606

National Association for the Education of Young Children (NAEYC)
Early Childhood Program

National Association of Schools of Art and Design (NASAD)
BA in Art; BFA in Art

National Council for Accreditation of Coaching Education (NCACE)
Department of Athletic Training, Sports, and Wellness/
Coaching Education Program

National Council for Accreditation of Teacher Education (NCATE)
School of Education

National Council for Middle Level Education (NMSA)
Middle Level Programs

National Council for the Social Studies (NCSS)
Secondary Social Studies

National Council of Teachers of English (NCTE)
Secondary English

National Council of Teachers of Mathematics (NCTM)
Secondary Mathematics

National Science Teachers Association (NSTA)
Secondary Sciences

Pennsylvania Department of Education/College of Education & Human Services/
Teacher Certification Programs (approved)

U.S. Department of Veterans Affairs (approved)

It is the policy of Clarion University of Pennsylvania that there shall be equal opportunity in all of its educational programs, services, and benefits, and there shall be no discrimination with regard to a student's or prospective student's race, color, religion, sex, national origin, disability, age, sexual orientation/affection, gender identity, veteran status, or other classifications that are protected under Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and other pertinent state and federal laws and regulations. Direct inquiries regarding equal opportunity, Title IX or services and facility accessibility to: Assistant to the President for Social Equity/Title IX and 504/ADA Coordinator, Clarion University of Pennsylvania, 207 Carrier Administration Building 16214-1232. Email jgant@clarion.edu or phone 814-393-2109. Inquiries may also be directed to the Director of the Office for Civil Rights, Department of Education, 330 Independence Avenue, SW, Washington, DC 20201.

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General Information

Mission

Clarion University of Pennsylvania provides transformative, life-long learning opportunities through innovative, nationally-recognized programs delivered in inclusive, student-centered environments.

Vision

Clarion University will be a leader in high-impact educational practices that benefit students, employers, and community partners.

Core Values

Students, faculty, staff and alumni of Clarion University value learning, accomplishment, encouragement, diversity, civility, civic engagement and public higher education.

Non-Discrimination Statement

It is the policy of Clarion University of Pennsylvania that there shall be equal opportunity in all of its educational programs, services, and benefits, and there shall be no discrimination with regard to a student's or prospective student's race, color, religion, sex, national origin, disability, age, sexual orientation/affection, gender identity, veteran status, or other classifications that are protected under Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and other pertinent state and federal

laws and regulations. Direct equal opportunity inquiries to: Assistant to the President for Social Equity, 207 Carrier Administration Building, 840 Wood Street, Clarion, PA 16214-1232, 814-393-2109; and direct inquiries regarding services or facility accessibility to the compliance specialist, 207 Carrier Administration Building, 840 Wood Street, Clarion, PA 16214-1232, 814-393-2000; (or to the Director of the Office for Civil Rights, Department of Education, 330 Independence Avenue, SW, Washington, DC 20201).

Correspondence

The address for all administrative correspondence may be sent to the following:

Clarion University of Pennsylvania
840 Wood Street
Clarion, PA 16214-1232
Telephone: 814-393-2000

Clarion Campus

Now well into its second century of service to the people of Pennsylvania, Clarion University has successively been Carrier Seminary, a state normal school, a state teachers' college, a state college, and beginning July 1, 1983, a university in the Pennsylvania State System of Higher Education. Each phase of this development has marked a stage in the continuing effort

of the institution to respond to the educational needs and aspirations of increasing numbers of students.

Today, Clarion University is a multi-purpose institution with an enrollment of more than 5,800 students offering associate's degrees in five areas; more than 110 baccalaureate programs leading to degrees in the arts, fine arts, nursing, and sciences; and 21 graduate programs leading to master's degrees in the business administration, education, library science, nursing, and sciences. Clarion University is recognized by 28 accrediting agencies.

The Clarion Campus of the university contains 128 acres and 43 buildings. Beyond the Clarion Campus, situated at the west end of the town of Clarion, is a 27-acre athletic complex with football, baseball, and practice fields and Memorial Stadium, seating 5,000 spectators. The university is within the Borough of Clarion approximately two miles north of Interstate 80 at Exits 62 and 64 and is approximately two hours' driving time from the urban centers of Pittsburgh, Erie, and Youngstown. High on the Allegheny Plateau overlooking the Clarion River, the rural setting is in the midst of one of Pennsylvania's most scenic resort areas.

Among facilities supporting programs and students at Clarion University are the Carlson and Suhr libraries, the George R. Lewis Center for Computing Services, more than two dozen computer laboratories, a planetarium, modern science laboratories having excellent instrumentation; a modern business administration building; technologically equipped classrooms; radio and television studios and experimental audio-visual facilities in the Department of Communication; a writing center, tutorial services, and a counseling center to assist students who can benefit from these services; a state-of-the-art recreation center; residence halls that are completely wired for high speed Internet access; a modern student center; and excellent food services across the campus.

Venango Campus

Venango Campus, established in 1961, was the first branch campus in the Pennsylvania State System of Higher Education. Located in Oil City, Venango Campus is scenically situated on 62 acres surrounded by heavily-wooded foothills overlooking the Allegheny River.

The campus houses Venango College and offers a personal and challenging academic experience with small

classes that maximize student-faculty interaction and student success. Programs and services are designed to meet a wide range of needs and are offered with the flexibility that is required for a diverse community of learners. Many academic programs utilize partnerships with medical, business, industrial, and educational organizations that bring real-world, technical expertise and resources into its curriculum.

Other programs offered at Venango Campus include certificates that can be completed in one year or less and a variety of continuing education courses and seminars.

Students and faculty utilize the latest in electronically enhanced learning and teaching tools and the fully wireless campus provides students the flexibility of accessing university resources anywhere on campus. A wide range of cultural events and activities, including a comprehensive intramurals and outdoor recreation program and nationally competing club sports teams, offer students and community members opportunities for engagement and personal enrichment.

Clarion University—Online Programs

Clarion University, combines its academic tradition of excellence with online educational technology to provide programs that are—accredited and accessible anywhere. Clarion has been offering classes off the Clarion Campus using a variety of technologies since 1996. There are currently several undergraduate degree and certificate programs available fully online. The courses required to support these degrees meet the same curricular and instructional standards and are taught by the same faculty as classes delivered on the Clarion Campus. As a result, the degree you earn through Clarion Online offers the same quality and accreditation as a degree you would earn through the university's traditional on-campus program.

All classes are delivered over the Internet and are designed to allow students flexibility to complete their course work at times convenient to them. Students also have access to extensive online resources including online library materials and databases.

Information on the availability of specific degrees online is indicated under each of the degree program areas. A list of current course offering and online undergraduate programs is available on the Web at www.clarion.edu/online.

Clarion University
Academic Calendar 2014-15

(Revised August 2014; Subject to change without notice)

Fall Semester 2014

Classes begin – 8 a.m.....	Monday, August 25
Labor Day Holiday	Monday, September 1
Mid-semester break begins – 10 p.m.	Thursday, September 25
Mid-semester break ends – 8 a.m.	Monday, September 29
<i>Friday classes meet in place of Tuesday classes</i>	Tuesday, November 25
Thanksgiving holiday begins – 10 p.m.	Tuesday, November 25
Thanksgiving holiday ends – 8 a.m.	Monday, December 1
Classes end – 10 p.m.....	Friday, December 5
Final examination period begins	Monday, December 8
Final examination period ends – 10 p.m.....	Friday, December 12
Semester ends – 10 p.m.	Friday, December 12
Winter Commencement	Saturday, December 13
Semester grades due from faculty – 12 p.m.....	Wednesday, December 17

Winter Intersession

Classes begin	Monday, December 15
Final Exams	Wednesday, January 14
Semester grades due from faculty – 12 p.m.....	Friday, January 16

Spring Semester 2015

Classes begin – 8 a.m.....	Tuesday, January 20
Winter holiday begins – 10 p.m.....	Friday, March 6
Winter holiday ends – 8 a.m.	Monday, March 16
Classes end – 10 p.m.....	Monday, May 4
Final examination period begins – 8. a.m.....	Tuesday, May 5
Final examination period ends – 10 p.m.....	Friday, May 8
Semester ends – 10 p.m.	Friday, May 8
Spring Commencement.....	Saturday, May 9
Semester grades due from faculty – 12 p.m.....	Wednesday, May 13

Summer Sessions – 2015

Session 1	May 11 – May 29
Session 2	June 1 – July 2
Session 3	July 6 – August 6

Clarion University
Academic Calendar 2015-16
 (Revised August 2014; Subject to change without notice)

Fall Semester 2015

Classes begin - 8 a.m.	Monday, August 24
Labor Day Holiday	Monday, September 7
Mid-semester break begins – 10 p.m.	Thursday, October 1
Mid-semester break ends – 8 a.m.	Monday, October 5
Friday classes meet in place of Tuesday classes	Tuesday, November 24
Thanksgiving holiday begins – 10 p.m.	Tuesday, November 24
Thanksgiving holiday ends – 8 a.m.	Monday, November 30
Classes end – 10 p.m.	Friday, December 4
Final examination period begins	Monday, December 7
Final examination period ends – 10 p.m.	Friday, December 11
Semester ends – 10 p.m.	Friday, December 11
Winter Commencement	Saturday, December 12
Semester grades due from faculty – 12 p.m.	Wednesday, December 16

Winter Intersession

Classes begin	Monday, December 14
Final Exams	Wednesday, January 13
Semester grades due from faculty – 12 p.m.	Friday, January 15

Spring Semester 2016

Classes begin - 8 a.m.	Tuesday, January 19
Winter holiday begins – 10 p.m.	Friday, March 4
Winter holiday ends – 8 a.m.	Monday, March 14
Classes end – 10 p.m.	Monday, May 2
Final examination period begins – 8. a.m.	Tuesday, May 3
Final examination period ends – 10 p.m.	Friday, May 6
Semester ends – 10 p.m.	Friday, May 6
Spring Commencement	Saturday, May 7
Semester grades due from faculty – 12 p.m.	Wednesday, May 11

Summer Sessions – 2016

Session 1	May 9 – May 26
Session 2	June 6 – July 8
Session 3	July 11 – August 11



Student Affairs

Harry E. Tripp, M.Ed., Vice President for Student Affairs

222 Egbert Hall
Telephone: 814-393-2351
E-mail address: htripp@clarion.edu
Website: www.clarion.edu/student

Susan Bornak, Dean of Student Development

118 Egbert Hall
Telephone: 814-393-1616
E-mail address: sbornak@clarion.edu
Website: www.clarion.edu/student

Student Affairs advances and complements the educational mission of the university through the collaborative efforts of four centers and the Department of Auxiliary Operations. The four centers include Leadership and Involvement, Residence Life Services, Intercollegiate Athletics and Wellness.

The division works collaboratively with members of the university community to support student personal, educational and professional growth by creating and fostering an integrated learning environment where civility, social responsibility, diversity and institutional loyalty are valued. The division strives to provide quality services, programs and facilities that advance a Clarion education as a common good, while setting the standard for accountability and assessment within the institution.

Student Affairs continues its affiliation with the Clarion Students' Association in support of student organizations and activities.

Center for Leadership and Involvement

Shawn Hoke, Director

251 James Gemmell Student Complex
Telephone: 814-393-2714
E-mail address: shoke@clarion.edu
Website: www.clarion.edu/cli

The Center for Leadership and Involvement is responsible for promoting community service opportunities to and tracking the service hours of the student body; working collaboratively with the Clarion Students' Association (CSA) on issues related to the student activity fee and recognized university organizations (RUOs); engaging students in leadership development opportunities; ensuring that fun and entertaining programming and events occur for students; providing organizational advising services to the Advisory Board for Leadership and Engagement (ABLE), Student Senate, the University Activities Board and the fraternity and sorority community, and assistance to recognized student organizations (RSOs).

Clarion Students' Association (CSA)**Shelly Wilson, Executive Director**

278 James Gemmell Student Complex
 Telephone: 814-393-2211
 E-mail Address: swilson@clarion.edu

The Clarion Students' Association (CSA) is a 501(c) 3 charitable organization, whose board of directors consists of students (8), faculty (2) and alumni (2) representatives. Per Act 188 of 1982, CSA sets the student activity fee and supervises its collection and distribution, in cooperation with the president of Clarion University. CSA also oversees the Clarion University Store management contract with Neebo and uses any profits and/or income derived from the operation of the store for the purpose of supporting the athletic, cultural, recreational, social and integrated learning activities of the University.

Fraternity and Sorority Affairs**Brian Hoover, Assistant Director
(Interfraternity Council Adviser)**

269 James Gemmell Student Complex
 Telephone: 814-393-2356
 E-mail Address: bhoover@clarion.edu

**Kelly Ryan, Assistant Director
(Panhellenic Council Adviser)**

265 James Gemmell Student Complex
 Telephone: 814-393-1688
 E-mail address: kryan@clarion.edu
 Website: www.clarion.edu/greeklife

The mission of the Fraternity and Sorority Affairs program is to provide support, programs and services for students affiliated with general fraternities and sororities, which help them to achieve their academic goals and aid in their personal growth and development. The efforts of the staff of the Center for Leadership and Involvement emphasize scholarship, service, leadership, involvement, diversity, community building, self-governance and lifelong membership, and challenge each undergraduate member to incorporate the ideals expressed in the ritual of his or her fraternity or sorority into their daily lives.

James Gemmell Student Complex

The James Gemmell Student Complex is the student center. It serves as a meeting and gathering place for our students, as well as the central location for campus organizations to hold events. The building is home to the Clarion University Store powered by Neebo, the Gemmell Food Court (featuring Mondo Subs, Pazzelli's Pizza, Big Smash Burgers, The Natural Chicken Sandwiches, Budget Bites and Outtakes), meeting rooms, the multi-purpose room, three racquetball courts and a television lounge.

Administrative offices located in the student center include: the Center for Leadership and Involvement, the Clarion Students' Association, Conference and Event Services and the Pennsylvania State Employees Credit Union (PSECU) e-Center. Six student organizations also have offices in the

student center, including: the Black Student Union, the Clarion Call student-run newspaper, the Interfraternity and Panhellenic councils, Interhall Council, Student Senate and the University Activities Board (UAB). An information desk is located on the second floor of the student center and serves as a central location to sign up for RSO trips and events and purchase tickets for university activities, such as the CampusFest concert.

Leadership and Community Service**Kelly Ryan, Assistant Director**

265 James Gemmell Student Complex
 Telephone: 814-393-1688
 E-mail address: kryan@clarion.edu
 Website: www.clarion.edu/leadserve

The Leadership and Community Service program provides leadership development training programs and community service opportunities for students. The staff coordinates the Student Leader Empowerment Program (SLEP); the Mary Walter Leadership Development Speakers Series; the Emerging Leaders Program; the Leaders in Action Conference; the Low Ropes Challenge Course; and the fall and spring community service days. The staff also conducts workshops and retreats focusing on team building, communication, visioning and goal setting when requested by RSOs.

University Activities Board**Brian Hoover, Assistant Director**

277 James Gemmell Student Complex
 Telephone: 814-393-2356
 E-mail address: bhoover@clarion.edu
 Website: www.clarion.edu/uab

The University Activities Board (UAB) provides a wide range of programs and leadership opportunities for Clarion University students. UAB plans approximately 150 programs each year and organizes a majority of the Every Friday and Saturday Night (EFSN) weekend programs. Big-name concerts, lecture experiences and numerous other programs are organized by a variety of UAB committees such as Arts, CampusFest, Collaboration/Community Service, Gemmell Activities, Lecture, Multicultural, Recreation, Special Events and Weekend Programming. The UAB adviser also provides leadership for the Programming Advisory Board (PAB). PAB meets bi-weekly each semester to discuss collaborative programming efforts with all interested students and staff members. PAB also develops the EFSN program schedule, which has a social program in the James Gemmell Student Complex every Friday and Saturday night. These programs are sponsored and supported by a variety of student organizations.

Residence Life Services

Michelle L. Kealey-Harbaugh, M.Ed., Director of Residence Life Services

230 Egbert Hall

Telephone: 814-393-1806

E-mail address: reslife@clarion.edu

Website: www.clarion.edu/PlacestoLive

Emily Aubele, Housing and Student Affairs Director, Venango Campus

114 Rhoades Center, Oil City, PA

814-676-6591, ext. 1270

Residence Life

Clarion University houses approximately 1,500 students in six residence halls. Offered are residence hall suites, traditional residence halls and, at Reinhard Villages, apartment style living. Combined, we provide approximately 2,100 beds for Clarion students.

First-time-in-college-students and transfer students with less than 24 earned credits whose permanent address is greater than 30 miles from campus are required to live in university-affiliated housing for their first four semesters. You may choose to live in our traditional residence halls, residence hall suites, or in an apartment at Reinhard Villages.

All of our housing provides a cross-section of students representing most aspects of a highly diverse student body. Housing assignments and roommate information is emailed in mid-July for students requesting housing in August and mid-December/early January for students requesting housing in January.

Traditional rooms and suites are furnished with beds, desks, chairs, dressers, and closets or wardrobes. Additionally, the common area of the suites provides a sofa, chair, coffee and end tables. Apartments at Reinhard are completely furnished and include a washer/dryer, dishwasher, and garbage disposal. Students should plan to furnish linens, blankets, pillows, bedding, desk lamps, a landline telephone, (not Reinhard Villages) and other personal items. Cable and high speed Internet are provided in all housing, with local telephone included in the traditional halls and suites. Residence halls and suites offer coin/Eagle Dollar operated laundry facilities and vending machines, as well as TV and study lounges. Kitchen facilities and/or microwave ovens are available for student use.

Graduate assistants and undergraduate Community Assistants, under the guidance and supervision of professional area coordinators, staff the residence halls. The campus is served by a 24-hour service desk located in the lobby of Givan Hall. The desk is open 24 hours a day, seven days a week, when school is in session. The desk serves many roles for our residence hall students including but not limited to: primary contact point for the residence hall staff, package pick up for residence hall students, computer labs, equipment sign out, and temporary key sign out.

A room may be occupied only by the students to whom it is assigned and the agreement may not be transferred. The residence hall agreement is in effect for the entire academic year, unless otherwise specified.

Residence hall applications must be submitted annually, and returning students will be notified of the times these are available online. For incoming students, applications will be accepted on a rolling basis. Housing information and on-line applications will be made available to new students once they have committed to attending Clarion University through their paid deposit.

Fees for housing and food services are due and payable at the same time as other university fees. Refunds cannot be made unless the student withdraws from the university or is granted an agreement release. The Center for Residence Life Services follows the University Refund Schedule, however after the start of the semester housing and/or meal plans will be pro-rated.

Campus residence halls are closed during university vacations and between semesters.

Judicial and Mediation Services

Matthew G. Shaffer, Coordinator

204 Egbert Hall

Telephone: 814-393-1918

E-mail address: mshaffer@clarion.edu

Website: www.clarion.edu/judicial

The Office of Judicial and Mediation Services promotes responsible citizenship by protecting student rights and maintaining the principles outlined in the Student Rights, Regulations, and Procedures Online Handbook. The office administers campus disciplinary procedures, seeks to maintain a positive living and learning environment and encourages the building of a respectful and inclusive community.

The office also serves as a resource to the university community regarding conflict management and resolution by providing services that promote the development of critical life skills. A mediation service is available to assist students in resolving interpersonal conflict.

Effective July 1, 2012, Clarion University applies a notification of student disciplinary expulsions and suspensions on Academic Transcripts. This notification will be viewed on official, unofficial, and electronic transcripts.

Intercollegiate Athletics

David Katis, Director of Intercollegiate Athletics

112 Tippin Gymnasium

Telephone: 814-393-1997

E-mail address: dkatis@clarion.edu

Website: www.clariongoldeneagles.com

Intercollegiate athletic competition plays an important role in the lives of Clarion students. Clarion University is affiliated with the National Collegiate Athletic Association (Division II), Pennsylvania State Athletic Conference and the Eastern Wrestling League. The present athletics program includes six men's and 10 women's varsity programs. The men's programs are baseball, basketball, football, golf, swimming and diving and Division I wrestling. The women's programs are basketball, cross-country, golf, soccer, softball, swimming and diving, tennis, indoor and outdoor track and field and volleyball.

Facilities for intercollegiate athletics include Memorial Stadium and the Waldo S. Tippin Gymnasium-Natorium. The stadium seats approximately 6,500 spectators. The football field is surrounded by an all-weather track. The facility also includes a baseball field, softball field, soccer field, practice football fields and parking areas. The gymnasium-natorium, seating approximately 4,000 spectators, is used for both physical education and athletic activities. A weight room, located in the gym, is used for intercollegiate athletics and physical education classes.

Center for Wellness

Jim McGee, Interim Director

134 Keeling Health Center

Telephone: 814-393-1949

E-mail address: jmcgee@clarion.edu

Website: www.clarion.edu/wellness

The Clarion University Center for Wellness promotes the holistic well-being of our students and enhances their university experience by providing health and counseling services, preventative education, and recreational and co-curricular programs through collaboration with others.

Recreation

Douglas Knepp, Director of Recreation

106 Student Recreation Center

Telephone: 814-393-1667

E-mail address: dknepp@clarion.edu

Website: www.clarion.edu/clubsports or
www.clarion.edu/intramurals

Daly Fuller, Coordinator of Intramurals, Recreation, Fitness and Club Sports for Venango Campus

116 Robert W. Rhoades Center, Oil City

814-676-6591, ext. 1330

dfuller@clarion.edu

Intramural and recreational programs are provided for students through student activity fees allocated by Student Senate. Programs are planned and supervised by the Office of Intramurals, Recreation, Fitness and Club Sports. Intramural competition is available for more than 50 activities, including flag football, soccer, volleyball, chess, bowling, table tennis, basketball, wrestling, badminton, billiards, swimming, softball, in-line hockey, water basketball, golf and racquetball. The program is housed in the Student Recreation Center and many of the intramural events are held in the facility. The program also offers a fitness component intended to help students develop and maintain a healthy and physically fit body through instructional strength-training programs, aerobics, body fat percentage screening tests and ongoing fitness counseling.

Club sports are administered by the Office of Intramurals, Recreation, Fitness and Club Sports located in the Student Recreation Center. The designation of club sport is given

to recognized student organizations (RSOs) choosing to participate in athletic competition with outside organizations in a non-varsity status. To obtain club-sport status, an organization must meet stipulations set forth by the Intramural, Recreation, and Club Sport (IRCS) Committee. Club sports operate on a year-to-year basis contingent upon student interest. Examples of club-sport programs at Clarion are men's and women's rugby, equestrian, ultimate frisbee, roller hockey, men's volleyball and soccer.

Student Recreation Center

Lori Sabatose, Manager

104 Student Recreation Center

Telephone: 814-393-1667

E-mail address: lsabatose@clarion.edu

Website: www.clarion.edu/reccenter

The student fee-funded Student Recreation Center facility houses three multi-purpose courts that may be used for basketball, volleyball, tennis, soccer, floor hockey or badminton. It also contains a four-lane running/walking track, a 32-foot-by-25-foot climbing wall with seven belay stations, a stretching area, cardiovascular area and a 4,700-square-foot weight room. Equipment includes elliptical cross trainers with personal viewing screens, steppers, treadmills, Espresso fitness bikes with personal viewing screens, stationary bicycles and a rowing machine. A variety of daily group fitness and aerobic classes are offered free to students. A small fee is charged to the campus community for these activities.

The weight room combines free weights, plate-loaded stations and variable-resistance, weight-training machines. Outdoor recreation equipment, such as camping gear, cross-country skis and roller blades may be checked out for a minimal fee. In order to accommodate student needs, the SRC has indoor equipment such as basketballs, volleyballs, footballs, dodge balls, soccer balls, playground balls, tennis racquets and balls, badminton equipment, ping pong equipment, Frisbees, hockey equipment, boxing gloves, jump ropes and weight belts.

The center also contains men's and women's locker/shower rooms, a multi-use room, a meeting room and office space for the recreation center director and the intramural, recreation and fitness director. A majority of intramurals, fitness and club sports programs are held in the Student Recreation Center and have priority over student groups for court usage. There are over 100 hours of open recreation time per week. All students enrolled at the Clarion Campus that have paid a recreation center fee are admitted free to the facility and have use of all equipment by simply presenting a valid Clarion University ID card. This facility is student run and operated. Students do not need to pay an extra fee to use the climbing wall. Memberships are available to non-students and online students.

For hours of operation, visit www.clarion.edu/rechours.

Counseling Services

Jennifer Barch, Interim Clinical Supervisor

148 Egbert Hall

Telephone: 814-393-2255

E-mail address: jbarch@clarion.edu

Website: www.clarion.edu/counseling

The Department of Counseling Services offers short-term episodic individual, couple and group counseling to all students at no charge. Counseling Services provides professional help with personal, social and career concerns.

Students may request counseling on their own initiative or may be referred by faculty, staff or other students. In keeping with accepted professional practice, counseling contacts are strictly confidential unless there is a clear, immediate threat to one's self or others.

Appointments can be made by calling the counseling center at 814-393-2255 or by stopping by the office in 148 Egbert Hall. Counseling services are available Monday through Friday during the fall and spring semesters.

Health Promotions

Jim McGee, Coordinator of Health Promotions, Drug and Alcohol

134 Keeling Health Center

Telephone: 814-393-1949

E-mail address: jmcgee@clarion.edu

Website: www.clarion.edu/wellness

The Office of Health Promotions, located in the Keeling Health Center, delivers health and wellness information to students across the campus. Through presentations, wellness programs and fitness activities, students have opportunities to learn about the importance of healthy choices and healthy living.

The office supports Healthy Campus 2020 which serves as a foundation for developing and implementing programs on topics such as alcohol awareness, women's health, safe sex/STD, tobacco, mental wellness and nutrition/exercise. It also coordinates the CHAMPS Life Skills Program and conducts presentations for student athletes.

The Office of Health Promotions collaborates with the Office of Judicial and Mediation Services and oversees mandated drug and alcohol programs for students violating university policy.

Keeling Health Center

Keeling Health Center

Telephone: 814-393-2121

Website: www.clarion.edu/healthservices

Keeling Health Center, accredited by the Accreditation Association for Ambulatory Health Centers (AAAHC), provides health services and wellness promotion to the student community of Clarion University. The health center is located at the northwest corner of the campus near Givan Hall. A highly credentialed staff, including contracted physicians, certified registered nurse practitioners and registered nurses

certified in college health, provide specialized student health services. Operating hours are 8:30 a.m. to 4:45 p.m., Monday through Friday. After-hours and emergency services are available from a variety of community providers.

The services of the health center are similar to those provided in a physician's office. Specific services include: physical examinations, immunizations, allergy injections, medication and prescriptions, pregnancy testing, treatment of acute and chronic illnesses and injuries and referral to appropriate community resources. Proper immunization is highly recommended prior to university entrance.

Pennsylvania Senate Bill 955, which was passed into law on June 28, 2002, mandates that all university students living in residence halls be immunized against meningitis or sign an informed declination statement. The American College Health Association also supports the meningitis vaccine.

A small co-payment is assessed for each visit. In addition, there may be charges for medications or procedures associated with the visit. Students are strongly encouraged to contact their primary insurance carrier to determine the conditions and limitations, if any, on medical treatment away from home.

Health Insurance

The health services fee includes basic provider services within the Keeling Health Center. A small co-payment is assessed for each visit. Charges for laboratory, X-ray, outpatient or inpatient services at other facilities, and medications are not covered and are the responsibility of the individual student. Health insurance coverage is strongly encouraged prior to enrollment at Clarion University. In an attempt to offer students an affordable health insurance option, Clarion University has collaborated with 12 other universities in the Pennsylvania State System of Higher Education to offer an economical and comprehensive insurance policy to students not covered by their parents' policy. Consolidated Health Plans (www.consolidatedhealthplan.com) has been selected as the insurance provider and students may choose from a variety of options.

Parents who plan to keep a son or daughter on family insurance plans should contact their insurance provider to determine the effects of university entrance on dependent coverage, particularly under managed care plans.

University policy requires students have medical insurance coverage to be eligible for participation in university-sanctioned, sponsored and/or approved activities, including intercollegiate sports. The assumption is students participating in such activities are covered by medical insurance and proof of coverage can be produced upon the university's request. Students interested in obtaining insurance from Consolidated Health Plans should go to www.chpstudent.com.

Department of Auxiliary Operations

G. Chad Thomas, Director of Auxiliary Operations

206 Egbert Hall

Telephone: 814-393-1859

E-mail address: cthomas@clarion.edu

Website: www.clarion.edu/events

The Department of Auxiliary Operations supports the daily functions of the centers within the Division of Student and University Affairs. This area coordinates the maintenance, housekeeping and renovation of all the auxiliary buildings including traditional residence halls, suite-style residence halls, the Student Recreation Center, James Gemmell Student Complex and Eagle Commons dining facility. This area also oversees the contract for all dining services on campus and includes the Office of Conference and Event Services.

Conference and Event Services

Carolyn Nick, Event Scheduler

Carl Callenburg, Auditoria Manager

Telephone: 814-393-2705

E-mail address: spacerequest@clarion.edu

Website: www.clarion.edu/events

The Office of Conference and Event Services schedules campus event space for non-academic events. The office assists recognized student organizations and administrative offices with the planning and coordination of their events and also contracts with external groups for camps and conferences. The space request process is handled online through the website.

Other Student-Related Services

University Libraries

Terry S. Latour, Ph.D., Dean of University Libraries

125 Carlson Library Building

Telephone: 814-393-2343

E-mail address: tlatour@clarion.edu

Website: www.clarion.edu/library

Suhr Library, Venango Campus: 814-393-1240

Department Faculty: M. Buchanan, S. Chen, L. Cheresnowski, N. Clemente, C. Glotfelty, P. Johner, S. Johnson, B. Martin

Carlson Library on the Clarion Campus and Suhr Library at Venango College have combined collections of more than 1.7 million items in various formats, including books, e-books, microforms, journals, e-journals, media, streaming video, and electronic databases. Materials not held by the two libraries may be accessed through interlibrary loan services offered at both libraries or directly online through the libraries' Webpage.

The libraries are committed to providing excellent service to users. Qualified library faculty and staff are available in the libraries' public service areas and via phone, chat, and e-mail to assist users in locating information, satisfying research needs, and effectively using instructional technologies. Library faculty also provide instruction on general library use and on research resources and strategies which are discipline specific. The libraries' Webpage (www.clarion.edu/library) provides a gateway to scholarly resources including services which provide full-text access to thousands of academic journals and services for distance learners.

The mission of the Clarion University Libraries is to:

- assist university undergraduate and graduate students, faculty, staff, and administration in conveniently locating and accessing the university's information resources and those of other sources;
- develop and provide timely and responsive services, programs, and tools that facilitate translation of information into knowledge and support research, scholarship, teaching, and learning;
- build, select, and preserve, in cooperation with university faculty, a collection of information resources commensurate with the current and anticipated discipline needs of the university's instructional programs and supportive of teaching and learning processes;
- contribute to progress of the university and the profession; and
- participate in addressing the information resource needs of local and rural communities in Pennsylvania.

Carlson Library on the Clarion Campus is a state-of-the-art facility. Extensive connectivity to the campus network and the Internet is provided through building-wide wireless and standard data networks. There are four computer laboratories with PCs, Macs, and printers available for student use. Laptop computers are available for use in the library. The Carlson Library building is home to the university's Center for Academic Excellence as well as the University Art Gallery. The Department of Library Science has its offices, classrooms, and computer laboratory in the facility.

Suhr Library at Venango College provides an inviting research and study environment. It is a wireless zone containing a computer lab and providing laptop computers for both library and off-site use. Suhr Library houses the Barbara Morgan Harvey Center for the Study of Oil Heritage, which sponsors a range of activities and contains primary source information on the region.

Music Program

Robert Levy, M.F.A., Chair, Department of Visual and Performing Arts

149 Marwick-Boyd Fine Arts Building

Telephone: 814-393-2283

E-mail address: rlevy@clarion.edu

Music ensembles are available to all members of the Clarion University community. The university offers the following on a regular basis:

- **Concert Choir** offers all members of the university community who enjoy and appreciate choral music the opportunity to sing large choral ensemble repertoire from the Renaissance to the 20th century. Audition not required.
- **Marching Band** repertoire ranges from classics to contemporary to jazz. The Golden Eagles Marching Band appears at all home football games, headlines regional marching festivals, and leads the annual Autumn Leaf Festival Parade. Audition not required.

The following ensembles are available based upon student interest:

- **Brass Ensemble** offers members the opportunity to study and perform chamber music for brass instruments. Repertoire is varied, with a concentration on early music and music of the 20th century. Membership is by audition.
- **Chamber Singers** is a group of approximately 20 members who perform significant works from the choral chamber repertoire. Membership is by audition.
- **Jazz Band** performs representative works for jazz band, with an emphasis on recent trends in composition and arranging. Membership is by audition.
- **Percussion Ensemble** offers members the opportunity to study and perform chamber music for percussion instruments, including contemporary works, transcriptions of early music, and music of various cultures. Membership is by audition.
- **String Ensemble** provides members the opportunity to perform chamber works for strings. Membership is by audition.
- **Symphonic Band** is an ensemble that performs representative works for band drawn from traditional and contemporary literature. Audition not required.
- **Symphony Orchestra** brings together string and wind players performing orchestral literature. Membership is by audition.
- **Wind Ensemble** provides wind and percussion players the opportunity to perform significant wind literature from the Renaissance to the 20th century. Membership is by audition.
- **Woodwind Ensemble** offers members the opportunity to perform chamber literature for woodwind instruments. Membership is by audition.

Dramatic Organizations

Robert G. Levy, M.F.A., Chair, Department of Visual and Performing Arts

149 Marwick-Boyd Fine Arts Building

Telephone: 814-393-2283

Website: www.clarion.edu/theatre

ALPHA PSI OMEGA is a national honorary dramatics fraternity. This organization attempts to further the student's knowledge of and involvement with theatre. The chapter sponsors the Alpha Psi Omega memorial scholarship fund which grants theatre awards to deserving students.

UNIVERSITY THEATRE, the campus dramatic organization, is open to all students interested in gaining experience in performance and technical aspects of theatre. Students are welcome to participate in the four major productions, student-directed plays, and the Summer Drama Workshop.

Debate

Myrna Kuehn, Ph.D., Chair, Department of Communication

Telephone: 814-393-2284

E-mail address: kuehn@clarion.edu

Website: www.clarion.edu/debate

SPEECH AND DEBATE TEAM is open to any student interested in competitive speaking events. Members compete in persuasive, informative, humorous, extemporaneous, and impromptu speaking as well as oral interpretation. Debaters argue various topics and compete in parliamentary and policy debate. Members of the Speech and Debate Team can compete in on-campus events, public debates, and travel to regional and national tournaments hosted by other colleges and universities.

Parking and Automobile Regulations

All provisions of the Vehicle Code of the Commonwealth of Pennsylvania as supplemented by parking regulations issued by the chancellor, State System of Higher Education, and Clarion University, will be strictly enforced on the Clarion University Campus. Authority for such enforcement rests with the director of public safety. Vehicles may be immobilized for unpaid tickets.

Students who park a vehicle on university property in an area requiring a permit must register with the Department of Public Safety. A valid university parking permit must be hung down from the inside rear-view mirror and clearly be visible from the front and rear of the vehicle when the vehicle is parked in a lot requiring a permit. The enforcement of parking permit regulations for employee lots, commuter lots, and metered parking shall be from 8 a.m. until 4:30 p.m., prevailing time, Monday through Friday, unless otherwise designated. For more information on parking, visit the parking Website at www.clarion.edu/parking.



University Advancement

Division of University Advancement

James Geiger, Vice President for University Advancement

227 Seifert-Mooney Center
Telephone: 814-393-2652
E-mail address: jgeiger@clarion.edu
Website: www.clarion.edu/advancement

The Division of University Advancement is comprised of the offices of marketing and communication, sports information and printing services. Responsibilities lie in advancing the general interests of Clarion University while building a base of support that enriches and sustains the university.

The focus of the division lies in telling the story of our vibrant academic institution in its unique western Pennsylvania setting along with promoting strong collaborative relationships among internal and external constituencies. Audiences served include prospective and current students, parents, more than 50,000 alumni, faculty, staff, community partners, friends of the university and the region at large.

In accomplishing its mission, the division seeks the involvement of university-affiliated organizations including the Clarion University Foundation, Inc., and Clarion University Alumni Association.

Marketing and Communication

David Love, Director, Marketing and Communication

211 Seifert Mooney Center
Telephone: 814-393-2659
E-mail address: dlove@clarion.edu
Website: www.clarion.edu/mktgcomm

Hope Lineman, Director of Marketing and Relations for Venango Campus

2207 Frame Hall, Oil City, PA
Telephone: 814-676-6591, ext. 1215
E-mail address: hlineman@clarion.edu

The Office of Marketing and Communication promotes Clarion University through integrated marketing initiatives, which include advertising and public relations. Efforts are part of a branding strategy that shapes the image of the university as it reaches various constituents.

The office works with university leaders in establishing and promoting the official position of the university to media outlets and its various audiences, including current and prospective students, faculty and staff, alumni and friends and the community and government. The office also oversees the development of marketing and advertising campaigns created by outside agencies.

Positioning is also supported by the marketing and communication office through web design and development in accordance with established standards and guidelines.

In serving as the university's news bureau, the office releases information through various outlets including: print, radio and television; the university's website; Clarion and Beyond magazine; Community Connections newsletter; electronic communications, Newswire and E-eagle; and a variety of social media venues. The department also assists in emergency communications and special projects.

Printing and Graphics Express Service (PAGES)

Central Services Building
Telephone: 814-393-2679
E-mail address: pages@clarion.edu
Website: www.clarion.edu/PAGES

PAGES is responsible for the development and printing of official university publications and other print materials. The department operates a copy center and provides design and digital services. PAGES works closely with marketing and communication on the incorporation of the university brand into print projects. PAGES also offers specialized mailing services and other promotional items, including portfolios, shirts, etc.

Sports Information

Rich Herman, Director, Sports Information

225 Ralston Hall
Telephone: 814-393-2651
E-mail address: rherman@clarion.edu
Website: www.clariongoldeneagles.com

All official news releases and media relations relating to athletics are coordinated and issued through the Office of Sports Information. This office works closely with the athletic director and coaches and is responsible for the coordination of statistical reports required by the NCAA (National Collegiate Athletic Association) and PSAC (Pennsylvania State Athletic Conference). The university's athletics website is also maintained by this department.

Clarion University Alumni Association, Inc.

Laura King, Director of Alumni Relations and Annual Funds/Executive Director

103 Seifert-Mooney Center for Advancement
Telephone: 814-393-2572
E-mail address: lking@cuf-inc.org
Website: www.clarion.edu/alumni

An integral part of the foundation, the Clarion University Alumni Association is led by its board of directors (the voice of more than 50,000 living alumni) and executive director and supported by student Eagle Ambassadors. The association is actively involved in the efforts of the university and the Clarion University Foundation, Inc., in serving alumni, friends, parents and the university community at large. The office is involved in attracting students, establishing a base of financial support, fostering lifelong affiliations with alumni (beginning with current students) and continuing in outreach programming to all alumni.

Clarion University Foundation, Inc.

Michael Keefer, Chief Executive Officer

220 Seifert-Mooney Center for Advancement
Telephone: 814-393-2572
E-mail address: mkeefer@cuf-inc.org
Website: www.clarion.edu/foundation

The Clarion University Foundation, Inc., a Pennsylvania not-for-profit corporation founded in 1969, is charged with promoting the educational purposes of, or at the request of, Clarion University. The organization, further described as a tax-exempt charity by section 501(c)(3) of the Internal Revenue Code, has been designated by the council of trustees to receive and manage private sector gifts on behalf of Clarion University.

As charged, the foundation is responsible for coordinating all university program requests for financial support from the private sector. Campaigns for support include annual, capital, planned gifts and other special appeals. Sources of private support include alumni, employees, retirees, parents, students, friends, businesses, corporations and foundations.

The foundation board of directors, through its CEO, oversees the management and operation of the organization including distribution of resources, management of assets, student housing operations, special projects and personnel.



Enrollment Information

Admissions

Dean of Enrollment Management

Telephone: 814-393-2306; 800-672-7171 (extension 1)

E-mail address: admissions@clarion.edu

Website: www.clarion.edu/admiss

Admission of Freshmen

Clarion University reviews students for admission using the following six criteria:

- Strength of curriculum
- Grade-point average
- High school class rank
- High school profile
- SAT or ACT test score
- Recommendations and essay

Applicants to the university are evaluated on these six areas. Applicants must be graduates of an approved secondary school or hold a General Education Development (GED) high school equivalency diploma issued by the Pennsylvania (or associated state) Department of Education. Home-schooled applicants must be a graduate of a Department of Education-approved home-school association program.

Steps to Apply for Freshman Admission

Applicants for admission should read and observe carefully the following procedure:

1. Access the application for admission on the Web at www.clarion.edu/admiss.
2. Complete the online application and submit electronically or print and complete a paper application.

The online application fee is \$35 and paper application fee is \$40. Have high school transcripts sent by the guidance counselor or other school official. A medical form is to be completed after the applicant has been accepted.

3. A deposit of \$100 is required when the accepted applicant makes the decision to attend Clarion. This fee is not refundable but is credited toward the student's first semester bill.
4. Clarion University applicants may ask for a decision as early as July 1 following their junior year in high school. This would require the applicant to have taken the Scholastic Assessment Test (SAT) or the American College Test (ACT) in the junior year.
5. Applicants for the Bachelor of Science degree or Associate of Science degree in Nursing—please check the website for specialized admission deadlines and requirements.

Transferring to Clarion

Clarion University welcomes applications from students who wish to transfer to Clarion from another college or university. Transfer information, including transfer guides for community colleges within the state and region, can be found at www.clarion.edu/transfer and transfer course equivalencies for many colleges nationwide can be found at www.pacollegetransfer.com.

Transfer Policy

Clarion University will accept transfer courses (except remedial/developmental) from regionally accredited two- and four-year institutions (e.g., Middle States Association of Colleges and Schools, North Central Association of Colleges and Schools) that are a grade of C- or better.

Transfer credits that are applied toward a specific major must be approved by the appropriate college dean or director and the department chair of the academic area in which the degree is to be granted. When applying transfer credits, all accepted courses will at least be applied as elective hours. Depending on a student's major and the number of credits, and compatibility of these credits with the student's chosen major, a student may complete her/his degree with credits beyond those required for graduation. Please note the following:

1. Students seeking to transfer must be in good academic and social standing at the transferring institution. It is the applicant's responsibility to submit official transcripts and other necessary materials for evaluation.
2. Credits are transferable, but grades and quality points are not.
3. All courses transferred must be recognized in content and quality.
4. Students who wish to challenge a course equivalency can appeal to the dean of their program of study. Students are requested to provide a course syllabus which gives more detail than just a catalog description. The course is then reevaluated by the appropriate academic department.
5. Transfer students must fill out the regular application for admission to the university, have high school and college transcripts sent to the Admissions Office, and pay the non-refundable application fee.
6. Applicants who hold the associate of science or arts degree from a Pennsylvania community college will be accepted by the university and granted transfer credits as outlined in the Academic Passport Principles (see the Credit Transfer Policy section.)
7. Applicants from Pennsylvania community colleges without the associate degree of science or arts will be processed in accordance with regular transfer guidelines.
8. First-time bachelor's degree-seeking students are to complete at least 30 of the last 45 credits and at least 50 percent of the credits in their major from Clarion University. (See "Residence Requirements").
9. To ensure proper placement of transfer credits taken at another institution, students enrolled at Clarion University are strongly encouraged to request written permission from their college dean to take courses at another institution for transfer back to Clarion. Grades and quality points for courses taken elsewhere do not transfer and cannot be used as repeats for grades previously earned at Clarion.

Credit Transfer Policy

Transfer and Articulation Oversight Committee (TAOC)

Clarion University follows the guidelines set forth by the Pennsylvania Public School Code of 1949 requiring the commonwealth's 14 state-owned universities and the 14 community colleges to develop statewide articulation agreements that will allow students to transfer full Associate of Arts (AA) and Associate of Science (AS) degrees into parallel bachelor degree programs with junior standing. The committee reports to the Pennsylvania Department of Education who has developed an ePortal system (www.pacollegetransfer.com) that serves as a public entryway to data and information relevant to transfer and articulation.

As of fall 2013, TAOC had the following Pennsylvania associate degrees approved for parallel transfer into Clarion University: Art, Biology, Business, Chemistry, Communications, Computer Science, English, History, Mathematics, Physics, PK-4 Education, Psychology, Sociology and Theatre. Please utilize the ePortal system www.pacollegetransfer.com for the most up-to-date information.

Academic Passport Principles

Clarion University affirms its commitment to maximize access to higher education for all Pennsylvanians through the Academic Passport to the Pennsylvania State System of Higher Education (PASSHE). Community college students who are not in a TAOC approved program but have earned an Associate of Arts (A.A.), the Associate of Science (A.S.), or the Associate of Applied Science (A.A.S) degree in a program containing a minimum of 30 credits of liberal arts courses, or PASSHE university students, who transfer from one PASSHE university to another with a 2.0 minimum cumulative quality-point average (GPA) in all course work and a minimum of 12 credit hours, shall be considered to have an Academic Passport which will allow them to transfer to any PASSHE university.

It is understood that the academic passport does not guarantee admission into specific majors. Some academic programs may have additional requirements such as satisfactory scores on Praxis exams or a higher GPA.

In the acceptance and application of credits for students holding an Academic Passport, the receiving university shall look first to apply as many credits as possible toward the satisfaction of lower-division general education requirements. Next, the receiving university shall look toward applying any appropriate credits to satisfy requirements in the major. Last, credits may be applied to satisfy elective requirements. It is the intent of the passport that credits earned as part of a qualifying degree program at a community college or state system university should be accepted and applied toward completion for the baccalaureate degree.

It is recognized that in certain circumstances, such as a change in major or specialized programs of study, it may not be possible to apply all transfer credits earned toward the four-year degree; however, absent legitimate academic reasons, the intent of this policy is to make full and complete

use of credits earned in qualified A.A., A.S., or A.A.S. degree programs. Transfer students shall not be required to repeat or retake courses that they have already successfully completed at another accredited institution.

In accepting the Academic Passport, Clarion University shall follow these principles:

1. Clarion University will recognize and honor the Academic Passport by admitting qualified students and shall apply credit toward graduation for all equivalent college course work completed for the associate's degree.
2. Students seeking to transfer to a PASSHE university and who are admissible shall receive an evaluation of credits prior to enrollment and payment of tuition and fees. (Application fees may still be required.)
3. Transfer students who meet the conditions of published articulation agreements shall not be required to take a higher number of credits for the baccalaureate degree than indigenous students of the receiving institution.
4. Up to a maximum of 45 general education credits and liberal arts course credits shall be used to meet lower division general education requirements, even if the receiving university does not offer the specific course being transferred or has not designated that course appropriate for general education. A course-by-course match shall not be required.
5. Students who transfer with 60 or more credits will be entitled to the same rights and privileges accorded PASSHE students with junior status (i.e., scheduling, internships, etc.).

Transfer Credit Appeal

Students who feel the need to appeal a course equivalency on the degree audit may do so by meeting with the dean of their college. Students who appeal an equivalency are asked to provide a course syllabus which provides more detailed information than catalog descriptions. The course is then re-evaluated by the appropriate academic department.

Admission with Advanced Standing

Advanced Placement—Credit by Examination

1. The College-Level Examination Program

A maximum of 60 credits may be earned through the College-Level Examination Program (CLEP). No more than 30 of the 60 credits may be earned after admission. These examinations, administered by the College Entrance Examination Board, may be taken at Venango College of Clarion University on pre-scheduled testing dates. They are designed for students who have gained college-level knowledge through prior education or training. The CLEP includes 36 subject examinations, which, if successfully passed, will earn the student three credits per examination. Listed below are the general and subject examinations, minimum acceptable scores, and credits available to earn:

General Exams	Course Equivalent	Min. Scores	Cr
English Composition	ENG 111	50	3
Humanities	CMST 120	50	3
Mathematics	MATH 112	50	3
Natural Sciences	PHSC 111	50	3
Social Science and History	Social Science		
	Elective	50	3

Subject Exams	Equivalent	Scores	Cr
American Government	PS 211	50	3
History of the United States I	HIST 120	50	3
History of the United States II	HIST 121	50	3
Educational Psychology	ED 122	50	3
Introduction to Psychology	PSY 211	50	3
Human Growth and Development	PSY 331	50	3
Principles of Macroeconomics	ECON 211	50	3
Principles of Microeconomics	ECON 212	50	3
Introductory Sociology	SOC 211	50	3
Western Civilization to 1648	HIST 111	50	3
Western Civilization 1648 to Present	HIST 113	50	3
College French Level 1	FR 151	50	3
College French Level 2	FR 152	59	3
College German Level 1	GER 151	50	3
College German Level 2	GER 152	60	3
College Spanish Level 1	SPAN 151 & 152	50	6
College Spanish Level 2	SPAN 251 & 252	63	6
American Literature	ENG 225	50	3
Analyzing and Interpreting Literature	ENG 130	50	3
Freshman College Composition	ENG 111	50	3
English Literature	ENG 221	50	3
	ENG 222		3
Calculus	MATH 232	50	4
College Algebra	MATH 110	50	3
Precalculus	MATH 171	50	4
Biology	BIOL 111	50	4
Chemistry	CHEM 153	50	3
	CHEM 154	50	3
Information Systems and Computer Applications	CIS 110	50	3
Financial Accounting	ACTG 251	50	3
Introductory Business Law	BSAD 240	50	3
Principles of Management	MGMT 121	50	3
Principles of Marketing	MKTG 160	50	3

For additional information and a CLEP registration form, contact: Tammy Beach, CLEP Certified Test Administrator, Venango College of Clarion University, 1801 West First Street, Oil City, PA 16301. **To have CLEP scores evaluated for credit, submit an official transcript of scores to: Diane Kahle, Assistant Director of Admissions, Clarion University of Pennsylvania, 840 Wood Street, Clarion, PA 16214-1232.**

2. Advanced Placement Program and Credit by Examination

Students also may earn credit and advanced standing through the Advanced Placement Program of the College Entrance Examination Board. The program is designed for high school students who expect to enter college and who have participated in one or more of the advanced classes while in high school. There are 31 subject areas in the program, and any high school student who earns the required score in a subject area will be granted college credits. The National Advanced Placement Examinations are given in May of each year.

Advanced Placement Examination	Advanced Placement Grade Req.	Number Credits Awarded	Course Typically Waived
Art History	4 or 5	6	ART 211 and 212
Art Studio—Drawing*	4 or 5	3	ART 121
Art 2-D Design*	4 or 5	3	ART 125
Art 3-D Design*	4 or 5	3	ART 126
Biology	5	8	BIOL 155/165, 156/166
Biology	4	4	BIOL 155/165 or 156/166
Biology	3	3	A free elective
Calculus AB	3	3	MATH 232
Calculus AB	4 or 5	4	MATH 270
Calculus BC	3	4	MATH 270
Calculus BC	4 or 5	8	MATH 270 and 271
Chemistry	3, 4, or 5	6	CHEM 153 and 154
Chemistry	Completed AP Lab Reports	2	CHEM 163 and 164
Comparative Government Politics	3, 4, or 5	3	PS 210
Computer Science A	3, 4, or 5	3	CIS 202
Computer Science AB	3, 4, or 5	6	CIS 202 and 244
English Language and Composition	3, 4 or 5	3	ENG 200
English Literature and Composition	3, 4 or 5	3	ENG 130
Environmental Science	3, 4, or 5	3	ENVR 275
European History	4 or 5	6	HIST 112 and 113
European History	3	3	HIST 112 or 113
French—Language	5	12	FR 151, 152, 251, 252
French—Language	4	9	FR 151, 152, 251
French—Language	3	6	FR 151 and 152
German—Language	5	12	GER 151, 152, 251, 252
German—Language	4	9	GER 151, 152, 251
German—Language	3	6	GER 151 and 152
Human Geography	3, 4, or 5	3	GEOG 100
Macroeconomics	3, 4, or 5	3	ECON 211
Microeconomics	3, 4, or 5	3	ECON 212
Music—Theory	3, 4, or 5	2	MUS 126
Physics 1	4 or 5	4	PH 251
Physics 2	4 or 5	4	PH 252
Physics B	4 or 5	8	PH 251 and 252
Physics C—Mechanics	4 or 5	3	PH 258
Physics C—Electricity/Magnetism	4 or 5	3	PH 259
Psychology	3, 4, or 5	3	PSY 211
Spanish—Language	5	12	SPAN 151, 152, 251, 252
Spanish—Language	4	9	SPAN 151, 152, 251
Spanish—Language	3	6	SPAN 151 and 152
Spanish—Literature	5	6	SPAN 280
Spanish—Literature	3 or 4	3	SPAN 281
Statistics	3, 4, or 5	3	MATH 221
Studio Art	3, 4, or 5	3	ART elective
U.S. Government and Policies	3, 4, or 5	3	PS 211
U.S. History	4 or 5	6	HIST 120 and 121
U.S. History	3	3	HIST 120 or 121
World History	4 or 5	6	Two courses in 111, 112 or 113
World History	3	3	HIST 112 or 113

*Students receiving a score of 3 for Drawing, 2D Design, or 3-D Design can request a departmental portfolio review and credits may be granted.

3. International Baccalaureate Credits

Students presenting International Baccalaureate credits are awarded Clarion credits provided they earn the following scores: 5 or higher for Standard Level courses (SL); 4 or higher for Higher Level (HL)courses. Equivalencies can be seen at www.clarion.edu/ibc.

Course	Level	Score	Credits	Course Equivalent
Economics	SL	5, 6 or 7	3	ECON 212
Economics	HL	4 or 5	3	ECON 212
English A1	HL	4 or 5	3	ENG 130
Geography	SL	5, 6 or 7	3	GEOG 1XX
Geography	HL	4 or 5	3	GEOG 1XX
Hist-Americas	HL	4 or 5	3	HIST 113
Hist-Americas	HL	6 or 7	6	HIST 113 & HIST 121
Hist-Africa	HL	4 or 5	3	HIST 113
Hist-Africa	HL	6 or 7	6	HIST 113 & HIST 131
Hist-East and SE Asia	HL	4 or 5	3	HIST 113
Hist-East and SE Asia	HL	6 or 7	6	HIST 113 & HIST 110
Hist-Europe	HL	4 or 5	3	HIST 113
Hist-Europe	HL	6 or 7	6	HIST 113 & HIST 1XX
Hist-S Asia & Mid East	HL	4 or 5	3	HIST 113
Hist-S Asia & Mid East	HL	6 or 7	6	HIST 113 & HIST 110
Hist	SL	5, 6 or 7	3	HIST 113
Language-Ab initio	SL	5 or 6	3	FR/GER/SPAN 151
Language-B	SL	5, 6 or 7	3	FR/GER/SPAN 152
Language-B	HL	4 or 5	3	FR/GER/SPAN 251
Language-A2	SL	5, 6 or 7	3	FR/GER/SPAN 252
Language-A2	HL	4 or 5	3	FR/GER/SPAN 281r or 282
Math Studies	SL	5, 6, or 7	3	MATR 1XX
Theatre	SL	5, 6 or 7	3	THE 2XX
Theatre	HL	4 or 5	3	THE 253
Visual Arts	SL	5, 6 or 7	3	ART 110
Visual Arts	HL	4 or 5	3	Art 110

4. Proficiency Examinations

Course credits, not to exceed 38 semester hours, also may be earned by proficiency examination for advanced college work administered by the departments in which the particular proficiency is taught. Enrolled, degree-seeking students who appear to possess a proficiency equal to or greater than that required in a particular course may make application for such an examination in the Office of the Registrar; the chair of the subject area concerned will determine the validity of the application. Minimum qualifications for proficiency examination applications are as follows: first-semester freshmen must have scored 550 or above in the verbal on the SAT; students other than first semester freshmen must have a GPA of 2.50 or above; and in no case may a student earn credit for a course more than once for any given subject. Proficiency exams are not available to students who are otherwise not enrolled at the university during the semester in which the exam is to be taken. Proficiency exams may not be used to repeat courses in which letter grades have previously been awarded.

5. Credit for Life Experience

Clarion University may grant credit for life experience based upon careful evaluation of such experience. For information, students may contact the dean of the college in which they are enrolled.

6. Active Military Service

The university grants a maximum of four credits in HPE for active military service of four months or more with honorable discharge or continued reserve status. Credit is normally given for HPE 111 (two credits) and two HPE activity courses of one credit each. To ensure credit is granted, students should bring an honorable discharge document to the Office of the Registrar, 122 Carrier Administration Building.

General Certificate of Education: Advanced Level

Clarion University grants course credits, whenever possible, in subjects in which an A-level pass has been earned. Course equivalencies will be determined by the appropriate college dean based upon information provided by the student.

International Students

Clarion University is authorized under federal law to enroll nonimmigrant students. Clarion University welcomes applications from students from other countries. If you are not a U.S. citizen or are not a resident alien (with a green card) you will apply to Clarion as an international student.

For international students to be considered for admission they are required to submit the following information:

1. The International Undergraduate Application. (www.clarion.edu/international)
2. Official or certified copies of all academic records with an official seal of the school must be provided from secondary school, college, university, and professional institutions, including all courses taken, grades (plus grading scale), graduation date(s), and copies of diplomas, degrees, or other certificates received. For post-secondary work to be evaluated for transfer credit, please provide a course description or syllabus for each course. Submit both official translated and untranslated records.
3. Applicants from countries where English is not the official language are required to submit official results for the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). Applicants from countries where English is the principal language may choose to submit official SAT or ACT scores in lieu of the TOEFL or IELTS.

Admission Guidelines

Basic requirements for admission include a minimum TOEFL score of 500, if it is paper-based, or a score of 173, if it is computer-based, a score of 61 if Internet-based, or a satisfactory SAT/ACT score, or IELTS score of 6.0. Clarion offers an Intensive English Program (IEP) and satisfactory completion of the program meets the university's English language proficiency requirement.

Students who have graduated from a high school (or equivalent) where the language of instruction is not English will be exempted from any general foreign language requirement at Clarion University. Academic credit and/or life experience credit will only be granted for knowledge of one's native language in cases when specific courses or examinations offered at Clarion University are successfully completed.

Non-Degree Admissions

Students who wish to enroll as a non-degree seeking student may enroll for up to 12 credit hours as a Quick Admit. Quick Admit forms are available in the Admissions Office. Note: state and federal financial aid is not available to quick-admitted students, because they are non-degree.

After completing coursework as a quick-admitted student, if a student chooses to apply for "regular" admission (in a degree program), they may do so during the semester in which they will complete no more than 12 credit hours. Applying for "regular" admission includes a non-refundable application fee, high school transcripts, and college transcripts, if applicable.

Students who have not been approved for degree candidacy after the completion of 12 credit hours of part-time study will not be permitted to continue at the university.

Early Admissions Program

Clarion University offers the opportunity for qualified high school students to enroll in classes at the university while they are still in high school. The Dual Enrollment Program provides high school students the opportunity to experience college coursework prior to high school graduation. The coursework provides depth and a greater challenge than their high school curriculum.

The guidelines for the program follow.

Dual Enrollment

Admissions Criteria

The following criteria determine admission of high school students to Dual Enrollment at Clarion University:

1. Completion of the freshman year in high school.
2. Completion of the Dual Enrollment online application.
3. Official transcripts that show enrollment in the academic or college preparatory program in high school while achieving the following:
3.0 cumulative grade-point average (85 percent) or top 20 percent of the class. SAT of at least 950 (CR & M) or ACT of 20. Students can also be considered with a PSAT of 95 or PSSA or Keystone exam scores of proficient or advanced (at least one score must be advanced).
4. Signatures from the guidance counselor, high school principal and parent or guardian to serve as support for the applicant's motivation, interest, academic ability and social maturity.

The Dean of Enrollment Management may arrange for an interview with the applicant and parents. The final decision rests with the Dean of Enrollment Management.

Credits

Students receive college course credits and are subject to the same rules, regulations, and benefits as other students at Clarion University. Students may enroll in traditional on-campus classes or web-based courses.

Cost

The cost of tuition for these programs are significantly reduced. Contact the admissions office at 1-800-672-7171, ext. 1 or go to www.clarion.edu/admissions, for current costs and application materials.

Please direct Dual Enrollment application materials to: Admissions Office, Clarion University, 840 Wood Street, Clarion, PA 16214.

New Student Orientation

All new students are required to attend New Student Orientation prior to their matriculation. New Student Orientation sessions are conducted throughout the year, with sessions generally offered in the spring and summer. Family members and guests are encouraged to attend with their student.

The primary objectives of New Student Orientation are to help entering students make the transition from their previous environment to Clarion University, and to ensure that students and parents complete critical tasks and receive information necessary for a successful entry into college. In order to facilitate this adjustment and allow the students to pursue their education in the best possible manner, the curricular and co-curricular aspects of university life are explored with students and their family members/guests in large and small groups. Students and family members/guests meet with faculty members and students receive academic advisement as they register for classes.

Registration forms and instructions for New Student Orientation program are mailed to all new students.

Financial Assistance

B-16 Carrier Hall

Telephone: 1-800-672-7171, opt#2

Email Address: stfinservice@clarion.edu

Website: www.clarion.edu/finaid

Current Costs of Enrollment

Students should refer to the Clarion University Student Financial Services (SFS) website at: www.clarion.edu/finaid for current costs of enrollment and detailed billing/payment information.

Student Invoices

Student Invoices (bills) are not mailed to students. Students are billed each term (i.e. summer, fall and spring) and payment is expected by the first day of class each semester. Students can view and print their electronic invoices (bills) via the Student Service Center (<https://myclarion.clarion.edu>) approximately 30 days prior to the start of the semester. Winter and summer session invoices are available approximately 10 days prior to the start of these sessions.

Monthly Payment Plan

Clarion University offers an alternative to paying your bill in full via our interest free monthly payment plan. There are 12-month and 10-month payment plan options available to choose from at <https://clarion.afford.com>. A small enrollment fee is the only cost and no credit approval is required. Interested students may obtain additional information about the payment plan on the SFS website: www.clarion.edu/finaid.

Financial Aid Refunds

Refunds from excess financial aid are not available to students until after drop/add is over each semester. The quickest way to gain access to any financial aid refunds you may receive from excess financial aid disbursements is to sign up for direct deposit online on the MyClarion portal. You can get step-by-step directions on how to do this at: <http://clarion.edu/267166.pdf>.

Financial Aid Application

Financial assistance is available to students in the form of scholarships, grants, loans and student employment. Detailed information and application forms may be secured from the SFS Office. Clarion urges all students to complete an annual Free Application for Federal Student Aid (FAFSA) prior to May 1st each year via the federal website: www.fafsa.ed.gov. Please indicate Clarion's Title IV code (003318) on the FAFSA form.

Academic Year

At Clarion University, an academic year is comprised of a Fall and Spring semester, during which time a full-time student is expected to complete at least 24 credits. The period of time school is in session consists of 30 weeks of instruction.

Financial Aid Programs

Federal Pell Grant

Pell is the foundation of all aid packages. It is only available to undergraduate students who have not yet earned their first bachelors degree. Eligible students must demonstrate financial need, as determined by the FAFSA application. Congress sets annual minimum and maximum award amounts for Pell Grant awards.

Federal TEACH Grant

Teacher Education Assistance for College and Higher Education (TEACH) grants are based on program of study and cumulative grade point average (3.25 is required) rather than financial need. In order to qualify for this grant at Clarion, students must be enrolled in a bilingual education, foreign language, mathematics, reading specialist, science or special education degree program and have reached their junior/senior year grade level. Applicants must also provide documentation that they have passed their PRAXIS/PAPA exams.

Interested students should complete a TEACH Grant Preliminary Application (available in the SFS Office). Once approved for the grant, students must complete an annual Agreement To Serve document in which they agree to teach for at least four academic years within the first eight calendar years of completing their TEACH eligible degree. NOTE: TEACH recipients who fail to complete this service obligation will have their TEACH grants convert to 6.8 percent Federal Direct Unsubsidized Stafford Loans. Interest will be assessed retroactive to the date the first TEACH grant disbursed to their account.

Federal SEOG Grant

Federal Supplemental Educational Opportunity Grants (SEOG) are need-based, campus based grants awarded by the SFS Office to Pell eligible students. There is no separate application for the SEOG grant program but, a current year FAFSA form must be on file to determine financial need and Pell grant eligibility. Awards range from \$100-\$500 per year and are targeted to students who demonstrate significant unmet need who also have very small or zero expected family contributions.

PHEAA State Grant

The Pennsylvania state grant is need based, as determined by the PHEAA's methodology, in conjunction with the federal FAFSA form. Eligible students must be residents of Pennsylvania who have not yet received their first bachelor's degree. Students must have their FAFSA form submitted by May 1st each year to be considered for this grant. First time students must also complete a student status form at www.pheaa.org. Award amounts vary based on funding levels. Currently students who enroll for more than 50 percent of their classes online in any given semester are not eligible for the state PHEAA grant.

Bachelor degree seeking students are limited to no more than four years of full time funding (eight semesters) and associate degree students are limited to two years (four semesters). PHEAA requires full time students to successfully complete 24 credit hours each academic year in order to qualify for the grant in future terms. Part time students are required to pass at least six credits each semester in which they receive a part-time grant.

Federal Perkins Loan Program

Perkins is a need-based, campus-based loan program for students enrolled at least half-time who demonstrate considerable unmet need. Students must have the current year FAFSA form on file and must also complete a Perkins Loan Application, available in the SFS Office each year after April 15th. Perkins loan amounts may vary, but \$1000 per semester is the maximum award for most Clarion students.

The five percent interest loan is non-interest bearing while the student is enrolled at least half-time at the university. Borrowers have a one-time-only nine month "grace" period, during which no payment is required, after they leave Clarion. The standard repayment period of 10 years requires borrowers to make quarterly (four times per year) payments with interest accruing at five percent.

Federal Direct Stafford Loan Program

Stafford Loans provide a maximum of \$5,500 per academic year for first-year students, \$6,500 for second-year students (30-59 credits), and \$7,500 for third, fourth and fifth-year students (60 credits and higher) not to exceed an aggregate undergraduate level of borrowing of \$31,000 in total. NOTE: Students who are determined by their current year FAFSA to be "independent", are eligible to borrow additional "unsubsidized" loan amounts: \$4,000 for first and second-

year students and \$5,000 for third and fourth-year (60 credits and higher). Independent students cannot exceed an aggregate loan limit of \$57,500 during their undergraduate enrollment at Clarion.

Borrowers who demonstrate unmet financial need may qualify for a portion of these annual loan amounts to be subsidized (i.e. interest free) during their enrollment at Clarion. However new borrowers who reach the 150 percent of the published length of their educational program, lose their eligibility for the interest subsidy benefits on all previously disbursed subsidized loans that they received on or after 7/1/13.

Students must have a current year FAFSA on file, as well as a Master Promissory Note (MPN) and Entrance Loan Counseling. The one-time-only MPN and entrance counseling are completed online at: www.studentloans.gov.

Stafford loan interest rates vary by year and type of loan (subsidized vs. non-subsidized). However, there is an 8.25 percent maximum interest rate cap on all Direct Stafford Loan programs. Please check the SFS website at www.clarion.edu/finaid to determine the current interest rate for these loans.

Repayment for Direct Stafford Loans begins six months after the student ceases at least half-time enrollment at the university. During this six month "grace" period, no payment is required. However, monthly repayments start at the end of the one-time-only grace period and extend over a ten year repayment period. Loan deferments are available to eligible students--students should contact their federal loan servicer to obtain additional information if they experience financial hardships during their 10 year repayment period.

Federal Direct Parent Loan for Undergraduate Students (PLUS)

PLUS loans are available to parents of dependent students and are not based on financial need. Parents may choose to borrow up to the student's cost of education minus any other financial aid awarded for the year. There are no aggregate loan limits for this program. The parent who applies for this loan must be the student's natural or adoptive parent. A stepparent can apply only if his/her information is provided on the current year FAFSA.

Students must have a current year FAFSA on file and parents must complete both a PLUS loan application and a PLUS loan Master Promissory Note (MPN) on the www.studentloans.gov website. Eligible students must be enrolled at least half time to qualify for this loan. Eligible parents must demonstrate no adverse credit history in order to qualify for the loan. NOTE: dependent students' whose parents are denied access, based on credit history, to participate in the Direct PLUS loan program, are eligible for the additional unsubsidized loan amounts typically restricted to independent students (see information above under Stafford Loans).

PLUS loan interest rates may vary but there is a nine percent maximum cap. Please check the SFS website at www.clarion.edu/finaid to determine the current interest rate for the PLUS loan.

Parents may request an in-school deferment during the PLUS application process. This permits them to waive the requirement to begin repayment no later than 60 days after the loan is fully disbursed to the student's account. Parents have 10 years in which to repay the loan once their deferment expires and/or the loan is fully disbursed to the student.

Clarion University Revolving Loan

This loan fund may only be utilized for educational purposes (books, etc.) and is available to Clarion students who are enrolled on campus at least half time (six credits) and do not currently have a financial hold on their account. On-line students are not eligible to participate in this loan program.

Students who wish to borrow money from this fund to purchase books at the University Book Store must complete a Promissory Note at the Book store within the first two weeks of the semester. Students who need funds for other educational related costs should contact the Director of Student Financial Services in B-16 Carrier Hall to request funds and/or complete a Promissory Note. Loan amounts may vary, but are typically restricted to no more than \$350.

The loan is interest-free but must be repaid in its entirety no later than 30 days from the date of issue. Financial aid funds can be utilized to cover this outstanding balance. However, if a borrower does not repay the loan within this time period, the outstanding balance of any unpaid portion will be posted to the student's university account, along with a \$25 late fee. Also, a registration hold will be placed on the student's account until such time as the loan balance is paid in full.

Employment

Employment on a part-time basis is available to the extent that funds are provided by the federal government and the institution. The assignment of students to on or off-campus positions is generally based on financial need. Students interested in student employment should review the university's Career Services website at www.clarion.edu/72668/ to identify employment opportunities.

All student employment programs require eligible students to maintain a least half-time enrollment (six credits) during the academic year. Participating students must be paid at least the current federal minimum wage rate and receive their pay on a bi-weekly basis.

Federal Work-Study Program

The university participates in the Federal Work-Study Program which permits students with unmet financial need to work while classes are in session. Eligible students must have a current year FAFSA on file. Participating students typically work no more than 10-15 hours per week (as determined by the employer) during the academic year.

State (Institutional) Employment Program

Students participating in this program do not need to demonstrate unmet financial need nor is a current year FAFSA required. Hours are typically limited to no more than 10-15 hours per week during the academic year (as determined by the employer).

Veterans Benefits

Clarion University is approved to offer training under the various GI Bills. Students who are entitled under one of these bills should contact the Veterans' Counselor, in the SFS Office, immediately after being accepted for admission to the university in order to secure additional instruction. This procedure is necessary to ensure students receive their monthly benefits. Please contact the SFS Office, B-16 Carrier Hall, at 1-800-672-7171, opt#2 for additional information.

Conditions Which Accompany Financial Aid

In order to continue receiving financial aid following initial enrollment at Clarion University of Pennsylvania, students must meet certain conditions each year. One such condition requires students to enroll at least part-time (six credits) for every aid program but the federal Pell Grant program. Also, all federal and state aid applicants must reapply for aid using the FAFSA form each year.

Full time baccalaureate students may receive assistance from most federal Title IV programs for up to six years of attendance or 180 semester hours; full time associate degree students are limited to three years of attendance or 90 semester hours. State programs provide baccalaureate students with up to four years of potential funding and associate degree students with a maximum of two years of funding.

Federal and state regulations require students to maintain "satisfactory academic progress". In order to demonstrate satisfactory academic progress, part-time and full-time students must successfully complete at least 67 percent of all cumulative attempted credits to date as measured on an annual basis. This percentage is calculated and reviewed each academic year at the end of the spring term, prior to the student's receipt of any additional federal financial aid monies for the future academic year.

Undergraduate students, regardless of enrollment status, who fail to achieve a cumulative GPA of at least a 2.00, are normally placed on probation or suspension by the Office of Academic Affairs. If a student is suspended by the Office of Academic Affairs, they do not qualify for additional federal aid until such time as they may be reinstated to the university. NOTE: If the student appeals the suspension action and is permitted to return to Clarion, he/she will receive additional federal financial aid ONLY if he/she also has successfully earned 67 percent of all cumulative attempted credits.

Full time PHEAA state grant recipients must successfully complete at least 24 new semester hours each year to be eligible for additional state grant monies for the upcoming award year. Part-time PHEAA grant recipients must successfully complete at least six credits during each semester in which they received a grant to maintain future award year eligibility.

Federal Direct Stafford Loan recipients must successfully complete a cumulative total of 30 credit hours to qualify for "second year" loan limits. In order to qualify for "third/fourth or fifth year" level loans, recipients must successfully earn a cumulative total of 60 or more credit hours.

Appeal Procedure

Students denied financial aid for any reason may appeal the denial as follows:

1. Write to the Student Financial Services Office (SFS), Clarion University, 840 Wood Street, Clarion, PA 16214, noting the denial and stating the reasons why financial aid should not be denied. NOTE: If the student is appealing a lack of satisfactory academic progress (SAP) determination, specific directions on the appeal process are available at: www.clarion.edu/sapp.
2. SFS Office staff will review the denial in terms of information provided by the student.
3. Following the review, the SFS Office staff will inform the student of the status of the appeal (granted/declined).

Refund Policy

Students receiving financial assistance from Clarion University are subject to the same refund policies as those who are not aid recipients.

Federal Title IV Regulations dictate the return of federal aid monies. If a recipient of Title IV funds (Pell Grant, SEOG Grant, TEACH Grant, Direct Stafford Loan) withdraws from school after beginning attendance, a portion of the Title IV funds may have to be returned to the U.S. Department of Education (USDE). Title IV funds are awarded to a student under the assumption that the student will attend school for the entire period for which the assistance is awarded. When a student withdraws, the student may no longer be eligible for the full amount of the Title IV funds that the student was originally scheduled to receive.

If a student withdraws before completing 60 percent of the semester, the percentage of Title IV funds earned is equal to the percentage of the semester completed. The university is required to return the unearned portion to USDE.

The percentage of payment period or term completed up to the withdrawal date is determined by dividing the total number of days enrolled up to the date of withdrawal, by the total days in the "standard" payment period or term. (Any break of five days or more is not counted as part of the days in the term.) This percentage is also the percentage of earned aid.

Funds are returned to the appropriate federal program based on the percentage of unearned aid using the following formula: aid to be returned = (100 percent of the aid that could be disbursed minus the percentage of earned aid) multiplied by the total amount of aid that could have been disbursed during the payment period of the term.

If a student earned less aid than was disbursed, the institution would be required to return a portion of the funds and the student would be required to return a portion of the funds. Please note, when Title IV funds are returned, the student borrower may owe a debit balance to the institution.

If a student earned more aid than was disbursed to him/her, the institution would owe the student a post-withdrawal disbursement which must be paid within 120 days of the student's withdrawal.

The institution must return the amount of the Title IV funds for which it is responsible no later than 45 days after the date of the determination of the date of the student's withdrawal.

Refunds are allocated in the following order:

- Unsubsidized Direct Stafford Loans
- Subsidized Direct Stafford Loans
- Federal Perkins Loans
- Federal Direct PLUS Loans
- Federal Pell Grants
- Federal SEOG Grants

If a student withdraws after completing 60 percent of the semester, the percentage of Title IV funds earned is 100.

NOTE: Students, who request a 100 percent withdrawal after the term is completed, will be required to repay all refund amounts they received from excess financial aid during the term in question. This repayment must happen before the withdrawal request is finalized.

Students who withdraw after the semester begins or reduce their credit hour load should contact the Student Financial Services Office to determine the impact on their financial aid awards.

NOTE: The university refund policy for tuition and fees is different from the Federal Title IV regulations.

Clarion University Undergraduate Student Scholarships

Scholarship Administrator

Admissions Building

Telephone: 814-393-2306

E-mail address: admissions@clarion.edu

Website: www.clarion.edu/scholarships

Clarion University's endowed, annual, and athletic scholarships provide support to more than 600 students yearly. Scholarships are available to new incoming students as well as currently enrolled students. The following information illustrates the many scholarship opportunities available to students attending Clarion University.

Most of Clarion's scholarships are funded by private support through the Clarion University Foundation, Inc., and are overseen by the Office of Scholarship Administration, within the Division of Enrollment Management. Clarion University's Scholarship web pages explain how students are considered for specific scholarship awards, i.e., via automatic consideration, scholarship committee, department decision, and so on. Please note deadlines and scholarship contact persons, when indicated, as well as certain preferences indicated by some donors.

A current list of Clarion University Scholarships can be found on the Web at www.clarion.edu/scholarships. Scholarships are organized on the Website under the following headings:

Student Scholarships: Search for scholarships for incoming students and current students; use this tool to find scholarships for specific majors.

Other scholarships for incoming freshmen: See a list of scholarships for incoming freshmen that do not specify a major as an eligibility requirement.

Other scholarships for current students: See a list of scholarships for current students that do not specify a major as an eligibility requirement.

Athletic Scholarships: See a list of scholarships available to athletes attending Clarion University.

Venango College Scholarships: See a list of scholarships for students attending Venango College of Clarion University; note: if you are a nursing major, click on the “Student Scholarships” link above to search for nursing scholarships for incoming freshmen and current students.



Academic Information



Undergraduate Degree Programs

Clarion University offers combined academic and professional curricula leading to the undergraduate degrees of Bachelor of Applied Science, Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Science, Bachelor of Science in Business Administration, and Bachelor of Science in Education, Bachelor of Science in Nursing, as well as certification for teaching in the public elementary, middle, and secondary schools of the Commonwealth of Pennsylvania.

Additionally, it offers associate degree programs in Administration Technology, Allied Health, Arts and Sciences, Business Administration, Criminal Justice, Industrial Technology, Nursing, Paralegal Studies, Rehabilitative Services and Respiratory Care through Venango College in Oil City.

Program Listing

- Key:
- * Concentration only
 - ** Certification only
 - *** Minor program
 - ❖ Post Baccalaureate Certificate
 - Letter of Completion

Updated program information is available at www.clarion.edu/academic

- Accounting (B.S.B.A.)
 - Accounting***
- Administration Technology (A.A.S.)
- Allied Health (A.S.) (B.S.)
 - Leadership*
- Anthropology (B.A.)
 - Anthropology***
 - Latin American and Caribbean Studies***
- Art (B.A., B.F.A.)
 - Art***

- Art History***
- Graphic Design*
- Arts and Sciences (A.A.)
- Athletic Coaching***
- Biology (B.S.)
 - Ecology and Evolutionary Biology***,*
 - Environmental Biology (B.S.)
 - Medical Technology (B.S.)
 - Molecular Biology/Biotechnology (B.S.)
 - Molecular, Cell, Organic Biology***
- Business Administration (A.S.)
 - Business: Pre-MBA Track***
 - Business: Traditional Track***
- Chemistry (B.S.)
 - Biochemistry*
 - Chemistry***
 - Chemistry/Business*
- Communication (B.S.)
 - Speech Communication***
- Computer Science (B.S.)
- Computer Science***
- CPA Exam Eligibility Certificate ❖
- Criminal Justice (A.S.)
- Early Childhood Education (A.S.)
- Early Childhood Education (B.S.Ed.), certification for Pre K-4
 - Early Childhood-Special Education dual program
- Economics (B.A.)
- Economics, Business (B.S.B.A.)
 - Economics***
- Engineering Coop. Programs
 - Engineering/Chemistry*
 - Engineering/Mathematics*
 - Engineering/Physics*

- English (B.A.)
 Literature***
 Creative Writing***
 Professional Writing and Rhetoric***
 Writing***
- Environmental Geoscience (B.S.)
- Finance (B.S.B.A.)
 Finance***
- Film Studies***
- French***
- Geography
 Environmental Geoscience***
 Geographic Information Science***
 Geography***
- Geology (B.S.)
 Geology***
- Gerontology***
- History (B.A.)
 Ancient Mediterranean Studies***
 Black Studies***
 History***
- Human Resources Management (B.S.B.A.)
- Industrial Technology (A.A.S.)
- Information Systems (B.S.)
 Information Systems***
- International Business (B.S.B.A.)
 International Business***
- Leadership - Entrepreneurial Track***
- Leadership - Interdisciplinary Studies***
- Liberal Studies
 Communication*
 Education*
 English*
 Geography and Sustainable Planning*
 Global Understanding*
 Library Science*
 Theatre*
 Women and Gender Studies*
 Writing*
- Library Science (B.S.Ed.), certification for grades K-12
- Management (B.S.B.A.)
- Marketing (B.S.B.A.)
 Marketing***
- Mathematics (B.S.)
 Mathematics***
 Mathematics/Statistics***
- Medical Imaging Sciences (B.S.)
 Medical Dosimetry*
 Nuclear Medicine*
 Radiation Therapy*
 Radiologic Technology*
 Ultrasound*
- Mid-Level Education (B.S.Ed.), certification for grades 4-8
- Mid-level (B.S.Ed.)/M.Ed. with Special Education concentration
- Military Science
 Leadership***
- Music***
- Nursing (A.S.N., RN-B.S.N., BSN - 4 yr.)
- Paralegal Studies (A.S.)
- Philosophy (B.A.)
 Philosophy***
- Physics (B.S.)
 Astrophysics*
 Nanotechnology***
 Physics***
 Environmental Sustainability: Science and Policy***
- Political Science (B.A.)
 Political Science***
- Pre-MBA Foundation Certificate ❖
- Psychology (B.A., B.S.)
 Psychology***
- Real Estate (B.S.B.A.)
- Rehabilitative Sciences (B.S.)
 Addictions*
 Court and Community Services*
 Developmental Disabilities*
 Gerontology*
- Rehabilitative Services (A.S.)
- Respiratory Care (A.S.)
- Secondary Education (B.S.Ed.), certification for grades 7-12
 Biology
 Chemistry
 Earth and Space Science
 English
 General Science
 Mathematics
 Physics
 Social Studies
- Sociology (B.A.)
 Sociology***
 Social Work***
- Sociology/Psychology (B.A.)
- Spanish Education (B.S.Ed.)
- Special Education Dual PreK-8/7-12 (B.S.Ed.)
 Early Childhood-Special Education dual program
 Special Education***
 Diagnosis and Intervention Strategies for Students with Mathematical Disabilities***
- Speech Pathology and Audiology (B.S.) pre-professional degree
 Speech Pathology and Audiology***
- Sports Management***
- Technology Leadership (B.A.S.)
- Theatre (B.A., B.F.A.)
 Acting****
 Design/Technical Director*
 Musical Theatre*
 Technical***
- Web Development***
- Women and Gender Studies***
- World Languages - Spanish (B.A., B.S.Ed.)
 Spanish***
- *academic concentrations

Academic Opportunities

Cooperative Engineering Program

Coordinator: John Heard, Ph.D.

185 STC

Telephone: 814-393-2573

E-mail address: jheard@clarion.edu

Department Faculty: V. Aravind, C. Childers, J. Heard, J. Touster

Clarion University has cooperative engineering agreements with the School of Engineering at the University of Pittsburgh and with the Case Institute of Technology of Case Western Reserve University. Students in this program attend Clarion for three years and one of the engineering schools for two years, earning a B.S. degree in physics, chemistry, or mathematics from Clarion and an engineering degree from the engineering school. Students with a cumulative 3.0 GPA are virtually guaranteed admission to the engineering school. Students with a cumulative GPA between 2.75 and 3.0 are considered for admission to the engineering school.

Honors Program

Dr. Rod Raehsler, Director

B-3 Ralston Hall

Telephone: 814-393-2585

E-mail address: honors@clarion.edu

Website: www.clarion.edu/honors

Clarion University's Honors Program is a community of academically talented students committed to seeking excellence in all areas of higher education. The Honors Program is for those individuals who desire professional success, demand academic excellence, and expect to create the future. The curriculum promotes development of life skills targeted for successful career outcomes. The Honors experience extends beyond the walls of the traditional classroom. Courses have included contemporary topics in the arts and humanities, sciences, and social sciences. Co-curricular themes prepare our Honors Program students to assume leadership roles.

Honors courses satisfy general educational requirements. Courses are taught as special topics and faculty instructors are recruited for their scholarly expertise. Students take a six-credit linked English and speech class and a three-credit humanities course in the freshman year. In the sophomore year, students take a three-credit mathematics or science course and a three-credit social sciences course. As juniors, students take a seminar that culminates in a project prospectus for the capstone experience. Honors 450 is the Senior Project delivered in a university-wide presentation. The following program standards must be maintained at the end of each academic year:

• Freshman Year	9 program credits	3.0	GPA
• Sophomore Year	15 program credits	3.25	GPA
• Junior Year	18 program credits	3.4	GPA
• Senior Year	18-plus program credits	3.4	GPA

Honors students major in every department within the university and receive pre-professional advisement. All

course substitutions or changes in academic programs must be approved by the Honors Program director. Successful completion of the program is recognized at Commencement and is also noted on the official transcript. The Honors Program houses the Office of National Scholarship Advisement to promote and support applications for nationally competitive awards. Honors students are eligible for academic scholarships.

Each year a limited number of freshmen are selected for the Honors Program. To be considered for Honors Program admission, entering freshman must have a minimum SAT score of 1150 or equivalent ACT scores, achieve a minimum grade-point average of 3.65 or 92 percent, successfully complete an interview, and provide a short essay. Undergraduate students already enrolled or transfer students may also apply. If a student should fail to maintain the required GPA and course progression, the student will be placed on probation and have one semester to meet the requirements. A student who fails to achieve the required GPA and course progression by the end of the probationary semester will not be allowed to continue in the Honors Program or to continue to receive an Honors scholarship.

Program suspension may be appealed. A letter of appeal must be submitted to the Honors Program director within two weeks of the date in the letter of notification of termination in the program. The appeal will be reviewed by the Honors Council and action taken before the beginning of the following semester. The credit/no record option will not be available for courses carrying Honors credit.

Honors Program Outcomes

1. Effective Communication skills (writing & speaking).
2. Critical Reasoning.
3. Practical application of the Liberal Arts.
4. Value & Mastery of Independent Research.
5. Professional dissemination.

ROTC-Military Science

Bret Rogowitz, Program Director

Army Reserve Officers' Training Program and

Minor in Leadership-Military Science Track

Thorn 2

Telephone: 814-393-2527

E-mail address: brogowitz@clarion.edu

Website: www.clarion.edu/rotc

In partnership with the Military Science Department at Slippery Rock University of Pennsylvania (SRU), Clarion University offers qualified students the opportunity to earn a commission as an officer in the United States Army. The Reserve Officers' Training Corps (ROTC) Program provides leadership training that students can apply throughout their careers regardless of major.

At Clarion University, your path to leadership excellence starts right here. Our on-campus program offers specialized training through both course and co-curricular activities. Whether you participate for a semester, two years, or a full four years, you'll learn leadership and management skills. Participation is open to all students, and there are a variety of opportunities for scholarships and financial aid.

Study Abroad—International Education

Lynn Hepfl, Program Director

B-8 Ralston Hall

Telephone: 814-393-2340

E-mail address: intlprograms@clarion.edu

Website: www.clarion.edu/international

Clarion University, as part of its mission to serve the educational needs of the citizens of the Commonwealth of Pennsylvania, is dedicated to strengthening the international and intercultural dimensions of its academic programs and activities. The leadership of the university recognizes the interdependence of nations and peoples throughout the world.

Clarion University is committed to providing a variety of study abroad and exchange programs. Study abroad programs offer students the opportunity to maintain enrollment at Clarion while attending an international university. Programs may be offered in both foreign and English language settings and may vary in duration.

The Office of International Programs (OIP) administers and provides services and programs inclusive of two major areas: International Students and Study Abroad. The study abroad-related services and programs include but are not limited to: promotion of student and faculty exchanges, development of sustainable partnership with international universities, and the coordination of student and exchange scholar immigration.

Applications for study abroad and the International Scholars Award are located in the Office of International Programs, B-8 Ralston Hall. Additional information is available at www.clarion.edu/studyabroad.

Summer Session

The Summer Session is maintained for the benefit of regular Clarion University students, incoming freshmen, students in good academic standing at other institutions, graduates of approved colleges and universities, teachers who wish to meet certification requirements, certain high school students, and any adults who wish to attend classes. In addition to the regular undergraduate and graduate course offerings, there are also workshops and special programs.

Clarion University and the surrounding area offer numerous opportunities for summer activities. There is one three-week session and two consecutive five-week sessions. Registration begins each spring; schedules are available prior to registration each spring.

Winter Intersession

The Winter Intersession was established to enable students to obtain additional credits outside the regular semesters. Only on-line classes are offered and students may take no more than one class during the Winter Intersession.

Classes run for just over three weeks. Dates are noted in the academic calendar. The session follows the standard add/drop refund period. Only limited library, student services, and office services (registrar, bursar, financial aid, etc.) are provided.

Veterans' Affairs

Clarion offers the regular degree curricula to veterans and children of deceased veterans.

Credit for educational experience in the armed services is allowed on the basis of the recommendations of the American Council on Education.

The university grants a maximum of four credits in health and physical education for active military service of four months or more with honorable discharge or continued reserve status. Credit is normally given for HPE 111 (two credits), and two HPE activity courses of one credit each. To ensure credit is granted, veterans should bring an honorable discharge document (Form DD214) to the Office of the Registrar, 122 Carrier.

Visiting Student Program

The Visiting Student Program provides students in good academic standing who have completed a minimum of 12 credits in residence the opportunity to take advantage of courses, programs, or experiences offered at the other 13 institutions of the Pennsylvania State System of Higher Education. These experiences require advance approval of the student's department chairperson and college dean and must not also be offered at Clarion University. Students may take a maximum of 24 credits via the Visiting Student Policy.

Applications and additional information are available at the Office of the Registrar, 122 Carrier Administration.

Center for Student Success

Chris Hearst, M.S.

118 Ralston Hall

Telephone: 814-393-2249

E-mail address: hearst@clarion.edu

Website: www.clarion.edu/academicsupport

The Mission of the Center for Student Success is to support the retention and graduation of students enrolled at Clarion University of Pennsylvania and its pre-college programs, through a variety of support services that promote academic success, enhance personal development, and provide an equitable educational experience leading to graduation.

Tutoring and Testing

The Center provides services to students who may encounter some form of difficulty with their courses and/or need instruction in basic skills development. The Center has two components, the Tutoring and Testing Center and the Learning Skills Lab. The two components offer students a comprehensive approach to the development of skills necessary at the collegiate level to ensure academic success. All services are free of charge. Services are available by either appointment and/or by walk-in.

Content tutoring is offered for most lower-level subject areas providing students with the understanding of basic concepts, ideas, and mechanical processes. Tutoring sessions give students the opportunity to secure in-depth clarification and to identify and apply specific reading and study skills required in their academic programs. Most tutoring sessions are one-to-one or small group instruction.

Learning skills instruction provides students with instruction in basic skill development to become independent learners. The Learning Skills Lab staff instructs students in practical study techniques. Students' reading and study skills are diagnosed to identify individual strengths and weaknesses. Once skill areas are diagnosed, a planned program of instruction is implemented using a variety of instructional aids as well as one-to-one instruction. Students can receive academic assistance in the following areas: time management, note taking, reading comprehension, test taking, vocabulary development, critical thinking skills, and library research.

Disability Support Services

Chris Hearst, M.S., Director

118 Ralston Hall
Telephone: 814-393-2249
E-mail address: hearst@clarion.edu
Website: www.clarion.edu/dss

The Office of Disability Support Services (DSS) functions as the university's primary vehicle for assisting students with documented disabilities. Students must initiate the process of receiving accommodations by contacting the coordinator of Disability Support Services, located in 102 Ralston Hall to discuss their need for disability related services. Also, as part of the university's registration process, students are provided with a confidential questionnaire that enables them to notify the university of possible accommodations and services that are related to a disabling condition. In addition, students must contact the Office of DSS to submit proper documentation and discuss requested accommodations. Students should contact the DSS office far enough in advance to allow sufficient time to coordinate accommodations.

Information on services for students with disabilities may be obtained by contacting the coordinator of Disability Support Services, 102 Ralston Hall, 814-393-2095. Additional information can also be found in the section, "Nondiscrimination on Basis of Disability" on page 31.

Inquiries regarding services and facilities accessibility may also be obtained by contacting the Assistant to the President for Social Equity, 207 Carrier Hall, 814-393-2109.

Student Support Services

The TRIO Student Support Services Program is available to students with disabilities who desire additional help in the form of academic advising, freshman seminars, informational workshops, and assistance with study skills. Students accepted into the program must meet eligibility requirements established by the institution and the U.S. Department of Education. Students interested in obtaining information about the program should contact the director, Student Support Services Program, 104 Ralston Hall, 814-393-2347.

Educational Talent Search Program

Rhonda J. McMillen-Toth, M.S., Director

219 Ralston Hall
Telephone: 814-393-2071
E-mail address: rmcmillen@clarion.edu
Website: www.clarion.edu/ets

As part of Clarion University's mission to serve community residents, Educational Talent Search (ETS) serves 900 participants annually in Clarion, Jefferson, and Venango counties. Talent Search assists people age 11-27 to complete secondary education programs and enroll or re-enroll in post-secondary education.

ETS provides such services as study skill instruction, campus visits, entrance exam preparation, post-secondary and career planning, financial aid information, cultural enrichment programs, and leadership training. Participants are selected based upon eligibility criteria established by the U.S. Department of Education, the program's funding agent.

TRIO Student Support Services Program

Shelly Silvis, M.Ed., Director

104 Ralston Hall
Telephone: 814-393-2347
E-mail address: ssilvis@clarion.edu
Website: www.clarion.edu/trio

Students admitted to the TRIO Student Support Services Program are provided with developmental services which may include learning skills assistance, academic advising, and career and financial aid counseling. During the academic year, workshops and on-going services which focus on academic survival and learning-to-learn activities are offered. A reserved section of AE 100: Reading/Study Skills, is also offered to program students. Students accepted into the program must meet eligibility requirements established by the institution and the U.S. Department of Education.

TRIO Upward Bound Program

Rhonda J. McMillen-Toth, M.S., Director

219 Ralston Hall
Telephone: 814-393-2071
E-mail address: rmcmillen@clarion.edu
Website: www.clarion.edu/upwardbound

As part of the university's commitment to serving the community, the TRIO Upward Bound Program is designed to enhance the overall potential for college success in selected high school students from Clarion, Jefferson, Mercer and Venango counties. The program operates in two segments—the academic year component and the residential summer academy. Services such as tutoring, career exploration, and academic counseling are provided year-round. The six-week summer academy offers participants the opportunity to experience life on campus at Clarion University while receiving academic instruction, experiencing a variety of cultural and social activities, and participating in educational travel. Participants are chosen based on eligibility criteria established by the program in accordance with the U.S. Department of Education.

Minority Student Services

Rogers Laugand, Director

277 James Gemmell Student Complex

Telephone: 814-393-2043

E-mail address: rlaugand@clarion.edu

Website: www.clarion.edu/mss

The Office of Minority Student Services provides programs and opportunities for members of underrepresented groups, including African Americans, Hispanic Americans, Asian Americans and Native Americans, to share their cultures and experiences with each other and with members of other groups. The office supports a number of initiatives and groups, including: Black Student Union, Leadership Institute, Academic Excellence Program, UMOJA publication, Eyes on the Prize, Mentoring Program, Annual Minority Student Recognition Dinner, Minority Student Services Leadership Council, Community Outreach Programs, Men of Color Think Tank, Asian Students International Association, Women United and Project SOAR (a retention program for state system partnership programs).

Student Orientation, Acclimation and Retention (SOAR)

Erin Schuetz, Director

111/112 Ralston

Telephone: 814-363-1766

E-mail address: eschuetz@clarion.edu

Website: www.clarion.edu/soar

The SOAR program is a collaborative effort of the divisions of Academic Affairs and Student and University Affairs. It builds a foundation for first-year students through activities supporting retention initiatives. First-year programs include orientation and Discovery Weekend. The SOAR staff is also involved in planning Activities Day, Around Clarion in 80 Days and Family Day events.

University Advising Services Center

Joseph Croskey Director

Academic Advising

144B Ralston Hall

Telephone: 814-393-2091

E-mail address: advising@clarion.edu

Website: www.clarion.edu/advising

University Advising Services Center serves as the primary source for all undecided academic advising. The office provides drop-in academic advising to all university students. Advising Services also serves as a resource for all faculty for professional development and answers to advising questions.

Purpose

To assist students in their academic growth and development; promote advisor-advisee relationships characterized by trust, mutual respect, and openness; and establish a climate of purposeful learning which maximizes student growth and minimizes student withdrawal.

Advisor/Advisee Roles and Responsibilities

As an advisee you should:

1. keep in touch with advisor
2. make and keep appointments; email or call if changing an appointment
3. come with specific questions in mind
4. ask about other sources of information
5. be open concerning academic work, study habits, academic progress, etc.
6. build a class schedule which meets necessary academic requirements and is free of time conflicts
7. make decisions concerning careers, choice of majors, and selection of courses

Your advisor should:

1. post office hours
2. keep appointments or call if it is necessary to change or cancel an appointment
3. provide accurate and specific information
4. suggest other sources of information
5. listen and help solve problems
6. check schedule for appropriate selection of courses
7. suggest options concerning careers, choice of majors, and selection of courses

The Writing Center

Christopher McCarrick, D.A., Director

Office: 210C Davis Hall

E-mail address: cmccarrick@clarion.edu or wcdirector@clarion.edu

Website: www.clarion.edu/wc

Renae Applegate House, Ph.D., Writing Center

Coordinator, Venango Campus

321 Montgomery Hall, Oil City

Telephone: 814-676-6591, ext. 1341

E-mail address: rhouse@clarion.edu

The Writing Center supports all students in their efforts to become better writers and provides assistance with writing assignments in all subject areas.

The Writing Center is not a proofreading or editing service. It is a support service for any writer who values feedback as part of the learning/writing process.

Consultants at The Writing Center assist students at whatever stage of writing they need assistance. Writing consultants aim to motivate rather than control a writer by asking questions, offering feedback, and encouraging writers to talk through the thinking and planning process.

Writing consultants assist writers at the level of the writer's ability; therefore, written work reflects each writer's ability as well as personal style. In this way, the center assures faculty that writing turned in for evaluation is the student's work, and not that of a writing consultant.

Writing consultants are graduate and undergraduate students who undergo a careful screening process and participate in weekly training sessions. Writing consultants who meet training and tutoring hour requirements receive College Reading and Learning Tutor Certification.

Clarion Online

Lynne M. Lander Fleisher, Director

102 Carrier Hall
Telephone: 814-393-2778
E-mail address: lfleisher@clarion.edu
Website: www.clarion.edu/online

Clarion University, combines its academic tradition of excellence with online educational technology to provide classes and programs that are—*accredited and accessible anywhere*. Information on the availability of specific degrees online is indicated under each of the degree program areas. A list of current course offerings and online undergraduate programs is available on the Web at www.clarion.edu/online.

Off-Campus Courses and Programs

A variety of classes, delivered by way of Interactive Video Conferencing (ITV) in specialized programs, are offered around the state at various locations.

Career Development Center

William Bailey, Director

114 Egbert Hall
Telephone: 814-393-2323
E-mail address: careers@clarion.edu
Website: www.clarion.edu/career

Mark Conrad, Coordinator of Career Services, Venango Campus

230 Montgomery Hall
Telephone: 814-676-6591, ext. 1373
E-mail address: mconrad@clarion.edu

Clarion University offers a number of services to assist students with their career plans. The Career Development Center works individually with students and through programs and classroom presentations to assist them in developing life-long career planning and job search skills. Students can obtain career and job search information in person or online.

The Career Development Center provides students with information regarding experiential education opportunities related to their personal interests, course requirements or career exploration needs. The center serves as a clearinghouse for opportunities related to part-time jobs and internships.

The Career Development Center offers a number of resources for students as they prepare to enter the workforce. Students can develop job-search skills by participating in programs and utilizing services. The center also helps students make connections with employers by arranging on-campus interviews, offering an online career services registration and resume posting service, providing a resume search for employers, coordinating a database of employment opportunities and sponsoring a number of career events throughout the academic year.

General Policies

Student Records

Student academic and personal records are confidential in nature and protected by the Family Educational Rights and Privacy Act (FERPA) of 1974. Records shall be released only to appropriate faculty and administrative personnel and to parents and guardians if the student has provided the Office of the Registrar with a signed written release. Release of these records to others, including institutions or governmental and legal agencies, shall occur only upon approval by the student or graduate, or upon subpoena.

Transcripts of academic work are available to the student or graduate at the Office of the Registrar when requested in writing. There is a limit of three transcripts per request per day. No transcript shall be issued to a student who is financially indebted to the college. All enrolled, degree-seeking students are charged a one-time academic records fee which is added to their statement of charges from the Accounts Receivable Office.

Grade Release Policy

The Family Educational Rights and Privacy Act (FERPA) of 1974 prohibits the release of educational records, other than to certain defined exceptions, without the student's consent. Therefore, no transcripts, grades, or GPAs shall be released through a telephone call or via facsimile.

The Office of the Registrar will send grades to parents upon request, if the student has completed a Release of Information form. Grades are available via the Web.

Family Educational Rights And Privacy Act (Ferpa) Notification Statement

The following notification statement is made available to students enrolled at Clarion University to apprise them of their rights concerning access and review of their education records maintained at the university.

These rights afforded to students through the Family Educational Rights and Privacy Act (FERPA) are:

The right to inspect and review the student's education records within 45 days of the day the University receives a request for access. Students should submit to the registrar, dean, chairperson, director or other appropriate University official written requests that identify the record(s) they wish to inspect. The university official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the university official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

The right to request the amendment of the student's education records that the student believes is inaccurate or misleading. Students may ask the university to amend a record that they believe is inaccurate or misleading.

They should write the university official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If the university decides not to amend the record as requested by the student, the university will notify the student of the decision

and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. One exception, which permits disclosure without consent, is disclosure to school officials with legitimate educational interests. A school official is defined as a person employed by the university in an administrative, supervisory, academic or support staff position (including law enforcement and health staff); a person or company with whom the university has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or assisting another school official in performing his or her tasks. The university uses contractors, volunteers, in-service providers to provide university services and functions. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

Upon request, the university may disclose education records without consent to officials of another school in which a student seeks or intends to enroll.

Examples of this are any collaborative programs that Clarion is involved in with sister PASSHE universities. These collaborative programs result in dual enrollment at both schools and Clarion will disclose certain information from the student's education records to the other institution under the program.

The right to file a complaint with the U.S. Department of Education concerning failures by the university to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-4605

Directory Information:

Clarion University shall disclose nothing more than "directory information" without the student's written consent, unless the Family Educational Rights and Privacy Act of 1974 permits the disclosure. One of those permissible disclosures is to faculty who has a legitimate educational interest. The following are considered to be "directory information:" the student's name, local and permanent addresses and telephone numbers, university e-mail address, age, names of parents, major field of study, dates of registered attendance, enrollment status (e.g., undergraduate or graduate; full-time or part-time), participation in officially recognized activities and sports, any degrees and the date they were conferred, any honors and awards received, and the most recent educational agency or institution attended. A student may refuse to permit disclosure of "directory information" by submitting in person to the Office of the Registrar, 122 Carrier Hall, at any time a written statement of such refusal. However, if the student's intent is exclusion of his or her information in the yearly printed directory, they must submit this refusal during the first five days of the Fall Semester.

Nondiscrimination on the Basis of Disability

Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and The Americans With Disabilities Amendments Act of 2008 have provided the framework for protecting individuals with disabilities against discrimination. Clarion University, which is a federally funded institution, must provide for nondiscrimination under its federal grants and programs. Thus, "no otherwise qualified individual with a disability in the United States... shall, solely by reason of her or his disability be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance..." (29 U.S.C. §794(a), see also 29 U.S.C. 706(8), see also 42 U.S.C. §§ 12132, 10102, 12114). An "individual with a disability" has been defined, with certain exceptions, as "any person who (i) has a physical or mental impairment which substantially limits one or more of such person's major life activities, (ii) has a record of such an impairment, or (iii) is regarded as having such an impairment." (See 42 U.S.C. § 12101 et. seq., and 29 U.S.C. § 701 et. seq.)

The applications of these laws at Clarion University ensure:

1. No qualified individual with a disability may be excluded solely by such disability from any course, or courses of study.*
2. Classes may be reassigned for those students with mobility impairments if they are scheduled for inaccessible classrooms.*
3. Academic degree or course requirements may be modified in certain instances to ensure full participation by students with disabilities.*
4. Alternate methods of testing and evaluation are available in all courses offered by the university for students with documented requirements for such methods.*
5. Auxiliary aids are made available by the university for students with impaired sensory, manual, or speaking skills.*
6. Certain campus rules and regulations may be waived if they limit the participation of qualified students with disabilities.*
7. Housing opportunities, employment opportunities, and other opportunities for students with disabilities are equal to those of students without disabilities.*

**Note: The university is only legally obligated to provide academic adjustments to a qualified individual with a disability who has made his or her need known and when it has received the appropriate documentation of such disability to support the adjustment. Thus, the students must provide the university with the necessary medical and diagnostic information to support their requests, including specifying what academic adjustments are needed.*

Information on services for students with disabilities may be obtained by contacting the coordinator of Disability Support Services, 102 Ralston Hall, 814-393-2095. Additional information can also be found in the section, "Disability Support Services" on page 28 of this catalog.

Inquiries regarding services and facility accessibility may also be obtained by contacting the Office of Assistant to

the President for Social Equity, 207 Carrier Administration Building, 814-393-2109.

Academic Policies

Scholarship policy at Clarion University is formulated by the Subcommittee on Academic Standards, which is a subcommittee of Faculty Senate.

Academic Honesty

Students at Clarion University shall maintain a high standard of honesty in scholastic work. As members of the university community, students have a responsibility to be familiar with the conduct regulations found in the university catalogs, *Residence Hall Handbook*; *Student Rights, Regulations, and Procedures Online Handbook*, and other university documents. Among the conduct regulations addressed are acts of academic dishonesty, including plagiarism or cheating on assignments, examinations, or other academic work, or without prior approval of the instructor, submitting work already done for another course.

Students shall avoid all forms of academic dishonesty, including but not limited to:

1. **Plagiarism**—the use of another's words without attribution and without enclosing the words in quotation marks. Plagiarism may also be defined as the act of taking the ideas or expression of ideas of another person and representing them as one's own—even if the original paper has been paraphrased or otherwise modified. A close or extended paraphrase may also be considered plagiarism even if the source is named.
2. **Collusion**—collaborating with another person in the preparation of notes, themes, reports, or other written work offered for credit, unless specifically permitted by the instructor.
3. **Cheating on an examination or quiz**—giving or receiving information or using prepared material on an examination or quiz.
4. **Falsification of data**—manufacturing data, falsification of information, including providing false or misleading information, or selective use of data to support a particular conclusion or to avoid conducting actual research.

Complaints of academic dishonesty may be brought against a student by any member of the academic community. Sanctions for academic dishonesty can range from a failing grade on a particular assignment or examination to dismissal from the university, based on the seriousness of the action and whether it is part of a pattern of academic dishonesty. Sanctions extending beyond a particular course, such as suspension or dismissal from an academic program or from the university, can only be imposed as a result of complaints filed under the Disciplinary Procedures Code and addressed through a formal hearing before the Conduct Board.

Instructors imposing a lowered or failing grade on an assignment or course as a result of a charge of academic dishonesty must inform the student in writing of the charge, as well as provide a copy to the Office of Judicial and Mediation

Services. Students have the right to appeal instructor decisions related to charges of academic dishonesty either (1) through the grade appeal process outlined above (see Student Rights, Regulations, and Procedures Online Handbook), or (2) directly to the university Conduct Board by contacting the Office of Judicial & Mediation Services. A student may not appeal through both procedures. Should a student appeal through the second option, the board will schedule a hearing at which the faculty member will explain the charge and resultant academic action; the student shall then have an opportunity to address the allegation. The decision of the Conduct Board shall be final.

Rather than imposing a lowered or failing grade on an assignment or for a course, an instructor may choose to report an allegation of academic dishonesty directly to the Office of Judicial & Mediation Services. This process automatically results in a formal hearing before the university Conduct Board. Should the board find the student in violation of the academic honesty policy, the student may appeal the decision and/or penalty to the university president. The decision of the president shall be final.

Good Academic Standing

To be in good academic standing at Clarion, undergraduate students must maintain a minimum GPA of 2.00 for both semester and cumulative averages. Individual programs may have higher requirements.

Grading System

A	excellent	AU	audit
B	good	I	indicates incomplete work
C	satisfactory	P	passing
D	poor	W	indicates withdrawal from a course
F	failure	WX	indicates withdrawal from the university
CR	credit	Z	grade not submitted (temporary)
CX	credit by examination		

Incomplete grades are not given unless a student has been in attendance throughout a semester or session. It indicates the work of a student is incomplete and the final grade is being withheld until the student fulfills all the requirements of the course. Incomplete grades are used only when conditions and circumstances warrant and when evidence is presented to justify its being given.

Students receiving incomplete grades are required to make arrangements with the instructor who submitted the incomplete grade to fulfill the requirements of the course by the end of the following semester, or the incomplete becomes a failing grade. Incompletes are not removed by repeating the course.

Calculation of Grade-Point Average (GPA)

Scholastic standing of students is determined on the basis of a grade-point system in which a grade of A equals four grade points per semester hour; B equals three; C equals two; D equals one; and E equals zero. The number of grade points earned in a single course for one semester is determined by multiplying the grade-point value of the course grade by the

number of semester hours in the course; thus, a grade of A in a three-semester-hour course has a grade-point value of 12. A student's GPA at any specific time is determined by dividing the total number of grade points earned in all courses by the total number of grade hours. For example, if a student earned 30 grade points for 15 grade hours of course work in a single semester, his or her GPA for the semester would be 2.00.

At the end of each semester, a student's GPA is calculated for that semester and also for all the course work he or she has taken up to and including the semester just completed. The latter is known as the cumulative GPA.

Scholarship policy for two-year programs requires students earn a minimum GPA of 1.75 their first semester and a 2.00 their second semester and thereafter in order to be in satisfactory academic standing. The cumulative GPA should be 2.00 by the end of the second semester.

Academic Probation

To be in good academic standing, undergraduate students must maintain a minimum GPA of 2.00 for both semester and cumulative averages. Students, who have earned 12 grade hours, falling below the 2.00 standard in either the semester or cumulative average will be placed on academic probation effective the next semester of attendance. Students placed on probation will be notified by mail at the end of the Fall or Spring semester. Students on academic probation may not attempt more than 12 to 15 credit hours per semester.

Academic Suspension

Undergraduate students who are not in good academic standing, despite probationary measures, will be placed on suspension. **Second-semester freshmen** on probation with less than a 1.75 **cumulative** and less than a 2.00 **semester** average will be suspended. Students, who have earned 12 grade hours or more, on probation with less than a 2.00 cumulative and less than a 2.00 semester average will be suspended. Students who are suspended will be notified by mail at the end of the Fall or Spring semester.

Students notified of academic suspension may attempt readmission in the following ways:

1. The student may attend winter intersession and summer sessions at Clarion. If the student earns the required **cumulative** average by the end of the summer and provided it was the student's first suspension, the student will be readmitted. Students who have been suspended two or more times, must appeal in a typed letter to the Academic Standards Committee.
2. The student may appeal the suspension by submitting a typed letter to the Academic Standards Committee. Students may be readmitted if the poor academic performance was caused by unusual circumstances beyond the student's control or if for other reasons it is not indicative of future performance. Petitions must be filed with the committee through the Office of Academic Affairs by the date specified in the notification of academic suspension.

Use the following guidelines when appealing a suspension to the Academic Standards Committee. If possible, include independent documentation and/or references in the petition. Statements should address:

- a. why academic performance was poor;
 - b. how the student expects to improve his or her academic performance and how he or she intends to correct the problem identified in item 2a;
 - c. the projected course of study if a change of major is planned;
 - d. what the student has done since last attending Clarion, including course work completed at other institutions; and/or
 - e. other evidence believed to be helpful to the committee.
3. The student may apply for readmission by writing to the Office of the Registrar after an absence of one or more semesters, provided the suspension was the student's first.
 4. Students who have been suspended two or more times must appeal in a typed letter to the Academic Standards Committee using the guidelines detailed above. Please contact the Office of the Registrar or the Office of Academic Affairs to obtain appeal deadlines.
 5. Suspended students who have been absent from the university for a period of at least four years do not need to file a written appeal to the Academic Standards Committee. Such students may be readmitted through the Office of the Registrar (see "Academic Renewal" on page 36).

Students on academic probation may not attempt more than 12 to 15 credit hours per semester.

Suspended students who wish to take credits at another accredited institution should first consult with their dean to ensure the credits will transfer. Clarion accepts credits from accredited institutions, but grades and grade points do not transfer. Clarion permits transfer of these credits provided the credits are applicable to the student's program and a grade of C or better is earned. Courses in which grades were previously earned at Clarion may not be repeated at another university.

Academic Honors

Academic honors are recognized with a dean's list every semester and with the traditional honors designations of cum laude, magna cum laude, and summa cum laude at graduation.

To be included on the semester dean's list, students must be enrolled for a minimum of 12 graded credits; not including credits by proficiency examinations, incomplete grades, or pass/fail; and achieve a semester GPA of at least a 3.50. In order to earn graduation honors, students must have earned at least 32 credits at Clarion. Students who graduate with the following cumulative GPAs will be recognized as honors graduates:

Cum laude	3.40 – 3.59
Magna cum laude	3.60 – 3.79
Summa cum laude	3.80 – 4.00

For the purposes of the commencement ceremony, graduation honors are based on the last graded term prior to

commencement. Designation of graduation honors on the academic transcript are determined after submission of final grades and degrees are posted.

For information concerning honorary kinds of recognition that may be accorded by various colleges and departments, students should inquire at the office of their major department and/or the office of the dean of the college in which they are enrolled.

Class Attendance Policy

Clarion University of Pennsylvania regards student participation in class as essential to the learning process. Therefore, regular classroom attendance is required of all students. Faculty members determine the absence policies for their own classes, except that participation in university sanctioned activities or active military service will be excused and the student will be given reasonable assistance when class work is missed.

It is understood that absence does not excuse the student from course work and the responsibility to complete assignments on time. If a student knows a class must be missed, the instructor should be notified in advance and arrangements made to complete the work. The instructor is not required to give make-up examinations or accept class work missed as a result of an unexcused absence.

In the event of an unexpected prolonged absence such as a serious illness or military deployment, the Office of the Registrar should be notified as soon as possible so instructors can be informed of the reason for a student's absence. This information is provided to faculty as a courtesy and does not, in and of itself, constitute a valid excuse for the student's absence from class. A valid excuse will be granted to a student for military deployment following receipt of a copy of the military orders from the student's military command.

Senior Citizens

People on Social Security or equivalent retirement benefits are given remission of fees for classes where space is available. Courses are recorded as audits with no grades or credits earned. Contact the Office of Admissions at 814-393-2306 to complete the process.

Auditing of Courses

With the permission of the instructor, interested persons may audit courses if there is space available in the course from the first day of class and up until the end of the drop/add period. Students must declare their intentions in writing to the Office of the Registrar prior to the end of the drop/add period. Laboratory courses may not be taken as an audit. Students who enroll in a course for credit may change to an audit grade only during the drop/add period. Likewise, students who enroll in a course to audit may only change to credit during this same period.

Credit-No Record Courses

After students have earned a minimum of 30 semester hours of credit and are in good academic standing, they may schedule a maximum of six courses or 18 semester hours for credit-no record. One such course may be taken each semester or Summer Session. This regulation does not apply to internships in the cooperative education program. All such internships are automatically credit-no record. Courses in one's major and minor fields may not be taken for credit-no record. Business students are not permitted to take any business courses, MATH 131, or MATH 132 for credit-no record. The option for taking a course for credit-no record is limited to the first five weeks of each semester and the first two weeks of any five-week Summer Session. Satisfactory work in a credit-no record course shall be shown on the transcript as CR, with no record and no credit for less than satisfactory work. Satisfactory work is defined as the equivalent of C grade or better under the letter grading system in use by the university. Students who desire to have a credit-no record course changed from CR to a letter grade must retake the course. Credit-no record courses are counted in determining the course load for a semester.

Individualized Instruction/Independent Study

A student seeking individualized instruction/independent study must initiate the request by completing the Petition for Individual Instruction and Independent Study form obtained from the dean of the college in which the course is offered, after preliminary discussions with both the advisor and possible instructor. Justification is required.

Independent Study

Independent study provides the opportunity to a student for a unique academic experience otherwise not available through regular curricular offerings. Independent study should not be confused with cooperative or internship courses which provide job experiences. A project description must be composed by the student and submitted along with the petition form.

Individualized Instruction

Individualized instruction allows a student to take an unscheduled course required for completion of a program of study. The course must not be offered currently, and it should be shown as not scheduled for offering prior to the student's intended graduation.

Class Standings

Class standings (freshman, sophomore, etc.) are determined by credits earned rather than by semesters of residence: freshmen, 1-29 credits; sophomores, 30-59 credits; juniors, 60-89 credits; seniors, 90 or more credits.

Course Numbering

Courses numbered 100 to 299 inclusive are primarily for freshmen and sophomores; 300 to 499 are primarily for juniors and seniors. Some courses numbered between 400 and 499 are acceptable for graduate credit. Courses numbered above 500 carry graduate credit.

The university reserves the right to change the sequence and number of courses.

Second Major

A student at Clarion University may earn a second major within the same college of the university and within the same degree category (B.S., B.A., or B.F.A.) by completing all requirements of both major programs. In this case, it is not necessary to meet the requirements for the baccalaureate degree, nor is a second baccalaureate degree granted.

Maximum Credit Hour Load

The normal credit-hour load for undergraduate students in good academic standing is 15 to 18 credit hours per semester, three to five credits per three-week Summer Session, six to seven credit hours per five-week Summer Session, and one class during winter intersession. Students on academic probation may not attempt more than 12 to 15 credit hours per semester.

Students wishing to register for 19 to 21 credit hours during any one semester, or more than five credit hours for a three-week Summer Session or seven credit hours for a five-week Summer Session or more than one class during Winter Intersession must have a cumulative GPA of 3.00 or better and the written permission of the appropriate college dean. Students are required to pay for each additional credit over the semester or session limit.

All scholastic standards noted above are subject to change by the university.

Readmission

Students who are absent for one or more semesters and students who are returning after an absence following their first academic suspension must apply for readmission in writing to the Office of the Registrar. The deadline is one week before the beginning of classes. Students seeking readmission following an academic suspension should read the section on Academic Suspension (page 33). Students readmitted after an absence of two or more years must meet all requirements of their respective degree program as of the date of readmission.

Repeat Grade Policy

Effective with the Fall 2009 semester, undergraduate students will be limited to a maximum of six repeats. Within the six-repeat rule, single course repeat for grade improvement will be limited to three times. Therefore, a single course can only appear in a transcript a total of three times. This policy will not take into account course repeats taken prior to the Fall 2009 semester.

Once a student has graduated from the university, a course cannot be repeated for the purpose of improving one's cumulative undergraduate or graduate GPA.

The latest repeat grade shall be the counting grade in the GPA prior to graduation. The grade points, grade hours, and earned hours of the original grade received will be subtracted from the student's cumulative statistics. Grades earned at another institution cannot be used to replace grades previously earned at Clarion.

Withdrawals

Individual Course Withdrawal Policy

An undergraduate student is permitted five individual course withdrawals at Clarion University, which are recorded with a grade of W. Exceptions may be made for withdrawals due to documented extenuating circumstances with approval of the instructor, advisor, and dean of the student's program.

All class withdrawals must be initiated by completing a class withdrawal form, which is signed by the student's advisor. If a withdrawal is not made through the Office of the Registrar, a failing grade will be recorded for the affected course(s). Classes a student drops during the period of drop/add will not appear on the student's record. Course withdrawals may be made between the second and tenth weeks of a regular semester or by the dates listed on the Registrar's calendar page for winter and summer sessions. Students are limited to 5 class withdrawals within their career.

Appeals for a late course withdrawal may be made by students to the Registrar for withdrawals due to documented extenuating circumstances such as illness or some other unavoidable occurrence. These appeals must be submitted in writing prior to the last day of classes and require approval of the instructor, advisor, and dean of the student's program.

Withdrawal From the University

Students may withdraw from the university (all courses) through the last day of classes by notifying the Office of the Registrar in writing of his or her intention to withdraw and the reason for withdrawal. University withdrawals, which are recorded with grades of WX, are not included in the limit of five individual course withdrawals. If a withdrawal is not made by the deadline, a failing grade may be recorded for the affected course(s).

Appeals to this procedure must be submitted by the student in writing to the Registrar no later than 30 days following the end of the semester for which the student is submitting the withdrawal. Appeals require review and approval by the Office of Academic Affairs. See section on refunds under financial information for financial implications of withdrawal.

Graduation and Degree Conferral Policy

Students must initiate an Application for Graduation to be considered a candidate for graduation. Applications are available on the Registrar's Office website. Applications must be approved by the academic advisor, department chair and dean. Deadlines for submitting applications are available on the Registrar website. Details regarding the commencement ceremony can be found on the Commencement web page.

Formal commencement exercises are held in December and May of each year. Participation in the December ceremony is limited to those degree candidates who will complete their degree requirements in fall or winter intersession. Participation in the May ceremony is limited to those degree candidates who will complete their degree requirements in the spring or summer.

Degrees are conferred six times annually – the last day of final exams for the fall semester, winter intersession, spring semester, first summer session, second summer session, and third summer session.

Students who have not successfully completed all degree requirements within 30 days after the last day of final exams will not have their degree awarded until the degree conferral date for the term their requirements have been completed.

Students who do not successfully complete their degree requirements for the term are responsible for reactivating their application for graduation by notifying the Registrar's Office of their next anticipated date of graduation.

Graduation Requirements

Graduation from Clarion University with a baccalaureate or associate degree requires successful completion of all specified major, degree, and university requirements outlined by the College of Arts and Sciences, the College of Business Administration, the College of Education and Human Services, the School of Nursing and Allied Health, or Venango College.

Undergraduate students must successfully complete a minimum of 120 credits with both a major and cumulative GPA of at least 2.00 except where the requirements of a particular program or college are higher.

All credits, including transfer credits, must be approved by the appropriate college dean or director and the department chair of the academic area in which the degree is to be granted.

Unless exempt, candidates for baccalaureate and associate degrees must successfully complete ENG 111 with a passing grade (education and nursing majors must earn a grade of C or better).

All students are responsible for knowing the major, degree, and university requirements of their respective programs. Students are advised to meet with their academic advisor on a regular basis throughout their undergraduate career.

Residence Requirements

A minimum of 30 of the last 45 credits required for graduation with a baccalaureate degree must be taken at Clarion University. At least 50 percent of major credits must be taken through Clarion University.

Candidates for graduation with an associate degree must complete a minimum of 30 credit hours in residence at Venango College in Oil City, Pa. or online for students in a completely on-line program.

Second Baccalaureate Degree

Students who have earned their first baccalaureate degree from Clarion University may earn a second baccalaureate degree from a different college of the university or different degree (B.S., B.A., or B.F.A.) within the same college. This can be accomplished by completing a minimum of 30 credits, excluding physical education activities, beyond the requirements of the first degree and by completing all of the requirements of the second degree. In this case, the student will receive two diplomas.

Students may also pursue two baccalaureate degrees concurrently by completing a minimum of 30 credits, excluding

physical education activities, beyond the requirements of the first degree and by completing all of the requirements of the second degree. Students who have earned their first baccalaureate degree from another institution are responsible for satisfying Clarion University's residence requirement.

Academic Renewal

The academic renewal policy permits undergraduate students who return to Clarion University after a minimum four-year absence the one-time option of having D and E coursework excluded from their grade-point average (GPA) calculation. Students enrolled in a bachelor's degree program may have up to 18 semester hours excluded from their GPA calculation. Students enrolled in an associate's degree program may have up to nine semester hours excluded from their GPA calculation. These semester hours must have been completed at Clarion University prior to readmission. The courses, grades, and probationary actions will remain on the transcript with an appropriate notation of academic renewal approved.

Students who have been suspended more than one time and absent from the university for a period of at least four years do not need to file a written appeal to the Academic Standards Committee. These students may be readmitted through the Office of the Registrar. Students must successfully complete a minimum of 30 hours before receiving a baccalaureate degree. Students must successfully complete a minimum of 15 hours before receiving an associate degree.

Students may complete a Request for Academic Renewal form which is available at the Office of the Registrar, 122 Carrier Administration, upon completion of 12 semester hours after readmission. Students must complete a minimum of 12 semester hours with a grade point average of 2.00 in their first 12 semester hours of study after readmission while on provisional status. Students, who do not achieve a minimum of 2.00 while on provisional status in their first 12 semester hours of study, are not eligible for academic renewal.

Removal of up to 18 credits for bachelor's degrees (up to nine credits for associate degrees) of D and E grades may achieve the required 2.00 GPA for financial aid requirements. All other current financial aid requirements are in effect each semester that the student enrolls at Clarion University.

Special Program Requirements

Special Program Requirements—Medical Technology

To remain in the Medical Technology Program, students must maintain the following GPA: first-semester freshmen, 2.0; second-semester freshmen and first-semester sophomores, 2.5; thereafter 2.5 with a 2.5 in the natural sciences. Exceptions to these requirements must be approved by the coordinator of medical technology.

Admission to the Medical Technology Program at the university does not guarantee admission to the year in the hospital laboratory. Hospital spaces are limited, are under the control of the individual hospitals.

Special Program Requirements—College of Business Administration and Information Sciences

Business students pursuing the B.S.B.A. must meet the requirements for admission to the college's upper division. In addition, business administration students must meet graduation standards beyond general university requirements.

Students readmitted after an absence of two years or more must meet all requirements of the college as of the date of readmission.

Students who transfer from other regionally accredited universities or colleges must have a minimum cumulative GPA of 2.50 in all previous course work to enter the College of Business Administration and Information Sciences.

This applies to all course work taken at all universities prior to attending Clarion University. Clarion students transferring from majors outside the COBAIS must have earned a minimum cumulative GPA of 2.50 to enter the COBAIS. Clarion students who do not have a cumulative GPA of 2.50 at the time of the request for transfer into the COBAIS must have achieved a 2.50 GPA in their most recent 12 credits completed at Clarion University.

Students transferring to Clarion University must take more than 50 percent of their business credits at Clarion. In addition, transfer students must complete a minimum of 15 credits (out of 24) in their specific business major in residence at Clarion University.

Credits for courses completed at other universities or colleges are transferable to Clarion University, but the grades and grade points are not. Therefore, grades earned in courses accepted to satisfy requirements of the lower- or upper-division core will not be used in the computation of the GPAs required by the academic standards of the college.

Clarion University students whose major is outside of the COBAIS may take no more than 25 percent of their total credits in courses offered by the COBAIS. This would amount to a maximum of 30 credits in a 120-credit hour program. Students who are enrolled in the business minor may be permitted to exceed this limit, dependent upon individual situations, with the approval of the dean of the College of Business Administration and Information Sciences. Economics courses taken by majors in the Bachelor of Arts in Economics degree are excluded from this restriction.

School of Education Selection, Retention, and Graduation Standards

I. Student responsibilities in all school programs

- A. Complete admission, legal, and medical requirements
 1. First year
 - a. Complete all clearances
 - 1) Act 33/151 and Act 24
 - 2) Act 34
 - 3) FBI clearance
 - b. Complete a physical exam and a TB (Mantoux) test through campus health center

- c. Teacher certification students must complete at least one professional education course with a grade of C or better
 2. Student teaching/internship/externship experience
 - a. Tests must be taken before graduation
 3. Graduation (from the university)
 4. Certification, where appropriate, from the Commonwealth of Pennsylvania
- B. Meet with advisors on a regular basis for career and program counseling as well as at the appropriate checkpoints in the program to obtain the appropriate forms. Although your advisor should be able to answer your questions, it is the student's responsibility to be informed of the General Education requirements specific to his/her program.

II. Admission to all certification programs

- A. Complete admission, legal, and medical requirements
 1. First year
 - a. Complete all clearances
 - 1) Act 33/151 and Act 24
 - 2) Act 34
 - 3) FBI clearance
 - b. Complete a physical exam and a TB (Mantoux) test through campus health center
 - c. Teacher certification students must complete at least one professional education course with a grade of C or better
 - B. Complete a speech and hearing screening. This screening is given once every semester—dates and times are posted. While it is preferred you have the screening when applying for program admission, it will not keep you from program admission IF you have completed the other entrance requirements. You may complete the speech and hearing screening the next semester.
 - C. ACT 33/151, ACT 34 and Act 24 FBI clearances are required for program admission. **Forms are available online.**
 - D. Complete and meet state-mandated minimum scores (PASS) on the following basic skills tests: (PAPA or CORE): Reading, Writing, and Mathematics.
 - E. Removal of any academic, physical, or mental deficiencies noted at any point in the student's program that would prevent the candidate from fulfilling the responsibilities of the certification area.
 - F. Possession of a **GPA—specific to the student's major** at the time of application.
 - G. Two (2) college-level English courses are required: ENG 111 (Composition) and one literature course (complete before program admission).
 - H. Two (2) college-level math courses are required by all majors. The required math competency (listed below) and a higher-level math course. **Mid-level and early childhood majors must meet the math requirements of MATH 111 and MATH 211 with a grade of C or higher and before program admission.

MAJOR**MATH REQUIREMENT**
(two college-level MATHs required)

Mid-level and Early Childhood and (Prerequisite for any DUAL certification which includes Early Childhood).....	MATH 111, 211
Special Education.....	MATH 111 + 1 higher level
Secondary Education:	
English, Spanish,	
Social Studies	MATH 112 + 1 higher level
Biology, Earth and Space	
Science.....	MATH 171 + 1 higher level
Chemistry	MATH 270, MATH 271
General Science	MATH 171, MATH 221 or 321
Mathematics.....	CIS 163
Physics	MATH 270 +1 higher level

PLEASE NOTE:

MATH 010 or MATH 050 does not count toward General Education requirements or toward graduation.

MATH 110 does not satisfy math requirement for education majors. It counts ONLY under Liberal Education Electives. It does not count as the second required college-level math course.

Early childhood majors must meet the math requirements (MATH 111 and MATH 211) with a grade of C or higher before taking ECH 424 or 425.

ALL students must complete both English requirements, both mathematics requirements with at least a grade of C prior to student teaching/internship.

Transfers and readmits must also meet the above requirements, but will be treated on a case-by-case basis.

III. Retention in a program

- Maintenance of required cumulative GPA.
- Attainment of a grade of C or higher in all required professional courses and all required courses (including content competency courses and proficiency courses in secondary) in major areas.
- Removal of any academic, physical, or mental deficiencies identified after admission to program before being permitted to continue in the program.
- Completion of all program requirements.

IV. Qualifications for student teaching/internship/externship

- Completion of 90 semester hours of university credit in designated program, including all teaching methods courses.
- PRAXIS II or PECT (Content Knowledge and Specialty Tests). Student teachers must provide verification of PRAXIS II tests being taken before graduation.
- A grade of C or higher in all required professional courses and all required major courses in area. Mid-level and early childhood majors must also have C or

higher (or equivalent) in content competency courses and 11-credit emphasis courses.

- An overall cumulative GPA of 3.00.
- Satisfactory completion of all tests and clearances (Criminal Record, Child Abuse, and FBI) necessary for field placement.

V. Graduation requirements

- Fulfillment of all university standards for graduation.
- An overall appropriate cumulative GPA.
- A grade of C or higher in all required professional courses and all required courses in major area. In addition, content competency courses in mid-level and early childhood. All proficiency courses also require a C or higher or equivalent.

VI. Pennsylvania certification requirements at Clarion University

- Complete admission, legal, and medical requirements
 - First year
 - Complete all clearances
 - Act 33/151 and Act 24
 - Act 34
 - FBI clearance
 - Complete a physical exam and a TB (Mantoux) test through campus health center
 - Teacher certification students must complete at least one professional education course with a grade of C or better
 - Pass the appropriate examinations (in effect at the time the tests are completed) required by the Pennsylvania Department of Education. All Pre-K–4, Mid-level 4–8, Pre-K–8 Special Education, and K–12 majors (library science and world languages) are also required to take:
 - Fundamental Subjects—Content Knowledge
 - Specialty Area Exam(s)
 In addition, all majors take:
- Complete application for certification.
- Certify U.S. citizenship or hold an immigrant visa which permits employment within the United States and declares an intent to become a U.S. citizen.
- Certify no habitual use of narcotic drugs in any form or excessive amounts of intoxicating beverages and not be under indictment nor have a conviction for a criminal offense.
- Provide verification of a valid health examination (within one year) and negative tuberculin test (within two years) at the date the application is processed.
- Receive recommendation for certification from the director, School of Education.



University Curricula

How do you want to be different at the end of your time in college?

The undergraduate educational journey will help you develop your intellectual skills, expand your knowledge, and help you clarify your values. All undergraduate curricula, with the exception of the two-year Associate of Science curriculum in Nursing, the Associate of Arts, and Associate of Science degrees, lead to a bachelor's degree and have a common core of 48 semester hours in general education. General education courses will complement the courses in your major to create an integrated educational experience. Careful consultation with your advisor will help you to create a coherent plan of study. Each course, as well as your co-curricular and extra-curricular experiences, can purposefully build toward reaching your goals of who you want to be when you graduate. Welcome to the Clarion journey.

Undergraduate education at Clarion University begins with course offerings and expands to co-curricular activities, student living arrangements, special cultural events at the

university and in the larger community, and opportunities for relevant work through participation in assistantships, internships, undergraduate research, and student and community organizations. The university's curriculum enables you to acquire skills, knowledge and values necessary to attain your life's goals. We believe that you should graduate with a distinguished level of ability and with attitudes necessary to continue developing and refining those abilities. Thus, as a student of Clarion, we will provide learning opportunities for you:

1. Students will mature in their understanding of the creative, natural, social, and cultural forces that shape the world.
2. Students will develop intellectual inquiry and problem solving skills, leading to praxis.
3. Students will commit to personal and professional ethical responsibility.
4. Students will integrate and apply their learning across general and specialized fields.

General Education Distribution

Goals and Purpose

A Clarion University education provides students with both a specialized and a liberal education. A specialized education provides a student with depth of knowledge in a particular vocation, profession, academic discipline, or area of study. General education aims to assist the student's development of skills which apply to all career areas and disciplines, and development as a person and an informed citizen for life within and beyond the university.

Students have the freedom to select an academic major for their area of specialization and elective courses in which they are interested. The general education curriculum provides students with the opportunity to explore a variety of subjects and develop skills that not only serve their interests but community needs as well. Here is an outline of general education requirements:

General Education Requirements

- I. Liberal Education Skills (in writing, mathematics, and communication)—12 credit hours to include:
 - A. College writing and information literacy
 - B. A mathematics course
 - C. A selection of courses from academic support, computer information science, communication, elementary foreign language, English composition, logic, mathematics, and speech communication.
- II. Liberal Knowledge (about society, its individuals, culture, and environment)—27 credit hours distributed among three categories:

A. Physical and biological sciences	9 credits
B. Social and behavioral sciences	9 credits
C. Arts and humanities	9 credits

At least two disciplines must be represented within each of the three categories.
- III. Health and Personal Performance (with focus on wellness, creative activities, and use of leisure time)—three credits to include:

A. Health and wellness (one course)	2 credits
B. Personal performance (one course)	1 credit
- IV. General Education Electives (for further exploration of areas of interest and continued broadening of studies)—sufficient course work to bring the total for general education to 48 credits from an approved list in areas of skills or liberal knowledge. These may not be in your major, and only one additional hour of personal performance is permitted.

General Education Flags

Among the courses meeting requirements in both general education and the major, there are courses having “flags” or special designations.

These flags denote courses that address such practical qualities as the ability to understand and discuss values, to write effectively, to engage in quantitative reasoning, and to be information literate. You will need to be sure courses selected in general education and in the major show a total of six flags in the following categories:

In general education:

- * One first-year **Values Flag**—promotes reflections on personal values, interpersonal values, and societal values.
- * One **Basic Information Literacy Flag**—shapes ability to gather, access, and critically evaluate information. Usually fulfilled by first-year writing competency course.

In the major or general education:

- * A second **Values Flag**—encourages exploration in human values, applied values, or ethics in a particular context.
- * Two **Writing Intensive Flags**—engage in higher order reasoning and communication in specific disciplines. These two writing courses count for credit beyond general education as part of the total academic experience, either in the major or in support courses for the major.
- * A **Quantitative Reasoning Flag**—to develop skills associated with learning from data, quantitative expression, evidence and assertions, and quantitative intuition.
- * One **Applied Information Literacy Flag**—ability to use information to accomplish specific purposes, incorporate information into knowledge base and value system, and understand the legal and ethical issues of accessing and using information.

Students have the freedom to select the academic major and elective courses that are of interest. The general education curriculum provides the opportunity to explore a variety of subjects that not only serve student interests but community needs as well. Students may wish to consult the registrar website at www.clarion.edu/registrar for a list of courses that satisfy general education requirements.

Colleges



College of Arts, Education and Sciences

Todd Pfannestiel, Dean
220 Founders Hall
814-393-2225
email: tpfannestiel@clarion.edu

Explore the Possibilities!

According to a recent Forbes magazine article the top skills desired by employers of college graduates are the ability to: work in a team; make decisions and solve problems; plan, organize and prioritize work; and communicate verbally. These skills and many more are taught in the reorganized College of Arts, Education and Sciences. The college has programs in the arts and humanities, social sciences, mathematics, the physical and biological sciences, education and special education. These programs are designed for those who want to hone technical skills in a pre-engineering program, have hands on experience putting on a theatrical production, teach in a rural or urban setting, participate in a biology field experience or help run a television station, radio station or student newspaper.

Regardless of the field you choose, you will experience the college's general education courses. With more than 30 minors you can pursue a field of interest to complement a degree in any discipline. The skills taught in the college — teamwork, problem solving and communication — are what employers want.

Student Services

Stop by the Dean's Office, located in historic Founders Hall, if you have questions about degree programs.

School of Education

Ray Puller, Interim Director
202 Stevens Hall
814-393-2146
rpuller@clarion.edu

The Clarion University School of Education is a part of the College of Arts, Education and Sciences. The School of Education is responsible for the preparation of future teachers in accordance with the guidelines and regulations of state and national accreditation agencies and associations. All of the programs within the School are nationally accredited by NCATE/CAEP. The School of Education houses two academic departments, Education and Special Education, and works closely with the content discipline departments across the College and University to prepare teachers in a wide variety of areas and levels.

College of Arts, Education and Sciences Degree Listing

Anthropology (B.A.)
 Anthropology (Minor)
 Latin American and Caribbean Studies (Minor)

Art (B.A., B.F.A.)
 Art (Minor)
 Art History (Minor)
 Graphic Design*

Biology (B.S.)
 Ecology and Evolutionary Biology (Minor)*
 Environmental Biology (B.S.)
 Medical Technology (B.S.)
 Molecular Biology/Biotechnology (B.S.)
 Molecular, Cell, Organic Biology (Minor)

Chemistry (B.S.)
 Biochemistry*
 Chemistry (Minor)

Communication (B.S.)
 Speech Communication (Minor)

Engineering Coop. Programs
 Engineering/Chemistry*
 Engineering/Mathematics*
 Engineering/Physics*

English (B.A.)
 Literature (Minor)
 Creative Writing (Minor)
 Professional Writing and Rhetoric (Minor)
 Writing (Minor)

Environmental Geoscience (B.S.)
 Environmental Geoscience (Minor)

Film Studies (Minor)

French (Minor)

Geography
 Geographic Information Science (Minor)
 Geography (Minor)
 Geography Sustainable Planning*

Geology (B.S.)
 Geology (Minor)

History (B.A.)
 Ancient Mediterranean Studies (Minor)
 Black Studies (Minor)
 History (Minor)

Liberal Studies
 Communication
 Education*
 English*
 Geography and Sustainable Planning*
 Global Understanding
 Theatre*
 Women and Gender Studies*
 Writing*

Mathematics (B.S.)
 Mathematics (Minor)
 Mathematics/Statistics (Minor)

Military Science
 Leadership (Minor)

Music (Minor)

Philosophy (B.A.)
 Philosophy (Minor)

Physics (B.S.)
 Astrophysics*
 Nanotechnology (Minor)
 Physics (Minor)
 Environmental Sustainability: Science and Policy (Minor)

Political Science (B.A.)
 Political Science (Minor)

Psychology (B.A., B.S.)
 Psychology (Minor)

Sociology (B.A.)
 Sociology (Minor)
 Social Work (Minor)

Sociology/Psychology (B.A.)

World Languages - Spanish (B.A., B.S.Ed.)
 Spanish (Minor)

Theatre (B.A., B.F.A.)
 Acting* (Minor)
 Design/Technical Director*
 Musical Theatre*
 Technical (Minor)

Women and Gender Studies (Minor)

School of Education Degree Listing

Early Childhood Education (A.S.),
 Early Childhood Education (B.S.Ed.), certification for Pre K-4
 Early Childhood-Special Education dual program

Mid-Level Education (B.S.Ed.), certification for grades 4-8
 Mid-level (B.S.Ed.)/M.Ed. with Special Education
 concentration

Secondary Education (B.S.Ed.), certification for grades 7-12:
 Biology
 Chemistry
 Earth and Space Science
 English
 General Science
 Mathematics
 Physics
 Social Studies
 Spanish Education (B.S.Ed.)

Special Education Dual PreK-8/7-12 (B.S.Ed.)
 Early Childhood-Special Education dual program
 Special Education (Minor)
 Diagnosis and Intervention Strategies for Students
 with Mathematical Disabilities (Minor)

**academic concentrations*

College of Business Administration and Information Sciences

Phillip Frese, Dean
330 Still Hall
Telephone 814-393-2600
Text 814-682-6221
coba@clarion.edu



Business is global and touches every aspect of our lives, from the artist selling paintings to the development of new applications for nanotechnology. Business processes, personal economics, finance, investments, accounting and management are areas that impact us daily. Advances in the use of data in driving business decisions have created exciting opportunities for our graduates. Students in the College of Business Administration and Information Sciences have a wide variety of majors and an even wider variety of careers to pursue.

The college has programs for non-business majors to help them with their personal financial planning and minors in accounting, economics, business administration, leadership and finance. You can minor in a business field as an undergraduate student, pursue an associate degree, earn a bachelor's degree or participate in our five-year Master of Business Administration (MBA) program. Our MBA is available to all students from all majors.

Our career focus in the undergraduate program has led to an emphasis in two areas: global leadership and entrepreneurship. Regardless of major, you can easily focus your studies on global leadership or entrepreneurship. Want to join a major corporation? Follow our global leadership path. Want to create your own business? Follow our entrepreneurship path.

We believe it is never too early to start thinking about and preparing for your career. Our students engage with the Career Development Center during the freshman year, learning critical job hunting skills and tapping into resources that will help propel them toward success.

The college is accredited by the AACSB International — The Association to Advance Collegiate Schools of Business — placing it among the top business programs in the world.

School of Information Sciences

To better align faculty talent and leverage the strengths of related disciplines, Clarion University has created a School of Information Sciences, which is an integral part of the renamed College of Business Administration and Information Sciences. The school includes two departments: computer information science (CIS) and library science (LS).

In a constantly changing world, the fields of CIS and LS are in the center, designing, creating, archiving, transferring and maintaining the information, technology and systems that are central to the way the world works. The School offers a variety of minors and bachelor's degrees and houses the Master of Library Science which is available to all students from all majors.

COBAIS Degree Listing

All candidates for the Bachelor of Science or Associate of Science degrees in business administration are required to take a broad program of business foundation subjects and then choose a business field of specialization in one of the following areas:

- Accounting (B.S.B.A.)
- Business Administration (A.S.)
- Business Economics (B.S.B.A.)
- Economics (B.A.)
- Finance (B.S.B.A.)
- Human Resources Management (B.S.B.A.)
- International Business (B.S.B.A.)
- Paralegal Studies (A.S.)
- Management (B.S.B.A.)
- Marketing (B.S.B.A.)
- Real Estate (B.S.B.A.)

School of Information Sciences

- Computer Science (B.S.)
- Computer Science (Minor)
- Information Systems (B.S.)
- Information Systems (Minor)
- Web Development (Minor)
- Library Science (B.S.Ed.), certification for grades K-12
- Liberal Studies - Library Sciences concentration*

*academic concentrations

Venango College of Clarion University

Office of the Dean
200 Frame Hall, Venango Campus
814-393-1207

The Venango campus is physically located in Oil City and is scenically situated on 62 acres surrounded by heavily-wooded foothills overlooking the Allegheny River just forty minutes from the Clarion campus. The campus was established in 1961 and was the first branch campus in the Pennsylvania State System of Higher Education.

Venango College, as an academic unit, is home to programs offered on the Clarion campus, Venango campus, Pittsburgh, and online. The Venango College delivers a personal and challenging academic experience, serving the region as the high-achieving, nationally accredited college of a comprehensive university. The college seeks motivated, career-oriented students of all ages and backgrounds who want to learn and grow in a supportive environment that promotes personal discovery and professional development.

The talented faculty and staff are deeply committed to serving students as individuals from whom they expect excellence and personal integrity. Its career-focused programs are offered through distinctive educational partnerships that address community and regional needs, and its students benefit from hands-on professional and technical preparation.

As a result, Venango College students gain a competitive edge in their fields and have expanding academic and career opportunities in high-demand professions. Venango College graduates are socially, civically and academically prepared to be active citizens of the global society.

The college also offers one-year certificate programs, a variety of professional development and personal enrichment courses, workforce training, Americorp opportunities, paraprofessional training and a summer enrichment program for students in K-8.

School of Health Sciences

Clarion University is justifiably proud of its career ladder program offerings in a variety of fields, including health sciences, allowing students to access education at the level they are at in associate, bachelor and graduate degrees. The mission of the School of Health Sciences is to educate future health care professionals in the fields of allied health, communication sciences and disorders, rehabilitation sciences, human services, nursing and sport sciences.

Students are prepared for growing employment opportunities in the human service fields such as addictions, mental health, children youth and families, eldercare, and intellectual disabilities. The undergraduate degree in speech pathology/speech and hearing science that is pre-professional in nature and prepares students to attend graduate school in speech-language pathology or audiology. Students also may obtain a minor in speech pathology/speech and hearing science.

Clarion University now offers the most comprehensive ladder of nursing credentials and access points within the

Pennsylvania State System of Higher Education. In addition, programs in the growing allied health field are available, to include allied health, respiratory care, medical imaging and allied health leadership. Cutting-edge programs are also available in athletic training, coaching and sports management. These programs all feature plenty of opportunity for hands-on learning in the field through co-ops and internships.

Clarion University Pittsburgh Site

4900 Friendship Ave., Pittsburgh, PA 15224
412-578-5239

The Pittsburgh Site of Clarion University of Pennsylvania, through the School of Health Sciences, offers both professional and career programs in nursing. Clarion University offers undergraduate general education courses such as English, philosophy, and anatomy and physiology, and the associate degree in paralegal studies. The Pittsburgh site, in the West Penn Hospital School of Nursing, is located in the Bloomfield section of Pittsburgh. Students at the Clarion University Pittsburgh Site come from a variety of backgrounds and experiences, including recent high school graduates, transfer and adult students.

Venango College Degree Listing

Administration Technology (A.A.S.)
Allied Health (A.S.) (B.S.)
 Leadership (B.S.)*
Arts and Sciences (A.A.)
Bachelor of Applied Science in Technology Leadership (B.A.S.)
Business Administration (A.S.)
 General Management*
Criminal Justice (A.S.)
Industrial Technology (A.A.S.)
Liberal Studies (B.S.)
Medical Imaging Sciences (B.S.)
 Medical Dosimetry*
 Nuclear Medicine*
 Radiation Therapy*
 Radiologic Technology*
 Ultrasound*
Paralegal Studies (A.S.)
Nursing (A.S.N., RN-B.S.N., B.S.N.-4 yr.)
Rehabilitative Sciences (B.S.)
 Addictions*
 Court and Community Services*
 Developmental Disabilities*
 Gerontology*
Rehabilitative Services (A.S.)
Respiratory Care (A.S.)
Speech Pathology and Audiology (B.S.) pre-professional degree
 Speech Pathology and Audiology (Minor)

**academic concentrations*

Undergraduate Programs



CLARION UNIVERSITY OFFERS a number of undergraduate majors and minors. This section lists those programs alphabetically. While you may find the program of interest fairly quickly, we encourage you to look through the listing carefully since there may be additional programs you may find of interest.

The B.A. refers to Bachelors of Arts degrees that focus on the arts and humanities and typically includes a requirement of study in a language beyond English. Coursework in a language in high school may allow you to register in an advanced college course in that language. The B.S. refers to Bachelor of Sciences degrees. This degree requires additional study in mathematics and science. We encourage you to discuss the differences between the B.A. and B.S. degrees with your advisor since neither college degree is uniformly preferred for today's careers.

Students at Clarion have the opportunity to select a minor or a second major as part of their program of study. This additional

study and credential often makes a student more attractive for their first career job or professional and graduate school. Again, talking with your advisor about these possibilities is strongly suggested.

For each program, you will find contact information including the name of the department chair, office, email and phone contact information. In addition to a description of the program, we list the program learning outcomes to help you better understand the knowledge and skills you will acquire by the time you graduate.

The required and recommended courses for your program of study are also listed. You should discuss these requirements when you meet regularly with your advisor. Successful students often develop a multi-semester plan of study to ensure graduating on time. Your faculty advisor can help you in developing this plan.

Accounting, B.S.B.A.

Department Chair, Anthony Greci, Ph.D.
 334 Still Hall
 Telephone: 814-393-2628
 Website: www.clarion.edu/coba/accy
 Faculty: A. Greci, T. Oliver

Accounting is the theory and practice of organizing, maintaining, and auditing the financial records of an organization or an individual. There are three main types of accountants: management accountants, who handle records of the companies they work for; public accountants, who work for or own independent accounting firms; and not-for-profit accountants, who work for governmental agencies and some health care organizations. Full or part-time internships are available to qualified students. The department recommends a graduate-level business program to fulfill the 150 credit hour requirement for CPA licensure. Graduates go into the areas of public, corporate, or not-for-profit accounting.

Accountancy (B.S.B.A.) Degree Outcomes

1. Students will be able to generate, analyze, and communicate accounting information for internal and external use.
2. Students will demonstrate analytical thinking skills through the interpretation of evidence and formulation of warranted conclusions.
3. Students will be able to employ technology to support data analysis and business decision making.
4. Students will show an awareness of the ethical dimensions of business through the ability to examine ethical issues and understand social forces shaping the environment of business
5. Students will demonstrate interdisciplinary competence across accounting, economics, finance, management, and marketing.

Requirements

ACCOUNTING, B.S.B.A.24 credits

Required: Intermediate Accounting (ACTG 350); Accounting for Equities (ACTG 351); Cost Accounting (ACTG 352); Federal Taxes (ACTG 353); and Auditing (ACTG 354). Six credits of accounting electives and three credits of accounting or business electives are also required.

ACCOUNTING, MINOR 18 credits

The minor in accounting is available to students with any major from any college, including those in the College of Business Administration.

Required: ACTG 251, ACTG 252, ACTG 350. ACTG 352 OR ACTG 353 AND six additional credits of 300- or 400-level courses selected in consultation with the student's minor advisor.

Administration Technology, A.A.S.

Department Chair, David Lott, Ph.D.
 222 Frame Hall
 Telephone: 814-676-6591
 Email address: dlott@clarion.edu
www.clarion.edu/jltl

The purpose of the Associate of Applied Science in Administration Technology degree is to provide students who have successfully completed, or wish to complete, significant technical education from licensed, certified, accredited, or otherwise qualified technical education organizations an opportunity to earn an associate degree from an institution of higher education. The Associate of Applied Science in Administration Technology degree:

1. provides necessary general education for students seeking an Associate of Applied Science degree.
2. provides appropriate familiarization with the software and office functions of commercial organizations.
3. provides an associate degree option for persons in technical aspects of general office insurance, and banking fields that incorporates office and specialty education from appropriate technical education providers.

Administration Technology (A.A.S.) Outcomes

1. Use technology effectively as an essential tool in office situations.
2. Apply business principles to office situations.
3. Demonstrate effective communication using both oral and written forms of communication.
4. Demonstrate appropriate technical skills in students chosen field of study.

Requirements**GENERAL EDUCATION (MINIMAL REQUIREMENT—20 CREDITS):**

ENG 111, CIS 217, HPE 111, three credits selected from at least one of the following physical and biological sciences: biology, chemistry, earth science, mathematics, physical science, and physics; three credits selected from at least one of the following social and behavioral sciences: anthropology, economics, geology, history, political science, psychology, and sociology; three credits from at least one of the following arts and humanities: art, English language and literature, humanities, intermediate foreign language and cultures, music, philosophy, speech, and theater.

ADMINISTRATION TECHNOLOGY MAJOR (12 CREDITS): MGMT 120, MGMT 210, plus six elective credits through the College of Business Administration.

Technical Courses: AT 299: Administration Field Training (28 CREDITS) in Insurance, Business Office Professional or Office Manager. Students will select from the concentrations listed above and complete up to 28 credits of technical education in their selected area of emphasis at Preferred Systems, Inc., The Learning Center, or Erie Institute of Technology. The specific courses needed for each concentration can be found at www.clarion.edu/appliedtech-AT.

Allied Health, A.S.

Department Chair, Ray Feroz, Ph.D.
 108 Special Education Center
 Telephone: 814-393-2052
 Email address: rferoz@clarion.edu
 www.clarion.edu/hsrhss

Clarion University’s Associate of Science degree with a major in Allied Health enables allied health professionals to get started on the road to career advancement through the attainment of academic degrees. Clarion University recognizes the value of an allied health professional’s clinical education and acquired professional expertise and therefore awards credit for completion of a formal, accredited educational program in an allied health field.

Potential Program Candidates

Health professionals who may qualify for the AS, Allied Health include the following: diploma nurses, surgical technologists, paramedics, ophthalmic medical technicians, dental professionals, pharmacy technicians, medical imaging professionals, medical office professionals, medical assistants, physical therapy technicians, and others.

The AS, Allied Health degree program is for individuals who are already credential allied health professionals and who wish to earn an associate degree. Clarion University does not provide the clinical education that is required for this degree program.

A.S., Allied Health Curriculum

The AS, Allied Health requires completion of a total of 60 credits—30 credits of science and general education course work that must be earned from Clarion University and 30 credits that are awarded for completion of a formal, accredited allied health educational program.

Sample Curriculum

- I. Liberal Education Skills**
 - A. English Composition3 cr
 - B. Math Competency.....3 cr
 - C. Liberal Education Elective3 cr
- II. Liberal Knowledge 15 cr**
 Choose courses from at least 2 of the following 3 categories.
 At least 3 credits must come from Category A for a total of 15 credits.
 - A. Physical and Biological Sciences
 - B. Social and Behavioral Sciences
 - C. Arts and Humanities
- III. General Education Electives 6 cr**
- IV. Approved Allied Health Professional Education 30 cr**

*Curriculum is subject to change.

Evaluation of Clinical Coursework

Credits for completion of clinical course work will be considered on a case-by-case basis by Clarion’s Department of Allied Health and will be based on the following criteria:

- The educational program must be in an allied health profession that is recognized by the American Medical Association as a health care profession.

- The allied health educational program from which the applicant has graduated must meet one or both of the following criteria:

1. The educational program must hold accreditation in good standing with a formal national programmatic accrediting agency widely acceptable to the specific allied health profession and formally recognized by the U.S. Department of Education or the Council for Higher Education Accreditation.
2. The educational program must be offered in a post-secondary institution of higher learning that has accreditation in good standing with a regional accreditor formally recognized by the U.S. Department of Education such as the Middle States Association of Colleges and Schools.

The allied health educational program from which the applicant has graduated must have entailed a minimum of 450 contact hours.

Allied Health (A.S.) Outcomes

1. Graduates will be able to describe career advancement opportunities for allied health professionals who hold academic degrees.
2. Graduates will be able to communicate effectively and professionally in a health care environment .
3. Graduates will demonstrate positive attitudes toward protecting the confidential health care information of patients.

Degree Conferral

Upon successful completion of the AS, Allied Health, graduates will have earned an Associate of Science degree with a major in Allied Health from Clarion University.

Allied Health Leadership, B.S.

Department Chair, Ray Feroz, Ph.D.
 108 Special Education Center
 Telephone: 814-393-2052
 Email address: rferoz@clarion.edu
 www.clarion.edu/hsrhss

The Bachelor of Science in Allied Health Leadership (BSAHL) degree program is interdisciplinary in nature in that it integrates clinical coursework that the student has already completed with liberal education coursework and business coursework offered by Clarion University’s College of Business Administration. All course work may be completed online.

Graduates of the BSAHL program will be prepared for entry-level leadership (supervisory/management/education) positions in health care organizations. Additionally, graduates of the BSAHL will be well positioned to enter graduate programs including Clarion University’s Master of Business Administration degree program.

The BSAHL curriculum requires completion of 60 clinical credits and 60 general education and business administration credits. Individuals who have completed an accredited program in allied health educational program that the applicant has completed.

Allied Health Leadership (BS) outcomes

1. Students will be able to use leadership theory to critique various styles of leadership.
2. Students will be able to discuss ethical and moral obligations of allied health care leaders.
3. Graduates will realize career advancement in a leadership position or be enrolled in a graduate program .

Admission Requirements

Admission to the program requires completion of an accredited educational program in allied health, as approved by the Department of Allied Health, and professional credentialing. Additionally, applicants must meet the general admissions requirements of Clarion University.

Curriculum Outline**I. GENERAL EDUCATION COURSE WORK**

A. Liberal Education Skills	Total of 12 Credits
English Composition	3 credits
Mathematics Competency	3 credits
Liberal Education Electives	6 credits

B. Liberal Knowledge	Total of 27 Credits
Physical and Biologic Sciences	9 credits
Social and Behavioral Sciences Electives	9 credits
Arts and Humanities Electives	9 credits

C. Health and Personal Performance	Total of 3 Credits
Health and Wellness	2 credits
Personal Performance	1 credit

D. General Education Electives Sufficient to total 48 credits	
(may include up to 9 credits of fundamental business courses from Section 11)	

II. FUNDAMENTAL BUSINESS ADMINISTRATION COURSE WORK	
(may be used to satisfy nine credits of required general education in Section 1)	

Course ID	Course Title	Credits
ECON 211	Principles of Macroeconomics	3
ECON 212	Principles of Microeconomics	3
ECON 221	Economics and Business Statistics	3
Total Credits		9

III. CORE BUSINESS ADMINISTRATION COURSE WORK		CREDITS
*ACTG 251	Financial Accounting	3
*ACTG 252	Managerial Accounting	3
*MGMT 320	Management Theory & Practice	3
*MGMT 324	Human Resources Management	3
Total Credits		12

Optional business Courses:

FIN 370	Financial Management	3 (optional)
MKTG 360	Principles of Marketing	3 (optional)

IV. ALLIED HEALTH CLINICAL (OR CLINICALLY EQUIVALENT) 60 CREDITS

AH 401 Allied Health Leadership Capstone..... 3 (required)

Up to 60 clinical credits will be awarded for completion of a formal, accredited allied health educational program and professional credentialing. Clinical credits will be awarded on a case-by-case basis upon review of transcripts and professional credentials.

Anthropology, B.A.

Department Chair, Robert M. Frakes, Ph.D.
313 Founders Hall
Telephone: 814-393-2375
E-mail address: rfrakes@clarion.edu
Website: www.clarion.edu/ssc
Department Faculty: L. Occhipinti, S. Prezzano

Do you ever wonder what it means to be human? Anthropologists seek to answer this question by investigating the human condition in all times and all places. Human genetics, the origin of our species, the rise and fall of civilizations, world languages, and the wide diversities of peoples, cultures, and religions are just some of the topics you can explore through anthropology. This discipline is the broadest social science and is unique in its cross-cultural and holistic perspectives. The program offers courses in all four of the anthropological sub-disciplines: biological anthropology, anthropological linguistics, archaeology, and cultural anthropology.

A major in anthropology provides a firm basis for exploring careers in museums, aid agencies, business, government, forensics, and teaching. Both majors and non-majors can take part in local and international field and laboratory experiences that provide the opportunity to contribute to current anthropological research. Completing the archaeological field school gives students hands-on experience in excavating an archaeological site. This course trains participants for immediate employment in public archaeology.

Anthropology (B.A.) Degree Outcomes

1. Recognize what it means to be human and how biological, archaeological, ethnographic, and linguistic knowledge contributes to that understanding.
2. Identify the major theoretical and methodical approaches in the study of human biology and evolution, culture, language, and the archaeological past.
3. Demonstrate skills in communicating anthropological knowledge effectively through writing, oral presentation, and data presentation.
4. Apply both qualitative and quantitative research methods to anthropological problems, complying with the ethical practices within the discipline.
5. Explain the holistic anthropological viewpoint on issues of cultural and ethnic diversity in past and present societies and draw comparisons between different cultures, describe cultural processes, and examine social issues from an anthropological perspective.

Requirements

ANTHROPOLOGY, B.A. 33-51 credits

Required: ANTH 211, 213, 362, 380, and 21 additional credits in anthropology chosen in consultation with a departmental advisor. In addition to 30 credits in anthropology, the following courses are required: SOC 211, GEOG 100, and 15 additional credits chosen from biology, history, earth science, geography, or sociology. Students may choose either foreign language competency or quantitative methods core.

- ANTHROPOLOGY, MINOR** 18 credits
 In addition to ANTH 211, anthropology students will complete nine credits of anthropology courses at the 300-level and an additional six credits of anthropology courses.
- LATIN AMERICAN AND CARIBBEAN STUDIES, MINOR** 18 credits
Required: 18 credits, chosen from a menu of interdisciplinary course. Courses must be chosen from at least two academic disciplines; at least nine credits must be at the 300- or 400-level.

Art, B.A., B.F.A.

Department Chair, Robert Levy, M.F.A.
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Are you a problem-solver? Do you imagine what hasn't been? Do you want to give form to your ideas? You may be an artist! Or perhaps you would just like to learn more about art in order to visit museums, start a collection, improve your visual literacy, or broaden your understanding of the world and its possibilities. Art is about all of these things. Living in a culture where visual communication is increasingly important, it's more critical than ever to understand how and why art affects the viewer.

The Clarion University Art Department boasts a diverse collection of faculty with a broad range of backgrounds and interests. The department's small student-faculty ratio ensures that you receive individual attention. Co-curricular professional opportunities are available through internships and employment in the department. Through art, learn to use your imagination, ambition, and talent to realize your ideas and become a citizen in a visual world.

Art (B.A., B.F.A.) Outcomes

1. Understand and effectively use principles of design (balance, rhythm, unity) and visual elements (line, color, etc.) in artworks that also show development and creation of personal forms of expression and unique visual language.
2. Display an understanding and skillful use of artistic mediums and techniques, and will also display an individualized use of the skills they have developed.
3. Display an understanding of the conceptual basis of their artwork, as well as its relevance and relationship to art historical precedents and contemporary practices.
4. Display professionalism in presentation and quality of both written and creative work, including use of supporting materials, bibliographies where applicable, and display critical thinking skills.
5. Display a record of solid production, the creation of a complete, unique and individual body of work, which will then be professionally displayed in a BFA or BA Graduating exhibition or a professional portfolio review and critiqued and evaluated by the entire art faculty. This body of work will be utilized by students in their post-graduate art careers.

Requirements

- ART, B.A.** 51 credits
Required: ART 121, 124, 125, 126; ART 222 and 12 additional credits of 200-level ART courses; six credits of 300-level ART courses; ART 491 and three additional credits of 400-level ART courses; ARTH 110, 111; six additional credits in art history (one of which must be ARTH 414 or a special topics course on contemporary art); foundation review; progress review; portfolio review; and foreign language competency.
- ART, B.F.A.** 72 credits
Required: ART 121, 124, 125, 126, ART 222 and 18 additional credits of 200-level ART courses; 15 credits of 300-level ART courses; ART 491 and six additional credits of 400-level ART courses; ARTH 110, 111; nine additional credits in art history (one of which must be ARTH 414 or a special topics course on contemporary art); foundation review; progress review; exhibition review.
- ART, B.F.A. WITH CONCENTRATION IN GRAPHIC DESIGN** 72 credits
Required: ART 121, 124, 125, 126, ART 222, 250 and 15 additional credits of 200-level ART courses; ART 350, 351, 355 and six credits of 300-level ART courses; ART 491; six credits of ART 451 or three credits of 451 and three credits of 455; ARTH 110, 111; nine additional credits in art history (one of which must be ARTH 414 or a special topics course on contemporary art); foundation review; progress review; portfolio review.
- ART, MINOR** 21 credits
Required: two of the following: ART 121, 124, 125, 126; nine additional credits in ART; ARTH 110; three additional credits in ARTH.
- ART HISTORY, MINOR** 18 credits
Required: ARTH 110, 111; nine additional credits in ARTH; three credits in ART.

Arts and Sciences, A.A.

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The Associate of Arts is a liberal arts degree program designed to provide the student with a range of experiences and a flexible educational program. To complete an associate degree, a minimum of 30 credit hours must be completed at Venango College or online for students in a completely online program.

Arts and Sciences (A.A.) Outcomes

1. Students will demonstrate their communication skills through either oral or written means.
2. Students will demonstrate critical thinking skills across a variety of disciplines.
3. Students will summarize their educational experience.

Suggested Program Outline

- I. Communication (12)*
 ENG 111: Writing II
 MATH 112: Excursions in Mathematics

- COM 113: Public Speaking
- II. Humanities (12)*
 ART 110: The Visual Arts
 ENG 130: The Literary Experience
- III. Natural Science (12)*
 BIOL 111: Basic Biology
 PHSC 111: Basic Physical Science—Chemistry
 PHSC 112: Basic Physical Science—Physics and Astronomy
- IV. Social Science (12)*
 PSY 211: General Psychology
 SOC 211: Principles of Sociology
 PS 211: American Government
- V. Personal Development (2)
- VI. Free electives (10)
- TOTAL: 60

*Because this is a liberal arts degree, substitution by equivalent course within the area of study is allowable with the permission of the academic advisor.

Athletic Training, Sports, and Wellness (ATSW) in Liberal Studies, B.S.

Department Chair, Ray Feroz, Ph.D.
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Department Faculty: K. Abbott, C. Brennan-Caplan,
 M. Chesterfield, D. Katis, D. Knepp, W. Snodgrass, J. Thornton

The Athletic Training, Sports, and Wellness (ATSW) programs currently offer three distinct areas of specialization: Athletic Training Education, Sports Management, and Athletic Coaching Education. Each of these exceptional programs has been designed to give the student a solid foundation for success in these ever expanding fields. Graduates may work as athletic trainers, athletic administrators, fitness directors, facility managers, manage sports teams, run municipal recreation departments, and serve as coaches at all levels. Students can choose from a variety of specialization levels including either the Bachelor of Science degree program in Liberal Studies and Concentrations in Athletic Training, Sports Management or Athletic Coaching. A Minor degree program is available for Sports Management and Athletic Coaching (which includes the National Level III certification). And an Athletic Coaching Verification Program is an option for education majors who will pursue a career in teaching. Please speak with an academic advisor or check specific websites for details, updates, and requirements for each program.

Athletic Training Education Program

Athletic Training Profession

Certified athletic trainers (ATC) are board certified health care professionals who specialize in preventing, recognizing, managing and rehabilitating injuries that result from physical activity. As part of a complete health care team, the certified athletic trainer works under the direction of a licensed physician and in cooperation with other health care professionals, athletics administrators, coaches, and parents.

Certified athletic trainers can be found in various work settings such as secondary schools, colleges and universities, professional sports, hospitals, clinics, physician offices, sports medicine clinics, military and law enforcement, industrial and commercial and the performing arts.

Athletic Training Program

Through a collaborative agreement with California University of Pennsylvania, Clarion University students can earn a B.S. degree in athletic training from California University. Concurrently, students are able to take a series of general education courses allowing them the opportunity to complete a B.S. degree in liberal studies with a concentration in athletic training from Clarion University.

Admission into the Athletic Training Program

During the first year, students planning to apply for admission into the Athletic Training Program must complete specific courses, including Anatomy & Physiology I and II, General Psychology, Health Education and Introduction to Athletic Training. Students must obtain a GPA of 3.0 to be eligible to apply for the Athletic Training Program. During the freshman year, pre-professional students must also complete a pre-professional observation experience. These observation experiences must take place on the Clarion Campus during practices and games with Clarion's varsity teams.

Curriculum

The Athletic Training Program consists of 120 credits and can be completed in four years. Of the 72 credits, which must be completed in the arts and sciences, all but 22 are encompassed by the core classes in Athletic Training. These additional 22 credits can be comprised of any arts and sciences courses. The 48 credits required in General Education are structured to fulfill the requirements of both the B.S. in Liberal Studies at Clarion University and the B.S. in Athletic Training at California University of Pennsylvania.

Athletic Training (B.S.) Outcomes

1. Sit for the Board of Certification Exam to become a Certified Athletic Trainer.
2. Demonstrate the character, integrity, and professional responsibility needed to assume a career in an athletic training field.
3. Exhibit professionalism and model the University's core values of Integrity, Civility and Responsibility.
4. Demonstrate a clinical competency, of an entry-level athletic trainer, that is capable of serving the community in a variety of employment settings.
5. Demonstrate a comprehensive knowledge base of the athletic training field including the use technology in the daily practice of Athletic Training.
6. Publicly communicate the role and value of athletic training to a group of people.
7. Explain and demonstrate the use of various types of athletic training equipment used for the evaluation, prevention and care of athletic injuries.

8. Demonstrate a commitment to continuing education by participating in local, regional and national professional development opportunities.
9. Identify career opportunities in athletic training and provide strategies for pursuing employment.

Requirements

First Semester

BIOL 251/261: Anatomy & Physiology I (with lab).....	4
ENG 111: Writing II.....	3
COM 113: Public Speaking.....	3
PSY 211: General Psychology	3
Mathematics requirement.....	3
Total	16

Second Semester

BIOL 252/262: Anatomy & Physiology II (with lab)	4
ATSW 150: Introduction to Athletic Training.....	3
HPE 111: Health Education	2
HPE 186 Personal Performance.....	1
ENG 130: Literary Experience <i>or</i>	2
ENG 200: Composition and Literature <i>or</i>	3
ENG 307: Business Writing	3
CIS 110: Intro to Computer Info. Systems <i>or</i>	3
CIS 217: Applications of Microcomputers.....	3
Total	16

Third Semester

ATE 204: Athletic Training Clinical Ed. I	2
ATE 225: Evaluation Techniques I	4
HSC 275: Functional Kinesiology.....	3
ATSW 300: Emergency Medical Technician.....	4
General education elective	3
Total	16

Fourth Semester

ATE 204: Athletic Training Clinical Ed. I	2
AE 265: Evaluative Techniques II	4
HSC 290: Therapeutic Modality and Lab	4
Soc 211: Principles of Sociology.....	3
General education elective	3
Total	16

Fifth Semester

ATE 305: Athletic Training Clinical Ed. II	2
ATE 330: Therapeutic Exercise and Lab	4
ATE 425: Admin. Strategies in Ath. Training.....	2
Science Elective	3
Social/Behavioral science elective.....	3
Total	14

Sixth Semester

ATE 305: Athletic Training Clinical Ed II	2
ATE 315: General Medical Assessment.....	3
HSC 325: Physiology of Exercise	3
FIT 400: Int. Sport Performance Training	3
Humanities elective.....	3
Total	14

Seventh Semester

ATE 400: Ortho. Evaluations in Sport Medicine	1
ATE 405: Athletic Training Clinical Ed. III.....	2
ATE 440: Pharmacology	2
ATE 460: Sports Medicine Research	3
Humanities elective.....	3
Arts and science elective.....	3
Total	14

Eighth Semester

ATE 400: Ortho. Evaluations in Sport Medicine	1
ATE 405: Athletic Training Clinical Ed. III.....	2
Arts and sciences electives.....	12
Total	15

Athletic Coaching Education Program

The athletic coaching education program is comprised of three distinct levels of specialization designed to meet the needs of all students interested in pursuing an education in the mastery of coaching. The minimum requirement for the athletic coaching program “Verification” is 13 credits. A total of 18 credits is required for successful completion of the athletic coaching program “Minor” which includes the Nationally Accredited Level III Athletic Coaching Certification. The B.S. Liberal Studies degree is also available with a concentration in Athletic Coaching. These programs were developed for students who intend to coach in interscholastic programs, youth sport or community recreation programs. It is not a degree program in physical education, but rather a specialized curriculum designed to provide those interested in coaching with a fundamental, educationally sound basis from which to pursue their coaching goals. The program is open to all students; however, the athletic coaching verification was specifically designed for education majors who want to combine coaching expertise with a teaching degree. Many non-education majors have found the athletic coaching program minor and certification to be an excellent addition to their current major. The B.S. Liberal Studies degree with a Concentration in Athletic Coaching is geared toward students who wish to pursue athletic coaching as a fulltime career in the collegiate or professional ranks.

Athletic Coaching Verification, Minor, National Level III Certification, and Concentration

Athletic Coaching (verification) requirements are 13 credits.

Athletic Coaching (minor) and nationally accredited Level III certification requirements are 18 credits.

B.S. in liberal studies with concentration in athletic coaching requires 29 credits in ATSW coaching courses.

Athletic Coaching Outcomes

1. Demonstrate the character, integrity, and professional responsibility needed to assume a career in an athletic coaching field.
2. Develop a comprehensive plan for coaching a sport team that includes an off-season, pre-season, and in-season segment.
3. Publicly communicate and explain your own personal philosophy of coaching to a group of people.
4. Demonstrate a fundamental understanding of the basic offensive and defensive strategy of a particular sport.
5. Demonstrate an understanding of game day management, personnel management, budget planning, risk management, and equipment management as each pertains to the realm of successful athletic coaching.
6. Identify career opportunities in athletic coaching and provide strategies for pursuing employment.

Requirements

ATHLETIC COACHING (VERIFICATION)13 credits

This option is designed for those students wishing to have athletic coaching as their area of emphasis.

Required:

ATSW 406	Athletic Injuries: Prevention, Recognition, and Evaluation	4
ATSW 407	Physiological Foundations of Coaching	3
ATSW 408	Principles and Problems of Athletic Coaching	3
ATSW 409	Kinesiological Foundations of Coaching	3

MINOR IN ATHLETIC COACHING AND NATIONAL LEVEL III CERTIFICATION IN ATHLETIC COACHING18 credits

Must include the courses above for the athletic coaching verification plus one of the following theory and techniques courses:

ATSW 350	Theory and Techniques of Coaching	2
ATSW 351	Theory and Techniques of Coaching Basketball	2
ATSW 352	Theory and Techniques of Coaching Baseball and Softball	2
ATSW 354	Theory and Techniques of Coaching Football	2

Required Athletic Coaching Field Experience:

COOP 444	Athletic Coaching Internship	3
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B.S. LIBERAL STUDIES WITH CONCENTRATION IN ATHLETIC COACHING.

Must include the courses listed above for the athletic coaching minor plus one additional theory and techniques course and:

ATSW 333	Fitness for Wellness	3
ATSW 334	Food, Fitness, and Weight Management	3
ATSW 440	Sports Facility and Event Management	3

Biology, B.S.

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Department Faculty: S. Boyden, H. Hampikian, S. Harris, A. Keth, S. Nix, K. Register, C. Scott, D. Smith, A. Turner

The Department of Biology and Geosciences offer students several degree options depending on interest and long-term career goals. Four Bachelor of Science degrees are offered: biology, environmental biology, medical technology, and molecular biology/biotechnology. The major requirements for all degrees are similar in the first two years, allowing students to switch between degree options and to readjust career objectives. All degrees are designed to prepare the student for success in the job market or pursuing advanced studies. For those students interested in a career in teaching, the Education Department offers a secondary education—biology degree and a secondary education—general science degree through the Department of Biology and Geosciences. Also available is a Teaching Certificate in Environmental Education for grades K–12. The Biology and Geoscience Department programs prepare students for a variety of health careers including pre-medical, pre-veterinary, pre-chiropractic, pre-physicians assistant, pre-optometry, pre-physical therapy, and pre-

dent. The necessary training to pursue other careers in the health sciences is also available through the Pre-Professional Program for the Healing Arts. Students more interested in ecology may choose the ecology and evolutionary biology concentration within the biology B.S. degree. Two minors in biology, with options in either cellular/organismal biology or ecology/evolutionary biology are available to non-majors interested in a more in-depth study of these aspects of biology. Whatever the degree or interest, the faculty in the Biology and Geoscience Department are committed to helping students reach their professional goals.

Biology (BS) Degree Outcomes

1. Students graduating with a degree in biology will have the technical knowledge and practical skills to conduct quality science in the field and laboratory.
2. Students graduating with a degree in biology will have the analytical and quantitative skills to understand, and create meaning for, graphical and quantitative representations of data.
3. Students graduating with a degree in biology will know the theories, major concepts and mechanisms which underlie and explain observed biological phenomena.
4. Students graduating with a degree in biology will know how to locate meaningful scientific information, evaluate, and use needed information effectively.
5. Students graduating with a degree in biology will understand different forms of communication within biology, and will know how to communicate scientific information in appropriate ways (verbal, written, etc.).
6. Students graduating with a degree in biology will understand what constitutes a testable hypothesis, and components of effective experimental design.
7. Students graduating with a degree in biology will understand the difference between science, scientific practice, and other ways of knowing and learning.

Requirements

BIOLGY, B.S.53-69 credits
Required: BIOL 155/165, 156/166, 201, 202, 203, 382, and five courses (15 to 20 credits) from approved biology electives at the 300 level or higher. In addition to these 35 to 40 credits in biology, the following supplemental courses are required: MATH 221 or 222 or BIOL 402, and MATH 260 or 270; CHEM 153/163, 154/164, 251/261, 252/262, PH 251 and 252; and one science elective from the following: BCHM 453 or 454, CHEM 265, 351, 353, 354, or 359; OR ES 270, 280, or 330; GEOG 310; ES/GEOG 385, 400, 460, 470, or 481; OR PH 254, 261, or 410. In some instances, students may be advised to substitute CHEM 151/161, 152/162 for CHEM 153/163, 154/164; PH 251 and 252, or PH 258, 259, 268 and 269.

ENVIRONMENTAL BIOLOGY, B.S.49-58 credits
Required: BIOL 155/165, 156/166, 202, 405, 493 or 494. A three-credit field experience competency is required, which can be fulfilled by taking a course at an approved field station OR by completing COOP 308/408. A three-credit methods competency is required and one is to be selected from the following: BIOL 410, 484, ES 455, ANTH 375, CHEM 353/363, CHEM 358/368. Also required are 12 to 16 credits of electives selected from the following: BIOL 305, 306, 307, 341, 382, 400, 402, 411, 421, 425, 427, 428, 440, 451, 456, 459, 460, 473, 477, 492, 493, 494,

497, 499. In addition to these 36 to 41 credits in environmental biology, the following supplemental courses are required (choosing one course from each category: (Geoscience) ES 150, 255, or 260; (Earth Systems) ES 270, 280, 330, or ES/GEOG 345; (Spatial Analysis) ES/GEOG 400, 425, 460, 470, 481, or 490; (Sustainability) GEOG 244, 310, PH/ENVR 261. Plus these four Chemistry courses are required: CHEM 153/163 and CHEM 154/164. In some instances, students may be advised to substitute CHEM 151/161 and 152/162 for CHEM 153/163 and 154/164. All students are required to take MATH 171 and MATH 221 or 222 or BIOL 402.

MOLECULAR BIOLOGY AND BIOTECHNOLOGY, B.S. ...60-71 credits

Required: BIOL 155/165, 156/166, 201, 203, 341, 450, 483, 485, 495, and nine to 12 credits from approved biology electives. In addition to these 41 to 44 credits in biology, the following supplemental courses are required: MATH 221 or 222 or BIOL 402, and MATH 260 or 270; CHEM 153/163, 154/164, 251/261, 252/262, BCHM 453/463; in some instances, students may be advised to substitute CHEM 151/161, 152/162 for CHEM 153/163, 154/164; PH 251 or 252 or PH 258/268, 259/269.

MEDICAL TECHNOLOGY, B.S.62-70 credits

The Medical Technology Program includes an academic preparation of three years (88 semester hours including general education) at Clarion and a 12-month course of clinical study in a hospital-based school of medical technology accredited by the National Accrediting Agency for Clinical Laboratory Sciences, (NAACLS), (32 semester hours). Upon successful completion of two years of prescribed courses at Clarion, the student is eligible to apply for admission to the hospital school. Although application is made through the office of the coordinator of medical technology at Clarion, acceptance is at the discretion of the staff of the clinical school. Clinical school spaces are limited, and admission to the Medical Technology Program at Clarion does not guarantee admission to the clinical school year. Clarion University maintains affiliations with six clinical schools; students may apply to accredited, non-affiliated schools, also. After graduation from Clarion University the student is eligible to take any of several certification examinations. Successful completion of the exam permits practice of the profession in most of the United States. A few states require a state examination for licensure. Further information on the exams can be obtained from the coordinator of medical technology. The following courses are required during the three years at Clarion: BIOL 155, 156, 165, 166, 201, 203, 341, 444; CHEM 153, 163, 154, 164; eight additional hours of chemistry chosen from CHEM 251, 252, 261, 262, 353, 358, 363, 368, and BCHM 453,463; either BIOL 203 or BCHM 453; and MATH 171, and 221 or 222. Substitutions for the above courses must be approved in writing by the coordinator of medical technology. Students in the program must maintain the following GPAs: first-semester freshmen, 2.0 overall; second-semester freshmen and first-semester sophomores, 2.5 overall; thereafter 2.5 overall with a 2.5 in the natural sciences. Exceptions to these requirements must be approved by the coordinator of medical technology. Specific information about courses, standards, and requirements established by the affiliate hospital schools are provided to enrolled students by the coordinator of medical technology. Students wishing to transfer into the program must be approved by the coordinator of medical technology and must plan to spend two years on the Clarion Campus. Hospital affiliates are Altoona Hospital, Altoona, Pa.; Williamsport Hospital, Williamsport, Pa.; Saint Vincent Health Center, Erie, Pa.; Guthrie Health Systems, Sayre, Pa.; Conemaugh Health System, Johnstown, Pa.; Women's Christian Association Hospital, Jamestown, N.Y.; Rochester General Hospital, Rochester, N.Y.; New York Methodist Hospital, Brooklyn, N.Y.; Lancaster General Hospital, Lancaster, PA.

SECONDARY EDUCATION, B.S.ED.

Certification for grades 7-12, Biology (see under Secondary Education, Biology), page 60.

ECOLOGY AND EVOLUTIONARY BIOLOGY, CONCENTRATION WITHIN THE

B.S. BIOLOGY63-72 credits
BIOL 155/165, 156/166, 201, 202, 203, 382, 493 or 494 and FOUR courses from the following (12-14 credits): BIOL 305, 341, 360, 402, 405, 424, 425, 427, 428, 432, 451, 452, 456, 460, 470, 471, 473, 478, 491, 492, 493, 494, 497, 499. As many as 9 credits from this list may be entered under Liberal Knowledge. If entered there, the credits are not counted as supplemental courses in the major. In addition, the following courses are required: CHEM 153/163, 154/164, CHEM 251/261, 252/262; in some instances, students may be advised to substitute CHEM 151/161, 152/162 for CHEM 153/163, 154/164. Students must also complete 9 credits from the following list: ES 150, ES/GEOG 210, ES 225, 255, 260, 270, 280, 330, ES/GEOG 345, ES 360, 385, ES/GEOG 400, ES 404, ES/GEOG 425, ES 455, ES/GEOG 460, 470, 481, 490, BCHEM 453, 454, CHEM 265, 351, 353, 354, 359, MATH 271, 272, 321, 322, 350, 370, PH 254, 261, 410, any 300-400 level BIOL elective approved for Biology major credit.

BIOLOGY MINOR, MOLECULAR/CELLULAR/ORGANISMAL

BIOLOGY TRACK18-19 credits

This minor provides students in chemistry, physics, pre-engineering, mathematics, and computer science a working knowledge of biology at all levels, but with an emphasis on cell and molecular biology. The cross-disciplinary experience allows them to apply the expertise from their majors to emerging fields in nanobiology, biotechnology, genetic engineering, genomics, computational biology, and others.

Required: BIOL 155/165, 203, 341, 483. In addition, three to four credits to be elected from: BIOL 305, 306, 307, 382, 404, 430, 440, 444, 446, 450, 459, 460, 464, 485; BCHM 453 or 454.

BIOLOGY MINOR, ECOLOGY/EVOLUTIONARY

BIOLOGY TRACK18-20 credits

This program is designed for students who are in other majors but require a general knowledge of the fundamental concepts of biology, but with a focus on ecology/evolutionary biology aspects. These students will be provided with additional skills and experience to enhance their education.

Required: BIOL 156/166, 202, and 11-12 credits from the following: BIOL 382, 402, 425, 427, 428, 432, 456, 471, 473, 492, 493, 494, or 495.

Environmental Studies

The Environmental Studies Program introduces students to environmental problems confronting contemporary society and examines these problems from a multidisciplinary point of view. Students have the opportunity to learn the role of science in various environmental situations, as well as management policies. The departments of Chemistry, Mathematics and Physics; Biology and Geosciences; and the Science Education Program are participants in the Environmental Studies program.

PRE-PROFESSIONAL STUDIES IN HEALTH CAREERS

The Biology and Geosciences Department offers a number of programs specifically designed to prepare students planning to enter a professional school in the healing arts, including pre-chiropractic, pre-dentistry, pre-medicine, pre-optometry, pre-pharmacy, pre-veterinary, and pre-podiatry. Qualified biology majors interested in a career in medicine have a unique

opportunity to apply for early acceptance to begin their medical training through a “3+4” or “4+4” affiliation agreement with Lake Erie College of Osteopathic Medicine (LECOM) in Erie, Pa. Another affiliation agreement with LECOM School of Dentistry provides qualified students in pursuing a “4+4” dental program. Another affiliation agreement with the LECOM School of Pharmacy provides qualified students with the option of pursuing a “3+3” accelerated pharmacy program. Those students interested in pursuing a career in chiropractic have the opportunity of a “3+3” program with Logan College of Chiropractic in Chesterfield, Mo. For more details, please contact the Biology and Geoscience Department.

Pymatuning Laboratory of Ecology

Through a unique cooperative program with the University of Pittsburgh, Clarion University offers a program of study in field ecology at the Pymatuning Laboratory of Ecology (PLE). Courses are taught by faculty from cooperating institutions. Sessions at Pymatuning are open to undergraduate and graduate students, are three weeks in length, and students normally reside on site.

The PLE is a field station dedicated to environmental education and ecological research. In PLE courses, direct observation and hands-on experience with living organisms under field conditions are combined with modern laboratory and computer techniques in the discovery of structure and function in ecological systems. PLE is located within Pymatuning State Park and overlooks Sanctuary Lake, part of an 11,000 acre tract of water, wetlands, and forest. The region contains many natural lakes, marshes, streams, and intact forests, making it an ideal location to study field biology.

SECONDARY EDUCATION—BIOLOGY/GENERAL SCIENCE

The Biology and Geoscience Department offers in conjunction with the Education Department a program in secondary education – Biology (page 60 for more details). Also available is a multidisciplinary secondary education degree in general science (page 60 for details). A Teaching Certificate in Environmental Education Grades 7-12 is also available.

Business Administration, A.S.

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Website: www.clarion.edu/coba/adsci

Department Faculty: G. Barboza, N. Chen, T. Johns, C. Nakhatu, M. Olivas, K. Roth, C. Smith

The Associate of Science in Business Administration is designed to provide an opportunity in post-secondary education not found elsewhere within the service area of Clarion University. After earning the associate degree, students who wish to further their education may continue at the baccalaureate level on the Clarion Campus.

Objectives

1. Ensure that each student has an exposure to general education and business fundamentals appropriate for associate-level degree education in business administration.
2. Prepare associate degree students for entry-level positions in business, industry, and government. Graduates may find jobs in sales, marketing, finance, or administrative areas of business.
3. Prepare aspiring students for entry into baccalaureate degree programs.

Business Administration (A.S.) Outcomes

1. Show an Awareness of the Ethical dimensions of Business Issues.
2. Demonstrate Analytical Thinking Skills by the formulation of warranted, non-fallacious conclusions.
3. Demonstrate Effective use of Technology and Data Analysis: by demonstrating an Understanding of and ability to use common methods of statistical inference.

Requirements

GENERAL EDUCATION (MINIMAL REQUIREMENT (20 credits): ENG 111, HPE 111, CMST 113, ECON 211, ECON 212, a HPE activity, and two General Education electives. Note: If ENG 110 is required as a result of the placement exam, it will be used as three credits of the general education electives.

BUSINESS CORE SUBJECTS (24 credits): ACTG 251, ACTG 252, BSAD 240, CIS 217, ECON 221, ENG 307, MATH 131, and MGMT 120.

GENERAL BUSINESS MANAGEMENT CONCENTRATION (15 credits): BSAD 241, ECON 222, FIN 170 OR FIN 373, MKTG 360, and MGMT 320.

Early Start Master of Business Administration Option

The College of Business Administration offers an early start to its M.B.A. program for qualified undergraduate students. Placement in this program is limited to outstanding undergraduate students who have distinguished themselves in their B.S.B.A. degree program. To be admitted, students must have met all M.B.A. admission requirements by the end of the first semester of their senior year and have the approval of the dean. Accepted students will be allowed to enroll in a maximum of six credits of M.B.A. course work for graduate credit during the last semester of their senior year. Students will be allowed to continue in the M.B.A. program beyond the six credits of graduate course work upon completion of their B.S.B.A. degree. For information about admission requirements for the M.B.A. program or program options available such as the Professional Accountancy Course of Study, please refer to the *Graduate Catalog*. Students interested in the M.B.A. Early-Start option should contact the M.B.A. program director during their junior year of study.

Chemistry, B.S.

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 155 Science and Technology Center
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 Website: www.clarion.edu/chemistry
 Department Faculty: D. Clark, J. Knaust, E. Lewis, A. Lockwood,
 J. Overly, J. Touster

Chemistry is the study of the properties and behavior of matter, which provides an important understanding of our world and how it works. A chemistry degree is a powerful springboard that can launch you into a fascinating and rewarding career. A bachelor's-level graduate in chemistry is able to assume a variety of positions in industry, government, or academia. Students can complete a B.S. in chemistry, or a more extensive major resulting in a B.S. in chemistry certified by the American Chemical Society. Other options include a B.S. in chemistry with a biochemistry concentration, certification to teach secondary school chemistry, a cooperative program in chemical engineering, a B.S. in chemistry with a pre-MBA path, or just a minor in chemistry.

The Clarion University chemistry curriculum, approved by the Committee on Professional Training of the American Chemical Society, provides a strong foundation for further studies at the graduate level or a career in the chemical industry. The program provides students with a rigorous introduction to the fields of chemistry and biochemistry. The curriculum emphasizes experience with modern chemical instrumentation, current developments in chemistry, independent chemical research, and professional growth. The department is small, which allows for a personal, caring atmosphere and an environment that encourages both intellectual growth and academic achievement.

Chemistry and Biochemistry (B.S.) Degree Outcomes

1. A graduate of this program will be able to demonstrate effective command of fundamental chemical concepts and application of those concepts to solve chemical problems.
2. A graduate of this program will understand the theory and operation of chemical/biochemical instrumentation/techniques used in modern clinical and research labs. In addition, graduates will have a practical level of ability in the evaluation and interpretation of data obtained from these instruments.
3. A graduate of this program will be able to effectively communicate in a scientifically appropriate style.

Requirements

CHEMISTRY, B.S.73 credits
Required: CHEM 151, 161, 152, 162, 251, 261, 252, 262, 257, 265, 266, 366, 367, 353, 363, 358, 368, 354, 364, 355, and 470. In addition to these credits of chemistry, the following courses are required: MATH 270, 271; PH 251/252 or 258/259. Also required are at least 12 credits with two courses from the following: BCHM 453, 463, 454; CHEM 359, 465, 466 or 471

and the remaining credits from BIOL 155, 165, 201, 203; MATH 272 or a higher numbered MATH course; PH 301 or a higher numbered PH course; CHEM 211; CIS 202 or a higher numbered CIS course; PHIL 317; ES 150, 260, 270, 280, or 360. Graduates who have met the above requirements and would like to earn a degree certified by the American Chemical Society must have taken BCHM 453 as well as either BCHM 463, CHEM 465, or CHEM 466.

CHEMISTRY B.S. WITH BIOCHEMISTRY CONCENTRATION. 72-73 credits
Required: CHEM 151, 161, 152, 162, 251, 261, 252, 262, 353, 363, 358, 368, 354, 364, 470; BCHM 453, 463, 454; and either CHEM 265, 266 or additional upper level BCHM. In addition to these credits of chemistry, the following courses are required: MATH 270, 271; PH 251/252 or 258/259; BIOL 155, 165, 201 or 203, 341, and 483.

SECONDARY EDUCATION, B.S.ED.

Certification for grades 7-12, Chemistry (see under Secondary Education, Chemistry), page 60.

CHEMISTRY MINOR18-20 credits

Required: CHEM 251, 261, 353, 363, 265, and 266; 3-4 credits selected from CHEM 354/364 or BCHM 453; and 3-4 credits selected from CHEM 252/262, CHEM 358/368, CHEM 366/367, CHEM 355, or BCHM 454.

The Chemistry Department also offers a cooperative chemical engineering program, a program in secondary education, and pre-professional programs in pharmacy, medicine, and business.

Communication, B.S.

Department Chair, Myrna Kuehn, Ph.D.
 130 Becker Hall
 Telephone: 814-393-2245
 Telephone: 814-393-2284
 E-mail address: kuehn@clarion.edu
 Website: www.clarion.edu/comm
 Department Faculty: J. Crespo, M. Kuehn, S. Kuehn, A. Lingwall,
 J. Lyle, L. Miller, B. O'Neil, R. Prioleau, H. Yang

A degree in communication offers many opportunities for students in a variety of exciting and rapidly expanding careers. The Department of Communication offers students a unique blend of broad-based communication and writing skills with the opportunity to concentrate in one of three specialty areas: digital media, journalism, and strategic communication. Students prepare for their specialties through a strong core of required courses that reflect the foundations of the discipline. Once inside the concentration, students rely on this broad background as they immerse themselves in their chosen career area. Capstone experiences such as internships provide a transition between the classroom and the professional world.

Expert faculty, outstanding equipment and facilities, and strong curriculum make the Department of Communication one of the stellar programs in the country. Our graduates have found work in major broadcast markets, newspapers, advertising and public relations firms, video production, internal and external corporate communication areas, graphic design and Web publishing, photography, event planning, sales, and non-profit organizations. Students also have been very successful in entering graduate school.

Communication (B.S.) Degree Outcomes

1. Students will demonstrate oral and nonverbal communication skills in forms and styles that are clear, accurate, thorough, cogent, fair and appropriate for communication professions, audiences and purposes they serve.
2. Students will demonstrate the ability to write in forms and styles that are clear, accurate, thorough, cogent and fair, and appropriate for scholarly research as well as for communication professions, audiences and purposes they serve.
3. Students will demonstrate the ability to think critically, creatively, and independently as they consider the persuasive nature of communication and the role of strategic planning for communication events.
4. Students will demonstrate an awareness and appreciation of the diversity of groups in a global society in relationship to communication.
5. Students will demonstrate the ability to gather and critically evaluate information from diverse and varied sources.
6. Students will demonstrate an understanding of the history and development of communication and the ways in which this history has affected individuals and society.
7. Students will demonstrate the ability to edit or produce communication material that is clear, accurate, thorough, cogent and fair.
8. Students will demonstrate an understanding of current media technologies and their capabilities, limitations and implications from multiple perspectives, including that of producer, artist and audience.
9. Students will demonstrate appreciation for the pervasive nature of communication by acknowledging the interdependence and intertwining of all disciplines with communication.
10. Students will demonstrate an awareness and appreciation of the foundations of the First Amendment and ethical issues in the media in order to realize their democratic potential, exhibit robust citizenship, and conduct their endeavors with civility and integrity.

Requirements

B.S. IN COMMUNICATION 72 credits

Required: COM 100, 110, 113, 140, 270, 322, 422; choose three Global Communication and Diversity courses from: COM 160, 200, 217, 312, 320, 321, 339, 420, 427, WGS 100, SOC 356, 362, PHIL 115, 215, 357, PS 210, PSY 300, 340, ECON 161; choose three Integrative & Applied Learning courses from advisement; choose one Analysis course from: COM 210, 281, 324, 331, 333, 334, 339, 410, 421, 424, 425, 427, 430, 431; complete six credits of COM 481/482 Practicum/Internship and a senior portfolio by advisement. Students must earn a "C" or better in COM 100, 110, 113, and 140 to continue in upper division 300-400 level COM courses and Communication majors must attain the minimum grade requirement of C or better in 300-400 level, upper division or graduate level COM courses; 42 out of 120 credits required for degree must be at 300/400 level.

DIGITAL MEDIA CONCENTRATION: Complete COM 351, 370 or 442, 208 or 316, 202 or 302; choose two courses from: COM 353, 354, 355, 357, 445, 455, 473, 476; and choose two courses from: COM 249, 340, 344, 345, 370, 372, 442.

JOURNALISM CONCENTRATION: Complete COM 249, 313, 341, 344; choose two courses from COM 371, 443, 444, 474, ART 125, 145, 250; choose two courses from COM 340, 345, 441, 442, 443.

STRATEGIC COMMUNICATION CONCENTRATION: Choose 3 courses from COM 300, 311, 360, 411, 448; choose 3 courses from COM 210, 214, 215, 217, 314, 315, 331, 332, 410, 430; complete 2 courses from COM 202, 249, 340, 341, 345, 371, 375, 441, 442, 443, 444, 446, 474, ART 125, 145, 250, ENG 263, 297, 301, 306, 307.

MINOR IN SPEECH COMMUNICATION

Required: COM 110, choose two courses from COM 113, 200, 210, 214, 215, 217, 281, THE 155, 251; choose two courses from COM 300, 311, 312, 320, 321, 331, 332, 360, 410, 411, 420, 421; choose one capstone course from COM 411, 420.

Computer Information Science, B.S.

Department Chair, Jon O'Donnell, Ph.D.

130 Becker Hall

Telephone: 814-393-2442

E-mail address: jodonnell@clarion.edu

Website: www.clarion.edu/CIS

Department Faculty: S. Agyei-Mensah, J. Childs, S. Kim,

J. O'Donnell, J. Wyatt

Welcome to the eye of the hurricane! In a world going through dramatic change, the field of Computer Information Science (CIS) stands at the center of the turmoil, designing, creating, and maintaining the technology and the systems that are central to the way the world works. Whether it's e-commerce, information retrieval via the World Wide Web, financial transactions at a local bank, or rockets blasting into space, computer scientists and information specialists are responsible for the hardware and software systems used for these endeavors. And although the changes in the world seem chaotic, there is calm at the center of the turmoil where the computer scientist and information specialist proceed methodically using the tools of industry, logic and mathematics and an evolving engineering discipline to shape this new world being built.

At Clarion, we have faculty who have many years of real world experience and many years of teaching and sharing that experience with students. Students develop software for a variety of computing platforms including mainframe and personal computers and the networks linking them together. Software experience includes C#, Java and others. At Clarion, the CIS student gets the full attention of the faculty who are in the classroom and in the labs helping the students learn. There is a dramatic need for people to come join the ranks of the professionals that are quietly changing the world. If you are bright, energetic, and persistent and love to solve difficult problems in creative ways, come join us.

Computer Science (B.S.) Degree Outcomes

1. Students will be proficient in at least two modern, commercial programming languages.
2. Students will demonstrate an understanding of the complete System Development Lifecycle from planning and problem analysis through implementation and documentation.

Information Systems (B.S.) Degree Outcomes

1. Students will acquire a breadth of knowledge in computer hardware, software, networking, systems analysis, and business administration.
2. Students will demonstrate an understanding of the complete System Development Lifecycle from planning and problem analysis through implementation and documentation.

Requirements

COMPUTER SCIENCE, B.S.	64 credits
Required: CIS 140, 202, 244, 253, 254, 306, 355, 356, 375, 411, 412, 460; MATH 260 or 270; ECON 221 or MATH 221, PHIL 311; and 18 credits of approved CIS electives.	
INFORMATION SYSTEMS, B.S.	60 credits
Required: CIS 110, 202, 206, 217, 301, 303, 317, 330, 402, 403, 411; MATH 131, 232; ECON 211, 212; ECON 221 or MATH 221; ACTG 251, 252; FIN 370; MGMT 320; MKTG 360; and 9 credits of approved CIS electives.	
COMPUTER SCIENCE, MINOR	18 credits
Required: CIS 202, 244, 254; and 9 credits of approved CIS electives.	
INFORMATION SYSTEMS, MINOR	18 credits
Required: CIS 202, 301, and either CIS 110 or CIS 317 plus 9 credits of approved CIS electives.	
WEB DEVELOPMENT, MINOR	24 credits
Required: CIS 202, CIS 270, CIS 370, COM 371, COM 444, ART 124, ART 250 and 3 credits of approved Web Development electives.	

Criminal Justice, A.S.

Department Chair, David Lott, Ph.D.
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 Email address: dlott@clarion.edu
 www.clarion.edu/jltl

Venango College’s criminal justice degree program provides a solid, broad-based education in all five areas that comprise criminal justice education including policing, juvenile justice, criminology, law adjudication and corrections.

The Associate of Science in Criminal Justice is designed to provide students with the knowledge and skills necessary to work within the criminal justice system. Graduates from the program will be prepared to seek entry-level positions in municipal, county, and state police agencies. Additionally, students can pursue careers as correctional officers or as support-level staff in juvenile residential facilities. Moreover, positions within the private safety/loss prevention sector may be available. This program can now be taken online to accommodate family and work obligations.

Criminal Justice (A.S.) Outcomes

1. Upon completion of the A.S. degree in criminal justice, students will be able to effectively delineate and explain the major branches of the American Criminal Justice System, particularly the roles and responsibilities of each of the individual branches.
2. Upon completion of the A.S. degree in criminal justice, students will be able to demonstrate the ability to

comprehend the various theoretical paradigms that have been proffered to explain both individual and group criminal behavior.

3. Upon completion of the A.S. degree in criminal justice, students will be able to identify and apply major discipline-specific concepts, procedures, and practices.

Requirements

GENERAL EDUCATION	CR.
ENG 111: Writing II.....	3
Math Proficiency	3
Liberal Education Skills.....	3
Physical and Biological Sciences.....	3-4
Social and Behavioral Sciences	3
Arts and Humanities	3
HPE 111	2
TOTAL	20-21

CRIMINAL JUSTICE

Required Courses–18 Credits

CRJT 110	3
CRJT 235	3
CRJT 245	3
CRJT 260	3
CRJT 363/PS 363.....	3
CRJT 275	3

Additional Required Course–3 Credits

CRJT 255 or CRJT 399 or CRJT 325	3
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Related Courses–9 credits (Choose three from the following)

MGMT 121	3
PS 211	3
PSY 111	3
PSY 211	3
PSY 354	3
SOC 211	3
SOC 351	3
SOC 361	3

Early Childhood Education, A.S.

Department Chair, Bruce Smith, Ph.D.
 123 Stevens Hall
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 Email address: bsmith@clarion.edu

The Associate of Science Degree in Early Childhood Education is designed to provide students with the knowledge and skills necessary to work directly with children from birth through age eight. Graduates from the associate degree program are educated to work with families and other professionals in a variety of child care-early education settings such as Head Start, child care centers, child development programs, public education classrooms, and early intervention programs. The program provides a strong foundation for individuals desiring to continue their education at the baccalaureate level. The associate degree program is offered completely online to provide the maximum flexibility for employed individuals. The program is designed to be completed on a part-time basis over a four-year period. The following program outline must be followed.

Sequence for Early Childhood Curriculum

<i>FIRST SEMESTER</i>	ED 121, ECH 240
<i>SECOND SEMESTER</i>	ECH 231
<i>THIRD SEMESTER</i>	ECH 234
<i>FOURTH SEMESTER</i>	ED 301
<i>FIFTH SEMESTER</i>	ECH 350
<i>SIXTH SEMESTER</i>	ECH 310 and ECH 322
<i>SEVENTH SEMESTER</i>	ECH 323 and ECH 325
<i>EIGHTH SEMESTER</i>	SPED 418
<i>NINTH SEMESTER</i>	ECH 413
<i>TENTH SEMESTER</i>	MATH 211, PSY 211, ANTH 211, or SOC 211
<i>ELEVENTH SEMESTER</i>	Fine Arts and Humanities Physical-Biological Sciences
<i>TWELFTH SEMESTER</i>	Literature Choice

General Education course appropriate for degree will be available on a rotating basis. Students are encouraged to contact their academic advisor.

Economics, B.S.B.A., B.A.

Department Chair, Rod D. Raehsler, Ph.D.
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Website: www.clarion.edu/econ
Department Faculty: R. Balough, R. Raehsler, S. Trejos, P. Woodburne

Economics studies how our society organizes natural resources, labor, productive assets, and human ingenuity to produce goods and services. It studies the decisions of individuals, governments and business firms, as they attempt to use their scarce resources in the most efficient way.

Clarion's Bachelor of Science in Business Administration (B.S.B.A.) in Economics provides a variety of business skills. It combines economics courses with other beginning and advanced business courses. The following five program tracks have been designated: monetary economics, quantitative economics, international economics, urban and public affairs, and general economics. Students select the track that is consistent with their interests and personal goals. Students from this program have been successful in graduate school, and in a range of careers immediately after graduation. A number of positions are open to economics graduates. A minor in economics is also offered, which complements most business majors.

The Economics Department at Clarion has an exceptionally high Ph.D. coverage, and its low student-faculty ratio for majors promotes high-quality instruction and personal attention. Economics is organized within the College of Business Administration and Information Sciences, whose elite AACSB accreditation guarantees exceptional preparation in both economics and related subjects. Internships tailored to students' specific requirements can be arranged with banks, businesses, and other institutions. Located in Still Hall, the department has excellent classroom and computer facilities. Within individual courses, students are introduced to simulation and calculation on computers using a variety

of software packages and databases, including a number developed specifically for economics classes at Clarion University.

Associated with the Economics Department are the PEACE Club and the Omega chapter of Omicron Delta Epsilon, the international honor society in Economics.

In addition to the business economics major listed below, the department offers students a major in economics in the Bachelor of Arts program of the College of Arts and Sciences.

Economics (B.S.B.A., B.A.) Outcomes

Students graduating with a degree in economics:

1. will be able to demonstrate an understanding of the concepts, terminology, and models pertinent to macroeconomic and microeconomic analysis.
2. will be able to apply economic theory and methods to real world problems and events.
3. will be well trained in critical, integrative, and evaluative thinking. They will be able to apply economic concepts together with quantitative methods to evaluate economic policies and decisions.
4. will have a comprehensive understanding of quantitative methods relevant to applied economic analysis.

Requirements

BUSINESS ECONOMICS (B.S.B.A.)	24 credits
Required: ECON 311, six credits in 300- or 400-level elective courses in economics or other business courses (may include BSAD 241), 15 credits in economics from one of the following tracks:	
MONETARY ECONOMICS TRACK	15 credits
Required: ECON 361, 370, 371. Two additional economics courses or one economics course and FIN 476.	
QUANTITATIVE ECONOMICS TRACK	15 credits
Required: ECON 309, 323, 470 and two additional economics courses.	
INTERNATIONAL ECONOMICS TRACK	15 credits
Required: Three of the following four: ECON 312, 361, 363, 461. Any two additional economics courses or any one additional economics course and MGMT 426.	
URBAN AND PUBLIC AFFAIRS TRACK	15 credits
Required: ECON 314, 342, 351. Two additional economics courses or one additional economics course and PS 375.	
GENERAL ECONOMICS TRACK	15 credits
Required: Five courses in economics to be selected in consultation with and approved by the student's advisor.	
ECONOMICS (MINOR)	18 credits
The minor in economics is available to students with any major from any college, including those in the College of Business Administration.	
Required: ECON 211, 212, 310, 311. Six additional credits in 300- or 400-level economics courses selected in consultation with the student's minor advisor.	

Clarion's Bachelor of Arts (B.A.) in Economics degree provides a traditional liberal arts education by combining economics courses with courses in other social sciences, such as history and political science. Students find this program suitable for postgraduate work in law, business and economics, or for beginning a career immediately after graduation. Many positions are open to economics graduates.

ECONOMICS, B.A.45 credits
Required: ECON 211, 212, 310, 311 and 21 credits of 300- and 400-level economics courses chosen in consultation with a department advisor. In addition to these 33 credits, the following are required:

- a. PS 210, PS 211
- b. One course from HIST 120 or 121
- c. One course from ANTH 211, SOC 211, PSY 211

In addition, the B.A. degree requires a competency in either foreign language [the student must pass the final exam for the second year (Intermediate II) or an equivalent thereof] or quantitative skills (the student must take ECON 221, ECON 222, and demonstrate mathematics competency on the level of MATH 232 or MATH 270).

Education, B.S.Ed.

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Department Faculty: P. Apple, L. Bonnett, J. Brown, D. Ellermeyer, G. Goodman, J. Haight, M. Howe, B. Maguire, C. Matthews, J. McCullough, K. Murphy, A. Shannonhouse, J. Smerkar, B. Smith, K. Sprenger

The Education Department is committed to preparing outstanding graduates empowered as decision-makers and reflective practitioners. These individuals shall have the knowledge and skills necessary to take their place in society as professional educators, capable of meeting the needs of a diverse population in our rapidly changing society. The overall mission of the department is to develop educators who have mastered both general knowledge and specialized training, including a recognized body of knowledge in professional content and pedagogy, and a successful integration of technology into day-to-day instructional practices. Individuals will demonstrate an internalized standard of excellence, will be prepared to meet professional employment requirements, and will be ready to assume responsibility for the exercise of professional judgment and for continued professional growth.

The experienced faculty of the Education Department at Clarion is committed to students and to the profession of teaching. Serving as academic advisors, faculty members encourage and help individual students attain their professional teaching goals. Student-centered classes and a variety of field experiences are offered in four specialized curricula in professional education: early childhood, mid-level, world languages and secondary education. Each curriculum meets the accreditation standards of professional groups such as the National Council for the Accreditation of Teacher Education.

Education Department Outcomes

1. Demonstrate discipline specific content, child development, and pedagogical content knowledge.
2. Demonstrate professional responsibility and ethical conduct while exhibiting respect for the cultural diversity of learners, families, colleagues, and communities.
3. Develop standards aligned goals, objectives, and learning experience plans.

4. Differentiate instruction by implementing instructional strategies informed by assessment data.
5. Design appropriate assessments to measure learner knowledge, skills and dispositions.
6. Communicate professionally and engage learners, families, and community members.
7. Analyze and reflect on instructional strategies, behavioral strategies, and learner progress.

Pre-K–4th Grade (Early Childhood)

The Pre-K–4th Grade (Early Childhood) education program provides teacher candidates with multiple opportunities to gain the knowledge, skills, and dispositions necessary to become effective decision makers in a multicultural society. In a sequential format, early childhood candidates are inducted into the education core, proceed with a series of pre-methods courses, and engage in a sequence of field experiences that begin in the first semester of the program.

General Education

The early childhood major should fulfill the general education requirements of the university.

Professional Competencies

General education courses may be used to meet the following content competencies required for certification in Pennsylvania: literature and language, mathematics, and English.

Professional Education Courses

The following courses are required of all Pre-K–4th Grade (Early Childhood) Education majors:

Pre-K–4th (ECH) Core (18 credits): ED 121, 231, 235, 236, 245, 260.

Special Education Core (9 credits): SPED 418, 442, 443.

Pre-K–K Block (18 credits): Must be taken concurrently: ECH 301, 310, 322, 323, 325, ECH 410.

Grades 1–4 Block (18 credits): Must be taken concurrently: ECH 413, 414, 415, 416, 417, 418.

Student Teaching (12 credits): ECH 424, 425.

Mid-level Education: Grades 4-8

Teacher candidates pursue an academic program that includes general education courses, professional education courses, and an area of concentration; i.e., English language and reading, mathematics, science, or social studies.

General Education

The middle-level education major should fulfill the general education requirements of the university.

Education Core: ED 110, 122, 350, 417, EDM1 322, 324, 325, 327, 329, 332, 333, 334.

Special Education Core: SPED 418, 441, 442.

Student Teaching: EDM1 424, 425

Middle-level Specialization (30 credits)

– **English/Language Arts & Reading concentration:** ENG 198, 199, 207, 242, 262, 263, 297, 332, 333, 339, 350, 470, 482. Content Competencies: (ED 350, ENG 459, 462, 463, select one), SCED 205, (PHSC 111, 112, BIOL 111, ES 111, 140, select one), MATH 111, 112, 113, 211, HIST 120 or 121, HIST 111 or 112 or 113, PS 211, GEOG 100.

- **Mathematics concentration:** MATH 111, 112, 171, 211, MATH 113 or MATH 221, or MATH 321, MATH 212 or MATH 357, MATH 213 or MATH 260, or MATH 270, MATH 214 or MATH 340, MATH 215 or MATH 340, MATH 454. Content Competencies: ED 122, 350, 417, NSCI 150, 151, SCED 205, ENG 111, 263, (PHSC 111, 112, BIOL 111, ES 111, 140, select one), HIST 111 or 112 or 113, HIST 120, 121, PS 211, GEOG 100.
- **Sciences concentration:** BIOL 155, 156, 165, 166, 202, CHEM 153, 163, ES 280. Content Competencies: ED 122, 350, 417, ENG 111, 263, EDML 332, 333, ES 111, HIST 111 or 112 or 113, HIST 120 or 121, PHSC 112, PS 211, SCED 205, 305, GEOG 100.
- **Social Studies concentration:** HIST 111, 120, 121, ECON 211, PS 211, GEOG 100, HIST 112, 113, 130, 131, 286, ANTH 211. Content Competencies: ED 122, 350, 417, SCED 205, (PHSC 111, 112, BIOL 111, ES 111, 140, select three), SCED 476, ENG 111, 263, EDML 332, 333, MATH 111, 112, 113, 211.

Integrated Middle-Level Education (Grades 4–8)

Teacher candidates pursue an academic program that includes general education courses, professional education courses, and an area of emphasis; i.e., English/language reading, mathematics, science, or social studies. This course of study is integrated with a Master's in Education with Special Education Concentration. Please refer to the *Clarion University Graduate Catalog* for specific requirements at the graduate level.

Secondary Education

Baccalaureate programs leading to certification in secondary education (7–12) are available in biology, chemistry, earth science, English, general science, mathematics, physics, social studies, and Spanish (K–12). Each program is designed to provide students with a thorough foundation in the teaching specialty and with the professional skills needed to work effectively with adolescents in a variety of learning environments.

General Education

Secondary education students fulfill the general education requirements of the university. However, within certain majors there may be slight deviations from the pattern presented, and secondary students should check with the departmental office of the discipline in which they are majoring to ascertain any variations. Two college-level English (composition/literature) and math courses are required.

Professional Education Core Requirements (36 credits):

ED 110, 122, 225, 327, 329, 350, 417, ED xxx (Methods in specific discipline), ED 424, 425, and SPED 418, 441, 442.

Secondary Certification Specialization

Secondary education majors may choose areas of specialization from the following programs. A grade of C or better is required for each course in the major area of specialization.

Biology (38 semester hours)

Required Courses: BIOL 155, 165, 156, 166, 201, 202, 203, 382, SCED 476, CHEM 154, 164, 251, 261.

Electives (two required), BIOL 341 and 405 recommended.

Prior to registration the student's advisor will approve courses

taken as biology electives. In meeting general education requirements, the distribution in natural sciences and mathematics may be met with supplemental courses from the field of specialization. It is recommended the quantitative reasoning requirement be met by MATH 221 and the mathematics competency be met by MATH 171 or higher. Students should note no more than one non-laboratory elective may be included in credits for the biology specialization. Proficiency in earth science, Physics I or II, also required.

Chemistry (42 semester hours)

Required: CHEM 151, 152, 161, 162, 251, 252, 257, 261, 262, 270, 271, 353, 354, 355, 358, 363, 364, 368, 456, and 470.

Additional Requirements: MATH 270, 271 and PH 251 or 252. Students who have taken CHEM 153 and 154 may be permitted, upon consideration of their performance, to substitute these courses for CHEM 151 and 152. A total of 30 semester hours in chemistry must be taken. Competency in biology and earth science (SCED 476) also required.

Earth Science (33 semester hours)

Required: ES 150, 200, 250, 260, 270, 280, 476

10 credits in one of two specializations: Geology: ES 255, 260, 355, 360, 370; Planetarium Management: ES 201, SCED 485, COOP 497

SECONDARY EDUCATION CORE (31 credits)

Required: ED 110, 122, 325, 327, 329, 332, 425, 425, SPED 418, 441, 442

Supplemental Courses: CHEM 154/164, four credits from biology, chemistry, or physics.

Proficiencies: CHEM 153/163, PH 251 or 252, BIOL 155/165.

English (42 semester hours)

Required: ENG 198, 199, 221, 222, 225, 226, 227 or 228, 262, 263, 355, 459 or 462 or 463, 470.

Additional English requirements (nine credits):

One from: ENG 353, 457, 458, or 459.

Literature electives: six credits must be taken on the 300/400-course levels.

One additional 300-400 level literature course competency required.

Non-print media competency is required.

Advanced writing competency is required.

General Science (38 semester hours)

A program specifically designed to prepare students to teach science at the junior high or middle school level. General science majors are not prepared to teach specialized high school courses such as biology, chemistry, physics, or earth science. Likewise, biology, chemistry, or physics majors are not prepared to teach general science unless their college program is broadened to include all of the required science courses of the general science curriculum. Students who desire to teach only specialized courses should major in the specific subject area.

Required: BIOL 155, 165, 156, 166, 202, SCED 476, CHEM 153, 163, 154, 164, PH 251, 252, ES 150, 200, 270, and 280, plus two one-credit seminars.

Also Required: Proficiency in precalculus (MATH 171) and statistics (MATH 221 or 321); Successful completion of SCED 460 and 499.

Majors in general science should not include BIOL 111, MATH 112, PHSC 111, PHSC 112, and ES 111 in their general education programs. Only upon satisfactory completion of all basic courses in the general science curriculum will a biology, chemistry, physics, or earth science major be recommended for an Instructional I certificate in general science.

Mathematics (31-35 semester hours)

Required courses: MATH 270, 271, 272, 300, 321, 340, 357, 370, 390, 451, 49_, and MATH Elective (300 level or above).

Also Required: (6 credits) Junior High Strand: MATH 111, 221 or Senior High Strand: MATH elective (221, 285, above 300).

Electives: Prior to registration, the student's advisor will approve courses taken as mathematics electives. Majors must select PH 258 and/or CHEM 151 or 152 instead of basic PHSC 111-112, which do not count toward graduation. CPSC 201 Required.

Concurrent certification in physics is possible with the election of PH 258, 268, 259, 269, 351, 352, 353, 354, 371, 372, 461. Students admitted into both programs should substitute ED 335 for 339.

Physics (38 semester hours)

Required: PH 258, 268, 259, 269, 351, 352, 353, 354, 371, 372, 461.

Electives: Additional 12 credits in physics (300-level or higher).

Proficiencies in Other Related Areas: MATH 270, 271, 272, 350, CHEM 153, 163, BIOL 111-499 (5 credits), and SCED 476.

Social Studies (42 semester hours)

Social Studies Specialization: History Concentration (24 credits)

Required: History Concentration (24 credits), Political Science (six credits), Geography (six credits), ECON 211, 212, ANTH 211, PSY 211, SOC 211, SCED 476. Non-western culture competency (three credits.)

Spanish K-12 (33 semester hours)

Required (33 credits): SPAN, 250 or 251 and 252, 265, 270 280 or 281 and 282, 301 and 12 additional credits chosen from Spanish 253-499, excluding courses above, and courses taught in English.

Supplemental Courses (6 credits): ANTH 211 and ENG 457 or ENG 262.

English, B.A.

Department Chair, Kathleen O'Donnell, Ph.D.

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Telephone: 814-393-1995

E-mail address: kodonnell@clarion.edu

Website: www.clarion.edu/english

Department Faculty: J. Bodziock, M. Downes, E. Foster,

J. Knepper, R. Lane, R. Leary, H. Luthin, E. MacDaniel,

C. McCarrick, U. Pack, B. Roberts, A. Rosati, D. Sarbin, J. Smart,

K. Stemmler, P. Terman, K. Welsch, G. Xu

There are few undergraduate majors that provide a person with the critical literacy and multicultural awareness essential for success in any field as does English. Since writing and reading literature are forms of self-discovery, as an English major you will learn how to express your own insights, values, and opinions. In addition you also will deepen your appreciation and knowledge of the world. Close reading, analytical writing, and critical/creative thinking are universally important skills that will serve the English major well in a variety of rewarding and competitive careers. The worlds of education, teaching, law, human services, marketing, advertising, publishing, public relations, and management welcome with open arms the literate, critical thinker who can write, read comprehensively, and develop convincing arguments with coherence and sharp focus.

As an English major at Clarion University, you will work with professors who are committed to teaching excellence. Our faculty is sensitive to the mosaic of critical and creative writing, literature, and multiculturalism that English studies offers students. As an English major at Clarion, you may choose among many fields of study: Literature (American,

British, World, Women's, Multi-Ethnic, Young Adult); Writing (Creative, Critical, Professional); Linguistics; Culture Studies (Film, Folklore, Critical Theory). Beyond course work, you can become active in our English Club, Sigma Tau Delta (the International English Honor Society), Study-Aboard Program, student magazine (*Tobeco*), and the Visiting Writers Program. Your personal and professional growth as a Clarion English major will prepare you to meet the world with confidence, critical literacy, and sophistication.

English (B.A.) Degree Outcomes

1. Read wide range of literary texts.
2. Write in rhetorical/critical modes.
3. Compare, evaluate, apply rhetorical strategies.
4. Compare, evaluate, apply interpretive strategies.
5. Compare, evaluate, apply critical strategies.

Requirements

ENGLISH, B.A.54 credits

Required: ENG 198; ENG 199; ENG 221 or 222; ENG 225 or 226; ENG 227 or 228 (NOTE: at least one of the surveys must come from the first half of a sequence, and at least one of the surveys must come from the second half of the sequence); ENG 262; 355; one American literature course at 300-/400-level; one English literature course at 300-/400-level; one world literature course at 300-/400-level; ENG 499. ≠

In addition to these 39 credits, the students must also, in consultation with their advisor, select 15 hours, nine of which must be at the 300-/400-level, that reflect one of the following areas of specialization:

- **General literature:** Two additional 200-level surveys plus three additional* literature courses at the 300-/400-level.
- **Comprehensive:** Two additional 200-level surveys, two additional* literature courses at the 300-/400-level, and a linguistics course, preferably ENG 458.
- **Writing:** 15 credits. Choose from the following writing courses: ENG 200, 202, 207, 297, 298, 301, 303, 304, 306, 307, 356, 381, 404, 480, and 482.
- **Multicultural literature:** ENG 230 and 365 are required (6 credits); one additional multicultural literature course from among the following: ENG 227, 228, 231, 241; two additional multicultural literature courses from among the following offerings: ENG 331, 354, and 454.
- **Cultural studies:** Three courses (9 credits): ENG 242, 250, and 353; two additional courses: ENG 350, and 352.
- **Linguistics:** ENG 262, 353, 457, 458, 459, 462, 463; ENG380/ ANTH 380.
- **Movie studies and drama:** One movie studies course (ENG 254, 350), one drama course (ENG 140, 342, 343, 344, 345, 455), one Shakespeare course (ENG 412, 413), plus any two additional courses in movie studies, drama, and/or Shakespeare.

An additional, nine hours of 300-/400-level English electives must also be taken.

*Excluding linguistics, folklore, and movie studies

SECONDARY EDUCATION, B.S.Ed.

Certification for grades 3-12 English (see under Secondary Education English), page 60.

In addition, the English Department offers four minors, one in literature and three in writing.

ENGLISH: LITERATURE, MINOR.....18 credits

Students pursuing the minor in English: Literature must successfully complete two of the 200-level survey courses listed below (B).

- A. ENG 199: Introduction to English Studies
This course is required of all students pursuing the minor in English: Literature. Ideally, it should be taken as the initial course in the program.
- B. ENG 221: English Literature: Beginnings to 1800
ENG 222: English Literature: 1800 to Present
ENG 225: American Literature: Beginnings to 1860
ENG 226: American Literature: 1860 to the Present
ENG 227: World Literature: Backgrounds and Traditions
ENG 228: Modern and Contemporary World Literature
ENG 230: Introduction to African-American Literature
- C. Students must also successfully complete any three literature courses to be selected from ENG 311 through ENG 455 (except ENG 353 and ENG 356).

ENGLISH: PROFESSIONAL WRITING & RHETORIC, MINOR..... 18 credits

- A. Required Writing Course (3 credits)
ENG 207: Research Methodology and Writing
- B. Additional Writing Courses (15 credits; at least nine of which must be at the 300-400 level)
ENG 263: English Grammar and Usage
ENG 297: Writing and Visual Rhetoric
ENG 298: Argument and Persuasion
ENG 301: Writing Non-Fiction Prose
ENG 306: Scientific and Technical Writing
ENG 307: Business Writing
* ENG 356: Rhetorical Theory for Writers
ENG 381: Documentary Writing
* ENG 480: Writing for the Professions
ENG 482: Composition: Theory and Practice

ENGLISH: CREATIVE WRITING, MINOR.....18 credits

- A. Required:
ENG 202: Beginning Creative Writing
ENG 404: Advanced Creative Writing
- B. Additional required credits (two of the following):
ENG 301: Writing Non-Fiction Prose
ENG 303: The Craft of Fiction
ENG 304: The Craft of Poetry
THE 356: Playwriting and Script Construction
- C. Two of the following (one from each group):
Group 1
ENG 130: Literary Experience
ENG 140: Drama as Literature
ENG 256: Movie Studies
Group 2
ENG 242: Intro to American Folklore
* ENG 329: Contemporary American Literature
ENG 339: Short Stories
ENG 341: 20th Century Poetry
ENG 353: American Voices

ENGLISH: WRITING, MINOR..... 18 credits

- A. Required Writing Course (3 credits)
ENG 207: Research Methodology and Writing
- B. Additional Writing Courses (15 credits)
ENG 202: Beginning Creative Writing
ENG 263: English Grammar and Usage
ENG 297: Writing and Visual Rhetoric
ENG 298: Argument and Persuasion
ENG 301: Writing Non-Fiction Prose
ENG 304: The Craft of Poetry
ENG 306: Scientific and Technical Writing
ENG 307: Business Writing
* ENG 356: Rhetorical Theory for Writers
ENG 381: Documentary Writing
ENG 404: Advanced Creative Writing
* ENG 480: Writing for the Professions
ENG 482: Composition: Theory and Practice

Environmental Biology, B.S. (See Biology)**Environmental Geoscience, B.S.**

Department Chair, Craig Scott, Ph.D.
255 Science and Technology Center
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E-mail address: cscott@clarion.edu
Website: www.clarion.edu/geoscience
Department Faculty: Y. Ayad, V. James, G. Thomas, A. Vega, C. Zamzow

Those with a specific interest in environmental applications may wish to enroll in the environmental geoscience program. This is specifically designed to prepare students to work in the rapidly expanding environmental consulting field. Individuals who would like to teach in the public schools will want to investigate the Secondary Education–Earth and Space Science program. Those who would like to combine an interest in the earth with another field of study may want to enroll in a dual major or a minor in earth science. A distinctive feature of the environmental geoscience program at Clarion is the opportunity to include GIS (Geographic Information Systems) classes, which add a powerful mapping and spatial analysis tool to the skills of our graduates.

Environmental Geoscience (B.S.) Outcomes

1. To understand the scientific method and theory development and demonstrate the ability to follow and/or generate standard scientific procedure.
2. To understand physical earth and environmental processes and their manifestations.
3. To understand major environmental concerns and human related issues.
4. To apply knowledge of earth and environmental processes in problem solving.
5. To obtain technical ability relative to environmental and geophysical data manipulation, analysis, and interpretation.
6. To effectively communicate information relative to the discipline

Requirements: (students must choose at least one concentration)

ENVIRONMENTAL GEOSCIENCE, B.S.54-60 credits

Required: ES 150, 260, ES/GEOG 385, 400, 470, and 455. **GIS Concentration required courses:** ES/GEOG 210, 425, 460, 481, 490, CIS 202. Students must select ONE course from the following: CIS 301 (CIS 202 is pre-requisite) or ES/GEOG 345 AND six credits from the following courses: BIOL 202, CIS 206, 270, 306, 330, 370, 402, MATH 225. **Geoscience Concentration required courses:** ES 255, 330, CHEM 153/163, 154/164. Students must choose up to EIGHT credits from the following Earth Science Electives: ES 350, 390, 360, 370 AND a Biology elective (3-4 credits) – fills Gen. Ed. Requirement. **Mineral Resources Exploration Concentration required courses:** ES 350, 360, 370, 390, CHEM 153/163, 154/164 AND students must choose MATH 260 or MATH 270 – fills Gen. Ed. Requirement. **Atmospheric/Oceanic Science Concentration required courses:** ES 140, 270, 280, PH 251, 252 AND students must choose MATH 260 or MATH 270 – fills Gen. Ed. Requirement.

- MINOR, ENVIRONMENTAL GEOSCIENCE**21-22 credits
Required: ES 150, 260, 385, ES/GEOG 400, 470. Students must choose ONE of the following (3-4 credits): ES 140, ES/GEOG 210, ES 250, 255, 270, 280.
- MINOR, GEOGRAPHIC INFORMATION SYSTEMS (GIS)**20 credits
Required: ES/GEOG 210, 345, 400, 425, 470, 490.

The Biology and Geosciences Department also offers a program in secondary education; page 60.

Finance, B.S.B.A.

Department Chair, Jerry Belloit, Ph.D.
 336 Still Hall
 Telephone: 814-393-2626
 E-mail address: belloit@clarion.edu
 Website: www.clarion.edu/coba/finance
 Department Faculty: J. Belloit, M. Brigida, J. Eicher, J. Eichlin, W. Pratt, F. Shepard

The finance curriculum prepares students for a variety of positions in financial institutions and other corporations, or for careers as financial planners. Because finance is a functional area in every organization, students are exposed in their finance electives to a wide range of choices. The real estate program is designed to prepare students for careers in brokerage, appraisal, real estate law, management, finance, and investment in real estate.

Finance (BSBA) degree outcomes

1. A student who graduates with a BSBA-Finance from Clarion University will be able to solve time-value-of-money problems.
2. A student who graduates with a BSBA-Finance from Clarion University will be able to compute the risk on a stock.
3. A student who graduates with a BSBA-Finance from Clarion University will be able to perform a capital budgeting analysis.
4. A student who graduates with a BSBA-Finance from Clarion University will be able to calculate a firm’s cost of capital.

Requirements

FINANCE (B.S.B.A.)24 credits
Required: *Corporate Finance Track* – FIN 371, 375, 376, 471, three courses from FIN 373, 374, 377, 463, 473, 474, 476, 478, 480, RE 373, 471, ECON 370 or 371, and a finance or business elective, which must be an international business course unless FIN 480 has been chosen as one of the three elective finance courses. *Personal Financial Planning Track* – FIN 373, 375, 376, 463, 473, 474; one course from FIN 371, 374, 377, 471, 476, 478, 480, RE 373, 471; and a finance or business elective, which must be an international business course unless FIN 480 has been chosen as one of the three courses.

MINOR, FINANCE 18 credits
Required: ACTG 251, Math 232 or Math 270, FIN 370, and three from the following: FIN 371, FIN 374, FIN 376, FIN/ACTG 463, FIN 476, FIN 373, FIN 375, FIN 377, FIN 471, FIN 474, FIN 478, FIN 480, RE 373, RE/MKTG 471

Geology, B.S.

Department Chair, Craig Scott, Ph.D.
 255 Science and Technology Center
 Telephone: 814-393-2560
 E-mail address: cscott@clarion.edu
 Website: www.clarion.edu/geology
 Department Faculty: Y. Ayad, V. James, G. Thomas, A. Vega, C. Zamzow

Have you ever wondered how a mountain forms? Or where the water you drink comes from? Or where we are going to safely put the huge quantities of waste materials a modern society produces? Or why “fossil fuels” are called that? Or been captivated by dinosaurs or gemstones? Have you wondered about earthquakes, or landslides, or floods? If so, you may want to investigate geology—the science that studies all of these and much more. As an intellectual field of study, geology attempts to understand how all the features of the earth are formed and in what historical sequence. As an applied field of study, geologists take the basic understanding of earth processes and attempt to predict where oil, gas, coal, and other earth resources are located and how best to extract them. They may also help to locate and predict geologic hazards such as earthquakes, volcanic eruptions, and landslides. Others may apply the knowledge of geologic processes to predicting human occupation sites for archaeologists, and then help interpret the environment when the site was occupied. Others, sometimes more correctly called paleontologists, use knowledge of planet earth to understand other planets in the solar system. A few even assist in solving crimes. Clearly, geology is a varied field of study with hundreds of sub- specialties within it. In the Biology and Geoscience Department, students can get a strong foundation in the basics of geology with the geology degree, a beginning that would prepare them for graduate studies and employment in a number of commercial firms and governmental agencies

Geology (B.S.) Outcomes

1. To understand the scientific method and theory development and demonstrate the ability to follow and/or generate standard scientific procedure.
2. To understand physical earth processes and their manifestations.
3. To apply knowledge of earth processes in problem solving.
4. To effectively communicate information relative to the discipline

Requirements

GEOLOGY, B.S.54-60 credits
Required: ES 150, 250, 255, 330, 350, 355, 360, 370, 390, 455. Students must also complete NINE credits in: ES 225 260, 270, 280, 300, ES/GEOG 301, ES 320, 345, 375, 385, 400, 404, 425, 450, 470, 490; GEOG 125; BIOL 111, 155/165, 156/166, 202. (*A field camp for 6-9 credits may be taken with another College or University.) A total of 9 credits from the Additional Required Credits (8-20) may be used in Liberal Knowledge area IIA. *Students must complete 16 credit hours in the following:* CHEM 153/163, 154/165, PH 251, 252; MATH 221 or 260.

MINOR, GEOLOGY19-20 credits
Required: ES 150, 250, 260, 360. Students must choose ONE of the following (3-4 credits): ES 255, 330, 350, 355, 370, 390.

**In cooperation with another college or university.*

SECONDARY EDUCATION, B.S.ED.

Certification for grades 7-12, Earth Science (see under Secondary Education Earth Science), page 60.

The Biology and Geoscience Department also offers a program in secondary education; page 60.

History, B.A.

Department Chair, Robert M. Frakes, Ph.D.

313 Founders Hall

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E-mail address: rfrakes@clarion.edu

Website: www.clarion.edu/history

Department Faculty: R. Frakes, C. Kennedy, G. LaRue,

K. McIntyre, S. Piott, M. Robinson

History is the discipline of critical inquiry into the human past. The history major introduces students to the study of causes and consequences of change through an examination of social, political, economic, cultural, and intellectual developments over time. The enterprise of history is much more than a recitation of facts and dates. It encourages students to examine the values of their society and those of other societies. It prepares students to read critically, think analytically, and argue logically about the events and forces that have shaped past and present worlds. These skills have served students well in a wide range of careers in business, law, public policy and advocacy, education, journalism historical societies, museums, and archives.

The department's goal is to help students view issues from a variety of perspectives. To assure breadth and depth, the history faculty offer courses in areas that span the globe as well as time. Students can take courses in the history of the United States, Europe, Russia, Asia, Africa, and Latin America. Students can also explore history through a number of distinctive specializations such as women's history, labor history, the history of religion, and African American history, as well as through methods courses in historical research and historiography. In addition, the History Department offers minors in ancient Mediterranean studies and black studies.

The black studies minor invites students to investigate the variety of black experiences in Africa and the African diaspora including North America, South America, the Caribbean, Europe, and Australia. At Clarion, students can study history as the foundation of a comprehensive, challenging liberal arts education while preparing themselves for numerous career opportunities.

History Department: History (B.A.) Outcomes

1. Students graduating from Clarion University with a B.A. in History will demonstrate breadth of knowledge in U.S. History.
2. Students graduating from Clarion University with a B.A. in History will demonstrate breadth of knowledge in European History.

3. Students graduating from Clarion University with a B.A. in History will demonstrate breadth of knowledge in Non-Western History.
4. Students graduating from Clarion University with a B.A. in History will demonstrate critical thinking skills in the historical method including the importance of primary sources, historical context, and cause and effect in a chronological sense.
5. Students graduating from Clarion University with a B.A. in History will demonstrate appropriate writing skills to develop a well-supported historical argument with proper use of citations.

Requirements

HISTORY, B.A.51 credits

Required: U.S. history—12 credits; European history—15 credits; history of other geographical areas—6 credits; and 12 credits of history electives. HIST 410 and 298 are required. Students must complete a foreign language requirement.

SECONDARY EDUCATION, B.S.ED.

Certification for grades 7-12, Social Studies (see under Secondary Education Social Studies), page 61.

HISTORY, MINOR18 credits

Required: 18 credits (nine of which must be at 300- or 400-level).

HISTORY, MINOR IN ANCIENT MEDITERRANEAN STUDIES 18 credits

Required: 18 credits chosen from a menu of interdisciplinary courses.

HISTORY, MINOR IN BLACK STUDIES18 credits

Required: 6 credits in history and 12 credits chosen from a menu of interdisciplinary courses.

Human Resources Management, B.S.B.A.

See Marketing and Management

Industrial Technology, A.A.S.

Department Chair, David Lott, Ph.D.

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The mission of the Department of Applied Technology at Venango College of Clarion University is to provide students with comprehensive technical education and academic skills that match the needs of our community and the employers of our region.

The Department of Applied Technology was created to address high-priority workforce development needs in the region. Students will earn an Associate of Applied Science in Industrial Technology degree from Clarion University. Clarion University will provide the core curriculum of general education and business courses. The technical component of the degree will be provided by licensed, certified, accredited, or otherwise approved technical education partners.

Each program concentration of the Associate of Applied Science in Industrial Technology degree consists of a combination of multiple courses targeting specific skills commonly used in the industry, as well as general education and business courses. Students will be instructed in essential workplace technology and techniques while studying at their respective technical training partner locations (First Energy Corp., The National Hardwood Lumber Association, Precision

Manufacturing Institute, Triangle Tech, The Learning Center, Erie Institute of Technology or Global Power). The remaining educational requirements of the program will be completed at Venango College and are outlined below.

Accreditations

The Industrial Technology is nationally accredited by the Association of Technology, Management, and Applied Engineering (ATMAE). ATMAE is recognized as the premier professional association for the accreditation of industrial technology programs in colleges, universities, and technical institutes. ATMAE accreditation ensures that the university has met a series of national standards to provide industry with highly competent employees and assures the graduate of an ATMAE-accredited program that they are receiving a marketable degree through relevant curricula. Clarion University's Industrial Technology program's accreditation followed a rigorous and comprehensive evaluation process.

Associate of Applied Science in Industrial Technology Program Outcomes

Students will:

1. demonstrate knowledge of industry standards for safety and compliance,
2. demonstrate the proper use of industrial equipment,
3. understand and apply proper techniques for analyzing and producing drawings,
4. differentiate technology processes and their applicability, and
5. demonstrate the skills needed to advance to areas of industrial supervision and seek continuing higher education.

Associate of Applied Science in Industrial Technology Program Goals

1. Ensure that programs of study remain current with industry standards and needs
2. Provide accessibility of the program to all students
3. Provide the highest quality atmosphere for instruction
4. Ensure graduate employability
5. Ensure a safe learning experience
6. Provide opportunity for graduates to continue their formal education
7. Provide a learning experience that will ensure student retention

Industrial Technology (A.A.S.) Outcomes

1. Use technology effectively as an essential tool in industrial situations.
2. Apply management principles to industrial supervision.
3. Demonstrate effective communication using both oral and written forms of communication.
4. Apply safety principles in industrial situations.
5. Demonstrate technical skills in student's chosen field of study.

Requirements

The following course curriculum is to be completed by all Associate of Applied Science degree seeking majors and is the foundation for all concentrations within the Industrial Technology Program.

GENERAL EDUCATION: COMPLETE THE FOLLOWING SEVEN COURSES TO EQUAL 20 CREDITS

ENG 111, MATH 112, CIS 217, PHSC 112, PSY 211, COM 113, HPE 111.

INDUSTRIAL TECHNOLOGY MAJOR: COMPLETE THE FOLLOWING FOUR COURSES TO EQUAL 12 CREDITS

MGMT 120, MGMT 121, ECON 211, INDT 301.

TECHNICAL COURSES: INDUSTRIAL FIELD TRAINING (INDT 299) 28 CREDITS

Students will select from the list of 25 available concentrations listed below and complete up to 30 credits of technical education in their selected area of emphasis at Precision Manufacturing Institute, Triangle Tech, The Learning Center, National Hardwood Lumber Association, FirstEnergy Corp, Erie Institute of Technology or Global Power. The specific courses needed for each concentration can be found at www.clarion.edu/appliedtech-INDT.

TECHNICAL CONCENTRATIONS

Advanced Manufacturing
 Biomedical Equipment Technology
 CADD – Architectural
 CADD – Mechanical
 Carpentry & Construction Technology
 CNC Machinist
 CNC Operator
 CNC/Machinist Technician
 Computer & Network Administration
 Electric Utility Technology
 Electrical Arc Welding
 Electricity – Maintenance & Construction
 Electronics Technician
 Hardwood Lumber Inspector
 Industrial Automation & Robotics Technology
 Maintenance Technician
 Mechatronics Technology
 Natural Gas Technology
 Network & Database Professional
 Professional Pilot
 Quality Control
 Refrigeration, Heating, Ventilation & Air Conditioning
 Welding & Fabrication Technology

TOTAL CREDITS NEEDED FOR GRADUATION: 60 CREDITS

International Business, B.S.B.A.

Department Chair, Rod Raehsler, Ph.D.
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International Business is a multidisciplinary major within the Bachelor of Science in Business Administration (B.S.B.A.) degree that enhances the student's knowledge of the international environment within which United States and multinational businesses operate.

The major not only adds courses in international business and economics to the basic business administration core, but also includes international cultural coursework, language competency, and international experience requirements.

Clarion's international business major provides a curriculum that helps prepare students for careers in business, industry, and government in paths such as international securities analysis, economic development, global marketing, multinational finance, management of global enterprises, and many more.

It also develops the skills needed for effective interaction with foreign businesses and government officials. Many of our faculty members travel regularly internationally to teach or consult including teaching in Russia and China and bring the benefit of their expertise to the students in our program.

The international experience requirement for the major can be met in one of several ways. Our international travel and student exchange experiences regularly send students to approximately eight countries each year. Internship opportunities exist for international business students in France, Ecuador, and Germany. The International Business Program coordinator works with every international business student on an individual basis to provide the type of international experience that is best suited for that student, including students with proficiencies in languages other than the main languages offered at Clarion University.

A minor in international business is also available to complement any major.

International Business (B.S.B.A.) Outcomes

Students graduating with a degree in international business:

1. will be able to demonstrate an understanding of international business concepts and trends and the ability to internationalize domestically developed business methods and practices.
2. will develop a greater degree of cross-cultural awareness related to business activity. They will develop an appreciation of the culture, business practices, and protocol observed in international markets.
3. will develop a deepened understanding of the impact the global environment has on international business activity.
4. will acquire an appropriate level of training in a second language to be able to effectively communicate with a wide range of agents in the global marketplace.
5. will acquire an advanced understanding of how each field in business incorporates international economic activity.

Requirements

INTERNATIONAL BUSINESS (B.S.B.A.)24 credits

Required: ECON 361, MGMT 426, select six to nine credits from the following: ACTG 461, FIN 480, MKTG 469, select three to six credits (for a total of 18 credits in business administration courses): BSAD 341, ECON 312, ECON 363, ECON 461, select six credits from the department's international cultural course list. **Foreign experience requirement:** Students may meet this requirement in a variety of ways, including completing BSAD 437, COOP 321/421, interning with a foreign or international firm, completing a foreign study abroad experience, or other qualified experience. Students who opt for an internship in a foreign country are advised to take a commercial language course and should be Level II proficient in that language. **Modern language requirement:** Students must show competency in a language other than English. This will be accomplished by passing a nationally-recognized language proficiency exam at Level I as a minimum in any language covered by that examination or completing six credits of a foreign language at the 200 level or higher.

INTERNATIONAL BUSINESS, MINOR18 credits

Required: Students must complete 12-15 credits of upper-division international business courses from among the following: ACTG 461, BSAD 341, ECON 312, ECON 361,

ECON 363, ECON 461, FIN 480, MGMT 426, MKTG 469. Students must complete 3-6 credits from the following: BSAD 437, COOP 321/421, study abroad, or a foreign language.

Liberal Studies, B.S.

Liberal Studies is a multidisciplinary degree program administered by the office of the dean in the College of Arts, education and Sciences, the College of Business and Information Sciences, and Health Sciences. The B.S. in liberal studies is a major program designed to provide (1) a structured program that encourages students to explore a diversity of academic skills and disciplines, (2) a liberal arts program for students who have not decided upon a specific school or major, and (3) an option for students who have a desire to specialize in a combination of courses for which a dedicated major does not already exist. It is not necessary for students who enter the university undecided about a major to continue in liberal studies through graduation. Many students who begin in the liberal studies program develop interests that lead them to declare a specific major. Conversely, some students who have completed the core of a degree program opt for liberal studies when their career goals change. In order for students to pursue a dual degree or dual major with liberal studies as a baccalaureate student they must pursue a specific liberal studies concentration that does not duplicate their other degree or major. In the case of a post-baccalaureate student pursuing a liberal studies degree, he or she also must pursue a specific liberal studies concentration that does not in essence duplicate their existing degree.

General Requirements

Admission requirements for the B.S. in liberal studies are the same as those for admission to the university. The degree is based upon the standard eight-semester sequence of courses and requires a minimum of 120 semester hours for graduation.

Academic standards for good standing in the program are the same as the university standards for good standing. To earn the B.S. in liberal studies, the student must complete 48 credits and have a minimum cumulative grade-point average of 2.00 for all course work.

Specific Requirements

Forty-eight credits are general education classes as required by the university constituting courses in specific categories within arts and sciences. In addition to general education classes, liberal studies students complete 24 credits of lower-level (100-200) and 24 credits of upper-level (300 and above) Arts and Sciences courses. An additional 24 credits of elective coursework may be selected from any discipline. Maximum course work in a single discipline is limited to 39 credit hours. All courses must be selected in consultation with an advisor.

Liberal Studies (B.S.) Outcomes

1. Demonstrate their communication skills through both oral and written means.
2. Demonstrate critical thinking skills across a variety of disciplines.
3. Express the connection between their academic program and their desired career interests.

4. Demonstrate advanced content knowledge in their chosen concentration (if applicable).

Requirements

LIBERAL STUDIES, B.S.,

REQUIREMENTS IN MAJOR48 credits
A minimum of 24 credits must be earned in the College of Arts and Sciences at or above the 300 level. No more than 39 credits may be represented in a single discipline.

LIBERAL STUDIES, B.S.,

CONCENTRATION IN COMMUNICATION

Required: COM 100, 110, and 140; 21 credits in courses numbered 100-higher; 30 credits in College of Arts & Sciences courses numbered 300 or higher; 12 credits of Elective Courses in the Communication Department with at least nine of these credits at the 300/400 level.

LIBERAL STUDIES, B.S.,

CONCENTRATION IN EDUCATION

Required: ED 110, 121 or 122, 225, 327, 329, 417, and SPED 418; a minimum of 51 credits must be earned in the College of Arts and Sciences; a minimum of 30 credits must be at or above the 300 level. Restricted to seniors.

LIBERAL STUDIES, B.S.,

CONCENTRATION IN ENGLISH

Required: Two courses from ENG 199, 130, 140, 160, 221, 222, 225, 226, 227, 228, 230, 231, 242, 243, 244, 249, 250, 254, 262, 265; Two writing courses from ENG 200, 202, 207, 263, 297, 298, 301, 303, 304, 306, 307, 381, 404, 480. The same course may not be used to fulfill two core requirements. English electives: 12 credits at a 300-400 level. 15 additional English credits can be placed under free electives.

LIBERAL STUDIES, B.S., CONCENTRATION IN

GEOGRAPHY AND SUSTAINABLE PLANNING

Required: GEOG 100, 257, 310, GEOG/ES 385, 400, 470, and ES 150. One course from GEOG 250, 252, or 490; one course from GEOG 260, 265, or 310; one course from GEOG/ES 345, 425, 490; 39 additional credits at the 300 level or above.

LIBERAL STUDIES, B.S.,

CONCENTRATION IN GLOBAL UNDERSTANDING

Required: Introductory course in Global Understanding GU/COM 160; Six credits of intermediate language courses; 12 Credits in Cultural Studies chosen from the following: ANTH 211, 216, 218, 245, 357; ARTH 111, 215, 216, 217; COM 312, 320, 360, 420; ENG 227, 228, 380; FR 101-499; GER 101-499; SPAN 101-499; Arabic 103, 104, 151, 152, Chinese 103, GEOG 250, 254, 256, 260, 310, 315; HIST 217, 254, 255, 275, 286, 303, 305, 370; HON 240; MMAJ 339; PHIL 215; PS 311, 35; 27 credits of general elective coursework to complete the major (at least 24 total credits in sections B, C, D of the major must be in College of Arts & Sciences courses numbered 300-higher). Free electives to complete 120 credit degree requirement.

LIBERAL STUDIES, B.S.,

CONCENTRATION IN THEATRE

Required: THE 161, 253, 254, 359, 360; two courses from THE 155, 201, 204, 301, 310, 311, 321, 352, 361, 368, 369, 370, 461; one course from THE 350 or 351; two courses from THE 251, 262, 271, 362, 363, 366, 367, 371; one course from THE 300-499; two courses from ENG 140, 342, 343, 344, 345, 412, 413; three credits from THE 103 (maximum 2 credits) or 104. Remaining 30 credits from College of Arts and Sciences courses numbered 100-499.

LIBERAL STUDIES, B.S.,

CONCENTRATION IN WRITING

Required: 24 credits in English writing courses; 15 credits in non-writing English courses (literature, drama, movie studies, folklore, linguistics); 33 additional credits in Arts and Sciences courses, excluding English.

LIBERAL STUDIES, B.S.,

CONCENTRATION IN WOMEN AND GENDER STUDIES

Required: 21 credits of women and gender studies courses; WGS 100: Survey of Women and Gender Studies; at least twelve other credits at the 300-400 levels. Eighteen credits to be selected from ANTH 216, 315; ART 216; ED/WGS 406; ENG 265, 365; GEOG 315; HIST 230; HPE 370; PHIL 357; PSY 220, 340, 390; COM 281, 320; SOC 311, 352, 362, 452; WGS 200, 300, 311.

LIBERAL STUDIES, B.S., CONCENTRATION

IN LIBRARY SCIENCE

Required: COM 100, 110, and 140; 21 credits in courses numbered 100-higher; 30 credits in College of Arts & Sciences courses numbered 300 or higher; 12 credits of Elective Courses in the Communication Department with at least nine of these credits at the 300/400 level.

The B.S. in liberal studies with a concentration in library science prepares students to work as paraprofessionals and provisional librarians in a variety of settings, including public libraries in Pennsylvania. It introduces students to the exciting worlds of information management and information transfer, in both traditional and emerging venues. The B.S. in liberal studies with a concentration in library science serves as an excellent preparation for studying toward a master's degree in library science (such as Clarion's American Library Association-accredited MSLS degree), which is the recognized professional credential for the practice of librarianship.

Liberal Studies (Library Science concentration) Outcomes

1. Students will demonstrate knowledge of principles of libraries and information organizations in a contemporary society.
2. Students will demonstrate knowledge of public and technical services performed under the supervision of a librarian or information professional.
3. Under the supervision of a librarian or information professional students will be able to develop and implement programs and services appropriate to specific user groups, e.g., children, senior citizens, etc.

Requirements

Required: LS 259, 370, 371 and 440. A minimum of 30 credits must be at the 300 level or above.

LIBERAL STUDIES, B.S., CONCENTRATION IN SPORTS

MANAGEMENT

Required: ATSW 370, ATSW 380, ATSW/MGMT 430, ATSW 440, MGMT 320, COOP 447, and choose either ECON 175, 211 or 212. A minimum of 39 credits on the right side of the check sheet must be at or above the 300 level. Students enrolled in this concentration are not eligible to receive the Sport Management Minor.

LIBERAL STUDIES, B.S., CONCENTRATION IN ATHLETIC

COACHING

Required: ATSW 406, ATSW 407, ATSW 408, ATSW 409, (choose two of the following ATSW 350, 351, 352, or 354), ATSW 333, ATSW 334, ATSW 440, COOP 444. A minimum of 39 credits must be at or above the 300 level. Students enrolled in this concentration are not eligible to receive the Minor or Verification in Athletic Coaching.

LIBERAL STUDIES, B.S., CONCENTRATION IN ATHLETIC

TRAINING EDUCATION

Required: ATSW 150, ATSW 300, ATE 204, ATE 225, ATE 265, ATE 305, ATE 315, ATE 330, ATE 400, ATE 405, ATE 425, ATE 440, ATE 460, COLB (FIT) 400, COLB (HSC) 275, COLB (HSC) 290, COLB (HSC) 325, BIOL 251/261, BIOL 252/262, PSY 211, HPE 111, HPE 186, SOC 211, COM 113, ENG 111 (or 130, 200, 307), CIS 110 or 217.

Liberal Studies, B.S. (Venango College)

The Bachelor of Science in Liberal Studies at Venango College of Clarion University offers students the flexibility to earn the degree through a blended program of traditional classroom instruction and online courses. Students who choose the suggested Venango College curriculum plan can earn two degrees: an Associate of Arts in Arts and Sciences degree is awarded after earning 64 credits; a Bachelor of Science in Liberal Studies degree is awarded upon completion of the 120-credit program.

Library Science

Liberal arts students, regardless of their major, may qualify as provisional librarians under the Pennsylvania Library Code by successfully completing at least 12 library science credits (semester hours).

Library Science, B.S.Ed.

Department Chair, Linda Lillard, Ph.D.

207 Carlson Library

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Department Faculty: S. Aristeguieta-Trillos, W. Buchanan,

R. Clark, Y. Ha, M. Harhai, J. Krueger, L. Lillard, J. Maccaferri

Library science makes use of a wide variety of traditional and emerging technologies to meet the world's information needs. Librarians and other information professionals work in a variety of institutional settings, including school library media centers, public libraries, academic libraries, and special libraries (including business, government, law, and medical libraries). Students learn how to acquire, organize, and provide access to information in all formats while gaining experience with a wide variety of information systems and developing advanced database search skills. While baccalaureate students are eligible for Pennsylvania school library media certification and/or provisional certification as a public librarian, most professional library positions require a master's degree from an institution accredited by the American Library Association (ALA).

Clarion University has offered undergraduate library education since 1937 and is one of only three universities in Pennsylvania to offer an ALA-accredited master's degree—permitting students in any degree program to progress from a bachelor's degree to a master's degree without changing universities. Faculty represent a variety of specializations, including school media librarianship, public librarianship, reference services, organization of information, and information technology. Students have ready access to a variety of advanced information systems in the department's computer laboratory. Many courses feature early field experiences, and students can gain additional pre-professional experience through membership in student chapters of both the American Library Association and the Special Libraries Association.

The Department of Library Science offers one undergraduate major and offers one concentration. The primary focus of the department's undergraduate program is the preparation of

students for careers as school library media specialists. In this respect, the department plays a unique role within the commonwealth: it is one of only three institutions of higher education in Pennsylvania providing undergraduate school library media certification; it is the only such institution in western Pennsylvania; and it is the only institution in Pennsylvania providing both graduate and undergraduate school library media certification programs.

The Bachelor of Science in Education in Library Science degree program is a 120-credit major that prepares students for Pennsylvania School Library Media Certification, grades K-12. The program emphasizes field experiences and the use of advanced information technology. Pennsylvania School Library Media Certification, K-12, also is valid for initial certification in more than 40 other states. The following courses are required:

Library Science (B.S.Ed.) Outcomes

1. Literacy and Reading. School library media candidates encourage reading and lifelong learning by stimulating interests and fostering competencies in the effective use of ideas and information
2. Teaching and Learning. School library media candidates model and promote collaborative planning with classroom teachers in order to teach concepts and skills of information processes integrated with classroom content.
3. Collaboration and Leadership. School library media candidates provide leadership and establish connections with the greater library and education community to create school library media programs.
4. Administration. School library media candidates administer the library media program in order to support the mission of the school, and according to the principles of best practice in library science and program administration.

Requirements

PROFESSIONAL EDUCATION COURSES 45 credits

ED	110: Introduction to Education	3
ED	121: Human Development and Learning	3
ED	417: Adv. Edu. Technology	3
ECH	231: Creativity and Early Childhood Curriculum	3
ED	327: Instructional Strategies and Management	3
ED	329: Educational Evaluation	3
ECH	245: Language and Literacy in the Early Childhood	3
ED	350: Teaching English Language Learners	3
ENG	462: Meth. In Teach Eng. to Non Nat. Speakers	3
ED	423: Library Practice/Secondary S.T.	6
ELED	423: Library Practice/Elementary S.T.	6
SPED	418: Exceptionalities in the Regular Classroom	3
SPED	442: Differentiated Instruction	3
SPED	443: Prev & Treat of Acad Learning Problems	3

LIBRARY SCIENCE SPECIALIZATION 27 credits

LS	255: Introduction to Librarianship	3
LS	257: Basic Information Sources and Services	3
LS	258: Selection of Library Materials	3
LS	356: Media for Young Adults	3
LS	357: Organization of Information	3
LS	358: Media for Children	3
LS	361: Administration of Libraries	3
LS	385: Library Automation	3
LS	459: Media, Methods, and Curriculum	3

Students must also complete 48 credits in general education requirements. All library science specialization courses must be completed prior to student teaching.

Education majors may elect to pursue a double major in library science. The number of credits required for a dual secondary education/library science major varies depending on the education certification. In addition to the requirements for their elementary education or secondary education major, students complete 27 credits of library science specialization courses, plus 12 credits of student teaching.

Early Field Experience

The library science early field experience is a combination of intensive course work and field experience taken the Fall Semester prior to student teaching. Students enroll in prescribed courses and spend approximately 150 hours during three weeks in school library media centers. The prescribed early field experience course is LS 459: Media, Methods, and the Curriculum.

Students are encouraged to take LS 361 as part of the early field experience in semesters in which it is offered. Students will also benefit from taking a 300-level education course in conjunction with these library science courses.

Any student who completes a prescribed set of credits in library science can qualify for certification as a provisional public librarian in Pennsylvania.

The entry-level degree for most professional positions in libraries and information centers is a master’s degree accredited by the American Library Association. The department’s Master of Science in Library Science (M.S.L.S.) Program is one of only 56 such programs in North America. While no specific undergraduate preparation is required for admission into the M.S.L.S. program, all prospective students are advised to develop their technology skills. Good written and oral communication skills also are critical.

Management, B.S.B.A.

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Department Faculty: G. Barboza, N. Chen, T. Johns, C. Nakhata, M. Olivas, K. Roth, C. Smith

In what type of vocation are you interested: bank manager, purchasing manager, human resource manager, recruiter, training specialist, compensation manager, small business owner or manager, health services manager, industrial production manager, planner, or consultant? As a management or human resources management major you will gain exposure to the knowledge and skills necessary to successfully enter your chosen career path. Two majors (management and industrial relations) and two tracks (general management, small business management) within the management major provide our students with the flexibility necessary to specialize in diverse areas of interest.

Management (B.S.B.A.) and Human Resources (B.S.B.A.) Outcomes

1. Management graduates will be able to demonstrate their knowledge in the key business disciplines of Management, Marketing, Finance, Accounting, and Economics by correctly answering questions on the ETS exam. Assessed in BSAD 490 as part of COBA’s mature assessment plan for AACSB-International accreditation.
2. Management graduates will be able to combine their knowledge from the various business disciplines to create solutions to real-world problems and then communicate those solutions via written and/or oral format. Assessed in BSAD 490 as part of COBA’s mature assessment plan for AACSB-International accreditation.
3. Management graduates will be able to demonstrate analytical thinking skills by assessing evidence presented to them, creating and evaluating alternative points of view, and then discriminate between the alternatives to judge the alternatives. Assessed in BSAD 490 part of COBA’s mature assessment plan for AACSB-International accreditation.
4. Management graduates will have a working knowledge of global issues which will allow them to recognize and identify differences between cultures and will be able to demonstrate this knowledge by correctly answering questions on the global portion of the ETS exam. Assessed in BSAD 490 part of COBA’s mature assessment plan for AACSB-International accreditation.

In addition:

MANAGEMENT GRADUATES will have a working knowledge of information systems as they pertain to business and be able to apply that knowledge to business situations. Assessed in MGMT 322: Business Computer Information Systems.

HUMAN RESOURCES GRADUATES will be able to complete a review of an employee’s skills and job performance and create a plan for just compensation and; will be able to contribute to negotiations with union or non-union workers. Assessed in MGMT 482: Collective Bargaining and 483: Compensation Management.

Requirements

MANAGEMENT (B.S.B.A.)	24 credits
Required: MGMT 321, 322, 324, and 426 and must select one of the following three tracks:	
General Management	9 credits
Required: Three courses from BSAD 437, MGMT 323, 420, 423, 427 428, 430, 445, 450, 482, 483, 485 or 486.	
Small Business Management	9 credits
Required: MGMT 323, 427, and 428.	
HUMAN RESOURCE MANAGEMENT (B.S.B.A.)	24 credits
Required: MGMT 324, 426*, 482, 483, 485, and 486. One course from BSAD 437, ECON 351, HIST 363, MGMT 321, 322, PSY 350, SOC 321.	
*Student may substitute BSAD 437 for MGMT 426.	

All majors must take an additional 3 credit-hour 300/400-level business course, BSAD 241 or RE 271 to complete their 24-credit hour major.

A student may earn a double major in management and human resources management by taking the required courses for each major and successfully completing two additional upper-level management (prefix) courses with a C or better grade.

BUSINESS ADMINISTRATION, MINOR21 credits

The business administration minor is intended to provide another academic option for non-business majors. Selection of this minor will broaden the academic pursuits of non-business majors, provide a credential that will make them more attractive to employers in the business sector, and serve as background for those intending to pursue the Master of Business Administration (M.B.A.) degree.

The business administration minor has two different tracks that are open to all students and a student may select either track depending on their personal interests. However, students who are planning to pursue the MBA degree should follow the pre-MBA track.

TRADITIONAL TRACK:

Required: ACTG 251 and 252, ECON 211 and 212, FIN 370, MGMT 320 and MKTG 360.

PRE-MBA TRACK:

Required: ACTG 251, ECON 211 and 212, ECON 221 and 222, FIN 370, MGMT 320 and MKTG 360.

LEADERSHIP MINOR, ENTREPRENEURIAL

LEADERSHIP TRACK 21 credits

The minor in Leadership-Entrepreneurial Leadership Track is an extension of a university initiative to develop a broad based and interdisciplinary approach to leadership. The intent is to attract potential students as well as create an environment that emphasizes the overall development of entrepreneurial leadership skills and leadership potential in our students across disciplinary boundaries. As a result of working toward this minor, the student will gain exposure to a body of knowledge that emphasizes entrepreneurial concepts and entrepreneurial leadership development. As an extension to this minor track, the program will develop and promote experiential learning, cocurricular and community service learning activities. Students will be able to develop/enhance specific entrepreneurial leadership skills that can be extended to their academic major.

Required: 15 credits from the following: ECON 211 or ECON 212; ACTG 251; MGMT 323, 427, 428.

Electives: Students must select six credits from one of the following options: Option A: MKTG 360, 361, 362, 363, 369, 491; MGMT 450. Option B: SOC 211, 311, 351, 362, 395; ECON 314.

LEADERSHIP MINOR, INTERDISCIPLINARY TRACK 18 credits

The leadership minor is designed as an interdisciplinary program housed in the College of Business Administration and open to all students regardless of their major. The student will experience critical leadership principles through theory, application, and skill development. As a result, the program provides exposure to a body of knowledge emphasizing both leadership concepts and the development of leadership skills.

Required: 12 credits from the following: SOC 211, PHIL 308, MGMT 320, COM/MGMT 360, and PS 395.

Electives: Students must select 6 credits from one of the following tracks. These electives must represent two different academic areas and must include at least one 300 or higher course. (1) Individual Dimensions of Leadership: COM 104, PHIL 111, PSY 111, COM 312, PHIL 352, PHIL 360, MGMT 427, PSY 454; (2) Group Level Dimensions of Leadership: PS 211, ANTH 252, PS 311, SOC 351, PSY 355, PS 366, SOC 395, COM 311; (3) Organizational Dimensions of Leadership: MS

110, MS 112, MS 201, COM 300, MGMT 321, SOC 321, PSY 350, MGMT 423, MGMT 426. It is recognized that a number of non-business curricula contain required business courses (e.g., information systems). For those students whose major requires specific upper-division business courses, a maximum of nine upper-division business course credits must be completed beyond those required for their non-business major program.

It is recognized that a number of non-business curricula contain required business courses (e.g., information systems). For those students whose major requires specific upper-division business courses, a maximum of nine upper-division business course credits must be completed beyond those required for their non-business major program.

Marketing, B.S.B.A.

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Website: www.clarion.edu/coba/adsci

Department Faculty: G. Barboza, N. Chen, T. Johns, C. Nakhata,

M. Olivas, K. Roth, C. Smith

Marketing is a process employed by contemporary organizations to discover and adapt to consumers' needs and desires. It includes advertising, consumer research, and selling, as well as other activities affecting the transfer of goods and services from seller to buyer.

Clarion's Marketing Program has a balanced curriculum and a well-qualified, diversified faculty. The program is relatively small, so students have the opportunity to become acquainted with faculty members. Students can plan their programs to fit their particular interests and needs. Marketing students can also choose the international business minor.

Marketing courses are involved with application software in Still Hall's microcomputer lab.

Listings of internships are available.

The American Marketing Association student chapter is very active on campus. Marketing has two honor societies, Alpha Mu Alpha and Mu Kappa Tau.

Clarion's program in marketing has been designed to prepare students for careers in advertising management, non-profit marketing, marketing research, physical distribution management, retailing management, and general marketing management. Types of entry-level positions available to graduates include: account executive, advertising manager, buyer, inventory control manager, marketing director, marketing research worker, media buyer, merchandise manager, product or brand manager, retail manager, salesperson, traffic and distribution services director, warehouse manager.

Marketing (B.S.B.A.) Outcomes

1. Students will be able to generate, analyze, and communicate marketing information for internal and external use.
2. Students will demonstrate analytical thinking skills through the interpretation of evidence and formulation of warranted conclusions.

3. Students will show an awareness of the ethical dimensions of business through the ability to examine ethical issues and understand social forces shaping the environment of business.
4. Students will demonstrate interdisciplinary competence across accounting, economics, finance, management, and marketing.

Requirements

MARKETING (B.S.B.A.)24 credits
Required: MKTG 461, 465, 469. Twelve credits of marketing electives (four courses) from the following: MKTG 361, 362, 363, 366, 369, 462, 463, 468, 491, and 495.

All majors must take an additional 3 credit-hour 300/400-level business course, BSAD 241 or RE 271 to complete their 24-credit hour major.

Mathematics, B.S.

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 155 Science and Technology Center
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 Department Faculty: J. Beal, D. Bhattacharya, K. Bolinger, C. Childers, D. Farnsworth, S. Gendler, D. Hipfel, B. Jackson, S. Johnson, D. Madison, M. McConnell, K. Overmoyer, A. Roberts, D. Shifflet

Mathematics is the science of numbers and the abstract formulation of their operations. Quantitative skills acquired through this study are useful in career fields which include computer science, business, actuarial science, engineering, life and physical sciences, medicine, and research. Actuaries concentrate on the study of actuarial science and usually work for the government, an insurance agency, or a consulting firm. They interpret statistics to determine the likelihood of injury, sickness, death, or loss of property among various population groups and develop insurance rates and plans for these groups.

A departmental microcomputer lab provides mathematics students with hands-on computer experience. The department is a part of the 3/2 Engineering Program with University of Pittsburgh and Case-Western Reserve University.

Allied activities include a Mathematics Club open to all students, a weekly problem contest (at the end of the semester a prize is awarded to the student who solves the most problems), and Pi Mu Epsilon, a national mathematics honorary.

Entry-level jobs available to graduates in this field include: actuary, computer programmer, engineer, internal revenue agent, military intelligence officer, pension administrator, rate analyst, research mathematician, statistician, systems analyst, cryptanalyst, and teacher. Among the employers who hire graduates: banks, computer services, consulting firms, corporations, educational institutions, engineering firms, government agencies, insurance companies, manufacturing firms, pharmaceutical companies, and research and development laboratories. Most mathematics graduates go directly into the field where they can earn good salaries, even at entry level. A few go immediately into graduate schools for further study.

High school students who are interested in a mathematics career should take at least five years of mathematics: geometry,

trigonometry, two years of algebra, and a third year of algebra or precalculus. It is not necessary to study calculus in high school.

Mathematics (B.S.) Outcomes

1. Students will demonstrate proficiency in mathematics content.
2. Students will be able to formulate and communicate proofs in mathematics.
3. Students will be able to read and evaluate mathematical writing
4. Students will be able to communicate mathematics knowledge in both written and oral forms

Requirements

MATHEMATICS, B.S. IN MATHEMATICS.....57 credits
Required: MATH 270, 271, 272, 300, 390, seminar, and 30 credits in mathematics electives from 300-level courses and above, at least 12 credits of which must be at the 400 level. Additional required courses include: CPSC 201, 301, and PH 258. A minimum of C grade in MATH 270, 271, 272 and ENG 111 is required.

MATHEMATICS (COOPERATIVE ENGINEERING PROGRAM)66 credits
Required: MATH 270, 271, 272, 300, 350, 370, and 18 credits in mathematics or approved engineering electives. In addition to these 39 credits, the following courses are required: PH 258, 268, 259, 269, 351, 352; CHEM 151, 161, 152, 162; CPSC 201. See also the Cooperative Engineering Program description on page26.

SECONDARY EDUCATION, B.S.Ed.
 Certification for grades 7-12, Mathematics (see under Secondary Education Mathematics), page 61.

MATHEMATICS (MINOR)20 credits
Required: MATH 270 or 260, MATH 271, and 12 credits of 272-level or higher mathematics courses.

Medical Imaging Sciences, B.S., 120 credits

Department Chair, Ray Feroz, Ph.D.
 108 Special Education Center
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 Website: www.clarion.edu/hsrhh
 Department Faculty: R. Bloom, C. Harancher, M. Moore

Radiologic Technology and Ultrasound Concentrations

Students who enroll in the medical imaging sciences program choose between Students who enroll in the medical imaging sciences program choose between the radiologic technology or ultrasound (diagnostic medical sonography) concentrations. Both concentrations are designed as two-plus-two programs. The medical imaging sciences program has an academic preparation of two years (60 semester hours of course work) at Venango College. The radiologic technology concentration continues with a two-year program of clinical study at an affiliated, hospital-based school of radiologic technology. All affiliated, hospital-based schools of radiologic technology are accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), The ultrasound concentration continues with a two-year program of clinical study in sonography at Great Lakes Institute of Technology (www.glit.edu/) that is accredited by the

Commission on Accreditation of Allied Health Education Programs (CAAHEP).

Clinical sites have limited space and competitive admission standards. Admission to the medical imaging sciences program at Venango College does not guarantee admission to an affiliated clinical site for radiologic technology or ultrasound. At the completion of the second year of study at Venango College, students who have been accepted to an affiliated clinical site (hospital program) attend the clinical site to which they have been accepted. Upon successful completion of the two-year course of study at the clinical site, the student is awarded a Bachelor of Science degree and is eligible to sit for the national certification examination in radiography that is administered by the American Registry of Radiologic Technologists. Successful completion of this examination entitles the graduate technologist to use the credentials Registered Technologist, Radiography (R.T.R.) and to practice as an entry level radiologic technologist.

Affiliated clinical sites in radiologic technology and ultrasound are subject to change.

Online Degree Completion Option for Credentialed Professionals

Registered radiologic technologists who wish to earn the B.S. degree with a major in medical imaging and a concentration in radiologic technology may complete required course work online.

Other Medical Imaging Sciences Concentrations: Diagnostic Medical Sonography (Ultrasound), Nuclear Medicine, Radiation Therapy, and Medical Dosimetry

Clarion's medical imaging program serves as an online degree completion program to individuals who are already credentialed professionals in diagnostic medical sonography, nuclear medicine technology, radiation therapy, or medical dosimetry and who wish to earn a Bachelor of Science degree.

Credentialed professionals opting for the concentration in diagnostic medical sonography, nuclear medicine technology, radiation therapy, or medical dosimetry will be awarded between 30–60 clinical credits for successful completion of a formal educational program that is accredited by the appropriate accrediting agency as follows:

- Commission on Accreditation of Allied Health Education Programs
- Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT)
- Joint Review Committee on Education in Radiologic Technology (JRCERT)

Clinical credits will be awarded based on the length of clinical education and is determined solely at the discretion of the chair of the Department of the Allied Health and the director of the school of Nursing and Allied Health.

Required course work for the medical imaging sciences degree completion concentrations may be completed online at Clarion University.

Admission Policy

Students interested in the medical imaging sciences program will be admitted to the university using the standard criteria for admission. Retention in the program requires the student to maintain a cumulative 2.0 GPA and attain a grade of C or higher in all required professional courses and all required science and major courses.

Students who apply for admission to an affiliated hospital's two-year radiologic technology program typically do so in the second semester of their sophomore year. Application is made to a hospital-based radiologic technology program (clinical site) and acceptance is at the discretion of the admission committee of the clinical site. Students are accepted to clinical sites based on their university records, application materials, interviews with clinical site admissions committees, and other admissions criteria established by the clinical site. Only students who are given formal recommendation by the Department of Allied Health may apply to clinical sites.

Medical Imaging Sciences (B.S.) Outcomes

1. Graduates will be able to demonstrate proficiency in performing all medical imaging examinations required to meet the competency requirements of the American Registry of Radiologic Technologists.
2. Students will be able to discuss the role of a medical imaging sciences professional, as a member of the larger health care team, in assuring continuity of patient care.

B.S. in Medical Imaging Sciences Curriculum

Although the medical imaging sciences program is designed to be completed in two academic years at Venango College and two years at an affiliated hospital, part-time study is optional while completing general education course work. The curriculum outline for the general education portion of the program is as follows:

Sample Curriculum Plan*

FIRST SEMESTER

CHEM 145 Chemistry for Allied Health Students I	3
ENG 111 English Composition	3
AH 101 Medical Terminology	3
AH 201 Introduction to the Health Care Environment	2
¹ Social & Behavioral Sciences Elective	3
Total Credits	14

SECOND SEMESTER

CHEM 146 Chemistry for Allied Health Students II	3
MATH 110 Intermediate Algebra	3
² Social & Behavioral Sciences Elective	3
³ Arts & Humanities Elective	3
HPE Activity Course	1
HPE 111 Health Education	2
Total Credits	15

THIRD SEMESTER

BIOL 251 & 261 Anatomy & Physiology I with Lab	4
PHSC 112 Basic Physical Science: Physics and Astronomy	3
Arts & Humanities Elective	3
⁴ Free Elective	3
Total Credits	13

FOURTH SEMESTER

BIOL 252 :& 262 Anatomy & Physiology II with Lab	4
MATH 221 Mathematics Competency (Elementary Applied Statistics)	3
Social & Behavioral Sciences Elective.....	3
Free Elective	2
Arts & Humanities Elective	3
Total Credits	15

FIFTH -EIGHTH SEMESTERS

Clinical program of study (contingent upon acceptance to clinical program)	up to 60
AH 401, Allied Health Leadership Capstone Course	3
TOTAL REQUIRED CREDITS = 120	

Note Recommended Courses:

- ¹PSY211 General Psychology
²SOC211 Principles of Sociology
³COM 113 Fundamentals of Speech
⁴CIS 217 Applications of Microcomputers

*Curriculum subject to change.

MATH 050 is required for students who place into the course, but will *not* count toward meeting the requirements of the medical imaging sciences degree. ENG 110 may be required of some students.

Credentialed medical imaging professionals completing this degree as a degree completion option will take BIOL 111 (Basic Biology, 3 credits), BIOL 224 (Human Biology, 3 credits), and PHSC 117(Explorations of Physical Science, 3 credits) in place of BOL 258, BIOL 259; and PHSC 112.

Students must ensure that they meet all requirements for attending clinical sites. For links to clinical sites that contain admissions criteria, please visit www.clarion.edu/281203/.

Prerequisites to the Great Lakes Institute Diagnostic Medical Sonography program include: 1) college-level algebra, statistics, or a higher math, 2) physics (PHSC 112), and 3) medical terminology (AH 101)

Medical Technology, B.S. (See Biology)**Military Science-ROTC****Bret Rogowitz, Program Director**

Army Reserve Officers' Training Program and
 Minor in Leadership-Military Science Track
 Thorn 2

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Website: www.clarion.edu/rotc

Department Faculty: LTC J. Alessi, SFC A. Byers, Capt. S. Woida

Clarion University offers qualified students the opportunity to earn a commission as an officer in the U.S. Army. Students who complete both the Basic Course program and the Advanced Course program receive a minor in leadership-military science track from Clarion University. Students who complete the Basic Course program (or have validated it), the Advanced Course program, and the **ROTC Leadership Development and Assessment Course** receive a commission as an officer in the U.S. Army. The ROTC program and the minor provide leadership training that students can apply throughout their careers, be they in business, industry, technology, education, the physical sciences, or the humanities.

The ROTC program and the minor are divided into two phases: the Basic Course (freshman and sophomore years) and the Advanced Course (junior and senior years).

Students who enroll in the ROTC program have the following benefits:

- ROTC offers a comprehensive academic program in military leadership and teaches practical skills such as self-defense, adventure training, rappelling, marksmanship, orienteering, and first aid techniques.
- The end-state of completing both the Basic Course ROTC Program (MS 110, MS 112, MS 201, and MS 202) and the Advanced Course ROTC program (MS 301, MS 302, MS 401, and MS 402) results in receiving a minor in leadership-military science track.
- Equipment, ROTC textbooks, and uniforms are issued, without cost, to enrolled students.
- Students enrolled in the Basic Course (MS 110, MS 112, MS 201, and MS 202) may become eligible for full-tuition scholarships and enrollment in the ROTC Advanced Course.
- Students formally enrolled in the Advanced Course (MS 301, MS 302, MS 401, and MS 402) receive a cash stipend (\$300-\$500) each month for 10 months during the academic year and receive \$900 each year for books.
- Students who complete the advanced course and graduate from the university receive commissions as second lieutenants and serve in one of the three army components: Active Army, National Guard, or Army Reserve.

ROTC/Minor in Leadership-Military Science Track Basic Course Program

The first two years of military science (MS 110, 112, 201, and 202) provide a background of the historical role of military forces as well as current national military objectives. In addition, students develop basic leadership skills in problem solving and decision making and learn survival techniques, map reading, self-defense, rappelling, and marksmanship. **Participants of the basic course incur no commitment to enroll in the ROTC Advanced Course and incur no obligation for military service. Students may enroll or withdraw from any of the four courses in the ROTC Basic Course under the same provisions and in the same manner as the other academic courses at Clarion.** Veterans of armed forces, junior ROTC and civil air patrol graduates, and students who complete the ROTC Basic Camp at Ft. Knox, Kcgv., may receive exemption from the ROTC Basic Course if approved by the professor of military science but they will not automatically receive academic credit for the course.

Required courses: Four (all courses include concurrent labs)

MS 110: Introduction to Military Science

MS 112: Fundamentals of Military Science

MS 201: Fundamental Tactical Operations and Leadership Techniques

MS 202: National Security and Fundamentals of Military Topography

ROTC Advanced Course Program (requires ROTC Basic Course validation)

To validate the ROTC Basic Course, a student must meet one of the following criteria:

- Complete MS 110, 112, 201, and 202
- Have served previously on active duty in the armed forces and received an honorable discharge
- Currently serve in the National Guard or Reserve and have completed basic training
- Have completed three or four continuous years of an accredited Junior ROTC or Civil Air Patrol program
- Complete the ROTC Leader's Training Course during the summer between their sophomore and junior years.

This option makes the ROTC program available to students with no previous military experience.

Qualified students complete the ROTC Advanced Course as they fulfill the requirements for their undergraduate degree from Clarion University. Enrollment occurs in Fall of the junior year and, in addition to attending physical fitness training three times a week, students attend one seminar and one lab per week at Clarion Campus. Students who pursue graduate degrees at Clarion can also apply for the program as long as the graduate program is at least four semesters long. Students who complete the ROTC program can earn a commission as a second lieutenant and receive placement in one of 17 professional officer specialties in the U.S. Army, including military intelligence, military police, signal, medical service, and the corps of engineers. To learn more about the program, go to the Clarion Army ROTC Website at www.clarion.edu/rotc.

Four military science courses taken over two years (MS 301, 302, 401, and 402) plus attendance at the ROTC Leadership Development and Assessment Course comprise the ROTC Advanced Course and lead to a commission as an officer in the U.S. Army. To be eligible to enroll in the Advanced Course, a student must validate the ROTC Basic Course and meet these criteria: be a citizen of the United States, be physically fit and pass a physical examination, be an enrolled academic junior with at least a 2.0 GPA, be not less than 17 years of age but less than 30 by the anticipated graduation date, and be accepted by the professor of military science.

Required courses: Five (four include concurrent labs)

- MS 301: Leadership and Modern Learning
 MS 302: Study of Advanced Leadership Planning and Execution of Modern Combat Operations
 MS 401: Management of the Military Complex
 MS 402: Seminar in Military Management and Analysis
 Summer: ROTC Leadership Development and Assessment Course (LDAC) five weeks in summer

Program Benefits

ROTC offers a comprehensive academic program in military leadership, adventure training, rappelling, marksmanship, land navigation, and first aid techniques. The Military Science Department provides equipment, ROTC textbooks, and uniforms without cost to enrolled students.

Students enrolled in the Advanced Course receive a cash stipend (\$300-\$500 each month) for 10 months during the academic year and receive \$900 each year for books. Students who complete the Advanced Course and graduate from the university receive commissions as second lieutenants in the active army, national guard, or army reserve.

Scholarships

All students, to include those who have completed the ROTC Leader's Training Course and graduate students, may apply for one- to four-year scholarships through ROTC. To be fully eligible, applicants must meet these criteria: 2.5 GPA, full-time student, U.S. citizen, physically qualified, and administratively qualified. ROTC scholarships provide these benefits for each year the scholarship is in effect: full tuition, \$900 for books, and \$300-\$500 per month for 10 months of the school year. Call 814-393-2527 for application instructions.

Molecular Biology, B.S. (See Biology)

Music

Department Chair, Robert Levy, M.F.A.
 165B Marwick Boyd Fine Arts Center
 Telephone: 814-393-2283
 E-mail address: rlevy@clarion.edu
 Website: www.clarion.edu/music
 Department Faculty: B. Register, C. Teske, J. Wardlaw

MUSIC, MINOR18-21 credits

Required: MUS 111 and 131, plus 12-15 credits from four additional categories. Contact the Department of Music for additional information.

Nursing, A.S., B.S.

Department Chair, Shelly Moore, Ph.D., RN., CNE
 220 Montgomery Hall, Venango Campus
 Telephone: 814-393-1258
 E-mail address: smoore@clarion.edu
 Website: www.clarion.edu/nursing

Specialized Admission Requirements

Candidates for admission into the Associate of Science in Nursing Program must make application to the Admissions Office at Clarion University. All candidates are required to meet the following high school requirements:

- four units of English
- three units of social studies
- two units of science: one year of chemistry with a grade of C or better and one year of biology with a grade of C or better within five years of date of entry (calculated from the date of high school graduation).
- two units of mathematics (one must be **algebra** with a grade of C or better and one course may be algebra II, trigonometry, geometry, or calculus). These courses must have been taken within five years of date of entry (calculated from the date of high school graduation).

Candidates who **do not** meet all the high school requirements or have not taken the equivalent college level

course(s) from a properly accredited institution and earned a grade of C or better must take the following courses.

1. To satisfy the science requirement, an individual must complete BIOL 111: Basic Biology **and** PHSC 111: Physical Science Chemistry or CHEM 153: General Chemistry I **and** CHEM 163: General Chemistry I Lab. These science courses are pre-requisite courses for admission into the A.S.N. Program. (College credits for the sciences are acceptable only if they have been earned within 10 years of admission and received from a properly accredited institution.)
2. To satisfy the English requirement, an individual must take ENG 111: Writing II.
3. To satisfy the mathematics requirement, an individual will need to take MATH 050 Basic Algebra. The course is pre-requisite to both the nursing program and the math course required to meet the General Education requirements for an associate degree from Clarion University. (A placement test may be necessary for determining the necessary math course. Based on the results of this exam, the individual will either be exempt from MATH 050 or be required to take the course. (College credits for mathematics are acceptable only if they have been earned within 10 years of admission from a properly accredited institution.)

Admission Policies for Entrance

Applicants who satisfy all high school criteria will be considered for admission into the A.S.N. program. Admission to the program is very competitive. Admission procedures for the A.S.N. program include:

1. having been accepted by Clarion University. (See Clarion University Admissions requirements on page 14 in the catalog);
2. a GPA of 2.5 or higher, 3.0 preferred, in high school and/or college;
3. completion of **pre-requisite courses** (biology, math, and chemistry) with a grade of C or better;
4. requesting admission into the A.S.N. program. (For new students, this requires a letter of application which **must** be received in the nursing office **no later than December 15**. For currently enrolled Clarion students, a change of status form **must** be completed and received in the nursing office **no later than December 15**;
5. having **official** transcripts from high school and **all** colleges or universities previously attended sent to the admissions office at Clarion University, 840 Wood Street, Clarion, PA 16214, no later than December 15;
6. having taken or scheduled the National League for Nursing (NLN) Pre-Entrance Examination

Please be aware, the Department of Nursing's admissions committee will consider for Fall admission only those applicants who have met the above criteria. Note also the university designation as "pre-nursing" **does not** guarantee acceptance into the A.S.N. program.

Nursing (A.S.N.) Outcomes

1. Advocate for patients and families in ways that promote their self-determination, integrity and ongoing growth as human beings. (Human Flourishing)
2. Make judgments in practice, substantiated with evidence, that integrate nursing science in the provision of safe, quality care and promote the health of patients within a family community context. (Nursing Judgment)
3. Integrate into practice one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving identity as a nurse committed to evidence-based practice, caring, advocacy, and safe, quality care for diverse patients within a family and community context. (Professional identity)
4. Examine the evidence that underlies clinical nursing practice to challenge the status quo, question underlying assumptions and offer new insights to improve the quality of care for patients, families and communities. (Spirit of Inquiry)

Associate of Science in Nursing Degree Program Curriculum

Although the Associate of Science in Nursing is designed to be completed in two academic years, part-time study is available. The curriculum outline for the program is as follows:

<i>FIRST SEMESTER</i>	<i>Credits</i>
NURS 101: Nursing Process I: Fundamentals of Nursing	3
NURS 111: Nursing Process I: Fundamentals of Nursing Clinical Practice	2
NURS 121: Nursing Process I: Fundamentals of Nursing Practice Laboratory	1
NURS 131: Nursing Health Assessment	2
BIOL 251: Anatomy and Physiology I	3
BIOL 261: Anatomy and Physiology I Lab	1
PSY 211: General Psychology	3
<i>SECOND SEMESTER</i>	
NURS 102: Nursing Process II	4
NURS 112: Nursing Process II Clinical Practice	4
NIJRS 133: Pharmacological Aspects of Nursing: Part I	1
BIOL 252: Anatomy and Physiology II	3
BIOL 262: Anatomy and Physiology II Lab	1
PSY 260: Developmental Psychology	3
<i>THIRD SEMESTER</i>	
NURS: 201: Nursing Process III	4
NURS 211: Nursing Process III Clinical Practice	4
NURS 233: Pharmacological Aspects of Nursing: Part II.	1
MATH Any math course greater than MATH 110	3
SOC 211: Principles of Sociology	3
ENG 111: Writing II	3
<i>FOURTH SEMESTER</i>	
NURS 202: Nursing Process IV	4
NURS 212: Nursing Process IV Clinical Practice	4
NURS 203: Nursing Seminar	2
NURS 234: Pharmacological Aspects of Nursing: Part III	1
COM 113: Public Speaking	3
TOTAL CREDITS 63	

Bachelor of Science in Nursing (BSN)

The 4-year Bachelor of Science in Nursing (BSN) degree program is innovative in its approach to nursing education. Unlike many nursing programs, students in Clarion's BSN program will participate in nursing courses and be introduced to research and critical thinking beginning in the first semester. Several high-impact educational practices such as clinical experiences, nursing courses, collaborative assignments, undergraduate research and a capstone project are incorporated throughout the curriculum.

The program utilizes a highly successful clinical immersion model in which several instructional methods are used to support lectures and discussions. Simulation laboratories, volunteer experiences in health care agencies, and creative, hands-on experiences such as live standardized patient labs and research studies are in place throughout the freshman through junior years as components of clinical learning to support senior-level clinical preparation.

In the senior year students will be immersed in clinical practice and will complete five clinical specialty rotations, after which they will participate in a clinical preceptorship. Capstone courses are offered in the final two semesters of the program and will result in a completed research project.

Admission to the BSN program:

For admission to the BSN program, applicants must meet or exceed the Clarion University admission criteria related to high school, class rank, SAT/ACT scores, and college/university grades. In addition to the University admission requirements, applicants to the BSN program will also be expected to meet these specific requirements:

- College Board scores, verbal and math, of at least 1000 preferred
- Successful pre-nursing examination scores – prefer greater than 110, first consideration is given to students achieving a score of 120 or better on the NLN nursing examination
- High school or college GPA of at least 3.0 on a 4.0 scale
- Four units of high school English.
- Three units of high school social studies.
- Two units of high school science: one year of chemistry with a grade of “C” or better and one year of biology with a grade of “C” or better within five years of date of entry. Science courses require a laboratory component.
- Two units of high school mathematics (one must be algebra with a grade of “C” or better and one course may be algebra II, trigonometry, geometry, or calculus). These courses must have been taken within five years of date of entry.

Candidates who do not meet all the high school requirements listed above must take college level courses to meet the requirement(s). The following Clarion University courses or acceptable transfer courses from other colleges/universities or College Level Examination Program (CLEP) provide acceptable substitutions for the high school requirements.

- Biology requirement: BIOL 111
- Chemistry requirement: PHSC 111 or CHEM 153/163 or CHEM 145
- Mathematics requirement: Students may be placed into a college level mathematics course by the Mathematics Department or be required to take the university mathematics placement test. Examination or placement will determine the need to complete MATH 050- Basic Algebra. College credits for biology, chemistry and math are acceptable only if earned within ten (10) years of admission. Biology and Chemistry courses must have a laboratory component. A grade of “C” or better must have been achieved.

BSN Program Outcomes

The Clarion University of Pennsylvania BSN program prepares the graduate to:

1. Integrate evidence, research findings and theory into professional nursing practice
2. Develop specific health-promotion plans based on the assessment of individuals, families and communities.
3. Provide safe and competent nursing care to clients across the lifespan.
4. Apply clinical thinking skills to professional nursing practice.
5. Demonstrate effective communication within the healthcare environment.
6. Demonstrate professionalism through accountability, autonomy, service, and global citizenship.
7. Synthesize findings of the nursing process into a comprehensive plan of care for individuals, families, and communities.
8. Provide leadership to initiate change within communities, the profession of nursing, and the healthcare delivery system.

Nursing, B.S. (RN-BSN Online)

220 Montgomery Hall, Venango Campus

Telephone: 814-393-1258

E-mail address: smoore@clarion.edu

Website: www.clarion.edu/nursing

Admission Requirements

Admission into the B.S.N. completion program online (RN-BSN) is consistent with the Pennsylvania Articulation Model developed by the Pennsylvania Higher Education Nursing Schools Association Inc. (PHENSA). Nursing students can fulfill requirements of the lower division (freshman and sophomore years) by means of the following:

1. Transferring or validating knowledge equivalent to 39 nursing credits from an associate degree or diploma program (see 4 below).
2. Transferring the **required general education credits** from any accredited college or successfully completing the approved challenge exams. The accepted scores for credit will be determined by university policy.

Admission Policies for Entrance

1. Graduate from either an associate degree or diploma program in nursing.
2. Hold current licensure as an RN.
3. Show evidence of scholarship as demonstrated by 2.5 GPA (on a 4.0 system), or a comparable equivalent of a C-plus in previous educational program.
4. Successfully complete the pre-entry lower-division requirements as mentioned above.

Individuals may be admitted to the RN-BSN completion program on a conditional basis while in the process of completing the above requirements.

Articulation Policy

Registered nurses who have graduated within three years from an ACEN-accredited nursing program are eligible for direct articulation into Clarion’s B.S.N. completion program online (RN-BSN). Individuals who have graduated between three and 10 years prior to application must have 1,000 hours of nursing practice within the last three years for direct articulation. Special arrangements are made for individuals who have:

- (1) graduated from a nursing program not accredited by the ACEN.
- (2) practiced nursing less than 1,000 hours within three years of application.
- (3) graduated from an ACEN-accredited nursing program more than 10 years ago.

Nursing (RN-B.S.N. Online) Outcomes

1. Integrate scholarly inquiry, research, and theory into evidence-based nursing practice.
2. Promote health and well-being for individuals, families, and communities including vulnerable and diverse populations.
3. Apply leadership principles and skills in meeting the health care needs of others.
4. Integrate clinical thinking skills into professional nursing practice
5. Demonstrate professional growth through participation in life-long learning, global citizenship, and service in the profession of nursing.
6. Create strategies to communicate effectively with others in a variety of settings.

B.S. in Nursing Curriculum

Junior and Senior Years

<i>FIRST SEMESTER</i>	<i>Credits</i>
NURS 340: Nursing in Transition	3
NURS 343: Health Literacy in Nursing Practice	3
NURS 345: Trends and Issues in Professional Nursing Practice	3
Gen Ed	3
Gen Ed	3
<i>SECOND SEMESTER</i>	<i>Credits</i>
NURS 341: Culture and Care in Nursing.....	3
NURS 342: Clinical Thinking Nursing	3
NURS 355: Health Promotion in Nursing	3
MATH 221: Statistics.....	3

<i>THIRD SEMESTER</i>	<i>Credits</i>
NURS 445: Research in Nursing	3
NURS 470: Promoting Healthy Communities	3
Gen Ed	3
Gen Ed	3
<i>FOURTH SEMESTER</i>	<i>Credits</i>
NURS 457: Leadership in Nursing	3
NURS 494: Advanced Concepts of Professional Nursing	3
Nursing Elective	3
General Ed	3
TOTAL CREDITS FOR GRADUATION	
	120

Paralegal Studies, A.S.

Department Chair, David Lott, Ph.D.
 222 Frame Hall, Venango Campus
 Telephone: 814-676-6591
 E-mail address: dlott@clarion.edu
 www.clarion.edu/jltl

Clarion University’s Paralegal Studies Program is designed to provide for the education of paralegals. A paralegal, or legal assistant, is a person qualified by education, training, or work experience who is employed or retained by a lawyer, law office, corporation, governmental agency or other entity and who performs legal work for which a lawyer is responsible. A paralegal may not practice law. All of the courses required for this degree are offered at Venango and Clarion campus.

Academic Requirement

The program is divided into three blocks of required courses. The general education and business core classes are required of all Associate of Science candidates to develop their ability to work and live as well-rounded and competent individuals in the business environment. The remaining courses are specialized legal courses designed to develop competence in substantive and procedural law.

GENERAL EDUCATION (MINIMAL REQUIREMENT—23 CREDITS): ENG 111, COM 113, HPE 111, ECON 211, a MATH competency class from the following: MATH 110, 112, 131, 171, 222, 270, or 271, and nine credits of general education electives. Note: The general education electives must be selected from an approved list of general education courses. This list is available from the director of Paralegal Studies and can be viewed on the program’s website at www.clarion.edu/paralegal.

PARALEGAL STUDIES CORE (18 CREDITS): ACTG 251, 252; BSAD 240, 241; CIS 217; and ECON 221.

LEGAL SPECIALTY COURSES (21 CREDITS): BSAD 238, 242, 246, 248, 249; and two of the following courses: BSAD 239, 243, 244, 247.

FREE ELECTIVE (6 CREDITS): Students should use their free electives to tailor the paralegal studies degree to their individual career preference. The choice may be a law specialty course not counted in the concentration, political science, philosophy, or any other general education course of interest.

Philosophy, B.A.

Department Chair, Robert Frakes, Ph.D.
 314 Founders Hall
 Telephone: 814-393-2375
 E-mail address: rfrakes@clarion.edu
 Website: www.clarion.edu/philosophy
 Department Faculty: J. Aaron, T. Lavin, J. Phillips

Philosophy is unlike other disciplines in the breadth of its subject matter. Since philosophy discusses all aspects of life, it provides an opportunity to think about topics that range from the existence of God to the confirmation of scientific theories. Additionally, philosophy asks the “big” questions that form the foundation of our belief systems and are rarely discussed. Philosophy challenges you to answer questions ranging from “What is the nature of consciousness?” and “What makes life truly meaningful?” to “Why should I be moral?” Philosophy can help you to understand those issues that are most fundamental to your experiences.

The Clarion University faculty can provide you with an experience you cannot get from most other departments of philosophy—two very different philosophical methods. Clarion’s faculty members are trained in analytic philosophy, the most popular style of philosophy within the United States, as well as continental philosophy, one of the most popular European styles, giving students the chance to use two very different approaches in their own studies. Thus, studying philosophy at Clarion will help you to understand those issues most fundamental to your own personal existence from a broad philosophical perspective.

Philosophy (B.A.) Outcomes

1. Students graduating with a B.A. in Philosophy will be able to identify multiple sides of complex philosophical issues
2. Students graduating with a B.A. in Philosophy will be able to effectively construct and evaluate arguments in order to resolve complex philosophical issues
3. Students graduating with a B.A. in Philosophy will be able to correctly identify and effectively evaluate the ethical aspects of complex philosophical issues
4. Students graduating with a B.A. in Philosophy will be able to effectively apply historically important philosophical theories and schools of thought in order to resolve complex philosophical issues

Requirements

PHILOSOPHY, B.A. 30 credits
Required: PHIL 111 or 311, PHIL 212 or 302 or 308; PHIL 115 or 211; PHIL 300 and 306; Philosophy electives 15 credits from among courses at the 300-level or above. Students must demonstrate competence in a foreign language.

PHILOSOPHY, MINOR 18 credits
Required: PHIL 115 or 211; PHIL 111 or 212 or 215; PHIL 300 or 306, and nine credits of philosophy electives at the 300- or 400-level.

Physics, B.S.

Department Chair, Adam Roberts, Ph.D.
 155 Science and Technology Center
 Telephone: 814-393-2327
 E-mail address: aroberts@clarion.edu
 Website: www.clarion.edu/physics
 Department Faculty: V. Aravind, J. Heard, C. Li, S. Montgomery

Physics is the science of matter, energy, and motion. It encompasses everything in nature from the behavior of the fundamental building blocks of matter to the large-scale evolution of the universe, galaxies, and black holes. Technological breakthroughs such as superconductivity, nanotechnology, and lasers would not have been possible without physics and physicists who have learned to use their knowledge of basic physical laws in novel and creative ways. At Clarion University, students will gain appreciation for nature by using the scientific method of investigation, and learn to effectively communicate their ideas both orally and in written form.

Our small student-to-faculty ratio allows for greater one-on-one instruction. Current faculty at Clarion University specialize in astrophysics, plasma physics, materials physics, nanotechnology, and energy sustainability. Graduates from Clarion University pursue a variety of careers or go on to earn advanced degrees in physics, engineering, medicine, or related fields. Some of our students choose to take advantage of our cooperative engineering program with the University of Pittsburgh and Case Western Reserve University, while others choose to apply their major to our highly successful program in secondary education. The physics department also offers a concentration in astrophysics and minors in nanotechnology and environmental sustainability.

Physics (B.S.); Physics (B.S. – Astrophysics concentration) Outcomes

1. The student will demonstrate a scientific knowledge of the core physics principles in Mechanics, Electromagnetism, Modern Physics, and Optics.
2. The student will determine the appropriate level of technology for use in: a) experimental design and implementation, b) analysis of experimental data, and c) numerical and mathematical methods in problem solutions.
3. The student will effectively communicate their knowledge of physics from basic concepts to specific detailed presentations through a variety of oral, written, and computational modalities.
4. The student will demonstrate a purposeful knowledge of scientific literature and ethical issues related to physics.

In addition:

(Astrophysics concentration only): The student will present detailed knowledge of astrophysical phenomena, research procedures, and associated skills specifically involved in astrophysical research.

(Cooperative Engineering concentration only): The student will demonstrate the ability to integrate scientific principles into real-world problems in engineering school.

Requirements

PHYSICS, B.S.66 credits
Required: PH 258, 268, 259, 269, 351, 352, 353, 354, 371, 372, 461, and four additional physics courses at the 300 level or higher. In addition to these courses in physics, the following are required: MATH 270, 271, 272, 350; CHEM 153, 163; and three other courses selected from the sciences, mathematics, or computer science, not including physics.

SECONDARY EDUCATION, B.S.Ed.
 Certification for grades 7-12, Physics (see under Secondary Education Physics), page 61.

PHYSICS, B.S, ASTROPHYSICS CONCENTRATION72 credits
Required: PH 258, 268, 259, 269, 301, 302, 351, 353, 354, 355, 356, 371, 461 and one course at the 300 level or higher. In addition to these courses in physics, the following are required: MATH 270, 271, 272, 350; CHEM 153, 163, 154, 164; and ES 201. Also take two of the following three courses: ES 200, ES 150, CPSC 201. This concentration is designed for physics students who are interested in applying the underlying principles of physics to the planets, stars, and galaxies. It is appropriate for all physics majors and strongly recommended for students planning to attend graduate school in either astronomy or astrophysics.

PHYSICS, MINOR25 credits
Required: (PH 251, 252) or (PH 258, 268, 259, 269), MATH 270 and 271, and three additional physics courses at the 300 level or higher. Note that some mathematics and physics courses are prerequisites or co-requisites of some of the upper-level classes. The minor in physics is designed for students from other science disciplines like biology, chemistry and mathematics who wish to see the interrelations of matter and energy at a higher level than provided in the introductory courses.

NANOTECHNOLOGY, MINOR38 credits
Required: (PH 251, 252) or (PH 258, 268, 259, 269), PH 254, 270, and three additional science courses at the 300 level or higher. These three courses may be selected from the list of approximately 20 courses appearing on the minor’s checksheet. The minor in nanotechnology is designed for students from all disciplines in science and mathematics who wish to know more about the revolutionary breakthroughs in physics that allow scientists to organize and manipulate matter at the atomic scale. The minor in nanotechnology prepares students to perform interdisciplinary research on the biological, chemical, environmental, and mathematical aspects of nanoscience.

ENVIRONMENTAL SUSTAINABILITY: SCIENCE AND POLICY, MINOR 18 credits
Required:PH 261, BIOL 202, BIOL 405, and three courses from the list of sustainable science and policy courses on the minor’s checksheet. Sustainability is society’s ability to meet the needs of the present without compromising future generations’ ability to meet their own needs. This interdisciplinary minor focused on sustainability is designed to give both science and non-science students the opportunity to study complex environmental concerns and to synthesize the analytical skills of scientific disciplines with the policy skills necessary to solve real-world environmental problems.

The cooperative engineering programs in various fields of engineering, other than chemical and petroleum engineering, are also administered by the Physics Department, page 26.

Political Science, B.A.

Department Chair, Robert Frakes, Ph.D., Chair
 314 Founders Hall
 Telephone: 814-393-2375
 E-mail address: rfrakes@clarion.edu
 www.clarion.edu/polisci
 Department Faculty: T. Rourke, B. Sweet, K. Yenerall

Twenty-four centuries ago, the great philosopher Aristotle argued that politics was “the master science” because it determined how the knowledge obtained in all other disciplines is socially used. In our era of globalization, in which decisions made by the government of one country have increasing political, economic, and social ramifications in others, the validity of Aristotle’s argument is even more glaring. Moreover, the demand for graduates who understand local, national, and global politics is greatly increasing. The political science major provides students with the tools necessary to understand the range of factors shaping the local, national, and global environments in which we live, to think critically and independently concerning pressing political issues, and to come to critically reasoned conclusions as to how we can organize the life we share with our fellow citizens and millions of people around the world.

Clarion University provides an especially favorable environment for the study of political science. An energetic, dedicated, and involved faculty instructs students in small classroom settings which permits a significant degree of faculty-student interaction. A favorable faculty-student ratio also permits considerable student access to faculty for the purposes of consultation, advising, and career planning. The small size of the program contributes to a sense of camaraderie and guarantees the individual attention students need. The political science faculty offer robust courses spanning a broad range of contemporary political science: American politics, constitutional law, state and local politics, international and comparative politics, political philosophy, politics and film, public administration, and political methodology.

Criminal Justice Concentration

Students with an interest in criminal justice have the option of pursuing a criminal justice concentration within the political science major. For students choosing the criminal justice concentration, degree requirements for the political science major are slightly different, as indicated below.

Internships

Political Science majors are encouraged to acquire experience through internships. In pursuit of that end, the Political Science Division offers a variety of internship experiences on a yearly basis. Past internship experiences have included working on political campaigns, field experiences with local and county government institutions, and working with interest groups. In addition, interested students are encouraged to participate in opportunities available in our nation’s capital through a variety of internships and programs such as those offered by The Washington Center. Students receive academic credit for working as interns.

Political Science (B.A.) Outcomes

1. Students will demonstrate knowledge of the constitutional framework and primary functions of the legislative, executive and judicial branches of government.
2. Students will demonstrate knowledge of the role of pluralism, political parties, and organized interests in the American political system.
3. Students will demonstrate proficiency in democratic theory and practice, including its historical development
4. Students will demonstrate knowledge and awareness of political citizenship and public service, and the skills necessary to be engaged citizens in the political system.

Requirements

POLITICAL SCIENCE, B.A.	51 credits
Required: PS 110 or PS 210, 211, 311 or 352, 365 or 366, and 18 credits of political science electives. In addition to these 30 credits in political science, the following courses are required: ECON 211, 212; SOC 211; and 12 credits from history, anthropology, or psychology. Students must demonstrate competence in either a foreign language or computer competency.	
POLITICAL SCIENCE, B.A., CONCENTRATION IN CRIMINAL JUSTICE	39 credits
Required: PS 110 or PS 210, 211, 18 hours in PS 300-499; CRJT 110, 12 hours in additional criminal justice coursework. Students must additionally demonstrate competence in either a foreign language or quantitative skills.	
POLITICAL SCIENCE, MINOR	18 credits
Required: PS 110 or PS 210, 211, 311 or 352, and nine additional credits to be selected at the 300 or 400 level.	

Pre-Professional Studies

Pre-Professional studies involves your university preparation for pursuing a career in many different career fields such as engineering, law, business administration, and the careers in the healing arts. It is more than just course work and majors; it is the guiding and instructing of the student who wishes more: to be more.

Clarion University has various affiliation agreements with other specific universities and their associated post-baccalaureate degree to a student who enters into the specific affiliation agreement and completes all the affiliation requirements. Most of the programs require two to three years at Clarion and then one to four years at the affiliated institution. Upon successful completion of studies at the accredited and affiliated school, the student will receive a baccalaureate degree from Clarion University. For specific information about the various affiliations with Clarion, see below and contact the coordinator or department in charge of the specific program.

Students must complete all requirements associated with the prescribed affiliation and must apply for graduation prior to entering the professional school. Students eligible to receive the baccalaureate degree shall be permitted to participate in the Clarion University graduation ceremony.

Pre-Engineering

Since curricular requirements vary among engineering schools and fields of specialization, students planning to transfer to a school of engineering must give careful consideration to the requirements of the institutions to which

they intend to apply and, with the exception of those in the Cooperative Engineering Program, should plan to transfer no later than at the completion of their sophomore year. The following courses should be included in their programs at Clarion: MATH 270, 271, 272, 350, 370; CHEM 151, 152, 161, 162; CPSC 201; PH 258/268 and 259/269. Interested students should contact the Physics Department.

Pre-Law Studies

No particular major is required for admission to law school because law schools desire a broad-based undergraduate education that will prepare a student to read, write, and think. However, because law deals with human institutions and values, some courses are recommended. English language and literature courses are indispensable. Students also should be aware of the institutional processes by which laws are made, and thus courses in political science and history are vital. Economics and accounting are helpful as well. Philosophy and computer science courses can help develop essential logic and problem solving skills. For specific course recommendations or further information, interested students are strongly urged to contact the pre-law advisor in the Department of Political Science and Philosophy. Additionally, Clarion University students are also eligible to participate in "3+3" early admission and/or joint degree programs with Widener University School of Law and Duquesne University School of Law.

Pre-Master of Business Administration Option

The College of Arts and Sciences, in cooperation with the College of Business Administration, has prepared a program at the baccalaureate level which provides the basic courses needed for further graduate training for business careers. Undergraduate students intending to complete the pre-M.B.A. option will meet the university's general education and special College of Business Administration requirements, will complete an arts and sciences major of choice, and will be advised to enroll in specific business administration and related core courses. Students completing the suggested courses in business may meet the requirements for a business administration minor. Requests to declare this minor should be filed in the dean's office of the College of Business Administration. However, completion of the suggested undergraduate courses does not guarantee admission to any graduate business program. The courses provide the student with a background suitable for study at the graduate level.

The student, through consultation with the pre-M.B.A. advisor, will first take lower-division skills and general knowledge courses. These courses should help students assess their ability and interest in business subjects and may also provide background preparation for assistantships during their graduate study. The courses, or approved equivalents, include: ECON 211, 212; ECON 221 or MATH 221; ECON 222; CIS 217; MATH 131; ACTG 251, 252; and BSAD 240.

The upper-division courses suggested for the Pre-M.B.A. are FIN 370; MGMT 320, 425; and MKTG 360. Achievement of a 2.75 GPA is generally considered to be minimally acceptable for admission to the M.B.A. Program. Students seeking admission

to the M.B.A. Program are encouraged to take the GMAT or GRE during the first semester of the senior year.

The arts and sciences pre-M.B.A. student may not take more than 30 undergraduate credits in the College of Business Administration at Clarion unless formally admitted to Clarion's M.B.A. Program. Changes in the requirements for admission to the upper-division courses, as well as in the list of suggested appropriate courses, may be made upon approval. Students should consult the pre-M.B.A. advisor before registration each term.

Pre-Medicine, Pre-Chiropractic, and Related Fields

Students who enroll at Clarion intending to enter a professional school for the study of medicine, dentistry, optometry, podiatry, chiropractic, veterinary medicine, or pharmacy, are advised by the Pre-Professional Committee. While students may choose any academic major, they must complete sufficient course work in the sciences, mathematics, and liberal arts to meet admission requirements established by the professional schools. In addition to academic requirements, many professional schools expect applicants to have engaged in specific kinds of services related to the profession and to be able to demonstrate a knowledge of the profession through these services. Students must also take an admissions examination designed by the professional association to assist admissions committees in evaluating the applicant's preparation for that profession. Such examinations (MCAT, DAT, GRE, etc.) normally are taken near the end of the junior year or the beginning of the senior year at Clarion. Clarion University has entered into a "3+4" and "4+4" affiliation agreement with Lake Erie College of Osteopathic Medicine (LECOM), whereby qualified Clarion students are guaranteed a seat at LECOM upon completion of the affiliation requirements. Clarion University has entered into a "2+3" and "3+3" affiliation agreement with LECOM School of Pharmacy, whereby qualified Clarion students are guaranteed a seat at LECOM upon completion of the affiliation requirements. Clarion University also has a "3+3" affiliation agreement with Logan College of Chiropractic whereby qualified Clarion students can complete their final year of college while beginning their chiropractic training.

Because the following courses usually are required by professional schools, it is recommended students complete the following work at Clarion:

BIOL	155:	Principles of Biology I
BIOL	165:	Principles of Biology I Laboratory
CHEM	153/163:	General Chemistry I
		OR
CHEM	151/161:	Chemical Principles I
CHEM	251/262:	Organic Chemistry I
PH	251:	General Physics I
MATH	270:	Calculus I
ENG	111:	Writing II
CHEM	154/164:	General Chemistry II
		OR
CHEM	152/162:	Chemical Principles II
CHEM	252/262:	Organic Chemistry II
PH	252:	General Physics II

Students also must complete requirements for an academic major within a specific department. If the student chooses to major in one of the sciences, the above courses may be included in the major.

Requirements for admission to specific professional schools vary slightly; thus, the student must determine such requirements through the Pre-Professional Committee.

The Pre-Professional Committee will assist students in arranging to take admissions examinations and preparing admissions materials. For information, send inquiries to Department of Biology, Chair, Pre-Professional Committee.

To ensure proper advisement, students must contact the Pre-Professional Committee at once.

Pre-Pharmacy

When applying to Clarion University, students may apply for admission into a "3+3" accelerated pharmacy program in affiliation with Lake Erie College of Osteopathic Medicine (LECOM) School of Pharmacy. In this program, students will spend three years at Clarion University (Phase I) as a Chemistry major with a concentration in Biochemistry and will have a guaranteed seat at LECOM upon successful completion of Phase I. At LECOM (Phase II), courses from the first year will count toward completion of the BS in Chemistry at Clarion. This program is highly competitive and high school seniors applying to Clarion should contact the Admissions Office for details. Clarion also advises students who are applying to other pharmacy schools, or who wish to apply to LECOM but are not in the 3+3 program.

Psychology, B.A., B.S.

Department Chair, Mark Mitchell, Ph.D.

237 Harvey Hall

Telephone: 814-393-2295

E-mail address: mmitchell@clarion.edu

Website: www.clarion.edu/psych

Department Faculty: D. Ashcraft, C. Forden, M. Haynes, J. Jolley, M. Mitchell, R. Nicholls, R. Potter, D. Schlueter, J. Slattery, T. Vilberg

Are you interested in what makes people tick? For example, why do people help when you're standing by a country road, but don't when you're stranded on the interstate? Why do some people eat when they're depressed and others lose their appetites? What do humans and other animals have in common? What is the relationship between your early childhood experiences and your later adult life? Is your behavior determined more by your genes or your experience? If these kinds of questions are of interest to you, psychology may be the major for you. Psychologists study many issues relevant to the human condition. While some focus on how to help people with problems, others work to better select and train employees. While some psychologists are interested in how the brain determines behavior, others study how behavior changes as we age. Psychologists can be found in human service agencies, schools, industry, advertising, hospitals, and research laboratories. Furthermore, a background in psychology can give you a good foundation for careers in business, law, medicine, or religion.

The Psychology Department is a friendly department with dedicated teachers and advisors. It offers three majors and one minor to fit students' varying career interests. The department's faculty will help you prepare for your future career with individual attention, research opportunities, and supervised internships. While you might fall through the cracks at a larger school, you won't at Clarion. This is a great place to learn about psychology and yourself.

Psychology (B.S., B.A.) Outcomes

1. Demonstrate psychology information literacy
2. Interpret, design, and conduct basic psychological research
3. Apply ethical standards to evaluate psychological science and practice
4. Adopt values that contribute to community building at both the local and global levels
5. Demonstrate effective writing in multiple formats
6. Exhibit effective presentation skills in multiple formats
7. Enhance teamwork capacity
8. Develop meaningful professional direction for life after graduation
9. Describe key concepts, principles, and overarching themes in psychology
10. Develop a working knowledge of the content domains of psychology
11. Describe applications that employ discipline-based problem solving

Requirements

- PSYCHOLOGY, B.S.**48 credits
Required: PSY 211, 230, 251 (each with the grade of C or higher), PSY 260, PSY 351, PSY 354, PSY 355, and PSY 454. In addition, one of PSY 401, PSY 456, or PSY 470. Additional courses to total 48 credits in psychology are required to complete the major. At least four courses at the 400 level (only three credits of PSY 499 or COOP 468 may be used), chosen in consultation with a departmental advisor, must be included within the major. Students also must complete two courses MATH 111 or higher OR one course MATH 111 or higher with a Level 4 Math Placement.
- PSYCHOLOGY, B.A.**39 credits
Required: PSY 211, 230, 251 (each with the grade of C or higher), 260, 354, 355, and either 456 or 470, plus at least 18 credits in psychology electives chosen in consultation with a departmental advisor. Three elective courses at the 400-level (only three credits of PSY 499 or COOP 468 may be used) in addition to PSY 456 or 470, are required. In addition to the above, students are required to pass the final examination in either their 250 or 252 language course.
- SOCIOLOGY/PSYCHOLOGY, B.A.** 42 Credits
Required: Three Sociology courses and four courses chosen from Sociology or Social Work. In addition, PSY 211, PSY 230, PSY 260, and PSY 354 are required, as well as 9 credits of psychology electives at least six of which must be at the 300 or 400 level (only three credits of PSY 499 or COOP 468 may be used). In addition to the above, students are required to pass the final examination in either their 250 or 252 language course.
- PSYCHOLOGY, MINOR**18-20 credits
 Available to all undergraduate students.
Required: PSY 211 and five other psychology courses (at least nine credits of which must be at the 300 or 400 level). A 2.0 GPA is required in the minor.

Real Estate, B.S.B.A.

Department Chair, Jerry Belloit, Ph.D.
 336 Still Hall
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 E-mail address: belloit@clarion.edu
 Website: www.clarion.edu/coba/finance
 Department Faculty: J. Belloit, M. Brigida, J. Eicher, J. Eichlin, W. Pratt, F. Shepard

The real estate program is designed to prepare students for careers in brokerage, appraisal, real estate law, management, finance, and investment in real estate.

Real Estate (B.S.B.A. – General Track) Degree Outcomes

1. A student who graduates with a BSBA-Real Estate-General Track from Clarion University will be able to solve time-value-of-money problems.
2. A student who graduates with a BSBA-Real Estate-General Track from Clarion University will be able to appraise a property
3. A student who graduates with a BSBA-Real Estate-General Track from Clarion University will be able to develop a population model.
4. A student who graduates with a BSBA-Real Estate-General Track from Clarion University will be able to demonstrate proficiency in real estate principles and practices.

Real Estate (B.S.B.A. – Paralegal Track) Degree Outcomes

1. A student who graduates with a BSBA-Real Estate-Real Estate Paralegal Track from Clarion University will be able to solve time-value-of-money problems.
2. A student who graduates with a BSBA-Real Estate-Real Estate Paralegal Track from Clarion University will be able to appraise a property
3. A student who graduates with a BSBA-Real Estate-Real Estate Paralegal Track from Clarion University will have completed the paralegal AS coursework.
4. A student who graduates with a BSBA-Real Estate-Real Estate Paralegal Track from Clarion University will be able to demonstrate proficiency in real estate principles and practices.

Requirements

- REAL ESTATE (B.S.B.A.)**24 credits
Required: General Real Estate Track—RE 270, 271, 373, 470, 471; two courses from BSAD 247 or RE 372; RE 374, 472, 475; one course from ACTG 353, 453, 463, BSAD 241, 340, 341, ECON 314, 370, 470, FIN 375, 376, 463, 473, MGMT 323, 324, 427, MKTG 363, 461, 462.
Paralegal Studies Track—Associate degree from American Bar Association approved program in paralegal studies or equivalent, RE 270, 271, 373, 470, one course from BSAD 247 or RE 372, BSAD 340, 448, RE 374. Real estate majors must select a three-credit international business course and a three-credit real estate or business elective. All courses with an RE designation have been approved by the Pennsylvania Real Estate Commission for three credits each toward meeting the education requirements for real estate brokerage licensing. RE 270 and 271 are the courses applicable toward meeting requirements of the salesperson licensing examination.

Rehabilitative Sciences, B.S., A.S.

Department Chair, Ray Feroz, Ph.D.
 108 Special Education Center
 Telephone: 814-393-2052
 E-mail address: rferoz@clarion.edu
 www.clarion.edu/hsrhss
 Department Faculty: G. Clary, M. Kilwein, M Lepore, J. May

Rehabilitative Science (all degrees) outcomes

1. Students will be competent human services professionals
2. Students will analyze the needs of clients/consumers, develop goals and design as well as implement a plan of action
3. Students will be familiar with the range of human service delivery models.

Associate of Science: Rehabilitative Services

The Associate of Science in Rehabilitative Services, which is accredited by the Council for Standards in Human Service Education, trains people to work in human service practitioner roles with people with special needs in human service agencies. They include, but are not limited to, the roles of life skills worker, life coach, classroom assistant and human development assistant. Because these roles vary, the program offers both specialized and generic competencies. The two-year program culminates with a supervised field experience in a human service agency. Students are responsible for providing their own transportation to and from field experience sites. Students who enroll in the associate degree program will work with nationally recognized faculty in the field. Qualified students who have earned a 2.5 GPA may continue their study toward a bachelor’s degree in special education or rehabilitative sciences and receive credit toward graduation for courses taken while earning an associate degree.

GENERAL EDUCATION

ENG 111: Writing II	3
COM 113: Public Speaking	3
PSY 211: General Psychology	3
SOC 211: Principles of Sociology	3
Natural Sciences and Mathematics	3
Humanities	3
Personal Development and General Ed Electives	6
TOTAL	24

REHABILITATIVE SERVICES CORE

REHB 126: Intro to Human Services	3
REHB 227: Neuro. Dis. and Phys. Impairments	3
REHB 250: The Helping Relationship	3
REHB 295: Field Experience	6
REHB 378: Seminar for REHB 295	1
SPED 245: Applied Behavior Analysis	3
NURS 368: Human Caring	3
SW 212: Social Work with Groups	3
PSY 111: Psych of Personal Growth	3
PSY 260: Developmental Psych	3
Related Elective	3
TOTAL	34

B.S. Degree in Rehabilitative Sciences

The Rehabilitative Sciences Program is an interdisciplinary program that combines the expertise of the departments of psychology, sociology and nursing with the resources of the Department of Human Services, Rehabilitation, Health and Sports Sciences. The program prepares students for generalist human service positions in the areas of aging, developmental disabilities, court and community services, or addictions treatment. Graduates of the program assume a variety of positions, including case managers, residential program managers, therapeutic staff support, day service directors, rehabilitation program specialists, children and youth personnel, substance abuse prevention specialists, activities directors, corrections and probation/parole and similar positions.

Clarion’s Rehabilitative Sciences program is dually accredited by the Council on Rehabilitation education (CORE) and the Council for Standards in Human Service Education (CSHSE) and highly regarded throughout Pennsylvania as a producer of high quality entry-level rehabilitation/ human service professionals. Students who enroll in Clarion’s Rehabilitative Sciences Program will work with nationally recognized faculty in the field and will participate in a variety of on- and off-campus field experiences involving increasing levels of responsibility and culminating in a semester-long supervised field experience in a human services agency. Field experience opportunities are available throughout the region and state. Students are responsible for providing their own transportation to and from any field experience or internship placement(s). Acceptance into the Rehabilitative Sciences Program is contingent upon a 2.5 GPA in the first four semesters at Clarion and Act 33, Act 34 and FBI clearances.

Program Requirements

Area of Specialization

I. REHABILITATIVE SCIENCE CORE.....	34 credits
REHB 126: Intro to Human Services	3
REHB 227: Neurological Disorders and Physical Impairments	3
SPED 245: Applied Behavior Analysis	3
REHB 250: Helping Relationship	3
REHB 370: Assessment in Human Services and Rehab	3
REHB 378: Seminar in COOP 377	1
REHB 440: Principles of Psychiatric Rehab and Recovery	3
REHB 460: Models of Human Services Delivery Systems	3
REHB 470: Intervention Strategies in Human Services and Rehab	3
REHB 475: Administering Rehabilitation Delivery Systems	3
COOP 377: COOP in Rehabilitative Sciences	3
SW 212: Social Work with Groups	3

Concurrent with completion of the rehabilitative science core, students must complete one of the following options. These options are designed to provide students with opportunities to focus their studies on a particular human service consumer group or prepare for further study at the graduate-school level.

A. ADDICTIONS CONCENTRATION	29 CREDITS
REHB 405: Substance Abuse	3
REHB 410: Prevention and Treatment Strategies in Substance Abuse	3
REHB 495: Field Experience in Rehabilitative Sciences	6
REHB 495: Field Experience in Rehabilitative Sciences	6
REHB 496: Seminar for REHB 495	1
REHB 496: Seminar for REHB 495	1
ATSW 333: Fitness for Wellness	3
SOC 351: Contemporary Social Problems	3
SOC 361: Sociology of Deviant Behavior	3
RELATED ELECTIVES – 9 credits	
B. COURTS AND COMMUNITY SERVICE – VENANGO COLLEGE*	
CONCENTRATION	38 CREDITS
REHB 405: Substance Abuse	3
REHB 410: Prevention and Treatment Strategies in Substance Abuse	3
REHB 495: Field Experience in Rehabilitative Sciences	6
REHB 496: Seminar for REHB 495	1
BSAD 238: Intro. to Paralegal Studies	3
BSAD 239: Family Law	3
BSAD 241: Legal Environment II	3
BSAD 242: Methods of Legal Research	3
BSAD 243: Wills, Trusts, Estates	3
BSAD 246: Civil Litigation	3
BSAD 247: Real Estate Law for the Paralegal	3
BSAD 249: Field Experience	3
Free Elective	1
*American BAR Association Approved	
C. DEVELOPMENTAL DISABILITIES CONCENTRATION	29 CREDITS
CSD 125: Intro to Communication Disorders	3
SPED 128: High Incidence Exceptionalities	3
SPED 129: Low Incidence Exceptionalities	3
SPED 446: Methods/Practicum for Ind. with Low Incidence Disabilities	3
ATSW 333: Fitness for Wellness	3
REHB 495: Field Experience in Rehabilitative Sciences	6
REHB 495: Field Experience in Rehabilitative Sciences	6
REHB 496: Seminar for REHB 495	1
REHB 496: Seminar for REHB 495	1
RELATED ELECTIVES -- 9 credits	
D. GERONTOLOGY CONCENTRATION	29 CREDITS
REHB 430: Aging and the Human Services	3
REHB 495: Field Experience in Rehabilitative Sciences	6
REHB 495: Field Experience in Rehabilitative Sciences	6
REHB 496: Seminar for REHB 495	1
REHB 496: Seminar for REHB 495	1
SOC 353: Aging in American Society	3
NURS 365: Health Promotion for the Elderly	3
PSY 464: Theories of Counseling	3
PSY 467: Gerontological Psychology	3
RELATED ELECTIVES – 9 credits	



Respiratory Care, A.S.

Department Chair, Ray Feroz, Ph.D.
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www.clarion.edu/hsrhss
Department Faculty: R. Bloom, C. Harancher, M. Moore

Clarion University's respiratory care program is offered at Venango College. The 24-month respiratory care program has an academic preparation of one academic year (two semesters) and continues with a 14-month program of clinical study at Clarion University and at accredited affiliated clinical sites.

Following completion of 79 credits of course work at Clarion University and at affiliated clinical practicum sites, the student is awarded an Associate of Science degree with a major in Respiratory Care. Program graduates are eligible to sit for the credentialing examinations administered by the National Board for Respiratory Care (NBRC). Graduates who successfully pass the NBRC Written Registry Examination for Advanced Level Respiratory Therapists and the Clinical Simulation Examination will earn the credentials Registered Respiratory Therapist (RRT) and may work in a variety of health care settings as advanced-level respiratory therapists after obtaining state licensure.

Clarion University's respiratory care program is accredited by the Commission on Accreditation for Respiratory Care (CoARC), 1248 Harwood Road, Bedford, TX 76021-4244, 817-283-2835, Fax: 817-354-8519, www.coarc.org.

Clinical Education

During the 14-month clinical phase of the respiratory care program, students will attend classes and clinical practicum five full days per week with some days spent in formal respiratory care classes taught at Clarion University and other days spent at assigned clinical sites. Students will also be required to periodically attend specialty respiratory

care rotations at local and regional health care organizations. *Significant travel is required of respiratory care students. Reliable transportation is therefore essential and is at the expense of the student.* Additionally, some weekend and evening rotations may be required.

Several local and regional health care organizations serve as clinical sites for the respiratory care program. Student preference cannot be considered in clinical site placement.

Admission Policy

Admission to the respiratory care program is contingent upon vacancy in the program. Applicants are required to meet the standard admission criteria for Clarion University. Students are admitted via a rolling admissions process. Once the respiratory care program is filled, students will be admitted to the following year’s class. Students applying after the program is filled may be considered for enrollment in general education courses for the first year while waiting for admission to the respiratory care program.

Suggested prerequisites:

- Students who have not had within the past five years one year of high school or college biology with a minimum grade of “C” are encouraged to take Basic Biology (BIOL 111) before starting the respiratory care program.
- Students who place into MATH 050, based on math placement test results, are encouraged to take Math 050 before starting the respiratory care program.

Pre-Clinical Requirements:

The pre-clinical requirements listed below must be satisfied by April 1 of the freshman year. All pre-clinical requirements are at the student’s expense.

- Satisfactory physical examination
- Child abuse history clearance
- Satisfactory results of a screening for illegal drug use
- FBI fingerprinting and criminal background clearance
- Current Basic Life Support for Health Care Provider (CPR) certification by the American Heart Association
- Documentation of health insurance during clinical rotations
- Documentation of the purchase of an individual malpractice insurance policy in the amount of one million dollars (\$1,000,000.00) for each claim and three million dollars (\$3,000,000.00) in the aggregate. The cost of this 2-year policy is currently under \$100 but is subject to change.

Pre-clinical requirements are subject to change. Refusal to comply with or failure to meet all of the criteria by the April 1 deadline will prohibit the student from continuing in the respiratory care program. Only students who have met the above criteria and have completed all science and general education requirements will be permitted to start respiratory care clinical practicum. Clinical education begins each May. Any costs incurred top meet the pre-clinical practicum requirements of the respiratory care program are nonrefundable even if a student is unable to continue in the program.

Throughout the 24-month respiratory care program, students will be assigned to clinical rotations at various clinical sites in the region. Required travel is sometimes extensive. Students are required to have reliable transportation to each clinical site.

Program Goals and Objectives

Goal: To prepare students as competent respiratory care practitioners.

Objectives: Upon completion of the program the graduate should demonstrate:

1. The ability to comprehend, apply and evaluate clinical information relevant to their roles as advanced-level respiratory care practitioners,
2. The technical proficiency in all skills necessary to fulfill their roles as advanced-level respiratory care practitioners,
3. Professional behavior consistent with employer expectations as advanced-level respiratory care practitioners.

Respiratory Care (A.S.) Outcomes

1. Students will communicate in a concise manner in the health care setting relating appropriate and complete information.
2. Students will be able to apply comprehensive knowledge of respiratory care practices in response to clinical situations.
3. Students will demonstrate concern for the dignity and welfare of patients and other members of the health care team.

Curriculum Plan for Full-Time Study

Although the Associate of Science in Respiratory Care degree program is designed to be completed in 24 consecutive months (two semesters at Clarion University followed by 14 months of clinical education that includes two summer sessions), the first two semesters at Clarion University may be completed on a part-time basis. Clinical education must be completed on a full-time basis.

Curriculum Plan

FIRST SEMESTER (FALL I)

BIOL 251 & 261 Human Anatomy and Physiology I with Lab	4
PHSC 111 Physical Science Chemistry	3
MATH 117 Mathematics for Health Science	3
AH 101 Medical Terminology	3
AH 201 Introduction to the Healthcare Environment	2
Semester Total.....	15

SECOND SEMESTER (SPRING I)

BIOL 252 & 262 Human Anatomy and Physiology II with Lab	4
RESP 101 Introduction to Respiratory Care	3
BIOL 260 Microbiology	3
ENG 111 Writing II	3
PSY 211 General Psychology	3
Semester Total.....	16

THIRD SEMESTER (SUMMER I)

RESP 102 Intermediate Respiratory Care	3
RESP 121 Clinical Application of Respiratory Care I	2
RESP 201 Cardiopulmonary Anatomy and Physiology	3
RESP 202 Cardiopulmonary Pathophysiology	2
RESP 203 Cardiopulmonary Pharmacology	2
Semester Total.....	12

FOURTH SEMESTER (FALL II)

RESP 204	Advanced Respiratory Care	3
RESP 205	Mechanical Ventilation and Critical Care I.....	3
RESP 206	Selected Topics in Respiratory Care	3
RESP 220	Clinical Application of Respiratory Care II.....	3
Semester Total.....		12

FIFTH SEMESTER (SPRING II)

RESP 207	Mechanical Ventilation and Critical Care II	4
RE-SP 208	Neonatal & Pediatric Respiratory Care	3
RESP 121	Clinical Application of Respiratory Care III.....	5
Semester Total.....		12

SIXTH SEMESTER (SUMMER II)

RESP 209	Advanced Life Support and Case Studies	2
RESP 210	Advanced Clinical Concepts.....	3
RESP 211	Case Studies — Clinical Simulations	2
RESP 222	Clinical Application of Respiratory Care IV	5
Semester Total.....		12

Total Credits = 79

*Curriculum subject to change.

** Contingent upon English placement Students who place into ENG 110 are required to take the course prior to taking ENG 111. A minimum grade of C must be earned in all RESP courses.

Sociology and Social Work

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Website: www.clarion.edu/sociology

Department Faculty: C. Petrissans, M. Reef

The field of sociology explores the social and cultural influences on social behavior, the dynamics of social interaction and inequality, social institutions, change, and social problems. The sociology major is beneficial to anyone who is interested in working closely with people and, in this sense, career possibilities are practically unlimited. Types of entry-level jobs available to graduates in sociology include: social service agencies, community organizations, and government agencies, as well as business. Sociology also teaches skills that are beneficial and related to further studies in law, criminology, teaching, social work, and business.

The sociology program provides students with knowledge in areas such as theory, research methods, inequality, family, social problems, deviance, and conflict resolution. The interdisciplinary nature of our department offers students the unique opportunity of taking social work classes as part of the sociology degree. We offer students a Bachelor of Arts in Sociology, as well as minors in sociology and social work. Internships are required of all social work minors and highly recommended for all sociology majors and minors. Professional organizations for majors include Alpha Kappa Delta, a national sociology honorary society and the Sociology/Social Work Club.

Sociology (B.A.) Outcomes

1. Students will be able to communicate effectively using oral and written communication.
2. Students will demonstrate knowledge of social theory
3. Students will demonstrate knowledge of the scientific method and demonstrate the ability to critically analyze written information within sociology.
4. Graduates will recognize diversity and inequality in American society and its implication for social change and social justice.
5. Graduates of the BA degree in Sociology will develop skills useful in future employment and civic engagement.

Requirements

SOCIOLOGY, B.A.52-53 credits
Required: SOC 211, 310, 450, and 24 additional credits in sociology, up to 12 credits in social work courses can be counted toward the major and chosen in consultation with a departmental advisor. In addition, the following courses are required: ANTH 211, HIST 113, PSY 211, PS 211, either ECON 211 or 212, ECON 221 or MATH 221 or PSY 230. Students must demonstrate competence in either a foreign language or computer science (CIS110, 202, 217, 301).

SOCIOLOGY, MINOR18-19 credits

Required: 18 credits, SOC 211 and five other sociology courses (three of which must be at 300 or 400 level).

SOCIAL WORK, MINOR18 credits

Required: SW 211, 212 and SW/SOC 499. Additional required courses (six credits from the following) SW 225; SOC 318, 340, 351, 352, 361, 362, and SW/SOC 499 (may take an additional three credits beyond the required three credits).

Spanish

SPANISH, B.A. SEE WORLD LANGUAGES.

Special Education, M.S., B.S.

Department Chair, Rick Sabousky, Ph.D.

107 Special Education Center

Telephone: 814-393-2294

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Website: www.clarion.edu/department/spec

Department Faculty: A. Conner-Love, P. Gent, Y. Kim, R. Sabousky, L. Taylor, L. Turner

Initial Preparation in Special Education

Special Education is no longer a “stand alone” preparation or certification program. Chapter 49 now requires that all Special Education certifications be combined with certification in either PK-4 Early Childhood, grades 4-8 Middle Level, a secondary subject content area, or Reading Specialist.

Those prepared as special educators are teachers who have received specialized training and certification to teach students with the cognitive, behavior, and/or physical/health disabilities. Special education, arguably one of the most challenging fields of education, requires teachers to use a variety of creative and critical thinking skills to develop and implement alternative instructional strategies and/or accommodations for individuals with disabilities.

The Special Education Program is nationally accredited and is highly regarded throughout the Mid-Atlantic region as a producer of high quality and skillful teachers. Personnel from school districts throughout the United States regularly visit Clarion campus to recruit graduates from the Special Education Program. Students who are accepted in Clarion’s Special Education Program will work with faculty who are experts in the field and earn the opportunity to participate in a variety of field experiences involving increasing levels of responsibility and culminating in a student teaching experience. Student teaching generally occurs in districts in the Clarion region, but also includes sites in urban areas. It should be noted that students are responsible for providing their own transportation to their field sites.

Early in the professional studies, students focus on an in-depth understanding of the specific disabling conditions, relevant variables and assessment procedures and their related implications for learning, intervention and instruction. During this period of study, the student is required to engage in specified field experiences that move the student from observation into direct experience and application of empirically-based strategies and instruction with individuals with disabilities.

In the next phase, the student further extends and refines the knowledge and skill base through applications in specifically selected field placements and supervised projects. During the final undergraduate semester, the student engages in student-teaching experiences under joint supervision and guidance of a selected cooperating professional and department faculty. The program is currently approved by the Pennsylvania Department of Education.

Special Education (all degrees) Outcomes

1. Students will be competent special educators
2. Students will analyze the needs of students with disabilities or at risk for disabilities and develop goals and design as well as implement an individualized education plan
3. Students will exhibit teacher behaviors consistent with the range of evidence-based models of education.

PROFESSIONAL EDUCATION AND AREA OF SPECIALIZATION CERTIFICATION CORE

SPED 128: High Incidence Exceptionalities	3
SPED 129: Low Incidence Exceptionalities	3
SPED 245: Applied Behavior Analysis	3
SPED 350: Seminar-Contemporary Issues in Special Education.....	2
SPED 381: Special Reading and Written Expression	3
SPED 411: Educational Assessment Practicum.....	1
SPED 422: Special Education Classroom Administration ..	3
SPED 426: Clinical Practicum for High Incidence Disabilities	1
SPED 427: Clinical Practicum for Low Incidence Disabilities	1
SPED 428: Assistive Technology	1
SPED 444: Methods & Practicum – High Incidence.....	3
SPED 446: Methods & Practicum – Low Incidence	3
SPED 450: Student Teaching.....	6
SPED 462: Educational Assessment.....	3
SPED 482: Special Math Instruction	3

Special Education Pre-K-8/7-12 Dual Certification

The department of Special Education has created a unique program designed to meet the needs of a variety of learners with disabilities, at risk for disabilities, and those with reading disabilities. We call this the Intervention Specialist Program. It is designed to prepare a new professional. The program combines special education preparation at the undergraduate level, special reading education, as well as mathematics content knowledge, to ensure that individuals with specific learning needs and diverse abilities entitled to a free, and appropriate quality education utilizing specialized teaching receive it at all age levels.

Upon completion of the program, students will earn a Bachelor of Science in Special Education degree, a M.S. in Special Education degree, and be prepared to sit for the examinations required by the Pennsylvania Department of Education (PDE) for Special Education as well as Reading Specialist Certification. Individuals would also have additional mathematics content knowledge and methods.

Individuals wishing to become enrolled in this program must understand that teaching experience is required before entering the graduate portion of the program, therefore the program requires at the undergraduate level more than 600 hours of supervised practicum experience as well as completing all requirements for special education certification including passing the appropriate examinations for certification. As per PDE requirements, no certifications can be awarded individually; the requirements for all must be completed in the prescribed order.

SPECIAL EDUCATION CERTIFICATION CORE.....45 CREDITS

SPED 128: High Incidence Exceptionalities	3
SPED 129: Low Incidence Exceptionalities	3
SPED 245: Applied Behavior Analysis	3
SPED 350: Seminar-Contemporary Issues in Special Education.....	2
SPED 381: Special Reading and Written Expression	3
SPED 411: Educational Assessment Practicum.....	1
SPED 422: Special Education Classroom Administration ..	3
SPED 426: Clinical Practicum for High Incidence Disabilities	1
SPED 427: Clinical Practicum for Low Incidence Disabilities	1
SPED 428: Assistive Technology	1
SPED 444: Methods & Practicum – High Incidence.....	3
SPED 446: Methods & Practicum – Low Incidence	3
SPED 450: Student Teaching.....	12
SPED 462: Educational Assessment.....	3
SPED 482: Special Math Instruction	3

MATHEMATICS REQUIRED RELATED ELECTIVES (6 CREDITS)

This area will be designed with the advisor to select courses to enable students to have enhanced mathematics content knowledge. These credits will be beyond the 6 credits of MATH 111 and Math 211 requirement. MATH 110-MATH 480, excluding MATH 010, MATH 050, MATH 290, and MATH 390, are acceptable credits for this requirement.

The Intervention Specialist Core provides students with enhanced content knowledge specifically in the areas listed below.

INTERVENTION SPECIALIST CORE (21 CREDITS)	
SPED 211: Intellectual Disabilities	3
SPED 230: Social and Emotional Disturbances	3
COOP 378: Co-op/Learning Disabilities	3
SPED 492: Special Mathematics Instruction II	3
SPED 442: Differentiating Instruction.....	3
ENG 459: Language Acquisition Across Cultures	3
SPED 432: Specific Learning Disabilities	3

Additional General Education to total 120 credits

Integrated Middle Level Baccalaureate and Master of Education with Special Education Concentration (ED 4-8/Special Education Pre-K-8)

In order to meet the new standards and offer Clarion University students a unique opportunity to complete a program with both Middle-Level and Special Education certification, an integrated program has been created.

For this circumstance, those students wishing to matriculate to graduate school to receive Special Education certification, the following courses will be substituted in the Middle level program of study:

Required Course	Substitution
SPED 441	SPED 462
SPED 442	SPED 482
EDML 425	SPED 245
EDML 425	SPED 381

The students would be required to student teach in both the Middle level area and the Special Education area. The SPED 462, SPED 482, SPED 245, and SPED 381 would count on the undergraduate record and as competencies completed for the Master's of Education with Special Education Concentration.

Master of Education With Special Education Concentration and Middle Level Certification

CORE COMPETENCIES	6 CREDITS
ED 520: Introduction to Research	3
ED 578: Professional Seminar.....	3
SPECIALIZATION COURSES.....	21 CREDITS
SPED 462: Educational Assessment*	
SPED 482: Special Mathematics Instruction*	
SPED 500: Contemporary Issues in Special Education.....	3
SPED 522: Special Education Classroom Administration...	3
SPED 526: Clinical Practicum for High Incidence Disabilities	1
SPED 527: Clinical Practicum for Low Incidence Disabilities	1
SPED 528: Assistive Technology	1
SPED 544: Methods of Practicum High Incidence.....	3
SPED 546: Methods of Practicum Low Incidence	3
SPED 567: Seminar on ABA*	
SPED 580: Special Reading Instruction*	
SPED 554: Graduate Student Teaching in Special Education.....	6
Special Education/ Rehabilitative Science Elective	3
TOTAL.....	30 Credits

* Completed in the mid-level undergraduate program
Student Teaching will occur after SPED 544 & 546 (block)

Special Education (Pre-K-8th Grade)/ Pre-K-4th Grade (Early Childhood)

Many employment opportunities exist in the state of Pennsylvania and throughout the country in pre-school and special education programs. The School of Education offers a program of study which will provide students with the academic preparation for dual certification in special education and early childhood education. Students completing this program, and successfully pass the PDE required tests, are qualified to teach in special education programs (pre-K-8) and early childhood programs (pre-K-4), as well as in special education infant stimulation and preschool programs. Completion of the following requirements will lead to dual certification in special education and early childhood education:

PRE-K – 4TH GRADE (EARLY CHILDHOOD) CORE	12 CREDITS
ED 121: Human development and Learning	3
ECH 235: Observation: Constr ECH Base.....	3
ECH 236: Assess & Plan: Using EC Base	3
ED 350: English Language Learners	3
SPECIAL EDUCATION CORE	20 CREDITS
SPED 128: High Incidence Exceptionalities.....	3
SPED 129: Low Incidence Exceptionalities	3
SPED 245: Applied Behavior Analysis.....	3
SPED 381: Special Reading and Written Instruction.....	3
SPED 350: Seminar: Contemporary Issues in SPED.....	2
SPED 462: Educational Assessment	3
SPED 482: Special Mathematics Instruction	3
PRE-K – K BLOCK.....	15 CREDITS
Must be taken concurrently	
ECH 310: Family-Community Collaboration	3
ECH 322: Curriculum Bases for Learning and Teaching...	3
ECH 323: Language, Literacy, and the Young Child	3
ECH 325: YC as Theory Builders	3
ECH 301: Child Development and Guidance	3
SPED BLOCK	13 CREDITS
SPED 411: Educational Assessmen Practicum	1
SPED 422: Special Education Classroom Administration...	3
SPED 426: Clinical Pract for High Inc. Dis	1
SPED 427: Clinical Pract for Low Inc. Dis	1
SPED 428: Assistive Technology	1
SPED 444: Methods and Practicum – High Incidence	3
SPED 446: Methods and Practicum – Low Incidence	3
GRADES 1 – 4 BLOCK	18 CREDITS
Must be taken concurrently	
ECH 414: Learning and Teaching Language and Literacy 1-4	3
ECH 415: Learning and Teaching Mathematics: 1-4	3
ECH 416: Learning and Teaching Social Studies: 1-4	3
ED 417: Advanced Educational Technology.....	3
ECH 410: Motor Development and Learning	3
STUDENT TEACHING.....	12 CREDITS
ECH 424: Student Teaching	6
SPED 450: Student Teaching	6
ADDITIONAL GENERAL EDUCATION TO TOTAL.....	126 CREDITS

DIAGNOSIS AND INTERVENTION STRATEGIES FOR STUDENTS WITH MATHEMATICAL DISABILITIES (MINOR) ... 18 credits

Required: 3 credits from the following prerequisites—
SPED 128 AND 129, or 418; Sped 432, 442, 482, 492
And select 3 credits from the following—SPED 441 or 443

SPECIAL EDUCATION (MINOR) 18 credits

Required: 3 credits from the following prerequisites—
SPED 128 AND 129, or 418; SPED 245, 442
Select 3 credits from the following—SPED 381, 482, 492;
Select 3 credits from the following—SPED 441, 443
Select 3 credits from the following—SPED 211, 230, 432

Speech Pathology and Audiology, B.S.

Department Chair, Janis Jarecki-Liu, Ph.D.
114 Keeling Health Center
Telephone: 814-393-2445
E-mail address: jjareckiliu@clarion.edu
Department Faculty: J. Jarecki-Liu, M. Mason-Baughman,
C. McAleer, M. McCarthy, H. Savage, K. Staub
www.clarion.edu/speechpath-bs

Leading to the Bachelor of Science in Speech Pathology and Audiology degree, this pre-professional program is designed to prepare the student for graduate study and the completion of professional requirements at that level. Full professional status, including certification by the American Speech-Language-Hearing Association and appropriate state licensure, requires completion of the master’s degree.

In addition to the undergraduate program, the department offers a graduate degree in speech pathology and makes provisions for teacher certification following the completion of the Master of Science degree. The graduate program is accredited in speech language pathology by the Council on Academic Accreditation in Audiology and Speech Language Pathology of the American Speech-Language-Hearing Association.

Speech Pathology (B.S.) Outcomes

1. Students will demonstrate knowledge of principles of basic science and normal development in relation to speech, language and hearing.
2. Students will demonstrate knowledge of characteristics, causes, and treatment methods for speech, language and hearing disorders.
3. Students will be able to apply and integrate discipline-specific knowledge to develop appropriate clinical management plans.

Requirements

SPEECH PATHOLOGY AND AUDIOLOGY, (B.S.) 54 credits
Required: CSD 125, 150, 156, 251, 257, 258, 352, 353, 460, 463, 467, 472, 475; ED 110 or ED 121; CIS 217; Psychology elective; SPED or Rehab Sci course; and MATH 221, PSY 230 or ECON 221.

Sequence of Courses

	<i>c.h.</i>	<i>s.h.</i>
FIRST SEMESTER		
CSD 125: Introduction to Communication Disorders	3	3
CSD 150: Speech Science	3	3
SECOND SEMESTER		
CSD 156: Phonetics and Phonology	3	3
FIRST OR SECOND SEMESTER		
BIO Biology Course	3	3
PHSC Physical Science Course	3	3
THIRD SEMESTER		
CSD 251: Anatomy of Speech and Hearing Mechanisms	3	3
CSD 257: Developmental Sequences in Language and Speech	3	3
FOURTH SEMESTER		
CSD 258: Language Disorders in Children	3	3
(pre-requisite CSD 257)		
FIFTH SEMESTER		
CSD 352: Speech Disorders	3	3
SIXTH SEMESTER		
CSD 353: Adult Communication Disorders	3	3
SEVENTH SEMESTER		
CSD 460: Introduction to Audiology	3	3
CSD 475: Augmentative and Alternative Communication	3	4
EIGHTH SEMESTER		
CSD 463: Aural Rehabilitation	3	3
(pre-requisite CSD 460)		
SEVENTH OR EIGHTH SEMESTER		
CSD 467: Clinical Observation	3	3
CSD 472: Seminar in Speech Science	3	3

Sports Management Program

Department Chair, Ray Feroz, Ph.D.
108 Special Education Center
Telephone: 814-393-2052
E-mail address: rferoz@clarion.edu
Website: www.clarion.edu/hsrhss
Department Faculty: K. Abbott, C. Brennan-Caplan,
M. Chesterfield, D. Katis, D. Knepp, W. Snodgrass, J. Thornton

The Sports Management Program is comprised of two curricular choices: B.S. Liberal Studies degree with a Concentration in Sports Management, and a Minor in Sports Management. Both choices offer a focused curriculum designed to provide students with the knowledge and skills specifically applicable to sports and recreation organizations. The B.S. Liberal Studies degree with a Concentration in Sports Management requires dedicated coursework including anchor courses such as Sports Management and Sports Facilities and Event Management. A minimum of 39 credits on the right side of the check sheet must be 300 level courses or above. With the emphasis on a health conscious society today, there is a growing need to have individuals capable of efficiently and effectively managing a variety of sport facilities ranging from YMCAs to fitness clubs. Clarion has made it possible to complete the Sports Management Program as a supplement to your choice of any academic major. Students pursuing a Sports Management Minor will likely pursue entry-level jobs in the

field or continue to graduate programs in Sports Management. Additionally, the skills and knowledge acquired in the program are applicable in many other industries. The requirement for the Sports Management Minor is 21 credits. Please consult your advisor and/or check sheet for specific requirements.

Sports Management (BSLS) Degree Outcomes

1. Students graduating from Clarion University with an BS LS Degrewill be able to develop a comprehensive plan for a sport team that includes basic sport management elements such as a marketing strategy, promotional materials, game day management, personnel management, budget planning, risk management, and equipment management.
2. Students will be able to design a marketing and promotional plan for a competitive sport season that will result in increased attendance at the competition/event.
3. Students will be able to publicly communicate a marketing and promotional plan to a group of people.
4. Students will be able to identify career opportunities in sport management and provide strategies for pursuing employment.

Requirements

SPORTS MANAGEMENT MINOR21 credits

Required:

ACTG	201	Intro to Accounting Survey.....	3
ECON	175	Economics of Free Enterprise and Public Policy	3
SOC	410	Sociology of Sports	3
		or	
ATSW	380	Fundamentals of Sport in American Society	3
ATSW	408	Principles and Problems of Athletic Coaching ...	3
		ATSW/	
MGMT	430	Sports Management	3
ATSW	440	Sports Facility and Event Management.....	3
COOP	447	Co-op Experience	3

B.S. LIBERAL STUDIES WITH CONCENTRATION IN SPORTS MANAGEMENT

A minimum of 39 credits on the right side of the check sheet must be at or above the 300 level.

ATSW	370	Women in Sport	3
ATSW	380	Fundamentals of Sport in American Society	3
		ATSW/	
MGMT	430	Sports Management	3
ATSW	440	Sports Facility and Event Management.....	3
MGMT	320	Management Theory and Practice	3
COOP	447	Co-op Experience	3-12

Choose one of the following:

ECON	175, ECON 211 or ECON 212.....	3
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Technology Leadership, B.A.S.

Department Chair, David Lott, Ph.D.

222 Frame Hall

Telephone: 814-676-6591

Email address: dlott@clarion.edu

www.clarion.edu/~jltl

The Bachelor of Applied Science in Technology Leadership is an online degree completion program that is appropriate for graduates of Clarion's Associate of Applied Science in Industrial Technology and similar programs at other institutions. The curricular combination of coursework and field experiences in leadership development, business, and advanced technology will serve to enhance analytical and critical thinking skills of graduates necessary to advance in their professions. With the focus on workforce development in the geographic region it serves, the Bachelor of Applied Science in Technology Leadership degree program provides a seamless transition for those who have earned an applied associate degree. The program prepares students to assume management and leadership positions, building on technical skill sets obtained at the associate degree level and providing online leadership and management courses in the junior and senior year. Additionally, students can use the degree as a springboard for the Master of Business Administration program.

Technology Leadership (B.A.S.) Outcomes

1. Apply technology effectively as an essential tool in industrial situations.
2. Apply management principles to industrial leadership positions.
3. Compose effective communication using both oral and written forms of communication.
4. Analyze safety principles within industrial leadership positions

BASIC CURRICULUM

CR.

- I. Liberal Education Skills
 - A. English Composition..... 3-6
 - B. Math Competency
 - C. Liberal Education Elective
- II. Liberal Knowledge
 - A. Physical & Biological Sciences
 - B. Social & Behavioral Sciences
 - C. Arts & Humanities
- III. Health & Personal Performance
 - A. Health & Wellness
 - B. Personal Performance

MAJOR COURSES

MGMT	120	Introduction to Business.....	3
MGMT	121	Fundamentals of Management	3
ACTG	251	Financial Accounting	3
ACTG	252	Managerial Accounting	3
FIN	370	Financial Management	3
MGMT	320	Management Theory & Practice	3
MKTG	360	Principles of Marketing.....	3
	300+	Business Elective	3
	300+	Business Elective	3
	300+	Elective.....	3

300+	Elective.....	3
300+	Elective.....	3
300+	Elective.....	3
INDT 301	Issues in Industrial Technology.....	3
	Technical Education.....	28

ELECTIVES TO TOTAL 120 CREDITS

Theatre, B.A., B.F.A.

Department Chair, Robert G. Levy, M.F.A.
 149 Marwick-Boyd Fine Arts Building
 Telephone: 814-393-2283
 Website: www.clarion.edu/theatre
 Department Faculty: R. Bullington, R. Levy, M. Michel,
 E. Powers

The Department of Theatre at Clarion University is an undergraduate program offering both the Bachelor of Arts and Bachelor of Fine Arts degrees. The program provides classroom and practical experience that enriches the lives of students and produces live theatre that enhances the cultural life of the university and the surrounding community. Education takes place not only in the classroom but also in theatrical laboratories and the world at large. Practical experience through dynamic and ambitious theatrical productions supplement classroom training. Many graduates are currently working in professional theatres.

Minor programs in theatre with concentration areas of acting and technical theatre are available to students regardless of major. Participation in most departmental performance activities is open to all students regardless of major.

The Bachelor of Fine Arts degree is open only to students through prepared audition or portfolio review. Dates for these auditions are scheduled each semester. Contact the Department of Theatre for more information.

Theatre (B.A.) Outcomes

1. Students will be knowledgeable of the role of Theatre in society throughout the major eras of Western History.
2. Students will have basic understanding of production methods used today.
3. Students will have knowledge of the variety of Dramatic Literature from different periods, genres and styles.
4. Students will have practical experience in production.

Theatre (BFA) outcomes

1. Students will be knowledgeable of the role of Theatre in society throughout the major eras of Western History.
2. Students will have demonstrated research skills and ability to put them into practice.
3. Students will have the ability to analyze the variety of Dramatic Literature in order to develop a critique, performance or design.
4. Students will have demonstrated the ability through technique and theory to communicate effectively to an audience.
5. Students will be able to work cooperatively with others, contribute artistically and lead.

Requirements

THEATRE, B.A. 48 credits
 Required courses: ENG 140, THE 104, 161, 253, 254, 352, nine credits chosen from THE 120, 154, 155, 201, 204, 215, 251, 301, 302, 304, 310, 311, 321, 350 or 351, 356, 361, 368, 369, 370, 461; nine credits chosen from THE 257, 260, 261, 262, 271, 362, 363, 364, 365, 366, 367, 371; six credits selected from ENG 342, 343, 344, 345, 412, 413; six credits from THE 344, 359, 360.

THEATRE, B.F.A. 72 credits

(1) Concentration in Acting; Required: THE 104, 155, 161, 201, 204, 251, 253, 254, 352, 359, 360, 361, 363, 368, 369, 370, 403, 461, ENG 140; three credits selected from THE 262, 271, 364, 366, 367; and three credits from ENG 254, 263, 339, 342, 343, 344, 345, 412, 413; nine credits chosen from COOP 384, 484, THE 120, 261, 262, 271, 301, 310, 311, 321, 322, 333, 344, 350 or 351, 352, 356, 364, 366, 367, 371, 388, ENG 254, 263, 339, 342, 343, 344, 345, 412, 413, and MUS 131. Also required are an audition and an approved Graduation Project.

(2) Concentration in Musical Theatre; Required: THE 104, 201, 204, 253, 254, 301, 304, 310, 311, 312, 350, 351, 361, 368, 403, 461, MUS 111, 125, 128, 131, 160, 161, 182, MUSA 126/226; six credits selected from THE 344, 359, 360, three credits from a combination of four credits from the following: MUSA 130/330, 131/132 or 331 and three credits from THE 161, 261, 262, 271, 322, 333, 344, 352, 356, 363, 366, 367, 370, 371, 388, 490, COOP 384, 484. Also required are an audition and an approved Graduation Project.

(3) Concentration in Technical Theatre; Required: COM 113; ENG 140; THE 104, 161, 253, 254, 261, 262, 271, 350, 351, 359, 360, 362, 363, 364, 366, 367, 371, 404; three credits selected from ART 211, 212, HIST 111, 112, ANTH 211; (Design Track) nine credits chosen from ART 121, 124, 125, 126, 222, 224, 230, 250, 280, 355, MIVIAJ 208; six credits selected from THE 322, 344, 352, 388, ART 260, 270, ENG 130, 254; (Stage Management Track) nine credits chosen from COM 100, 208, 214, 311, 312, 322; and six credits from THE 322, 344, 352, 388, ENG 130, 202, 254, ECON 140. Also required are a portfolio review and an approved Graduation Project.

(4) Selection/Retention Standards for B.F.A/theatre majors:

Students must demonstrate potential for excellence in acting or technical design by means of an assessment audition and/or a portfolio of designs during their first semester on campus. Auditions to assess progress are held annually.

After completing a total of 60 credit hours, or prior to entering their junior year, B.F.A. students must appear before the theatre staff and demonstrate the following: a minimum 2.50 GPA in at least 12 credits within the required core curriculum and a written statement of career goals. At the time of this review, the theatre staff will inform the B.F.A. theatre student of any program deficiencies and specify a time limit for removing the deficiencies. Students who fail to meet the retention standard will be dropped from the B.F.A./theatre program. Students may appeal the decision of the theatre staff through the appropriate channels: department chair, dean, and vice president for academic affairs.

All B.F.A. candidates must complete a graduation project. The project is assigned by the faculty, or approved by the faculty if it involves an off-campus internship, and must be completed during the student's last three semesters. Students must register for THE 403, 404, or 495 and work under the supervision of a project advisor. The goal of the B.F.A. graduation project is to provide evidence of critical thinking, enthusiasm for process, and a deep understanding of the student's work in their specific area of concentration.

- THEATRE: ACTING, MINOR** 18 credits
Required: THE 104, 253, 254; six credits selected from THE 204, 251, 310, 352, 361, and the capstone course of either THE 359 or 360.
- THEATRE: TECHNICAL, MINOR** 18 credits
Required: THE 104, 253; nine credits selected from THE 261, 262, 271, 362, 364, 366, 367; and the capstone course of either THE 359 or 360.

Women and Gender Studies Program

Dr. Kathleen McIntyre, Director

318 Founders Hall
 Telephone: 814-393-2412
 E-mail address: kmcintyre@clarion.edu
 Website: www.clarion.edu/gender

The Women and Gender Studies Program at Clarion University is an interdisciplinary community where students gain an understanding of gender issues across cultures. Our values include respect for diversity, open-mindedness, and self-exploration. We strive to cultivate supportive relationships between you and faculty, to make connections between personal experience and intellectual development, and to take action for social justice. Our programs enhance your preparation no matter what your major and we prepare you to be an involved, informed and empowered citizen.

Women and Gender Studies courses in humanities, education, business and social sciences promote peer interaction, knowledge application, and contribution to societal change. By studying knowledge about women and gender that in the past has been omitted, distorted, or minimized in the university curriculum, you learn to think critically and creatively. Outstanding professors from across disciplines teach students how to think locally and globally about the intersections of sex and gender with race, ethnicity, sexuality, class, ability, religion, age, and nationality.

With a minor or concentration in women and gender studies, you develop problem-solving and cross-cultural communication skills that are highly sought by employers and where women and girls or men and boys make up the majority of the customer base or clientele.

WOMEN AND GENDER STUDIES MINOR 18 credits

To earn a minor in women and gender studies, the student must complete 18 credits of women and gender studies courses, including WGS 100: Survey of Women Studies; WGS 490: Seminar in Women Studies; and at least six other credits at the 300-400 level. Twelve credits are to be selected from ANTH 216, 315; ART 216; ED/WGS 406; ENG 265, 365; GEOG 315; HIST 230; HPE 370; PHIL 357; PSY 220, 340, 390; COM 281, 320; SOC 311, 352, 362, 452; WGS 200, 300, 311.

Students enrolled in the liberal studies degree program may earn a concentration in women and gender studies by completing 21 credits of women and gender studies courses, including WGS 100: Survey of Women and Gender Studies; and at least nine other credits at the 300-400 level. Eighteen credits are to be selected from ANTH 216, 315; ART 216; ED/WGS 406; ENG 265, 365; GEOG 315; HIST 230; HPE 370; PHIL 357; PSY 220, 340, 390; COM 281, 320; SOC 311, 352, 362, 452; WGS 200, 300, 311, 490.

World Languages, B.A.

Department Chair, Kathleen O'Donnell, Ph.D.
 207D Davis Hall
 Telephone: 814-393-1995
 E-mail address: kodonnell@clarion.edu
 Website: www.clarion.edu/emod
 Department Faculty: E. Donato, K. O'Donnell, Y. Shao

Students who want to enhance their marketability upon graduation should learn a foreign language and become familiar with other world cultures. The study of languages and the development of cross-cultural understanding transform students into more enlightened, culturally sensitive citizens who can better perform in the global community and the world marketplace. To ensure Clarion University graduates are prepared for today's competitive job market, the Department of World Languages offers the following courses and programs:

- B.A. in World Languages with concentration in Spanish
- Minor in French, Spanish and Film Studies
- B.S. in Spanish Education for students who intend to teach
- Courses that fulfill foreign language, general education, or values flag requirements

We recommend students opt for a double major or a minor, combining two languages, or a language with other fields, such as business, communication, fine arts, the sciences, and the humanities. Recent graduates of the program have found employment as teachers throughout the nation. Others have gone to graduate school, or are pursuing careers with international corporations, the government, the military, or the foreign service.

Unique features of the program include:

- Competent and dedicated faculty—well-trained professionals who are native or near-native speakers of the language they teach, or have studied and lived extensively in countries where it is spoken. All are highly dedicated teachers who are on the cutting edge of foreign language pedagogy, and whose research interests are relevant to, and enhance their teaching.
- Low student-faculty ratio allows faculty to be accessible to students and to give them individual attention.
- Language center offers students the opportunity to practice their aural/oral skills, and to have access to computer-enhanced and Internet-based activities. An extensive video library is available to students, either as support to courses, or for personal enrichment.
- Overseas travel and study abroad programs for one summer, one semester, or an academic year are available for students of Spanish and French.
- Language clubs provide many special social and cultural events, including films, conversation and game nights, guest speakers, and field trips.
- National language honorary society, Alpha Mu Gamma, initiates outstanding language students each year.

**World Languages (B.A. – concentration in Spanish)
Outcomes**

1. Students will acquire and demonstrate listening, speaking, reading, and writing skills at the Intermediate-High level of the target language (Spanish) consistent with the National Standards for Foreign Language Education.
2. Students will acquire and demonstrate skills necessary to analyze and compare cultural products and practices of the target culture (French/Francophone, Hispanic with their own culture).
3. Students will be able to identify and analyze major literary, historical and cultural products of the target culture and situate those products within a broad historical framework.
4. Students will demonstrate the ability to use library and technological resources that allow them to access and analyze literary works, and cultural products and practices related to the target language.

Requirements

- B.A. IN WORLD LANGUAGES**42 credits
Required: Spanish Concentration
- SPANISH, B.A.**42 credits
Required: SPAN 251, 252 (or 250), 265, 281 or 282, 300 or 301 and 18 additional credits from courses numbered 253-499 (excluding SPAN 302 and courses taught in English). In addition to these Spanish credits - ENG 262 and 6 credits from among the following: SPAN 101, 103, 109, ANTH 245, 357, ANTH 380/ENG 380, ART 217, ENG 227, 228, 457, 458, 459, GEOG 358, 310, HIST 111, 112, 113, 254, 255, 303.
- SECONDARY EDUCATION, B.S.Ed.**
 Certification for grades K-12, Spanish (see under Secondary Education Spanish), page 61.
- FRENCH OR SPANISH, MINOR**21 credits
Required in either French or Spanish: Credits to be divided among nine required credits (FR/SPAN 152, 250, 251, and 252), nine credits of 200-level courses, and three credits of 300-level courses.
- FILM STUDIES, MINOR** 18 credits
 Offering students an opportunity to study film from various points of view ranging from the aesthetic approach to an investigation of film’s philosophical or sociological content. Gives students the opportunity to study film critically and to have a hands-on experience in film making.

Course Descriptions

COURAGEOUS. *confident.* CLARION.

Ponder the possibilities.

Anything is achievable with Clarion's comprehensive slate of academic programs. .

ACTG 201	Intro to Accounting Survey	3.00	Introduces accounting, the language of business. Emphasizes accounting terminology, concepts, and the interpretation and use of accounting information for decision-making. Designed for non-business freshman students only. May not be used to satisfy core or major requirements for degrees in business administration. Students who have passed ACTG 251 may not schedule this course. No prerequisite. Each semester.		
ACTG 251	Financial Actg	3.00	Examines the principles and procedures for collecting, recording, summarizing, and reporting financial information. Prerequisite: Sophomore standing only at Clarion Campus. Each semester. Fall, annually at Venango.		
ACTG 252	Managerial Actg	3.00	Analyzes aspects of accounting that aid managers. Includes budgeting, cost behavior and systems, alternate choice decisions, international accounting aspects, and cash flow. Prerequisites: Sophomore standing only at Clarion Campus, and ACTG 251. Each semester. Spring, annually at Venango.		
ACTG 253	Factory Actg	3.00	Presents fundamental accounting concepts and techniques applied in record keeping and accounting control of the production process. Prerequisite: ACTG 252. Spring, annually, Venango only.		
ACTG 254	Payroll Actg	3.00	Provides detailed coverage of payroll policy, records, wage calculation, deductions, and government reporting. Emphasizes tax form preparation. Prerequisite: ACTG 252. Fall, annually, Venango only.		
ACTG 255	Financial Statement Preparation & Analysis	3.00	Focuses on procedures for financial statement preparation and the use of accounting information as a basis for decision making by management, owners, creditors, and other users of financial statements. Prerequisite: ACTG 251. Spring, annually, Venango only.		
ACTG 256	Income Tax Proc/Forms	3.00	Explains which types of income are taxable and which expenses are deductible. Covers both filling out and filing individual, partnership, and corporate tax returns. Prerequisite: ACTG 251. Fall, annually, Venango only.		
ACTG 350	Inter Actg	3.00	Explores accounting theory and practice. Includes accounting for current assets, investments, plant and equipment, and intangibles. Emphasizes developing the student's technical and problem-solving ability. Prerequisite: ACTG 252. Each semester.		
ACTG 351	Actg Equities	3.00	Examines accounting theory and practice. Includes accounting for current and long-term liabilities, corporate equity, pension plans, long-term leases, income taxes, accounting changes, and cash flows. Emphasizes developing the student's technical and problem-solving ability. Prerequisite: ACTG 350 or consent of instructor. Each semester.		
ACTG 352	Cost Actg	3.00	Analyzes cost principles, procedures, systems, controls, and analysis. Considers standard cost systems with the two basic cost accounting systems. Stresses cost accounting as a tool for management decision-making based on management information systems. Includes flexible budgets, accounting for		
					by-products and joint products, transfer pricing, and environmental costs. Prerequisite: ACTG 252. Each semester.
ACTG 353	Federal Taxes	3.00	Examines federal income, estate, and gift taxation. Considers problems of compliance with the law by individuals, partnerships, corporations, estates, and trusts. Prerequisite: ACTG 252. Each semester.		
ACTG 354	Auditing	3.00	A study of the purposes, the ethical and legal environment, financial analysis, and selected auditing techniques and procedures. Emphasizes developing the student's technical writing ability. Prerequisite: ACTG 351. Each semester.		
ACTG 451	Actg Problems	3.00	A problem-oriented study of topics most often tested on the CPA exam. Includes inventory methods, long-term contracts, partnership, leases, consignments, installment sales, receivership, fiduciary accounting, and governmental accounting. Preparations for the practice portion of the CPA exam are emphasized. Prerequisite: ACTG 350. Spring Semester.		
ACTG 452	Adv Cost Actg	3.00	A study of advanced concepts of cost accounting to provide useful quantitative information for decision-making. Includes inventory valuation, cost allocations, joint-product costs, process costing, accounting systems, profit center costs, and segment performance measuring. Prerequisite: ACTG 352.		
ACTG 453	Prob Fed Tax Actg	3.00	Examines federal income tax concepts and compliance problems of partnerships, corporations, estates, and trusts. Briefly considers Social Security, estate, and gift taxation. Prerequisite: ACTG 353.		
ACTG 454	Comparative Actg Systems	3.00	Helps students develop a holistic approach to the concepts and practices for the examination and exploration of accounting systems. Discusses specialized accounting systems in detail, depending on the interest and desires of students. Prerequisites: ACTG 251, 252, 350, 351, 354, CIS 223, and 301.		
ACTG 455	Not For Profit Entities	3.00	A study of the principles and practices of budgeting and accounting for activities of entities that are operated for purposes other than making profits. Prerequisite: ACTG 351.		
ACTG 456	Advanced Actg	3.00	Considers modern development in accounting, including recent studies and pronouncements by accounting authorities such as the American Institute of Certified Public Accountants and the Securities and Exchange Commission. Analyzes the problems of accounting for consolidation and partnership equity. Emphasizes developing the student's technical and problem-solving abilities. Prerequisite: ACTG 351. On demand.		
ACTG 461	International Actg	3.00	Studies the influence of cultural values on the practice and theory of accounting and developing sensitivity to the differences and similarities of different accounting systems. Includes consolidation, translation of foreign currency statements, inflation, replacement cost accounting of global-oriented corporations and harmonization of accounting standards. Prerequisite: ACTG 252.		
ACTG 463	Tax Planning	3.00	Acquaints students with tax planning techniques that		

- can be used to accomplish an individual's financial goals. Enables students to suggest actions that fit the individual's financial priorities based on an understanding of financial position, cash flow and income, gift and estate tax matters. Prerequisite: ACTG 353.
- ACTG 490 Current Accounting Pronouncements 3.00**
A research study of current Financial Accounting Standards Board statements of standards, interpretations, concepts, exposure drafts, and discussion memorandums. The internship experience and related research topics will be presented, discussed, and integrated with the pronouncements. Prerequisite: COOP 420, Accounting Internship.
- ACTG 499 Special Topics in Actg 3.00**
Presents various current topics affecting accounting practice and theory. Covers different topics from year to year as subjects of importance are identified. Prerequisite: ACTG 351 or consent of instructor.
- AE 10 Prep for College Math 3.00**
Covers basic arithmetic and geometric principles necessary for the subsequent study of introductory algebra and other more advanced courses requiring a basic mathematics competency. Emphasizes decreasing mathematics anxiety, developing mathematics text-reading abilities, including the study of vocabulary unique to the mathematics discipline, developing estimation skills, interpreting data, mental mathematics, and critical thinking. Major learning modalities are written response, calculator use and experimentation, analysis activities, and problem-solving.
- AE 91 CU Trans: Exploration 2 0.50**
The goal of Explorations is to help students stay in college and develop permanent ties with Clarion University through curricular and co-curricular programming that: cements students' and families' commitment to Clarion University; forges positive and active relationships among students, and among students, faculty and staff; guides family members as they support their students during transition from home to college and from college to work; ensures that students are informed self advocates who accept personal responsibility for their education; and engages students in productive co-curricular and extra-curricular activities.
- AE 100 College Read Study Skills 3.00**
Develops reading, writing, research, and study skills needed at the college level. Intended for underclass students only. Emphasizes application of these skills to courses students are studying. No prerequisite. Each semester.
- AE 101 CU Trans: Exploration 1 0.50**
The goal of Explorations is to help students stay in college and develop permanent ties with Clarion University through curricular and co-curricular programming that: cements students' and families' commitment to Clarion University; forges positive and active relationships among students, and among students, faculty and staff; guides family members as they support their students during transition from home to college and from college to work; ensures that students are informed self advocates who accept personal responsibility for their education; and engages students in productive co-curricular and extra-curricular activities.
- AE 102 CU Trans: Exploration 2 0.50**
The goal of Explorations is to help students stay in college and develop permanent ties with Clarion University through curricular and co-curricular programming that: cements students' and families' commitment to Clarion University; forges positive and active relationships among students, and among students, faculty and staff; guides family members as they support their students during transition from home to college and from college to work; ensures that students are informed self advocates who accept personal responsibility for their education; and engages students in productive co-curricular and extra-curricular activities.
- AE 103 CU Trans: First Year Experience 1.00**
A co-curricular offering for first-year students. Intended to acquaint students with many aspects and resources of Clarion University. Students will explore and understand themselves interacting in a higher-education environment, identify and utilize campus resources and develop strategies to facilitate learning. The intent is to forge positive active relationships among students, faculty, and staff, help students be informed self-advocates, and engage in co-curricular and extra-curricular activities, which will enhance personal growth and education.
- AE 110 The Student in the University 3.00**
This course is designed to (1) enable freshman students to explore and understand themselves as developing adults interacting in a higher education environment; (2) identify and/or utilize campus and community resources that will enhance their academic program; (3) develop strategies to facilitate the learning process; and (4) apply those strategies in a practical manner in order to build upon a resource base for academic skill transference. Note: This course is designed for freshman students only and is a general elective under personal development and life skills. Each semester.
- AE 260 Career Exploration & Planning 3.00**
Focuses on the career planning process that involves: (a) career awareness--students learn to examine the world of work and the occupational alternatives available; (b) self study--students learn to examine their own personalities, interests, needs, achievements, abilities, and values when developing a personal career plan; and (c) career decision-making--students learn to practice the skills necessary to make prudent occupational choices and set realistic goals.
- AE 261 Student Services & Civic Engagement 1.00**
This is a class for students interested in enhancing their connection to both the university and greater community by promoting the values of service and civic involvement. Using a service-learning design, students will be developing their prevocational skills and personal values through volunteer activities in leadership positions in Recognized Student Organizations (R.S.O.'s) within the university and greater community. Prerequisite: Sophomore standing.
- AE 361 Professional Development: Leadership & Life Skills 0.50**
AE 361 Transitions Professional Development (Leadership/Life Skills) is a .5 credit co-curricular course targeted to juniors and seniors. Its primary goal is to ensure that Clarion students have the knowledge, skills, and experiences needed to be successful in experiential learning situations, the job search, the graduate/professional school admissions process, and the workplace. Prerequisite: JR or SR standing

AE 362	Professional Development: Job Search/ Graduate School Planning 0.50 AE 362 Transitions Professional Development (Job Search/Graduate School Planning) is a .5 credit co-curricular course targeted to juniors and seniors. Its primary goal is to ensure that Clarion students have the knowledge, skills, and experiences needed to be successful in experiential learning situations, the job search, the graduate/professional school admissions process, and the workplace. Prerequisite: Jr. or Sr. Standing	AH 299	Allied Health Clinical II 15.00 Within the Associate of Science in Allied Health degree program, AH 299 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.
AH 101	Medical Terminology 3.00 Teaches principles of medical word building that support understanding and use of the language of medicine and also enhance understanding of the English language. Includes study of medical term components, medical abbreviations, specialized terminology related to body systems and related pathology, diagnostic examinations, clinical and laboratory procedures, oncology, and pharmacology. Students will apply their knowledge of and skills in medical terminology to speak, read, and write the language of medicine and to understand health care information as a future helathcare provider, patient, and caregiver. Open to both health care majors and non health care majors. Fall, annually and in other academic terms as needed.	AH 300	Allied Health Clinical III 15.00 Within the Associate of Science in Allied Health degree program, AH 300 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.
AH 201	Introduction to Health Care 2.00 This course will familiarize students with health care organizations, the health care system, and the clinical environment in relationship to the student's role as a future health care practitioner. Topics will include the structure, organization, and function of hospital systems and staff; documentation and medical records; professional development and professionalism; the role and function of professional societies and membership; safety and emergency response; body mechanics; HIPAA; infection control; communication in the health care environment in relationship to continuum of care; ethical and legal responsibilities of health care practitioners; current trends in health care; and employment opportunities for health care professionals.	AH 301	Research Methods for Health Sciences 3.00 Develops in students a working knowledge of research methods necessary to create new health and medical sciences knowledge. Teaches students a systematic and principled way of locating and evaluating health and medical scientific publications and empirical evidence in support of effective clinical practice and professional decision making. Prerequisite: AH 201. Prerequisite or Co-requisite: ECON 221 or MATH 221. Offered fall and spring as needed.
AH 201	Introduction to Health Care 2.00 This course will familiarize students with health care organizations, the health care system, and the clinical environment in relationship to the student's role as a future health care practitioner. Topics will include the structure, organization, and function of hospital systems and staff; documentation and medical records; professional development and professionalism; the role and function of professional societies and membership; safety and emergency response; body mechanics; HIPAA; infection control; communication in the health care environment in relationship to continuum of care; ethical and legal responsibilities of health care practitioners; current trends in health care; and employment opportunities for health care professionals.	AH 310	Allied Health Clinical IV 15.00 Within the Associate of Science in Allied Health degree program, AH 310 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.
AH 290	Allied Health Clinical I 15.00 Within the Associate of Science in Allied Health degree program, AH 290 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.	AH 400	Allied Health Clinical VII 15.00 Within the Department of Allied Health, AH 400 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.
		AH 401	Allied Health Leadership Capstone 3.00 Exploration and execution of health care leadership and management concepts and health care information literacy practices in relation to health care clinical environments. Students will apply knowledge and skills acquired in their college and clinical experiences to reflect on "real world" health care leadrship situations and challenges. A review of health care information literacy practices will aid students in locating, evaluating, and using scholarly healthcare literature that will inform their functioning as entry-level health care leaders. Prerequisite(s): 1) In final year of a baccalaureate-level health care program in the Department of Allied Health and, 2) completion or near completion of an allied health clinical program.
		AH 410	Allied Health Clinical VIII 15.00 Within the Department of Allied Health, AH 410 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.

- AH 420 Allied Health Clinical IX 15.00**
Within the Department of Allied Health, AH 420 will facilitate transference of a block of 1 to 15 credits for completion of a formal, accredited clinical educational program in a health profession that is recognized by the American Medical Association. The clinical program of study must entail a minimum of 450 contact hours.
- ANTH 211 Humans and Culture 3.00**
Introduces students to the nature of humanity and the human condition by exploring contemporary and past societies. Applies the four-field approach, emphasizing human diversity, origins of humans and culture, language, and archaeology. Each semester.
- ANTH 213 Intro to Bioanthropology 3.00**
Surveys the human species in time, place, and culture, and investigates factors underlying human variation. Prerequisite: ANTH 211, or one semester in Biology. Alternate years.
- ANTH 214 Prin Human Ecology 3.00**
Examines the functional interrelationships of humankind and the biophysical environment. No prerequisite. Alternate years.
- ANTH 216 Women and Culture 3.00**
Introduces the study of the lives of women in cross-cultural perspective. Explores gender issues including sexual division of labor, inequality, changing position of women in families, and the role of women in development. Alternate years.
- ANTH 217 Intro to Archaeology 3.00**
Introduces students to theory and methods used in archaeological inquiry. Explores the history of archaeology, key researchers in the field, and important discoveries.
- ANTH 218 Buried Cities & Lost Civ 3.00**
Introduces students to archaeology and to what archaeologists do. Provides a long-term perspective on human history starting with the first archaeological sites over 2.5 million years old. Addresses some of the more popular theories about the prehistoric human past. Alternate years.
- ANTH 242 Intro to Amer Folklore 3.00**
Introduces the major genres of American folklore: legend, tale, folk belief, song and ballad, and material folk culture; and various folk groups in America: occupational, gender, ethnic, age, regional, and their traditions. Analyzes examples of American literature and American popular culture through an examination of their American folk elements. Provides students with fieldwork experiences and methods of analysis of oral, customary, and material traditions. No prerequisite. Fall, annually.
- ANTH 245 Peoples & Cult Of Latin Amer 3.00**
Introduces the rich variety of ethnic groups and cultures of contemporary Latin America, including Central and South America. Topics will include social structures, economic organization, gender roles, religion, political systems, ethnic identity, and globalization. Focus will be on indigenous peoples, with an emphasis on their role in national societies and the international economy.
- ANTH 250 Prehistoric North America 3.00**
Examines the development of North American Indian cultures from the beginning of human migration in the late Pleistocene to the coming of Europeans. Emphasizes human interrelationships with the various New World environments in time and space which led to the rise of prehistoric cultures, food production, trade, etc. No prerequisite. Every second year.
- ANTH 251 Historic Indians North Amer 3.00**
Surveys American Indians ethnographically. Explores cultural processes, historic events, and ecological adjustments to understand the diversity of Indian culture at the time of their discovery by Europeans. Considers American Indian acculturation and contemporary Indian issues. No prerequisite. Every second year.
- ANTH 253 Arch East North America 3.00**
Provides detailed survey of prehistoric developments in North America east of the Mississippi from Late Pleistocene to the Colonial Period. Familiarizes students with the prehistory of the Amerind populations in the area, including the gradual emergence of the Woodland pattern. On demand.
- ANTH 254 Language and Culture 3.00**
An introduction to linguistic anthropology. Focuses on the main areas of intersection between language and culture. Topics may include: animal communication systems; primate language studies, the evolution of language; linguistic diversity; linguistic relativity (a.k.a. the Sapir/Whorf hypothesis); language and identity; language and gender; and the ethnography of speaking. From an examination of such topics students will learn to see how people use language to create and maintain their cultures, and to recognize the ways in which language itself influences human thought and behavior.
- ANTH 262 Intro to Eng Lang 3.00**
Deals generally with the nature of language and specifically with the grammatical structures of modern English, its regional and social varieties, and certain highlights of its historical development. Each semester.
- ANTH 300 Lab Meth In Archaeology 3.00**
Provides a hands-on overview of the major analytical methods in archaeology and a basic understanding of both the practical application of standard methodologies, and the questions archaeologists address. Prerequisite: ANTH 211. Alternate years.
- ANTH 315 Ending Poverty 3.00**
Introduces the field of development anthropology, including its applied aspects. Explores the history of development theory; models of cultural change; contemporary issues of poverty and globalization; models of program design. Provides students with a practical background in project design, assessment, and management. Prerequisite: Sophomore standing. Alternate years
- ANTH 352 Topics In Folklore 3.00**
Provides intense study of one or more aspects of folklore study. Focuses on one or more folk groups, a particular folk genre, folklore and popular culture, or folklore and literature. Offers students a fieldwork experience-collection, transcription, classification-and methods of analysis of oral traditions. No prerequisite. Spring, annually.
- ANTH 357 Aztec, Inca, & Their Ancestors 3.00**
Surveys Indian cultures from the beginnings in the Late Pleistocene to the coming of the Conquistadors. Emphasizes cultural developments, the rise of states, native agriculture, and the development of arts and crafts, including architecture and ceremonial art. No prerequisite. Every second year.
- ANTH 358 World Prehistory 3.00**
This course covers the cultural development of humankind from the Lower Paleolithic to the beginnings of urbanism in the Bronze and Iron Age. The course examines human development in Europe,

- Africa, Asia, and the New World; draws comparisons between cultures; studies the diffusion of cultural traits; and summarizes recent developments in research. No prerequisite. Every second year.
- ANTH 361 Witchcraft, Magic, Rel 3.00**
Provides cross cultural comparative analysis of human environment with the supernatural. Explores the role of religion and theories dealing with the nature and function of various aspects of supernaturalism from an anthropological perspective. No prerequisite. Every second year.
- ANTH 362 History and Methods of Anthropology 3.00**
Provides a general overview of the history of anthropology as an academic discipline, combined with a survey of anthropological theory and research methods. Alternative years. Prerequisite: ANTH 211 plus at least 3 additional credits in anthropology, or permission of instructor.
- ANTH 364 American Voices 3.00**
Provides an introduction to American dialectology and sociolinguistics. Emphasizes the great diversity and vitality of American English. Covers the causes and mechanisms of linguistic changes, the role of language differences in society, and the relevance of dialectology to language teaching. Pays special attention to the regional speech patterns of Pennsylvania. No prerequisite. Spring, odd-numbered years.
- ANTH 366 Race & Ethnic Relations 3.00**
Background of racial and ethnic identity. Examines contemporary aspects of inter-ethnic and inter-racial group relations. Considers proposals for alleviating and resolving problems and their implications. Prerequisite: SOC 211 or permission of the instructor. Once annually.
- ANTH 374 Research Seminar In Anth 3.00**
Investigates how to research, write, and present a substantive anthropological project. Each student will work on an individualized project by developing a research design, performing background research, collecting and analyzing data, and writing a formal paper that will be presented in class. Prerequisite: Junior or Senior standing. Spring, alternate years
- ANTH 375 Archaeological Field Sch 9.00**
Provides undergraduates with a practical and technical background in modern archaeological research. Includes an introduction to cultural contexts. Covers all phases of field investigation, including site reconnaissance, site survey and testing, site mapping, controlled excavation, specimen recovery techniques, and information regarding procedures. Includes laboratory methods such as catalog and preservation procedures.
- ANTH 376 Adv Arch Field School 9.00**
Provides students with additional training in archaeological field methods. Students obtain supervisory skills and experience in site interpretation and report writing. Students will also learn applied archaeological (Cultural Resources Management) field techniques. ANTH 376 is offered concurrently with ANTH 375. Prerequisite: ANTH 375.
- ANTH 380 Language and Culture 3.00**
An introduction to linguistic anthropology. Focuses on the main areas of intersection between language and culture. Topics may include: animal communication systems; primate language studies; the evolution of language; linguistic diversity; linguistic relativity (a.k.a. the Sapir/Whorf Hypothesis); language endangerment and revival; nonverbal communication; linguistic field methods; ethnopoetics; sociolinguistics; language and identity; language and gender; and the ethnography of speaking. From an examination of such topics, students will learn to see how people use language to create and maintain their cultures, and to recognize the ways in which language itself influences human thought and behavior.
- ANTH 400 Individual Research 9.00**
Allows students to develop their approach to a specific problem, by conducting individual research defined in conference with the instructor. Regular sessions with the faculty member in charge evaluate the progress of the work and chart its direction. Students expected to acquire research techniques in dealing with their topics. All branches of anthropology may be used to select a topic. Credit and grades will be given only if the project (term paper, survey, investigation, etc.) has been completed to the satisfaction of the project advisor and the departmental chair. Prerequisite: ANTH 211. On demand.
- ANTH 425 Field School Cultural Anth 9.00**
Provides students with field experience in cultural anthropology. Emphasizes practical, first-hand experience of ethnographic fieldwork. Focus is on research design, qualitative methodology, and communication results of research. Prerequisite: At least 6 credits in anthropology, or permission of instructor.
- ANTH 426 Spec Topics Biol Anth & Arch 3.00**
Focuses on a single topic of interest in Biological Anthropology and Archaeology. Course content varies. Topic will be announced in advance. Prerequisite: ANTH 211 or permission of instructor.
- ANTH 427 Special Topics In Cultural Anthropology 3.00**
Focuses on a single topic of interest in cultural and/or linguistic anthropology. Course content varies. Topic will be announced in advance. Prerequisite: ANTH 211 or permission of instructor.
- ANTH 457 Intro to Linguistics 3.00**
Presents key concepts and basic analytical procedures common to many contemporary linguistics theories. Covers phonetics and phonology, morphology, and syntax in detail. Analyzes the integration of these sub-systems in the overall design of a generative grammar. Prerequisite: ANTH/ENG 262. Fall, annually.
- APT 299 Applied Technology Field Training 18.00**
Performance-oriented field training in technical fields using industrial machines and computers. Includes math and blueprint skills, sufficient to operate various complex machine, tooling or computer equipment. Analyzes and troubleshoots the problems of production. Emphasis is on developing student competency in equipment operation and troubleshooting. Credit only for students enrolled in the AAS-IT degree.
- APT 301 Issues in Applied Technology 3.00**
This capstone course to the Associate of Applied Science in Industrial Technology degree will prepare students for the career opportunities that exist upon graduation. Students will apply extensive technical writing and oral presentations to practical applications that exist in the workplace. Research in the field of industrial technology will take place, along with research into career development and job

procurement. Problem solving activities related to industrial situations will be presented and analyzed, as well as current topics in industrial technology. Offered Each semester.

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| ART 121 | Foundation Drawing
Develops the drawing skills of students. Emphasizes observation, analysis, basic pictorial composition, and spatial organization. Students draw primarily from direct observation, exploring a variety of drawing media, processes, and attitudes. Required of all art majors. Each semester. | 3.00 | ART 230 | Intro to Ceramics
This course provides initial experiences in traditional hand building and wheel forming techniques and an introduction to and overview of ceramic technology and processes against a background of contemporary and historical developments and applications. | 3.00 |
| ART 124 | Digital Art Foundations
This course will introduce students to basic computer software and hardware related to the creation, documentation, and presentation of art. The course looks at digital media as an investigative and creative tool in art and design, and as a method of communication. Topics and programs covered include, but are not limited to, digital photography, scanning, Photoshop, and PowerPoint. Fall and Spring semesters annually | 3.00 | ART 240 | Intro to Weaving & Fabric Design
This course provides an introduction to the history, theory, and practice of textile design. Through group and individual projects, demonstrations, lectures, and readings, students will learn several traditional textile construction and design techniques, and they will gain an understanding of textile art history. Each semester. | 3.00 |
| ART 125 | Color And Design
A study of two-dimensional design concepts and their applications. Emphasizes the principles and elements of design. Required of all art majors. Fall Semester and on demand. | 3.00 | ART 246 | Illustration II
Utilizes skills and knowledge acquired from Level I to produce portfolio quality pieces. Emphasizes the creative process and advanced software knowledge. Offered concurrently with ART 145. Prerequisite: ART 145. Fall Semester, annually, or on demand. | 3.00 |
| ART 126 | 3-D Design
Explores three-dimensional design forms to gain a deeper understanding of the elements and principles of design. Required of all art majors. Spring Semester. | 3.00 | ART 250 | Introduction to Graphic Design
Introduces graphic design, typography, and computer graphic modes and functions. Focuses on state-of-the-art industry software and creativity. Each semester. | 3.00 |
| ART 190 | Teach Art Elem Grades
Analyzes the place of art in the elementary school curriculum, and provides the skills and knowledge needed to teach art. Develops classroom planning, presentation, motivation methods, and lesson plans in workshops or actual teaching situations. Each semester. | 3.00 | ART 256 | Graphic Des & Comp II
Continues exploring layout, typography, and computer graphics. Students build on the skills and knowledge acquired from Level I to produce portfolio quality pieces. Emphasizes advanced computer software techniques. Offered concurrently with ART 155. Prerequisite: ART 155. Spring Semester, annually, or on demand. | 3.00 |
| ART 218 | Intro To Hist Of Photography
Surveys the history of photography from 1827 to the present. Developments in photographic processes, styles and movements in photography, and the work of individual photographers will be covered. This class is aimed at art students and also at students from a variety of disciplines who are interested in art, history, or modes of visual representation. | 3.00 | ART 260 | Intro to Painting
Introduction to oil painting. Students explore basic materials and techniques of painting. Stresses fundamentals of pictorial organization and visual expression; includes introduction to Contemporary and Art Historical painting. Prerequisite: Art 121 or ART 110. Each semester | 3.00 |
| ART 222 | Drawing Concepts
Continues exploration of a variety of drawing media and techniques in order to solve more complex pictorial and spatial problems. Encourages development of individualized responses. Offered concurrently with ART 121. Prerequisites: ART 121, 122. Each semester. | 3.00 | ART 265 | Printed & Dyed Fabric II | 3.00 |
| ART 223 | Figure Drawing II
Continues exploring the figure and its expressive potential. In-depth analysis of anatomy, including musculature and surface features. Expanded media and problem solving. Offered concurrently with ART 122. Prerequisites: ART 121, 122. Spring Semester. | 3.00 | ART 270 | Introduction to Printmaking
This course provides an introduction to the history, theory, and practice of printmaking. Through group and individual projects, demonstrations, lectures, and readings, students will learn several traditional printmaking techniques, and they will gain an understanding of printmaking history as well as critical theory that surrounds the medium. | 3.00 |
| ART 224 | Figure Drawing I
Develops students' knowledge of human anatomy. Emphasizes an intuitive approach to recording the figure. Students work directly from the skeleton and models, analyzing the figure, and exploring a variety of media and pictorial problems. Required of all art majors. Spring Semester. | 3.00 | ART 280 | Introduction to Sculpture
This course introduces students to a variety of sculptural materials, methods, and concepts as a viable contemporary practice. This course concentrates on the basics of sculptural form building, with an emphasis on spatial awareness and problem solving. | 3.00 |
| ART 228 | Intro to Jewelry
This course provides initial experiences in and an | 3.00 | ART 282 | Jewelry II
Continues study in the design and construction of jewelry pieces. Students continue advancing their skills and knowledge of metals, stones, woods, and other materials. Prerequisite: ART 181. Annually. | 3.00 |

ART 300	Special Topics	3.00	Topics of interest in various areas of art. The instructor selects the format. Offered when faculty available.	
ART 330	Intermediate Ceramics	3.00	This course facilitates the refinement of hand building techniques and throwing skills in conjunction with formal and conceptual considerations. Clay body formulation and glaze calculation, development and testing are introduced while experience is gained in firing various kiln types. Emphasis is placed on continuing aesthetic and technical development and the ability to critically evaluate an individualized approach to form function and content. Prerequisite: ART 230. Fall and Spring annually	
ART 340	Interm Weaving & Fabric Des	3.00	This course offers students the opportunity to discover the possibilities of textile media as a viable contemporary practice. Print, dye, woven, and off-loom techniques will be taught. Through group and individual projects, demonstrations, lectures, and readings, students will be asked to consider the varied potential of textile art for visual communications. Prerequisite: ART 125, ART 240. Fall or Spring annually	
ART 347	Illustration III	3.00	Incorporates all previous knowledge acquired in Levels I and II. Encourages students to develop their personal aesthetic and to produce portfolio quality pieces. Offered concurrently with ART 145. Prerequisite: ART 246. Fall Semester, annually, or on demand.	
ART 350	Intrm Graphic Des I - Typgr	3.00	Continues exploring layout, typography, and computer graphics. Students build on the skills and knowledge acquired from Introduction to Graphic Design to produce a professional portfolio. Emphasizes advanced computer software techniques and typography. Prerequisite: ART 250 Introduction to Graphic Design. Fall semester annually	
ART 351	Intermediate Graphic Design II	3.00	This course incorporates all previous knowledge acquired in Introduction to Graphic Design and Graphic Design I - Typography. Coursework is based on student-initiated projects, independent research, and professional development. Students are expected to be self-motivated and capable of working in an interdisciplinary and mature fashion. Prerequisite: ART 350 Graphic Design I - Typography. Spring semester annually	
ART 355	Illustration	3.00	Entry-level studio course introduces students to a variety of drawing and painting media. Industry standard computer software is also taught. Encourages utilization of the principles of design, creative problem-solving, and the integration of illustrations into media. Prerequisite: Sophomore standing. Spring semester annually	
ART 357	Graphic Des & Comp III	3.00	Incorporates all previous knowledge acquired in Levels I and II, including proficiency in advanced software. Encourages students to develop their personal direction and to produce portfolio quality pieces. Offered concurrently with ART 155. Prerequisite: ART 256. Spring Semester or on demand.	
ART 360	Intermediate Painting	3.00	Encourages integration of conceptual concerns and thematic focus in painting. Experimentation	with subject and materials; working toward developing a personal aesthetic direction in relation to Contemporary art. Regular critiques and assignments. Prerequisite: ART 260. Each semester
				ART 370
				Intermediate Printmaking
				3.00
				This course offers students the opportunity to discover the possibilities of print media as a viable contemporary practice. Students will explore ways that photographic, mechanical, and electronic tools have influenced both artistic production and the dissemination of art. Through group and individual projects, demonstrations, lectures, and readings, students will be asked to consider the varied potential of the two-dimensional multiple for visual communication. Screenprinting, photo-litho, photo-etching, and transfer/copier processes are introduced. Prerequisite: ART 124, ART 270. Spring semester annually
				ART 380
				Intermediate Sculpture
				3.00
				This course introduces students to a variety of sculptural materials, methods, and concepts as a viable contemporary practice. Coursework and projects produced are self-governed with a strong focus on artistic value, conceptual clarity, and cultural and art historical contexts. Through group and individual projects, demonstrations, lectures, and readings, students will be asked to consider the varied potentials of sculptural form. Prerequisite: ART 126, ART 280. Fall or Spring semester annually
				ART 383
				Jewelry III
				3.00
				Continues study of the design and creation of jewelry and metalwork, emphasizing development of an individual aesthetic through the use of multiple techniques and processes. Prerequisite: ART 282. Annually.
				ART 417
				Latin American Art
				3.00
				A study of selected art traditions in the Spanish and Portuguese and French-speaking Western Hemisphere, including ancient, medieval and contemporary examples. Contributions of native, African, European, and other cultures will be considered. This is a writing intensive course with frequent essays, hands-on art making processes, a research project, and a required museum field trip. The course may be offered on location in Central or South American or the Caribbean, and will become part of the Latin American and Caribbean studies minor program. Visits and apprenticeships to artist' and artisans' workshops will be arranged when possible. Students who received credit for ART 217 may not subsequently enroll in ART 417/517.
				ART 426
				Senior Drawing
				3.00
				Capstone course allows students concentrating in drawing to develop their work for the B.F.A. exhibit. Offered concurrently with other drawing courses. Prerequisites: ART 424 and 425. Each semester.
				ART 431
				Advanced Ceramics
				3.00
				This course facilitates the development self-directed research and explorations, focusing on the creation and refinement of a cohesive body of work reflecting an individualized aesthetic based on the technical competency to actualize, the critical insight to evaluate, the verbal and writing skills to articulate, and the facility to professionally exhibit and document. Prerequisite: 6 Cr. Hr. of ART 330 - Intermediate Ceramics. Fall and Spring semester annually

- ART 441 Adv Weaving & Fabric Design 3.00**
This course offers students the opportunity to further explore the possibilities of constructed and printed/dyed textile media as a viable contemporary practice. Coursework is based on student-initiated projects, independent research, and professional development. Students are expected to be self-motivated and capable of working in an interdisciplinary and mature fashion. Prerequisite: ART 340. Fall or Spring semester annually
- ART 448 Illustration IV 3.00**
Encourages students to develop their personal aesthetic and produce portfolio quality pieces. Intermediate-level course emphasizes business aspects of illustration. Offered concurrently with ART 145. Prerequisite: ART 347. Fall Semester, annually, or on demand.
- ART 449 Illustration V 3.00**
Students develop a portfolio geared toward their particular skills and interests. Students entering this advanced-level course should have a solid creative and technical background in illustration. Students can seek their own clients at this time so they have printed pieces in their professional portfolios. Offered concurrently with ART 145. Prerequisite: ART 448. Fall Semester, annually, or on demand.
- ART 450 Illustration VI 3.00**
Students develop a portfolio geared toward their particular skills and interests. Students entering this advanced-level course should have a solid creative and technical background in illustration. Students can seek their own clients at this time so they have printed pieces in their professional portfolios. Offered concurrently with ART 145. Prerequisite: ART 449. Fall Semester, annually, or on demand.
- ART 451 Advanced Graphic Design 3.00**
This course incorporates all previous knowledge acquired in Introduction to Graphic Design and Graphic Design I - Typography and Graphic Design II - Photography. Coursework is based on student-initiated projects, independent research, and professional development. Students are expected to be self-motivated and capable of working in an interdisciplinary and mature fashion. The goal is a professional digital and hard-copy portfolio. Prerequisite: ART 351 Graphic Design II - Photography. Fall and Spring semester annually
- ART 452 Advanced Illustration 3.00**
Advanced studio course using a variety of drawing and painting media and industry standard computer software. Encourages use of the principles of design, creative problem-solving, and the integration of illustrations into media to create a professional portfolio. Prerequisite: ART 355 - Illustration. Spring semester annually
- ART 458 Graphic Des & Comp IV 3.00**
Encourages students to develop personal direction and produce portfolio quality pieces. Intermediate-level course explores software. Offered concurrently with ART 155. Prerequisite: ART 357. Spring Semester, annually, or on demand.
- ART 459 Graphic Des & Comp V 3.00**
Students develop a portfolio geared toward their particular skills and interests. Students can seek their own clients at this time so they have printed pieces in their professional portfolios. Advanced-level course emphasizes advanced software competency. Students should have a solid creative and technical background in computer graphics and graphic design. Offered concurrently with ART 155. Prerequisite: ART 458. Spring Semester, annually, or on demand.
- ART 460 Graphic Des & Comp VI 3.00**
Professional portfolios are reviewed at the beginning of the course, and weak projects are replaced with higher quality pieces. Stresses business skills, especially promotional pieces. Students entering this advanced-level course should have a solid creative and technical background in computer graphics and graphic design. Offered concurrently with ART 155. Prerequisite: ART 459. Spring Semester, annually, or on demand.
- ART 461 Advanced Painting 3.00**
Integrating conceptual concerns and thematic focus in painting and working toward developing a personal aesthetic direction in relation to Contemporary art in preparation for BFA Exhibition. Regular critiques and assignments. Prerequisite: ART 360. Each semester
- ART 464 Weaving & Fiber Scu IV 3.00**
Advanced studio production and study of textile construction history and techniques; continued development of portfolio through regular critiques. Prerequisite: ART 363. Fall, annually, and on demand.
- ART 465 Weaving & Fiber Scu V 3.00**
Preparation for B.F.A. exhibition and continued development of portfolio. Prerequisite: ART 464. Fall, annually, and on demand.
- ART 466 Weaving & Fiber Scu VI 3.00**
Preparation for B.F.A. exhibition and continued development of portfolio. Prerequisite: ART 465. Fall, annually, and on demand.
- ART 468 Fabric Sur Des IV 3.00**
Advanced studio production and study of surface design history and techniques; continued development of portfolio through regular critiques. Prerequisite: ART 367. Spring, annually, and on demand.
- ART 469 Fabric Sur Des V 3.00**
Preparation for B.F.A. exhibition and continued development of portfolio. Prerequisite: ART 468. Spring, annually, and on demand.
- ART 470 Fabric Sur Des VI 3.00**
Preparation for B.F.A. exhibition and continued development of portfolio. Prerequisite: ART 469. Spring, annually, and on demand.
- ART 471 Advanced Printmaking 3.00**
This course offers students the opportunity to further explore the possibilities of print media as a viable contemporary practice. Coursework is based on student-initiated projects, independent research, and professional development. Students are expected to be self-motivated and capable of working in an interdisciplinary and mature fashion. Prerequisite: Permission of Instructor. On demand.
- ART 474 Printmaking IV 3.00**
Emphasizes development of individualized approaches to printmaking relevant to the student's personal aesthetic and conceptual interests. Students work with intaglio and silkscreen each fall semester, and lithography and relief each spring semester. Evidence of refined technical skills is expected. Prerequisite: ART 373. Each semester.
- ART 475 Printmaking V 3.00**
Continuation of Printmaking IV. Emphasizes development of a cohesive portfolio. Prerequisite: ART 474. Each semester.

ART 476	Printmaking VI Continuation of Printmaking V. Focuses on preparation of the B.F.A. exhibition. Prerequisite: ART 475. Each semester.	3.00	ARTH 412	Changing Times: Art of the 60's Surveys the art of the sixties, its historical and cultural context. Prerequisite: Sophomore standing. Spring semester every two years	3.00
ART 481	Advanced Sculpture This course offers students the opportunity to expand upon a variety of sculptural materials, methods, and concepts as a viable contemporary practice. Coursework and projects produced are self-governed, and should focus on artistic value, conceptual clarity, and cultural and art historical contexts. Prerequisite: Permission of Instructor. Fall or Spring semester annually	3.00	ARTH 414	Topics In Contemp Art This course introduces contemporary art and theory. It covers art and artists from the 1960s to the present. This class deals with conceptual issues facing today's artists and introduces the main currents in contemporary critical theory. It is aimed at students who: 1) have a strong interest in contemporary art; 2) are interested in recent critical theory and its applications in visual art; 3) are artists or other students in the humanities planning to attend graduate school.	3.00
ART 491	Senior Seminar This course involves preparation, research, proposal development, and studio exploration for the senior B.F.A. exhibition requirement or B.A. capstone project. Students will have the opportunity to present their research and artwork for discussion and critique in a group environment. Focus will be placed on the preparation of a comprehensive portfolio, and forming a statement that incorporates the understanding one's work in relation to current works by mature artists. Prerequisite: The student must co-register with any 400-level studio class and Permission of Instructor. Fall semester annually	3.00	AT 299	Admin Tech Field Training AT 299 is performance oriented field training using software applications, productivity software, specialized office disciplines and procedures. The course includes continuous improvement and process reengineering skills, sufficient to manage a small office, or certain specialized departments. Analyzes and troubleshoots the problems of daily operations. Emphasis is on developing student competency in operational troubleshooting and software applications. Credit only for students enrolled in the AAS-AT degree.	18.00
ARTH 110	Visual Arts Introduces art appreciation. Deals with the form and content of art as well as the processes and products of art. Enriches the student's awareness and understanding of visual art forms. Each semester.	3.00	ATE 100	Practicum Athletic Training I	1.00
ARTH 111	Survey Of World Art Surveys art and architecture from around the world in its cultural context. Spring semester annually	3.00	ATE 110	Practicum Athletic Training II	1.00
ARTH 215	African Traditions in Art Introduces traditional sculpture, masks, crafts, and other arts of selected Subsaharan African groups, and African American artists. Develops students' understanding of the meaning and cultural context of the art through hands-on experience in related art processes and a required museum trip. On demand.	3.00	ATE 204	Athletic Trng Clinical Ed I	2.00
ARTH 216	Women in Art	3.00	ATE 225	Evaluation Techniques I	4.00
ARTH 217	Intro to Latin American Art	3.00	ATE 265	Evaluative Tech II	4.00
ARTH 300	Special Topics in Art Hist Topics of interest in various areas of art history. The instructor selects the format. Prerequisite: Sophomore standing. Offered on demand	3.00	ATE 290	Therapeutic Mod Lab	2.00
ARTH 312	Italian Renaissance Art	3.00	ATE 300	Adv Athletic Training Proc	3.00
ARTH 313	19th Century Art	3.00	ATE 305	Athletic Trng Clinical Ed II	2.00
ARTH 314	20th Century Art	3.00	ATE 315	General Medical Assessment	3.00
ARTH 315	Oriental Art	3.00	ATE 330	Therapeutic Exercise	4.00
ARTH 317	Art/Arch of Ancient Greece	3.00	ATE 400	Orthopedic Eval In Sports Med	1.00
ARTH 411	Modernism: Art 1850 - 1950 Surveys art and architecture of Europe and the United States between 1850 and 1950, its historical and cultural context, and its connection to concepts of modernity. Prerequisite: Sophomore standing. Fall semester, every two years	3.00	ATE 405	Athletic Trng Clinical Ed III	2.00
			ATE 425	Adm Strategies In Athletic Trn	2.00
			ATE 440	Pharmacology	2.00
			ATE 460	Sports Medicine Research	3.00
			ATSW 102	Credit for Athletic Participation The student athlete must complete the full season of athletic participation in good standing with the student's varsity athletic program. Eligibility to register for this credit is not permitted until a student's second season of team participation.	1.00
			ATSW 150	Introduction to Athletic Training Students learn about common injuries and illnesses associated with athletic populations, including	4.00

- introduction, rehabilitation, and treatment approaches for athletic injuries. Also addresses prevention and implications of athletic injuries. Every spring.
- ATSW 160 Introduction to Nutrition and Fitness 3.00**
This course will introduce students to the Nutrition and Fitness major. Students will gain a better understanding of the professional disciplines, career opportunities, and college curriculum within the nutrition and fitness field. Students will begin to develop personal and career goals.
- ATSW 286 Cardiovascular and Resistance Training Techniques 3.00**
Students will explore the various methods of cardiovascular and resistance training. Appropriate training progression and safety will be emphasized. Topics include training for muscular strength, muscular endurance, and power. Students will learn how to train both the aerobic and anaerobic athlete.
- ATSW 300 Emergency Med Tech 4.00**
Students will be prepared to become certified as Emergency Medical Technicians. Emphasis is placed upon the care and treatment of the ill or injured in a variety of emergency situations. Prerequisite: 16 years of age.
- ATSW 320 Health Promotion 3.00**
Students will be introduced to the strategies used and marketing skills necessary to promote healthy living in various settings.
- ATSW 333 Fitness for Wellness 3.00**
Provides students with knowledge, skills, and strategies in stress management and health-related fitness. Stresses skills in psychophysiological regulation, exercise, and nutrition design. Emphasizes adherence issues of recognition, identification, and remediation. Pre-requisite: successful completion of HPE 111 Health Education. Offered: annually, Fall.
- ATSW 334 Food, Fitness Wt Mgmt 3.00**
Provides students with knowledge, skills, and strategies in diet management, both qualitatively and quantitatively. Emphasizes skills in personal dietary design and assessment. Also covers dietary needs and problems of special populations. Pre-requisite: successful completion of HPE 111 Health Education. stress management and health-related fitness. Stresses skills in psychophysiological regulation, exercise, and nutrition design
- ATSW 336 Sport Nutrition 3.00**
This course discusses nutritional sources for athletes, nutritional aspects of optimal performance, factors that may affect nutrition strategies for specific energy systems, and the development of nutrition plans for specific sports.
- ATSW 340 Nutrition Education 3.00**
An overview of nutrition education that explores the settings in which nutrition education is carried out, introduces nutrition students to learning theory, and reviews techniques and resources for teaching nutrition. Students learn to assess the needs of different learner groups and select and evaluate appropriate nutrition education materials. Prerequisite: CHEM 205.
- ATSW 350 Thy & Technique Of Coaching 2.00**
Examines theories and techniques of coaching sports. Covers rules and regulations, fundamentals, organizational principles, specific conditioning programs scouting, technical tactics, and toher topics.
- ATSW 351 T&t Coach Basketball 2.00**
Examines theories and techniques of coaching specific sports. Covers rules and regulations, fundamentals, organizational principles, specific conditioning programs, scouting, technical tactics and other topics. On demand.
- ATSW 352 T&t of Baseball/Softball 2.00**
Examines theories and techniques of coaching specific sports. Covers rules and regulations, fundamentals, organizational principles, specific conditioning programs, scouting, technical tactics and other topics. Fall, even-numbered years.
- ATSW 354 T&t of Football 2.00**
Examines theories and techniques of coaching specific sports. Covers rules and regulations, fundamentals, organizational principles, specific conditioning programs, scouting, technical tactics and other topics. Fall, even-numbered years.
- ATSW 365 Sport Leadership 3.00**
This course is designed to provide an examination of effective leadership skills from multiple angles and perspectives. Students will examine general concepts in leadership by reviewing theory, principles, traits, and skills required of a leader in the field of sport management.
- ATSW 367 Ethics in Sport 3.00**
This course is designed to examine major ethical issues in sport. The course will explore the ethical presuppositions of competitive athletics and make connections to ethical theory and concrete moral dilemmas that arise in the sport milieu. The course will cover current ethical considerations in modern sports, including the nature of fair play, standards of excellence, essence of sportsmanship, sexual equality, drugs, violence, and exploitation. Offered fall annually.
- ATSW 370 Gender In Sports 3.00**
Provides students with a comprehensive, multidisciplinary analysis of the problems, patterns, and processes associated with the involvement of women in sports.
- ATSW 380 Found of Sports in Amer Society 3.00**
Covers the role of sports in American society. Includes examination of the fundamental changes in the organization, rules, management, finances, and ethos of sports. Also examines the social, cultural, economical, philosophical, and anthropological foundations that have shaped American sport. Every other semester.
- ATSW 386 Principles of Exercise Training 3.00**
Physiological basis of long-term exercise training with special consideration of the body's morphologic and physiologic adaptation to specific forms of training. Various training and conditioning methods are examined.
- ATSW 400 Special Topics 3.00**
Formal course offered each academic year to explore, in depth, a comparatively narrow subject that may be topical or of special interest.
- ATSW 402 Nutrition and Fitness Seminar 2 2.00**
Students will learn how to prepare for interviews and write resumes. The various opportunities within the profession and related fields will be reviewed. Additional requirements for jobs or graduate school applications will be discussed.
- ATSW 406 Ath Inj: Prev, Recog Eva 4.00**
Presents the latest information on prevention, recognition, and evaluation of athletic injuries. Students learn to coordinate appropriate emergency

care as well as establish a professional working relationship with the qualified medical personnel who assist an injured athlete's recovery. Students earn an American Red Cross AED/CPR certification upon successful completion of the course.

- ATSW 407 Phys Found of Coaching 3.00**
Study of the basic scientific principles of physiology and how they can be applied to conditioning programs for the athlete. Covers all phases of physical training, along with evaluation of modern training devices. Spring, annually.
- ATSW 408 Principles and Problems of Athletic Coaching 3.00**
A study of modern techniques and practices used in the organizational procedure of athletic programs. Covers major problem areas such as practice and game organization, purchase and care of equipment, budget and finances, public relations, legal liability, drug abuse, and sports psychology. Analyzes modern trends and issues in athletics as well as various philosophical views of athletics as a part of the educational curriculum. Fall, annually.
- ATSW 409 Kines Found Coach 3.00**
Helps coaches increase their understanding of basic scientific information concerning athletic movement by utilizing the conceptual approach. Examines three main areas of study: applied anatomy, the production of motion, and application. Applies scientific principles to athletic skills to aid in the coaching and teaching of skills. Spring, annually.
- ATSW 421 Nutrition II 3.00**
A study of vitamin and mineral requirements; the utilization of nutrients in the body; and the application of nutritional principles. Prerequisite: CHEM 205.
- ATSW 425 Nutrition Assessment and Counseling 3.00**
Students will learn the current methods used to perform nutrition screenings and assessments. Counseling techniques, when and how to refer clientele to a specialist and other components of medical nutrition therapy will also be emphasized. Prerequisite: CHEM 153/163; Corequisite: CHEM 205.
- ATSW 426 Life Cycle and Community Nutrition and Fitness 3.00**
Special problems in nutrition, including needs during the different stages of life, current research, international nutrition, public health aspects, laws, dissemination of information, and nutrition quackery. Also, special issues related to fitness, including needs during the different stages of life. Current research will be discussed.
- ATSW 427 Medical Nutrition Therapy 3.00**
This course will introduce students to the nutrition and dietary principles for pathological conditions. Prerequisite: CHEM 205 and ATSW 425.
- ATSW 429 Behavior and Education Strategies for Nutrition and Fitness 3.00**
This course will cover the socioeconomic, cultural, and psychological factors on food and fitness choices. Issues such as timing and types of questions to ask, how to provide effective feedback, and how to facilitate robust action planning will be discussed. Prerequisite: ATSW 409 and CHEM 205.
- ATSW 430 Sports Management 3.00**
Provides students with an understanding of how the principles and concepts of management theory can be applied to sports administration. Prerequisite: MGMT 320. Every other semester.
- ATSW 431 Fitness Assessment and Prescription 3.00**
Application of scientific principles of exercise physiology to the measurement and evaluation of healthy individuals. Techniques of exercise testing commonly used in corporate and adult fitness settings. Training methods for improvement in exercise capacity and good health. Designing exercise programs for individuals and groups. Prerequisite: ATSW 386, ATSW 407.
- ATSW 435 Risk Management for Sports 3.00**
This course is designed to examine risk management in sports and recreation. It will provide a comprehensive knowledge base for those sports management professionals charged with the responsibility of ensuring the safety of participants and spectators. The course covers a wide range of risk management and safety issues including: legal concerns, emergency action plans, waivers, facilities, equipment, aquatics, supervision, and training. Students will receive clear and detailed explanations of issues to consider before making an informed decision on risk management.
- ATSW 440 Sports Facility and Event 3.00**
This course is designed to assist the sport management student in acquiring necessary knowledge and skill needed to manage a sport facility and to plan a variety of sport programs.
- ATSW 449 Internship in Exercise Science 3.00**
In-depth, structured, practical experience in a formalized program dealing with fitness and health enhancement of individuals. Experiences in existing clinical or corporate programs are intergrated with academic preparation through regular seminar meetings on campus. The minimal on-site hourly requirement is 90 hours but varies according to the nature of the site's program. Prerequisite: ATSW 431, Advanced standing required.
- BCHM 453 Biochemistry 3.00**
A study of the chemical properties of proteins, nucleic acids, carbohydrates, and lipids. An introduction to bioenergetics and carbohydrate metabolism. In addition, students will gain an understanding of biomolecule structure/function relationships, basic biochemical and energetic pathways, and how biochemical energy is processed for survival. The ultimate goal of this course is for the student to gain knowledge and understanding of biochemical principles in order to think critically, analytically, and creatively in applying these principles to solving problems. Prerequisite: CHEM 251 or 254. Three hours lecture. Fall, annually.
- BCHM 454 Biochemistry II 3.00**
This course is a continuation of CHEM 453. Topics will include carbohydrate, lipid and amino acid metabolism, bioenergetics, vitamins and minerals, control and regulation of metabolic pathways, and the nature of metabolic and genetic diseases. Prerequisite: CHEM 453. Three hours lecture. Spring annually.
- BCHM 463 Biochem Lab 1.00**
Experiments involving the major techniques in modern biochemistry. Emphasizes separation and purification techniques, kinetic studies, quantitative determinations, and analytical instrumentation in biochemistry and biotechnology. Co/Prerequisite: BCHM 453. Three hours laboratory. Fall annually.
- BIOL 105 Freshman Biology Seminar 1.00**
Recommended for all freshmen and new majors in any area of Biology. Enables students to (1)

- explore and understand various majors, minors, curricula, and career options in Biology; (2) become familiar with Biology Department faculty, research interests and opportunities; (3) identify and /or utilize department, campus and community resources that will enhance their academic program; and (4) develop and apply strategies to facilitate the learning process.
- BIOL 111 Basic Biology 3.00**
Deals with the principles of biology. Includes cellular structure and physiology, growth and repair, reproduction and development, control, sources of food energy, inheritance, and people's interrelationship with their biological environment. Briefly reviews the classification of plants and animals. Credit not to be applied toward biology major. Each semester.
- BIOL 115 Introductory Biology 4.00**
A basic course in Biology for non-science majors. Includes cellular structure and function, molecular biology, genetics, survey of organisms, evolution, and ecology. Divided into two hours of lecture and a two-hour instruction/laboratory/discussion/recitation session weekly. Credit not to be applied toward the Biology major. Each semester.
- BIOL 116 Aerodynamics: Ph/Bio of Flight 4.00**
The biomechanics of flight. Students will use techniques in physics and evolutionary biology to study how animals fly and swim. Drawing upon bats, birds, insects, and even winged seeds, we will discuss and test the basic operating principles of wings. We will apply results obtained with a wind tunnel to the locomotion of objects in water. Students will then be able to compare and contrast the flyers and swimmers of nature with those of human invention. The course will have a substantial studio laboratory component. Offered every other fall.
- BIOL 125 Intro to Forensic Science 2.00**
Basic course in forensic science for non-majors combining field techniques in forensic ecology and taphonomy with laboratory techniques in molecular biology and biotechnology. Summer: daily for 8 hours, for 5 days or during the fall semester: weekly for 3 hours, for 12 weeks. Credit not to be applied toward any biology major. Summer or fall on demand. Prerequisite: a course in basic or introductory biology or permission of instructor.
- BIOL 150 Insects and Society 3.00**
A basic course in insects and their interactions with human society. Includes insect diversity, insect structure and function, insect biology, and both insect benefits and damage. Three lecture hours weekly. Credit may not be applied toward a Biology degree. Annually.
- BIOL 153 Intro Animal Biology 4.00**
- BIOL 154 Intro Plant Biology 4.00**
- BIOL 155 Prin of Biology I 3.00**
Introduces fundamental concepts of biology focusing on the characteristics of living things, cell function, biological information, storage and retrieval, and organismal structure and function. Presents concepts in the context of current evolutionary theory. Three hours lecture weekly. For biology majors. All science and science education majors and biology minors must concurrently register for BIOL 165
- BIOL 156 Prin of Biology II 3.00**
Introduces fundamental concepts of biology focusing on organismal structure and function, adaptation, behavior, and ecology in the context of current evolutionary theory. Three hours lecture weekly. For biology majors. All science and science education majors and biology minors must concurrently register for BIOL 166. SPring, annually.
- BIOL 165 Prin of Biology I Lab 1.00**
Laboratory exercises augment and integrate course material emphasized in BIOL 155. Three hours laboratory weekly. For biology majors. Must be taken concurrently with BIOL 155 unless it is being repeated. Fall, annually.
- BIOL 166 Prin of Biology II Lab 1.00**
Laboratory exercises augment and integrate course material emphasized in BIOL 156. Three hours laboratory weekly. For biology majors. Must be taken concurrently with BIOL 156 unless it is being repeated. Spring, annually.
- BIOL 200 Selected Topics in Biol 3.00**
Provides for focused study of a special interest topic in biology using different learning formats selected by the instructor as best suited for the particular course. May be offered in any semester, subject to demand and staff availability. Not for biology majors.
- BIOL 201 Genetics 3.00**
A study of the principles of inheritance in plants and animals, including humans. Topics include Mendelian genetics, linkage recombination, cytogenetics, and molecular genetics. Three lecture hours and one recitation hour weekly. Prerequisites: Completion of BIOL 155, 156, 165, and 166, with a grade of a C or better and one semester of organic chemistry or permission of instructor. Fall and Spring, annually.
- BIOL 202 Principles of Ecology 3.00**
Examines the interaction of organisms and their biotic and abiotic environment, population dynamics and interactions, community structure and function, and ecosystem energetics and biogeochemistry. Two lecture and three laboratory hours weekly. Prerequisites: Completion of BIOL 155, 156, 165 and 166 with a grade of C or better, or permission of instructor. Fall and Spring, annually.
- BIOL 203 Cell Biology 3.00**
Examines structure, biochemistry, and function of plant and animal cells. Three lecture and two laboratory hours weekly. Prerequisites: BIOL 155, 156, 165, 166, CHEM 151 or 153, 161 or 163, 152 or 154, 162 or 164, all with a C or better. Each semester.
- BIOL 211 Environmental Science and Sustainability 3.00**
Humans are changing the global environment in profound ways but the consequences are not widely understood. This course will examine current environmental issues from a scientific perspective and explore how science can be best used to shape sound environmental law and regulation, public lands, types and sources of air and water pollution, and other environmental issues of current interest. Environmental issues of local and regional importance will be emphasized. Three lecture hours weekly. Credit not to be applied toward a biology major.
- BIOL 224 Human Biology 3.00**
This course focuses on the biology of the human organism. Recent scientific and medical advances as they relate to the development of public policy are interwoven through topics covered. The biology of our aging human population including issues

such as infection, autoimmunity, cancer, as well as respiratory, cardiovascular, and urinary system decline, will be discussed. Credit not to be applied toward a biology major or biology education certification. Annually.

BIOL 225	Human Genetics	3.00
Mendelian genetics and the inheritance of human genetic disease. Examines the anatomical, physiological, biochemical, and genetic basis of human diseases, including diabetes, atherosclerosis, and cancer, and the genetic component of human illness. Analyzes behavioral genetics, sociobiology, recombinant DNA, gene therapy, and medical ethics. Non-majors course for students who wish to know more about human genetics than is available in basic biology. Particularly useful for students in anthropology, rehabilitative sciences, psychology, sociology, and special education. Prerequisite: One semester of biology or permission of instructor. Annually.		
BIOL 251	Human Anatomy & Physiology I	3.00
Analyzes the normal structure of the human body and how it functions. Focuses on skeletal, muscular, nervous, sensory, and endocrine systems and their interrelationships. Three lecture hours weekly. Fall, annually. Not for biology majors.		
BIOL 252	Human Anatomy & Physiology II	3.00
Continuation of BIOL 251, Anatomy and Physiology I. Includes the circulatory, respiratory, digestive, and urinary systems and their interrelationships. Three lecture hours weekly. Prerequisite: Biol 251. Spring, annually. Not for biology majors.		
BIOL 260	Microbiology	3.00
Examines microorganisms, including viruses, bacteria, fungi, and protozoa, emphasizing those associated with human health and disease. Considers immunity and resistance to infectious diseases and to their epidemiological and public health aspects. Laboratory emphasizes pathogenic bacteria and the bacteriological and microscopic techniques. Two lecture and three laboratory hours weekly. Not for biology majors. Pittsburgh Campus, annually.		
BIOL 261	Human Anatomy & Physiology I Lab	1.00
Laboratory exercises augment and integrate course material emphasized in BIOL 251 with emphasis on anatomy and select physiology activities. Focuses on skeletal, muscular, nervous, sensory, and endocrine systems. Two laboratory hours weekly. Must be taken concurrently with BIOL 251 unless it is being repeated. Fall, annually. Not for biology majors.		
BIOL 262	Human Anatomy & Physiology II Lab	1.00
Laboratory exercises augment and intergrate course material emphasized in BIOL 252, and continuation of BIOL 261. Focuses on circulatory, respiratory, digestive, urinary, and reproductive systems. Two laboratory hours weekly. Must be taken concurrently with BIOL 252 unless it is being repeated. Spring, annually. Nor for biology majors.		
BIOL 289	Career Dev Health Prof	3.00
Students in this course will research and discuss current issues in health care, including professionalism, policy, practice, and reform. The goals of this course are to familiarize future health care professionals with issues related to their career, as well as with the application process and requirements for admissoino to health professional programs (medical, dental, veterinary, etc.), guide students in preparing a portfolio of necessary		

application materials, and develop their writing, interview, test-taking, and other necessary skills and experiences. It will also include a service-learning activity. Prerequisite: Junior standing or instructor's permission

BIOL 301	Marine Invertebrates	3.00
This course introduces students to the taxonomy, structure, function and ecology of marine invertebrates emphasizing specializations which have allowe these animals to exploit a wide variety of marine habitats. Major trends in invertebrate evolution will be used to illustrate the development of form and function in these animals. Prerequisites: Completion of two semesters of introductory biology. Completion of a crouse in general zoology is desirable. Summer, on demand.		
BIOL 305	General Zoology	3.00
Surveys the animal kingdom. Emphasizes the biology and classification of both invertebrate and vertebrate animals. Covers the role of animals in ecosystems and interrelationships among the various taxa and aspects of morphology, phylogeny, ethology, and zoogeography. Includes special reference to animals occurring in Pennsylvania. Two lecture and three laboratory hours weekly. Prerequisites: BIOL 155, 156, 165, 166. Alternate years.		
BIOL 306	General Botany	3.00
A survey of the structure, function and diversity of non-vascular and vascular plants from an evolutionary perspective. Topics will include structure, function, organization and evolution of plant cells and tissues, photosynthesis and nutrition, water uptake and balance, hormonal control of growth, reproduction and dispersal, and classification and systematics. Two lecture and three laboratory hours weekly. Prerequisite: BIOL 155, 156, 165, 166 or equivalent courses.		
BIOL 307	General Mycology	3.00
A survey of Kingdom Fungi, with particular emphasis on the mushrooms, molds, yeasts, smuts, rusts and slime molds. Topics include the morphology, physiology, biochemistry, systematics, ecology and evolution of fungi. Laboratory stresses identification of higher fungi, laboratory techniques and field mycology. Two lecture and three laboratory hours weekly. Prerequisite: Completion of BIOL 155 and BIOL 156 or permission of instructor. Fall, alternate years		
BIOL 341	General Microbiology	4.00
A study of microorganisms, including bacteria, viruses, fungi. Extensive laboratory work includes isolation, staining, culturing, and identification of microorganisms. Examine prokaryotic cell architecture, microbial physiology, methods or controlling the growth of microbes, microbial genetics, medical microbiology, and applied and environmental microbiology. Two lecture periods and two laboratory periods weekly. Prerequisites: BIOL 155, 156, 164, 166 and BIOL 201 or 202, CHEM 151 or 153, 161 or 163, 152 or 154, 162 or 164, all with a C or better. Or Permission of Instructor. Each semester.		
BIOL 360	Problems in Biology	3.00
Acquaints students with skills and techniques used in research. Students identify a problem for investigation and complete all phases of its study, including writing a research report. Approval from the staff member who will direct the student must be secured before pre-registration.		

- BIOL 375 Herpetology 3.00**
Students will study the ecology and evolution of amphibians and reptiles. Topics to be studied include behavior, morphology, physiology, taxonomic diversity, systematic practice, evolutionary biology, and conservation biology. Course includes a substantial field component. Taught summer session, Pymatuning Laboratory of Ecology. Prerequisite: BIOL 202
- BIOL 382 Evolution 3.00**
Analyzes evolution and its links with other areas of biology. Includes the history of evolutionary thought, species concepts and speciation processes, phylogenetic patterns and their reconstruction, diversity of life, and the mechanisms of evolution. Satisfies the second value flags of the university general education requirements. Three lecture hours weekly. Prerequisites: Completion of two semesters of introductory biology and one semester of genetics (BIOL 201 at Clarion) or permission of instructor.
- BIOL 400 Special Topics 6.00**
Advanced topics in various areas of biology. The professor selects a format most suitable to the study. May be offered on request of students, subject to staff availability. Enrollment by consent of the instructor. On demand.
- BIOL 402 Biometry 3.00**
Intro to the collection, analysis, and presentation of biological data. Fundamental aspects of designing and executing descriptive and experimental studies emphasizing biological research. Stresses applications to undergraduate and graduate research in progress in the Department of Biology. Three lecture hours per week. Spring, alternate years.
- BIOL 403 Coral Reef Ecology 3.00**
A study of coral reef structure, formation, types, and the relationships of reef organisms to their environment. Emphasis is given to species diversity, identification, symbioses, and effects of temperature, salinity, light, nutrient concentration, predation, and competition on the abundance and the distribution of coral reef organisms. Prerequisite: Completion of two semesters of introductory biology. Completion of a course in general zoology in desirable. Summer, on demand.
- BIOL 404 Genomics And Bioinformatics 3.00**
The new disciplines of genomics, proteomics and bioinformatics analyze the deluge of DNA sequence data currently being generated. Topics include comparative structure of prokaryotic and eukaryotic genomes, genetic variation in humans and pharmacogenetics, and genomic circuits and complex diseases. Students will be introduced to the computational techniques and algorithms of Bioinformatics, and use them to mine information about a gene and genome of their choice. Designed for students in biology, molecular biology, evolutionary biology, biochemistry, industrial mathematics and computational science. Two hours of lecture and three hours of lab. Prerequisite: BIOL 201 and MATH 260 OR MATH 221, or permission of instructor. Fall alternate years.
- BIOL 405 Ecological Applications 3.00**
Case history approach to the analysis and possible resolution of both terrestrial and aquatic environmental problems. Students analyze problems from a number of perspectives, including the biological, in an assessment of the problem. Incorporates sample design, cost considerations, data collection, and analysis into the assessment. Overall assessment of problems and possible resolutions will be conveyed both orally and in a written format. Intended as a capstone for students in the Applied Ecology Program, but appropriate for other students who meet prerequisites. Satisfies the writing intensive and second values flags of the university general education requirements. Prerequisites: BIOL 202 or permission of the instructor, BIOL 493 and 494 are recommended. Spring, alternate years.
- BIOL 410 Field Meth in Environ Biol 3.00**
A field-based course designed to give students hands-on experience in the various methods needed in environmental studies. The course will focus on the environmental assessment of terrestrial and aquatic habitats and the impacts of perturbations on flora, fauna, and natural landscapes. Summer, on demand.
- BIOL 410 Field Meth in Environ Biol 3.00**
A field-based course designed to give students hands-on experience in the various methods needed in environmental studies. The course will focus on the environmental assessment of terrestrial and aquatic habitats and the impacts of perturbations on flora, fauna, and natural landscapes. Summer, on demand.
- BIOL 411 Wildlife Ecology & Mgmt 3.00**
An in-depth approach to the ecology and management of wildlife species - birds, mammals, amphibians and reptiles - at scales ranging from populations to landscapes. Lecture and discussion will focus on current topics in wildlife ecology and management such as the dynamics of exploited populations, non-game wildlife, population regulation by predators, parasites, and diseases, habitat evaluation and management, and restoration of wildlife populations. Laboratory will emphasize descriptive and investigative studies of wildlife in local ecosystems. Two lecture and three laboratory hours weekly. Prerequisite: BIOL 202 or equivalent. BIOL 305 desirable.
- BIOL 425 Fisheries Biology 3.00**
Examines ecology of fish populations, including taxonomy identification, age and growth, population estimation and analysis, food habits, management, and environmental requirements. Emphasizes data analysis and application of microcomputers in fisheries work. Two lecture and three hours of laboratory or field work weekly. Prerequisites: Completion of a course in ecology or permission of instructor and PA fishing license required. Alternate years.
- BIOL 427 Field Botany 3.00**
Field-based course emphasizing the identification and natural history of common vascular plants native to western Pennsylvania and methods used to study them. Course will be taught at a time when the spring flora is conspicuous. Spring, alternate years.
- BIOL 428 Ornithology 3.00**
Deals with the biology of birds. Lectures cover topics such as classification; internal and external adaptations for flight, migration, nesting, feeding habits, behavior, ecology, and physiology. Two lectures and three laboratory or field trip hours per week. Prerequisite: Junior or higher standing in biology or permission from the instructor. Spring, even numbered years.

- BIOL 430 Biology Of Cancer 3.00**
This course presents an in depth overview of both the scientific and clinical aspects of cancer with an emphasis on the cellular, molecular, and genetic models of cancer development in humans. Topics include: cancer epidemiology, biochemical processes of malignant process, TNM classification, modern advances in tumor biology and molecular biology including the effects of a variety of agents (chemical, radiation, viruses, and oncogenes) that cause human cancer. Furthermore, the course examines the major types of cancer as well as present methods of cancer prevention and treatment. Three lecture hours weekly. Prerequisite: BIOL 201 and BIOL 203. Fall, alternate years.
- BIOL 432 Field Ornithology 3.00**
Deals primarily with the identification and natural history of birds of western Pennsylvania. It is taught at a time when migratory species are commonly seen. Although lectures are an important component, indoor and outdoor laboratory activities play a predominant role. Prerequisite: BIOL 155/165 and BIOL 156/166 or permission of the instructor. Spring, even numbered years.
- BIOL 440 Environmental Microbiology 3.00**
Explores the diversity, distribution, and activities of microorganisms in natural, managed and extreme environments, with a particular focus on microbial communities, interactions and environmental processes. Laboratory sessions and field experiences will be on an arranged basis. Prerequisite: BIOL 341 or permission of instructor. Spring, alternate years
- BIOL 443 Virology 3.00**
Study of plant, animal, and bacterial viruses, emphasizing biochemistry, structure, life cycles, and disease-causing mechanisms. Three lecture hours weekly. Prerequisites: BIOL 201, 203, 341; CHEM 251, 261, 252, and 262, all with a C or better. Fall, even numbered years.
- BIOL 444 Immunology 4.00**
Study of the mammalian immune system. The course will focus on the parts of the system and how they function together to produce the varied and complex regulated responses that provide innate and adaptive immunity. The course will also incorporate case studies involving dysfunction and pathophysiology of the immune system. Since this course is required for medical technology majors, essential laboratory principles and skills involving microscopy (light and fluorescence), ultraviolet and visible spectroscopy, affinity chromatography, mammalian virus culture, enzyme linked immunosorbent assay, electrophoresis and blotting are presented. Three lecture hours weekly and three laboratory hours weekly. Prerequisites: BIOL 201, 203, 341; CHEM 251, 261, 252, and 262, all with a C or better. Spring annually.
- BIOL 445 Molecular Mechanisms of Microbial Pathogenesis 3.00**
Examines mechanisms of pathogenicity utilized by bacteria, viruses and eukaryotic microorganisms at the molecular level. Topics include the mechanics of bacterial secretion systems, specialized extracellular structures, toxins, host-pathogen interactions, horizontal gene transfer, intracellular pathogens, viral replication, viral pathogenesis, viral genetics and mechanisms of anti-microbial action. Three lecture hours weekly. Prerequisite: BIOL 203 and BIOL 341 at a grade C or above.
- BIOL 446 Pathogenic Microbiol 4.00**
Study of the infectious agents of mammals and the diseases that result from infection by these agents. The course will focus on bacterial agents, their diagnosis and treatment. The laboratory portion of the course incorporates experiential learning of diagnostic procedures and case studies involving examples of pathogenic organisms. Three lecture hours and three laboratory hours weekly. Prerequisites: BIOL 201, 203, 341; CHEM 251, 261, 252, and 262, all with a C or better. Fall annually.
- BIOL 450 Cell Physiology 4.00**
Study of the regulatory processes that occur within the eukaryotic cell that govern homeostasis and allow for adaptive change. The course will focus on membrane biochemistry, transport, protein sorting, cell signaling, cytoskeletal nanomotors, and cell specialization. The laboratory portion of the course incorporates experiential learning of basic procedures that allow experimentalists to uncover the workings of the eukaryotic cell. Three lecture hours and three laboratory hours weekly. Prerequisites: BIOL 201, 203, 341; CHEM 251, 261, 252, and 262, all with a C or better. Spring annually.
- BIOL 451 Animal Physiology 3.00**
Study of the comparative physiology of animals, including water and ion regulations, circulation, respiration, nutrition, nervous activity, endocrine functions, and responses to temperature, light, gasses, and pressure. Two lecture and three laboratory hours weekly. Prerequisites: BIOL 201, 203; CHEM 252, 261, 252, and 262, or permission of instructor.
- BIOL 452 Plant Physiology 3.00**
Life processes and responses of plants to the environment. Includes water relations, transpiration, translocation, photosynthesis, respiration, metabolism, plant hormones and morphogenesis, photoperiodism, temperature responses, environmental and stress physiology. Two lectures and three hours laboratory weekly. Prerequisites: Completion of a course in genetics, cell biology, and one semester of organic chemistry or permission of instructor. On demand.
- BIOL 453 Patho I, Endogen Agents 4.00**
Analyzes the mechanisms by which disease occurs in humans. Emphasizes responses to the disease process, and the effects of pathophysiologic mechanisms on the normality of cell, tissue, organ and system functions, and the response of the body to the disease process. Prerequisites: Prior courses in physiology desired. Two years of study in biology or permission of instructor. Venango Campus and Pittsburgh site, annually. Not for biology majors.
- BIOL 454 Patho II, Exog Agents 4.00**
Study of mechanisms by which disease occurs in humans. Emphasizes disease related to heredity, physical, chemical, and biological stresses. Prerequisite: Three semesters of biology required or permission of instructor. Venango Campus, annually. Not for biology majors.
- BIOL 455 Endocrinology 3.00**
Surveys the chemical and physiological principles of hormonal integrations in animals. Three hours lecture weekly. Prerequisites: Completion of a course in physiology and one semester of organic chemistry or permission of instructor. Annually.

- BIOL 456 Entomology 3.00**
General study of insects, including structure, physiology, classification, economic importance, and ecology. Two lecture and three hours of laboratory or fieldwork weekly. Prerequisite: Completion of two semesters of introductory biology or permission of instructor. Alternate years.
- BIOL 459 Physiological Ecology 3.00**
Nearly every habitat on earth, from thermal hot springs to polar ice caps, is home to some form of life. Physiological Ecology explores the biotic and abiotic challenges to organisms imposed by their environments and adaptations which allow them to survive in various habitats, both in terms of how organisms physiologically adapt to short-term fluctuations in their environment and how adaptations influence biogeographic distribution and evolutionary success of various species. Topics include adaptations related to temperature, water and salt balance, and gas exchange. Adaptations of organisms to extreme or unusual environments may be considered. Prerequisite: BIOL 202, 203, 451 or instructor's permission. Spring, alternate years.
- BIOL 460 Comp Vertebrate Anatomy 4.00**
Traces the most important trends in the evolution of basic structures in vertebrate lines and conveys an appreciation of how the mammals came to possess the combination of characters that make this group unique. Three lectures and three laboratory hours weekly. Prerequisites: Two semesters of Intro Biology, or permission of instructor. Frequency: Alternate years
- BIOL 464 Developmental Biology 3.00**
The course focuses on the major processes in multi-cellular development and embryogenesis and their underlying biochemical mechanisms. Throughout the semester, students will study various processes, such as cell differentiation, intra- and inter-cellular induction, and organismal morphogenesis. The class will primarily focus on animal or vertebrate development, though invertebrate and plant model organisms will also be examined. Prerequisites: BIOL 201, BIOL 203, CHEM 251, CHEM 252, CHEM 261, and CHEM 262, all with a C or better. Fall, alternate years.
- BIOL 470 Mammalogy 3.00**
Interrelationships of mammals and the biotic and biotic environment. Includes discussions and investigations of mammalian distribution, diversity, taxonomy, ecology, and physiology. Includes both field and laboratory studies. Two lecture and three laboratory hours weekly. On demand.
- BIOL 471 Plant Ecology 3.00**
In-depth approach to the interaction of plants with the physical and biotic environments at population, community, ecosystem, and landscape scales. Lecture and discussion focus on current topics in plant ecology such as disturbance, succession, herbivory, dispersal, competition, and environmental stress. Laboratory includes field-based experimental and descriptive investigations of plant population and communities. Two hours lecture/discussion and three laboratory hours weekly. Prerequisite: A course in principles of ecology or permission of instructor. On demand (Pymatuning).
- BIOL 473 Freshwater Ecology 3.00**
Field-oriented study of the physics, chemistry, and biology of standing and flowing inland waters.
- Prerequisite: Completion of two semesters of introductory biology or permission of instructor. Alternate years.
- BIOL 474 Ecol of Aquatic Insects 3.00**
Examination of the ecological adaptations of aquatic insects with special emphasis on morphology, habitat, and trophic relationships.
- BIOL 475 Wetland Ecology 3.00**
Wetlands are an important transitional habitat from terrestrial to aquatic systems. They provide services that are critical to the health and functioning of the ecosystem, but in many ways wetlands defy easy definition. This class will investigate the different types of wetlands, the properties that define wetlands, the benefits they supply to the ecosystem and society, and the history and present status of ecosystem management. Taught summer session
Prerequisite: BIOL 202
- BIOL 477 Forest Ecology 4.00**
An in-depth approach to the structure, function and dynamics of forest ecosystems at multiple scales. Lecture and discussion will focus on current topics in forest ecology and management such as major forest types and climate, influence of physical factors like soils and hydrology on forest ecosystem function, the importance of disturbance, herbivores and pathogens in structuring forest ecosystems, and the concept and practice of sustainability in forest management. Laboratory emphasizes descriptive and investigative studies of local forest ecosystems. Two lecture and three laboratory hours weekly. Prerequisite: BIOL 202 or equivalent. BIOL 306 desirable. Fall, alternate years.
- BIOL 478 Biome Studies 3.00**
A travel-study program which offers opportunities for study in the various biomes, e.g., grasslands, montane, seashore, etc. On demand.
- BIOL 483 Molecular Biology 4.00**
Study of the structural and functional relationships of the major biological macromolecules, emphasizing nucleic acid biology. Laboratory emphasizes current systems, methods, and applications of biotechnology, including recombinant DNA techniques. Two lecture and four laboratory hours weekly. Prerequisites: BIOL 201, 203, 341; CHEM 251, 261, 252, and 262, all with a C or better. Annually.
- BIOL 484 Quantitative Methods in Environmental Biology 3.00**
This course will focus on the practical skills required to test hypotheses and solve problems in the real world. Lectures will explore the quantitative and analytical methods most often used by environmental biologists, drawing liberally on applied examples. Students will learn the statistical and analytical principles that form the foundation for sound sampling programs and experiments. Laboratories will be aimed at gaining experience in the applications of these methods. There will be a strong focus on the proper use of field and laboratory equipment. We will explore methods used in both terrestrial and aquatic ecosystems, and we will emphasize the development of skills that are most often sought after by potential employers. Our local field sites offer a rich array of opportunities to use technology to better understand the environment, and this course will strive to focus on environmental issues of regional importance. Two lecture hours and three laboratory hours per week. Prerequisite: BIOL

BIOL 485	156/166 and CHEM 154/164. Fall annually. Biotechnology 4.00 Advanced topics in the current systems, methods, and applications of nucleic acid and protein biotechnology. Two lecture and four laboratory hours weekly. Prerequisite: Completion of a course in molecular biology or permission of instructor. Annually.	Three hours lecture/discussion weekly. Prerequisites: Completion of a course in principles of ecology, evolution, and genetics, or permission of instructor. Spring, alternate years.
BIOL 491	Biogeography 3.00 The subject matter will cover aspects of the distribution of plants and animals. Main topics of concern will include interpretive approaches to biogeography, paleobiogeographic evidence of past distributions, the centers of origin of various groups, mechanics and routes of dispersal and colonization, and the dynamics of extinction. Prerequisites: A course in genetics and principles of ecology or permission of instructor. On demand.	BIOL 499 Undergrad Res in Biology 4.00 Gives upper-level undergraduate students an experience in biological research. Students identify problems for investigation and complete all phases of study, including writing a research report. Prerequisites: Second semester junior or senior standing with a 3.0 QPA overall, a 3.0 QPA in biology or the consent of the department. Limited to a total of four credits during undergraduate career. Students seeking approval for a BIOL 499 project must complete the BIOL 499 registration form securing signatures of the academic advisor and project director. BIOL 360 and 499 may not be used for the same project.
BIOL 492	Animal Behavior 3.00 Study of the biological concepts of animal behavior. Investigates sensory receptors, internal mechanisms, genetics, learning and habituation, social organization, and communication. Lecture topics include techniques of observation and experiments in animal behavior. Three lecture hours weekly. Prerequisites: Completion of courses in principles of ecology and genetics or permission of instructor. Alternate years.	BSAD 237 Global Studies Travel Seminar 3.00 This seminar course is designed to give students an opportunity to travel internationally for a two week period to at least three centers of business and industry. The tour includes lectures and company visits. The third week will be used to summarize the visits and complete term projects. Students will need to pay for the cost of travel in addition to tuition expenses.
BIOL 493	Comm & Ecosys Dynamics 4.00 In-depth approach to the structure, function, and dynamics of ecological systems at community, ecosystem, and landscape scales. Lecture and discussion focus on current topics such as niche theory, the regulation of community structure, food webs, ecological stability, diversity, succession, and energy and material cycles. Laboratory emphasizes field-based descriptive and investigative studies of local communities and ecosystems. Three hours lecture and three hours laboratory weekly. Prerequisites: Completion of a course in principles of ecology, basic statistics highly desirable, or permission of instructor. Fall, alternate years.	BSAD 238 Introduction to Paralegal Studies 3.00 Designed to provide an introduction to the present and potential role of the legal assistant within our legal system. The student will be introduced to the operation of the court structure and the tasks handled by paralegals within this structure. Introduction to legal research and office computers as well as ethical obligations of the Legal Assistant will be emphasized. A prerequisite for all other Legal Business Studies courses.
BIOL 494	Population Biology 3.00 Investigates the empirical, experimental, and theoretical aspects of the structure, growth, and evolution of biological populations. Takes a holistic approach to how population genetics and population ecology interact to produce observed population structure and dynamics. Two hours lecture/discussion and three laboratory hours weekly. Prerequisites: Completion of a course in principles of ecology and applied calculus or permission of instructor. Alternate years.	BSAD 239 Family Law 3.00 In-depth study of all of the area of family law encountered by a legal assistant. Includes divorce, custody, child and spousal support, adoptions, termination of parental rights, and abuse of family members. Students learn both substantive law and procedure. Includes the creation of legal pleadings in the family law area. Prerequisite: BSAD 240. Biennially, Fall Semester at Venango.
BIOL 495	Undergraduate Sem I 3.00 Extensive exposure to primary scientific research articles in their field of studies allows the students to critically assess modern experimental techniques and theories. Furthermore the students will practice critical thinking and communication skills required for professional scientists. Students will critique each seminar via written reviews as well as verbal discussions; focusing conclusion, and analysis of student presentations. Prerequisite: BIOL 201 and BIOL 203. Required for Molecular Biology/Biotechnology majors. Fall, annually.	BSAD 240 Legal Environment I 3.00 Surveys law and society. Orients students to the judicial systems of the United States and the legal remedies and mechanisms at their disposal. Compares and contrasts both civil and equitable court functions through the illustrations of common law contracts, torts, criminal law, property law, and the administration of decedents' estates. Each semester at Clarion Campus. Fall annually at Venango.
BIOL 497	Evolutionary Ecology 3.00 Explores contemporary topics and landmark contributions in ecology and evolutionary biology through readings of research and review papers.	BSAD 241 Legal Environ II 3.00 Applies concepts explored in BSAD 240, Legal Environment I, in a business context. Emphasizes general substantive business law topics; i.e.: agency, partnerships, corporations, sales, negotiable instruments, and real property. Prerequisite: BSAD 240. Each semester at Clarion Campus. Spring, annually at Venango.
		BSAD 242 Methods of Legal Resrch 3.00 Students learn the traditional legal research materials and brief writing techniques, including use of digests and citators. Emphasizes legal research in the area of administrative law. Prerequisite: BSAD 240. Spring,

- annually, Venango only.
- BSAD 243 Wills, Trusts & Estates 3.00**
Provides instruction regarding the administration of the probate estate as well as necessary documentation and filing requirements. Students gain understanding of various laws governing transfer of property at death as well as tax consequences of such a transfer. Students also study creation of trusts and transfers during life. Concepts are applied to the actual drafting of wills, trusts, codicils, and ancillary documents. Prerequisite: BSAD 240. Biennially, Fall Semester at Venango.
- BSAD 244 Administrative Law 3.00**
In-depth study of various administrative law topics. Familiarizes students with statutes and regulations supporting Social Security, unemployment compensation, and workmen's compensation. Involves study of judicial precedent and mock hearing practice. Prerequisite: BSAD 240. Biennially, Spring Semester at Venango.
- BSAD 246 Civil Litigation 3.00**
In-depth study of various court procedures, including discovery, that the legal assistant will use in supporting an attorney during litigation. Familiarizes students with the rules of court, including both criminal and civil practice. Instructs legal assistants on how to prepare various court documents. Prerequisite: BSAD 240. Offered at Venango.
- BSAD 247 Real Estate Law For Para 3.00**
Includes estates in land, property sales contracts, deed preparation, title abstracts, searching courthouse records, adverse possession, easements, judgments and liens, tax sales, and the Real Estate Settlement Procedures Act. Students learn to complete all necessary documents involved in all real estate transactions and to prepare all histories of title so that the attorney may certify the title and complete closing. Prerequisite: BSAD 240. Biennially, Spring Semester at Venango.
- BSAD 248 Legal Writing 3.00**
Detailed study of the various writing tasks performed by a legal assistant. Students become proficient at writing pleadings, trial briefs, appellate briefs, legal memoranda, demand letters, and informational requests. Familiarizes students with various briefing techniques and rules of style. Explores the required briefing forms of various courts and administrative appeal agencies. Prerequisites: BSAD 240 and 242. Fall, annually at Venango.
- BSAD 249 Field Experience 3.00**
- BSAD 250 Criminal Law And Procedure 3.00**
An introduction to the procedures and practice of criminal law. This course will examine the development of law and an analysis of the criminal system bureaucracy, including punishment, courts and police. This course shall survey the system from the initial contact with the offender through prosecution, sentencing and release to the community.
- BSAD 340 Environmental Law 3.00**
A study of environmental law and policy in the United States. Explores the method in which business entities and environmental organization--government and nongovernment--achieve compliance. Focuses on case law providing legal remedies for environmental torts and crimes. Prerequisite: BSAD 240. Spring, annually.
- BSAD 341 Internat Environ Law 3.00**
A study of international law and agreements affecting the global commons. Examines the process by which international accord is reached and enforced and the effects of GATT and NAFTA on environmental regulation. Analyzes the effects of transfrontier pollution, resource allocation and industrialization. Provides case studies involving the redress of environmental wrongs. Prerequisite: BSAD 240 or permission of the instructor. Fall, annually.
- BSAD 437 International Business Seminar 6.00**
Focuses on developing an understanding of the problems and opportunities faced by international organizations. In order to best achieve both micro and macro perspectives in the study of international aspects of the business, students visit businesses abroad for discussions with top-level executives. In addition to international travel, the students will meet with the instructor for a series of briefing and debriefing sessions. An additional three credits may be taken (for a total of six) on an individualized basis. Prerequisite: MGMT 320. Junior standing.
- BSAD 448 Adv Legal Writing And Research 3.00**
Advanced legal research and writing procedures. Online research methodology shall be incorporated into the study of the various writing tasks performed by a legal assistant. The student will become proficient at writing pleadings, trial briefs, appellate briefs, legal memoranda, demand letters, and informational requests as well as the preparation of contracts for sale, deeds, leases and easements. Title abstracting, search for general liens tax liens, and property closing procedures will be emphasized. The student will learn Motion Practice, Federal Practice and Discovery. Advanced legal research and writing techniques such as legislative history, argumentative briefs, depositions and interrogatories will be practiced.
- BSAD 490 Adm Decision Making 3.00**
Requires students to synthesize what had been learned in the separate business fields and to utilize this knowledge in the analysis of complex problems. Emphasizes organizational and industry research and its application to strategic decision making. Capstone course for a degree in business administration. Prerequisites: MGMT 320, MKTG 360, FIN 370, and senior standing. Each semester.
- BSAD 491 Independent Study 3.00**
Explores in depth a problem or area of business under the direction of a faculty member of the college. Prerequisites: 2.75 QPA and consent of both instructor and department head. Maximum credit granted in BSAD 491 is six credits.
- BSAD 494 Bus Executive Lecture 1.00**
Introduces students to successful business practices. Several prominent business men and women from the local area give a series of lectures concerning their business philosophies and practices. Assists students in bringing together knowledge attained from the business curriculum and suggesting practical applications of that knowledge. Prerequisite: MGMT 320.
- CHEM 50 Prep for Chemistry 3.00**
Emphasizes development of verbal, mathematical, and abstract reasoning skills, and a basic scientific vocabulary needed to more fully explore the science of chemistry. Designed for students who may not have sufficient background for college chemistry.

	Placement is recommended by the Department of Chemistry or it may be taken by students who feel a need to strengthen their skills prior to entering the normal sequence of chemistry courses. Course credits do not count toward graduation or general education science requirement. Offered occasionally.	
CHEM 141	Freshman Seminar Required of all freshman chemistry majors, this course provides an orientation to the university, to the faculty, and to the programs within the chemistry department including, among other topics, advisement, opportunities, curriculum and scheduling, faculty expectations, laboratory safety procedures, facilities, career options, professional societies. The academic component, involving common readings, assignments, discussions, and attendance at seminars, is part of the course requirements.	1.00
CHEM 145	Chemistry for Allied Health Sciences I This course is the first semester of a two-semester sequence covering the main topics in general, organic, and biological chemistry as they relate to the health sciences field. Topics include atoms and molecules, chemical reactions, bonding, energy in chemical reactions, phases of matter, kinetics and equilibrium, acids and bases, nuclear chemistry, and an introduction to hydrocarbons and organic chemistry. Three hours lecture. Fall annually.	3.00
CHEM 146	Chemistry for Allied Sciences II This course is the continuation of CHEM 145. CHEM 146 covers the principles of organic chemistry by functional groups plus the biochemistry of proteins, enzymes, carbohydrates, lipids, neurotransmitters and hormones. All topics are taught with an emphasis on health-related topics. Three hours lecture. Spring, annually.	3.00
CHEM 151	Chem Principles I Explores atomic theory, gases, solids, liquids, chemical bonding, and molecular structure. Intended for chemistry program majors and co-op engineering students. CHEM 151 and 152 comprise the foundation for all subsequent courses in the major sequence. This lecture course must be scheduled concurrently with its corresponding laboratory (CHEM 161). Lecture may be repeated alone provided lab has been passed. Co/Prerequisite: CHEM 161. Three hours lecture. Fall annually.	3.00
CHEM 152	Chem Principles II Includes second law, equilibrium, acids and bases, electrochemistry, kinetics, and coordination chemistry. This lecture course must be scheduled concurrently with its corresponding laboratory (CHEM 162). Lecture may be repeated alone provided lab has been passed. Co/Prerequisite: CHEM 162. Prerequisite: CHEM 151. Three hours lecture. Spring, annually.	3.00
CHEM 153	General Chemistry I Initial course in the fundamental concepts of chemistry for students not majoring in chemistry; it can serve as a preparation for CHEM 251 or as a general education elective. Includes atomic theory and structure, stoichiometry, chemical bonding, and the physical states of matter. This lecture course must be scheduled concurrently with its corresponding laboratory (CHEM 163). Lecture may be repeated alone provided lab has been passed. Co/Prerequisite: CHEM 163. Three hours lecture. Fall,	3.00
CHEM 154	General Chemistry II Continuation of CHEM 153. Includes a discussion of solutions, thermodynamics, equilibria, kinetics, acids and bases, and oxidation-reduction. This lecture course must be scheduled concurrently with its corresponding laboratory (CHEM 164). Lecture may be repeated alone provided lab has been passed. Co-Prerequisite: CHEM 164. Prerequisite: CHEM 153. Three hours lecture. Spring, annually.	3.00
CHEM 161	Chem Prin I Lab Laboratory exercises to exemplify and augment the material in CHEM 151. This laboratory course must be scheduled concurrently with its corresponding lecture (CHEM 151). Laboratory may be repeated alone provided lecture has been passed. Co/Prerequisite: CHEM 151. Three hours laboratory. Fall, annually.	1.00
CHEM 162	Chem Principles II Lab Laboratory exercises to exemplify and augment the material in CHEM 152. This laboratory course must be scheduled concurrently with its corresponding lecture (CHEM 152). Laboratory may be repeated alone provided lecture has been passed. Co/Prerequisite: CHEM 152. Prerequisite: CHEM 161. Three hours laboratory. Spring, annually.	1.00
CHEM 163	General Chem I Lab Laboratory exercises to exemplify and augment the material in CHEM 153. This laboratory course must be scheduled concurrently with its corresponding lecture (CHEM 153). Laboratory may be repeated alone provided lecture has been passed. Co/Prerequisite: CHEM 153. Three hours laboratory. Fall, annually.	1.00
CHEM 164	General Chem II Lab Laboratory exercises to exemplify and augment the material in CHEM 154. This laboratory course must be scheduled concurrently with its corresponding lecture (CHEM 154). Laboratory may be repeated alone provided lecture has been passed. Co/Prerequisite: CHEM 154. Prerequisite: CHEM 163. Three hours laboratory. Spring, annually.	1.00
CHEM 205	Nutrition Introduces the basic principles of human nutrition. Explores the structure of proteins, fats, carbohydrates, vitamins, and minerals and their role in metabolism. Analyzes nutritional needs of various age groups, nutrition and disease, and recent research in nutritional problems. Prerequisite: One semester of general chemistry or consent of instructor.	3.00
CHEM 211	Science and Society Describes the process of science as an ongoing and continuously developing means of describing the natural world. Examines what science is and how it is done. Promotes science literacy. Emphasizes written and oral communication skills as well as the ability to understand important topics in science, along with the policy and ethical questions raised. Open to students in all academic areas.	3.00
CHEM 251	Organic Chem I Examines bonding, structure, stereochemistry, nomenclature, and the mechanisms of free radical substitution, nucleophilic substitution, electrophilic addition and electrophilic aromatic substitution. Emphasizes organic syntheses, reactions, and methods. This lecture course must be scheduled concurrently with its corresponding laboratory (CHEM	3.00

- 261). Lecture may be repeated alone provided lab has been passed. Co/Prerequisites: CHEM 261. Prerequisite: CHEM 151,152 or 153, 154. Three hours lecture. Fall, annually.
- CHEM 252 Organic Chem II 3.00**
Continuation of CHEM 251. A discussion of functional groups, their preparation and reactions. Emphasizes synthesis and mechanisms. This lecture course must be scheduled concurrently with its corresponding laboratory (CHEM 262). Lecture may be repeated alone provided lab has been passed. Co/Prerequisite: CHEM 262. Prerequisite: CHEM 251. Three hours lecture. Spring, annually.
- CHEM 254 Intro Organic Chem 3.00**
Surveys the field of elementary organic chemistry, emphasizing nomenclature, simple reactions and mechanisms, and the structure of organic compounds, together with their relation to biology. Does not count toward the requirements for a major in chemistry and must be taken concurrently with CHEM 264 unless it is being repeated. Co/Prerequisite: CHEM 264. Prerequisite: CHEM 152 or 154. Three hours laboratory.
- CHEM 257 Organic Spectroscopy 3.00**
Applies modern spectroscopic techniques to the determination of the structures of organic compounds. Discusses the techniques of infrared, nuclear magnetic resonance, and mass spectroscopy, emphasizing their application toward the elucidation of structures of organic compounds. Presents necessary theoretical background and applications. Required of all chemistry majors. Prerequisites CHEM 252 or consent of instructor.
- CHEM 261 Organic Chem I Lab 1.00**
Consists of experiments using important techniques, natural product isolation, and synthesis using modern instrumental methods. This laboratory course must be scheduled concurrently with its corresponding lecture (CHEM 251). Laboratory may be repeated alone provided lecture has been passed. Co/Prerequisite: CHEM 251. Prerequisites: CHEM 162 or 164. Three hours laboratory. Fall, annually.
- CHEM 262 Organic Chem II Lab 1.00**
Complex synthesis and organic qualitative analysis using modern instrumentation. Emphasizes the important spectroscopic methods of infrared and nuclear magnetic resonance spectroscopy and mass spectrometry. This laboratory course must be scheduled concurrently with its corresponding lecture (CHEM 252). Laboratory may be repeated alone provided lecture has been passed. Co/Prerequisite: CHEM 252. Prerequisite: CHEM 261. Three hours laboratory. Spring, annually.
- CHEM 264 Intro Org Chem Lab 1.00**
Introduces important techniques, synthesis, and functional group analyses of organic compounds. Must be taken concurrently with CHEM 254 unless it is being repeated. Co/Prerequisite: CHEM 254. Prerequisite: CHEM 162 or 164. Three hours laboratory. Fall, annually.
- CHEM 265 Inorganic Chemistry I 3.00**
Explores topics in contemporary inorganic chemistry. Special attention will be given to: atomic structure, bonding, group theory, molecular orbital theory and solid state chemistry, and chemistry of the main group. Prerequisite: CHEM 251 and Co-requisite: 266.
- CHEM 266 Inorganic Chemistry Laboratory I 1.00**
Explores topics in contemporary inorganic chemistry. Students will use models and software to simulate, explain, and visualize chemical phenomena related to atomic structure, group theory, molecular orbital theory, and solid state structure. Students will be introduced to a range of laboratory techniques used in the synthesis, purification, and characterization inorganic compounds. Prerequisite: CHEM 261 and Corequisite: CHEM 265.
- CHEM 270 Chemical Information 1.00**
Covers sources, organization, and the effective use of chemical information. Includes working safely with chemicals, regulatory agencies and their role in ensuring safety and environmental quality, and critical evaluation of scientific literature. Discusses aspects of both printed and computer-based chemical information sources. Problem assignments provide illustration and practice in effective searching of the chemical literature. Co-requisites: CHEM 251, 261. One hour lecture.
- CHEM 271 Intro Inorganic Chem 2.00**
Introduces coordination and descriptive inorganic chemistry. Laboratory focuses on the properties and reaction chemistry of the elements and inorganic compounds. Prerequisite: CHEM 152/162. Fall, annually.
- CHEM 311 Drugs: From Discovery To Mkt 3.00**
A study of the drug development and the pharmaceutical industry. The course will, follow the path that new drugs take from their discovery in the laboratory, through in vitro testing, clinical trials, to final Food and Drug Administration (FDA) approval and post-market surveillance. Attention will be paid to the role of the FDA, and ethical issues at every step along the path to market. Students will also examine drugs as molecules and how they function physiologically, as well as a look at the major in vivo targets of drugs. Prerequisite: PHSC 111 or BIOL 111 or equivalent. Spring annually
- CHEM 351 Intro Analytical Chem 3.00**
Explores the theory and applied techniques and instrumentation of analytical chemistry for majors in the allied health and other biological professions. Includes separation procedures and spectrophotometric, volumetric, and electroanalytical methods. Geared toward the analytical chemistry needs of the allied health and biological professions. Does not count toward the requirements for a major in chemistry. This lecture course must be scheduled concurrently with its corresponding laboratory (CHEM 361). Lecture may be repeated alone provided lab has been passed. Co/Prerequisite: CHEM 361. Prerequisite: CHEM 152 or 154. Three hours lecture.
- CHEM 353 Analytical Chem I 3.00**
Serves students both in chemistry and in related fields. Includes spectrophotometric and volumetric methods of chemical analysis. This lecture course must be scheduled concurrently with its corresponding laboratory (CHEM 363). Lecture may be repeated alone provided lab has been passed. Co/Prerequisite: CHEM 363. Prerequisite: CHEM 251. Three hours lecture. Fall, annually.
- CHEM 354 Physical Chem I 3.00**
Concerned primarily with the principles of thermodynamics. Discusses kinetics in the latter portion of the term. Applies the laws of thermodynamics to many problem-solving situations.

- Uses calculus heavily, and requires a basic familiarity with the handling of simple differentials and integrals. Kinetics is treated from experimental and mechanistic points of view. This lecture course must be scheduled concurrently with its corresponding laboratory (CHEM 364). Lecture may be repeated alone provided lab has been passed. Co/Prerequisites: CHEM 364. Prerequisites: CHEM 152, 162; PH 252 or 259; MATH 271. Three hours lecture. Fall, annually.
- CHEM 355 Physical Chem II 3.00**
Develops both the classical wave formulation and the concept of operators as approaches to the study of quantum mechanics. Students solve simple one-electron problems. Extends groundwork to molecular problems. Examines spectroscopy in detail, particularly as a tool in the determination of molecular structures. Discusses powder and single-crystal X-ray diffraction techniques and investigates their use as research tools. Prerequisite: CHEM 354. Three hour lecture. Spring, annually.
- CHEM 358 Analytical Chem II 3.00**
An introduction of the theory, fundamental principles, and application of modern instrumentation to the analysis of chemical systems. This lecture course must be scheduled concurrently with its corresponding laboratory (CHEM 368). Lecture may be repeated alone provided lab has been passed. Co/Prerequisite: CHEM 368. Prerequisite: CHEM 251. Three hours lecture. Spring, annually.
- CHEM 359 Advanced Organic Chem 3.00**
A study of reaction mechanism, synthetic methods, and structure elucidations. Emphasizes modern physical organic chemistry and the correlation of structure and reactivity. Prerequisites: CHEM 252. Three hour lecture. Spring occasionally.
- CHEM 361 Intro Analytical Chem Lab 1.00**
Laboratory exercises exemplify and augment topics included in CHEM 351. This laboratory course must be scheduled concurrently with its corresponding lecture (CHEM 351). Laboratory may be repeated alone provided lecture has been passed. Co/Prerequisite: CHEM 351. Prerequisite: CHEM 162 or 164. Three hours laboratory.
- CHEM 363 Analytical Chem I Lab 1.00**
Laboratory exercises exemplify and augment topics included in CHEM 353. This laboratory course must be scheduled concurrently with its corresponding lecture (CHEM 353). Laboratory may be repeated alone provided lecture has been passed. Co/Prerequisite: CHEM 353. Prerequisite: CHEM 261. Three hours laboratory. Fall, annually.
- CHEM 364 Phys Chem I Lab 1.00**
Involves experiments in the areas of thermodynamics and kinetics to reinforce what is taught in the lecture course. To be taken concurrently with CHEM 354. Experiments include bomb calorimetry, construction of a simple two-component phase diagram, and stopped-flow, fast-action kinetics. Prerequisite: CHEM 355. Three hours laboratory. Fall, annually.
- CHEM 365 Physical Chem II Lab 1.00**
Involves experiments in the areas of quantum mechanics, molecular spectroscopy, and crystallography. Experiments include obtaining rotational-vibrational spectra of a diatomic molecule utilizing Fourier Transform Infrared Spectroscopy (FTIR), and analyzing a powdered crystalline sample using X-ray diffraction. This laboratory course must be scheduled concurrently with its corresponding lecture (CHEM 355). Laboratory may be repeated
- alone provided lecture has been passed. Co/Prerequisite: CHEM 355. Prerequisite: CHEM 364. Three hours laboratory.
- CHEM 366 Inorganic Chemistry II 3.00**
Explores topics in contemporary inorganic chemistry. Special attention will be given to coordination chemistry and organometallic chemistry. This lecture course must be scheduled concurrently with its corresponding laboratory. (CHEM 367). Lecture may be repeated alone provided lab has been passed. Co/Prerequisite: CHEM 367. Prerequisite: CHEM 265. Three hours lecture
- CHEM 367 Inorganic Chemistry II Lab 1.00**
Explores topics in contemporary synthetic inorganic chemistry. Students will gain an understanding of a range of laboratory techniques used in the synthesis, purification, and characterization inorganic compounds. This laboratory course must be scheduled concurrently with its corresponding lecture (CHEM 366). Laboratory may be repeated alone provided lecture has been passed. Co/Prerequisite: CHEM 366. Prerequisite: CHEM 266. Three hours laboratory.
- CHEM 368 Analytical Chem Lab II 1.00**
Laboratory exercises exemplify and augment topics included in CHEM 358 and the analytical techniques of spectroscopy, chromatography, and mass spectrometry. This laboratory course must be scheduled concurrently with its corresponding lecture (CHEM 358). Laboratory may be repeated alone provided lecture has been passed. Co/Prerequisite: CHEM 358. Prerequisite: Chem 261. Three hours laboratory. Spring, annually.
- CHEM 400 Special Topics 3.00**
- CHEM 455 Adv Physical Chem 3.00**
Concerned primarily with statistical mechanics and additional aspects of quantum mechanics such as molecular modeling and potential energy surfaces. Prerequisite: CHEM 355. Offered occasionally.
- CHEM 456 Adv Inorganic Chem 3.00**
Extends and compares various concepts of bonding and molecular structure, encountered in previous courses, to gain appreciation of their uses and shortcomings. Includes acid-base theory, nonaqueous solvents, and coordination chemistry. The descriptive chemistry includes recently discovered compound types as well as classical periodicity and periodic anomalies. Prerequisite: CHEM 354 or consent of the department. Three hours lecture. Fall, alternate years.
- CHEM 459 Demos in Chemistry 3.00**
Studies are made of various demonstration techniques with students devising and applying each with many examples. Emphasizes the study of material the Chem. Study Committee of the American Chemical Society prepared for the purpose of vitalizing high school chemistry courses. Prerequisites: CHEM 151, 152, and at least one other major course. Offered occasionally.
- CHEM 461 Adv Inorg/Org Lab 2.00**
Involves complex synthesis of inorganic and organic compounds. Uses sophisticated techniques and contemporary instrumentation in the synthesis, analysis, and characterization of these inorganic and organic compounds. Two hours laboratory.
- CHEM 465 Chemical Research 3.00**
An independent laboratory problem in some field of chemistry of special interest to the student.

- Admission only by consent of the instructor and the approval of the department chair.
- CHEM 466 Chemical Research 3.00**
An independent laboratory problem in some field of chemistry of special interest to the student. Admission only by consent of the instructor and the approval of the department chair.
- CHEM 470 Chemistry Seminar 3.00**
This course is an introduction to chemistry literature an presentations. Students will learn how to search the chemistry literature for topics of current interest using databases, compilation of a bibliography, preparation of an abstract, and presentation of a poster and seminar. Prerequisites: CHEM 354. Three hours lecture. Spring annually.
- CHEM 471 Advanced Topics in Chem 3.00**
Presents topics of current interest. Topics vary from year to year. Discusses topics such as non-aqueous solvents, solid state chemistry, polymers, chemical physics, group theory, stereochemistry, organometallics, and recent developments in spectroscopy. Prerequisite: CHEM 355 (may be taken concurrently). Offered occasionally.
- CHEM 485 Prob Chem Ed 3.00**
In-depth exploration of a problem area in chemistry education according to the student's need or interest under the direction of a faculty member. Admission only by consent of instructor and approval of department chair. Prerequisite: Junior standing or consent of the department. Not open to chemistry majors in the liberal arts or Bachelor of Science curriculum.
- CHIN 103 Introduction to Chinese Languages and Cultures I 3.00**
Introduces basic facts about Chinese languages and cultures. Topics include Chinese customs, current affairs, and contributions to literature, art, science, and technology of the world. Course taught in English.
- CHIN 151 Elementary Chinese I 3.00**
Introduces the Chinese language, emphasizing all language skills - listening, speaking, reading and writing.
- CHIN 152 Elementary Chinese II 3.00**
Continuation of CHIN 151: Elementary Chinese I. Prerequisite: CHIN 151 or placement based on evaluation.
- CIS 110 Computer Info Process 3.00**
Surveys the need for, and roles of, computer information systems in contemporary society. Designed to satisfy the need of students from every discipline to be computer literate, and provides the necessary basis for further computer-related studies. Emphasizes computer requirements in organizations, history, hardware concepts, programming, application software, systems development, and computer operations.
- CIS 140 Essential Topics in Discrete Mathematics for Computer Science 3.00**
An introduction to the discrete mathematics essential for course work in computer science. Elementary coverage of proofs including mathematical induction, sets, functions, relations, boolean algebra, number theory, combinatorics, analysis of algorithms including recursive algorithms, matrices and the logic of control and data storage through hand computation. This course should be taken in a computer science major's first year. It is a prerequisite for upper division required major courses
- in the Computer Science major. A successful student should be able to apply the concepts taught to problem solving in computer science.
- CIS 202 Intro Prog And Algo 3.00**
Introduces algorithms and translation of algorithms into a programming language. Student will create algorithms and computer programs that implement those algorithms. Will learn programming language syntax and programming fundamentals including variables, input and output, arithmetic and logical operations, control flow (sequence, selection, iteration), file access and modular development. Computer language used may change over time, but an example language would be C# (C Sharp).
- CIS 206 Intro to Java Programming 3.00**
Introduces the Java programming language. Designed to expose Information Systems majors to a second programming language (after C#). Involves programming Java applets and Java applications. Students learn the core of the language including its data types, arithmetic statements, selection statements, repetition statements, arrays, and string processing features. Object oriented programming concepts are introduced but are not the focus of the course. Other topics include Java's windowing toolkits, file input and output, exception handling, and the Java security model. Prerequisite: CIS 202 with a grade of C or better. Not for credit for CS majors.
- CIS 217 Appl of Micro 3.00**
Introduces the basic concepts of microcomputers and software applications. Includes commonly available software packages and graphics. No prerequisite.
- CIS 230 Practicum in CIS 2.00**
Provides undergraduates with an introduction to the role of computer specialists in the everyday operation of a computer laboratory. Supplies real experience in such routine exercises as interacting with computer users to field problems and complaints, machine event logging, and performing simple tasks to keep machines operating. A maximum of six credits of the practicum may be applied toward graduation. Prerequisite: CIS 217 or permission of the instructor.
- CIS 244 Intro Prog & Algo II 3.00**
Examines complex problem-solving techniques, top down design, and prgram debugginh and testing. Prerequisite: "B" or better in CIS 202 or permission of instructor.
- CIS 253 Comp Org/Asb Lang 3.00**
Consists of two major parts: (1) an introduction to assembly language programming and (2) an introduction to computer organization and the structuring of major hardware components. Students develop a basic understanding of the mechanics of information transfer and control and the fundamentals of logic design. Prerequisite: CIS 202.
- CIS 254 Data Structures 3.00**
Introduces the structuring of data in computer programs. Topics include static, dynamic, and persistent memory, linked lists, stacks, queues, trees, and hash tables. The major concepts are reinforced through programming assignments using algorithms illustrating the power of each data structure. Prerequisite: CIS 244.
- CIS 270 Client-Side Web Programming 3.00**
Student will explore front-end, client-side web development emphasizing programming in a client-side programming language such as JavaScript or

	VBScript. Human-computer interface issues will also be explored as well as basic web page markup (HTML, XHTML) and display (CSS). Student will also look at HTML validation issues and implications of different browser usage on web page rendering. Prerequisite: CIS 202 with a grade of C or better.		students in both mathematics and computer science. Prerequisites: MATH 300 and CPSC 201.
CIS 301	Comp Sys Analysis 3.00 Study of informational needs and patterns of information flow within a large organization. Emphasizes the analysis and design of computer software systems. Examines ethical and legal issues related to information systems. Prerequisite: CIS 244 alone or both 217 and 202 (with a grade of C or better).	CIS 355	Operating Systems I 3.00 Covers the functions of operating systems, the design of operating systems at the register transfer and programming levels, and the important relationships between operating systems and computer hardware. Prerequisites: CIS 253 and 254.
CIS 303	Local Area Networks 3.00 Study of the technology of local area networks. Includes LAN design, topology, hardware, standards, protocols, and network operating systems. Includes significant hands-on experience building a LAN; and installing network interface cards and cable. Prerequisites: CIS 202 with a grade of C or better.	CIS 356	Analysis of Algorithms 3.00 Analysis of algorithms represented in computer programs. Topics include correctness and performance of code used in searching, sorting, and solving mathematical problems. Prerequisites: CIS 254 and MATH 260 or 270.
CIS 305	Art Intell Decision Make 3.00 Surveys the thinking and some of the pioneering efforts in the area of artificial intelligence (AI), integrated with more traditional approaches to decision-making. Applies AI principles through the use of logic programming languages. Prerequisite: CIS 202 with a grade of C or better.	CIS 370	Server-Side Web Programming 3.00 Covers web programming focusing on the web server side of the client/server architecture. Students will learn the fundamentals of secure, dynamic, web application development using one or two of the most popular tool sets. Topics covered include web server setup, database setup, user authentication, session management, client/server interaction, and using the tool set to develop database driven web sites. One example of a tool set would be PHP as the programming language, MySQL as the database, and Apache as the web server. Prerequisite: CIS 270: Client-Side Web Programming
CIS 306	Object Oriented Programming 3.00 Introduces a popular object-oriented programming language. Emphasizes object-oriented features of the language: classes and objects, encapsulation, inheritance, and virtual functions. Exposes students to both the syntax and semantics of the language. Applying these features, students complete several small programming projects. Smalltalk and Java are examples of a language that might be chosen. Prerequisite CIS 206 or CIS 244.	CIS 375	Software Engineering 3.00 Introduces the student to the basic concepts and ideas surrounding the discipline of software engineering. The student will analyze and design and implement one or more software projects. The language used will vary. Prerequisites: CIS 254 and 306.
CIS 312	Special Topics in Computing 3.00 Provides for focused study of a special interest topic in computing using learning formats selected by the instructor as best suited for the particular course. Prerequisites for particular course set by the instructor.	CIS 377	Computer Graphics 3.00 Provides an overview and application of the principles and tools of computer graphics. Includes characteristics of graphical display devices, graphics software primitives, representation, manipulation, and display of two- and three-dimensional objects, interactive graphics and the graphical user interface, and animation. Includes graphics programming projects. Prerequisites: CIS 254.
CIS 317	Microcomp Maint Conc & Tech 3.00 Covers the installation, configuration, upgrading, troubleshooting and repair of microcomputer hardware. Includes basic networking concepts and printers. Knowledge of safety and common preventive maintenance procedures is stressed. Prerequisite: CIS 217	CIS 402	Data Base Sys Mgt 3.00 A study of data base management systems with hands-on experience. Students investigate the analysis, design, implementation, and maintenance of a modern data base management system. Prerequisite: CIS 301.
CIS 330	Information Systems Programming 3.00 In-depth study of event-driven programming with a concentration on the retrieval, updating and reporting of information stored in a database. Prerequisite: "C" or better in CIS 202 or permission of instructor.	CIS 403	Data Communications 3.00 Focuses on the OSI model of data communications and uses the model as the basis for discussions of protocols, topologies, transmission media, and communications security. The TCP/IP protocol suite is examined in detail. Prerequisite: CIS 303.
CIS 333	Info Sys Auditing & Security 3.00 Analyzes the information system audit process, provision and evaluation of controls in all aspects of information system operation, and the provision and maintenance of computer security. Stresses internal controls while examining specific controls and security. Prerequisites: CIS 303.	CIS 406	Mobile Application Development 3.00 This course introduces mobile application development for devices such as smart phones and tablets. Students will learn skills for creating and deploying mobile applications on a popular platform including topics such as the development environment, user interfaces, audio, persistence, location, sensors, and graphics. Examples of current platforms are Android and IOS. Prerequisite: CIS 206 or CIS 306. Fall annually.
CIS 340	Discrete Mathematical Structures 3.00 Introduces sets, relations, functions, combinations, graphs, and trees, emphasizing concrete models. Includes computer algorithms and mathematical structures useful in computer science. Designed for	CIS 411	Systems Development Project 3.00 Students develop a computer-based solution to a real problem obtained from the university or the

	community. Working as a member of a group/team, students evaluate an existing system; identify alternative solutions; select a solution; develop a project plan; and design, implement, test, and document the system. Utilizes current technology whenever possible, including microcomputers, and a relational database. Prerequisites: CIS 217, 301, and 402.				
CIS 412	Parallel Processing	3.00		CIS 499	Independent Study 3.00
	Studies the architecture, algorithms, and programming that are involved with parallel processing. Students will learn how parallel architecture affects the design of parallel algorithms and parallel programming. Architectures shall include the prevailing message passing and shared memory architectures. Students will learn how to design parallel algorithms and how to think in parallel. Students will learn how to write parallel programs, using a prevailing parallel programming language. Programming may be done by remotely using an account at a supercomputer center, using serial computers that are working together to solve a problem (a cluster), or using an individual computer which has multiple processors within it. Prerequisites: CIS 253 and CIS 254				Permits students to explore an area of special interest using computers. Department faculty member must direct the special project. Prerequisites: CIS 244 or 330, junior or senior standing.
CIS 422	Internship in Computers	12.00		CMST 101	Debate 3.00
	Provides students the opportunity for practical computer experience in commercial, industrial, governmental, or other participating organizations. Prerequisite: CIS 253 or 330. Junior or senior standing.				Students earn one to three credits through participation on the Debate Team by successfully completing the terms of the Contract for Credit in SCT Activities, subject to approval by instructor and department chair. No more than three credits may be taken in SC 101 during any one semester. Students should not enroll in SC 101 and 256 for credit concurrently. Each semester.
CIS 460	Programming Lang & Comp Theory	3.00		CMST 110	Intro to Human Comm 3.00
	Introduces automata theory and Turing machines as well as the associated formal languages. Students will explore the construction and implementation of programming languages allowing the student to choose and use programming languages in a competent manner. Students will also explore different programming paradigms, such as robotics programming and parallel programming. Prerequisites: CIS/MATH 140 and CIS 254.				A theoretical overview of the concepts involved in the human communication process.
CIS 462	Simulation/Modeling	3.00		CMST 113	Public Speaking 3.00
	Covers the advantages and disadvantages of using computer simulation in modeling. Students learn and practice techniques of computer simulation. Prerequisites: CIS 244 or 330.				Introduces the long tradition of public speaking, examines the role of public speaking in a multicultural world, applies the principles of research, organization and delivery to preparation and presentation of speeches, presents techniques students can use to combat stage fright, teaches applications of listening and critical thinking skills, and provides coaching for delivering a minimum of three in-class speeches designed for a variety of contexts. Each semester.
CIS 470	Project Management	3.00		CMST 160	Intro to Global Understanding 3.00
	Introduces students to basic project management concepts and reinforces those concepts through the use of project management software. Provides students with the knowledge and skills necessary to plan, organize and control information technology projects. Key topics include monitoring and controlling schedules, progress reporting, risk management, quality management, cost management as well as contracting and procurement. Graduate students will analyze a case study; present it to the class; and provide a 10-15 page written report on the case study analysis to the instructor. Prerequisites: CIS 301 and MGMT 320 or permission of instructor.				Introduces students to global perspectives that shape how we facilitate and coordinate interactions with people from different backgrounds through the use of verbal and nonverbal codes.
CIS 470	Project Management	3.00		CMST 200	Interpersonal Comm 3.00
	Introduces students to basic project management concepts and reinforces those concepts through the use of project management software. Provides students with the knowledge and skills necessary to plan, organize and control information technology projects. Key topics include				Focuses on the study of interpersonal communication, specifically the investigation of major theories and research in the field and the application of those theories to improving the students' interpersonal skills.
				CMST 210	Intro to Rhetorical Theory 3.00
					Investigates, on a fundamental level, the historical and conceptual development of the major theories of rhetorical discourse. Applies theories from classical to contemporary to analysis of the spoken word. Stresses speech making and criticism of historical and current political rhetoric.
				CMST 214	Bus & Prof Speaking 3.00
					Develops professional presentation skills. Students learn how to effectively adapt presentations to business audiences and professional contexts as well as manage the constraints associated with technical material and sales objectives. Prerequisites: CMST 113.
				CMST 215	Argumentation & Debate 3.00
					Study of argumentation in the area of academic debate and the legal world. Emphasizes applying theories and techniques of argumentation to developing analytical abilities, reasoning, use of data, and evidence to support arguments.
				CMST 216	Group Discussion 3.00
					Trains students how to facilitate group discussions. Students will learn how to move groups through

- phases of development, effectively assume group task and social roles, and effectively conduct group meetings.
- CMST 217 Listening 3.00**
Explores the process and integral role of listening in human communication from both a theoretical and practical perspective. Identifies different listening skills appropriate for diverse types and purposes of listening. Examines ineffective and effective listening behavior and the consequences of both in every day interactions for a variety of contexts including personal, professional and mass mediated.
- CMST 220 On-Camera Performance 3.00**
This course is designed to develop those skills needed to effectively communicate in front of the camera. The course will explore the principles and applications of various performance techniques involved in a video or film production, and will provide extensive knowledge and practice in the forms and styles of performance for the camera.
- CMST 255 Advanced Debate 3.00**
Further experience in competitive debating and in a variety of debating forms is provided. Prerequisite: Consent of instructor. On demand.
- CMST 281 Great Women Speakers 3.00**
Examines the speeches primarily of American women whose public speaking has had a significant influence on our lives and our culture. Includes the study of speeches and other public communication concerning various social and political issues, movements and causes from 1800 to the present day. Involves analysis and criticism of the content and delivery of speeches.
- CMST 300 Comm in Organization 3.00**
Students develop personal communication competencies in contemporary organizations and gain an understanding of the design and function of communication systems within organizations.
- CMST 311 Small Group Decision Making 3.00**
Trains students to help groups to make decisions. Utilizing techniques such as Nominal Group Technique, Ideawriting, Delphi Method, and Interpretive Structural Modeling, students will help outside clients to make decisions or solve problems.
- CMST 312 Communication & Conflict 3.00**
This is a performance course designed to help students understand, practice, and improve their communication skills when dealing with conflict. Emphasis is placed on developing communication competencies required for successful management and resolution of conflict when dealing with people one-on-one, in small groups, and at work.
- CMST 320 Communication & Gender 3.00**
Investigates the effects of gender roles on communication behaviors, such as naming behavior, language acquisitions, professional orientation, conflict management, self-image, dress, and social roles.
- CMST 321 Nonverbal Communication 3.00**
Increases awareness of students in the areas of nonverbal communication. Describes and analyzes the various concepts of nonverbal communication, applies them to actual situations, and relates them to the entirety of the communication process.
- CMST 331 Communication & Dissenting Voices 3.00**
Introduces the student of rhetorical theory to the tools for analysis of individuals and groups which seek change in the political and social sphere,
- outside the normal decision-making process.
- CMST 332 Methods of Persuasion 3.00**
Study and practice in persuasive speaking. Includes general theories of persuasion, the role of persuasion in a democratic society, and introduces modern experimental research.
- CMST 333 Environmental Rhetoric 3.00**
Explores the interface of the environmental science community, the policy-making community, and the public, and analyzes the persuasive and argumentative strategies used by each community in dealing with various environmental issues (such as climate, waste, fuel, and development issues).
- CMST 360 Leadership Communication 3.00**
The course provides an overview of the role of communication in leadership in a variety of contexts, including interpersonal, small group, intercultural, organizational, and public sphere. It includes theoretical and experiential approaches to effective leadership communication. Students will analyze their personal leadership styles and develop leadership communication skills.
- CMST 410 Rhetorical Criticism 3.00**
Involves study and application of the major types of rhetorical criticism, including both traditional and contemporary approaches. Utilizes various critical forms to analyze and criticize actual speeches and other forms of the spoken word.
- CMST 411 Organization Communication Seminar in Consulting 3.00**
Focuses on the roles and responsibilities of the communication consultant, emphasizing the latest consulting processes, assessment procedures, problem diagnoses, intervention strategies, and client presentations. Designed to facilitate hands-on learning and practical applications. Students will work with outside organizations in completing a communication consulting project. No prerequisite.
- CMST 420 Cross-Cultural Comm 3.00**
Examines the role played by culture in developing personal attitudes, values, and behavior, and to apply this awareness to communicating across cultural differences in a variety of situations, including interviewing, group discussion, and negotiation.
- CMST 421 Comm Theories & Pract Applica 3.00**
Surveys the elements and processes critical to human communication behavior and compares influential communication theories. Emphasizes practical applications of theories.
- CMST 430 Advocacy Campaigns 3.00**
Campaign Advocacy involves the strategies, actions and proposed solutions to influence decision making at the local, state and federal level. It is designed to promote positive changes that affect people and their environments. Campaign Advocacy can be used to protect rights or change unfair, discriminatory or abusive practice. It is used to gain eligibility for services or change the nature and quality of services to better meet the needs of the individual. It is also used to assist in the removal of barriers and limitations which work to prevent full access to full participation in community life.
- CMST 475 Practicum in Communication 6.00**
Provides students with pre-professional development experiences through participation in designated workshops, training sessions, and co-curricular activities designed to promote the effective practice of communication skills critical to success as communication professionals.

CMST 490	Independent Study	3.00			
	Selected topics for research and/or performance projects in speech communication and theatre. Prior to registration, students need to obtain an advisor who will direct their study. Approval by appropriate dean required.				
COOP 301	Coop Anthropology	12.00			
COOP 302	Co-Op Phil	12.00			
COOP 303	Co-Op Political Science	12.00			
COOP 304	Co-Op Sociology	12.00			
COOP 305	Co-Op Social Work	12.00			
COOP 306	Co-Op Art	12.00			
COOP 308	Co-Op Biology	12.00			
COOP 309	Co-Op Environ Science	12.00			
COOP 310	Co-Op Outdoor Ed	12.00			
COOP 311	Co-Op Science Ed	12.00			
COOP 312	Co-Op Chemistry	12.00			
COOP 313	Co-Op Communication	12.00			
COOP 314	Co-Op Advertising	12.00			
COOP 315	Co-Op Journalism	12.00			
COOP 316	Co-Op Public Relations	12.00			
COOP 317	Co-Op Radio	12.00			
COOP 318	Co-Op Tv	12.00			
COOP 319	Co-Op Computer Science	12.00			
COOP 320	Co-Op Accounting	12.00			
COOP 321	Co-Op International Bus	12.00			
COOP 322	Co-Op Banking	12.00			
COOP 323	Co-Op Finance	12.00			
COOP 324	Co-Op Management	12.00			
COOP 325	Co-Op Marketing	12.00			
COOP 326	Co-Op Real Estate	12.00			
COOP 327	Co-Op Economics	12.00			
COOP 328	Co-Op Administration	12.00			
COOP 329	Co-Op Office Management	12.00			
COOP 330	Co-Op Mgt Library Sci	12.00			
COOP 332	Co-Op Early Childhood	12.00			
COOP 333	Co-Op Elementary Ed	12.00			
COOP 334	Co-Op Secondary Ed	12.00			
COOP 335	Co-Op Education	12.00			
COOP 336	Co-Op English	12.00			
COOP 337	Co-Op Writing Center	12.00			
COOP 338	Co-Op Geography	12.00			
COOP 339	Co-Op Earth Science	12.00			
COOP 340	Co-Op Urban Planning	12.00			
COOP 341	Co-Op Health & Safety	12.00			
COOP 342	Co-Op Physical Ed	12.00			
COOP 343	Co-Op Recreation	12.00			
COOP 344	Co-Op Coaching	12.00			
COOP 345	Co-Op Athletic Training	12.00			
COOP 346	Co-Op Water Safety	12.00			
COOP 347	Co-Op Sport Management	12.00			
COOP 348	Co-Op History	12.00			
COOP 349	Co-Op Humanities	12.00			
COOP 350	Co-Op Library Science	12.00			
COOP 351	Co-Op Media	12.00			
COOP 352	Co-Op Math	12.00			
COOP 355	Co-Op French	12.00			
COOP 356	Co-Op German	12.00			
COOP 357	Co-Op Russian	12.00			
COOP 358	Co-Op Spanish	12.00			
COOP 360	Co-Op Music	12.00			
COOP 361	Co-Op Piano	12.00			
COOP 362	Co-Op Instrumentals	12.00			
COOP 363	Co-Op Vocal	12.00			
COOP 364	Co-Op Music Marketing	12.00			
COOP 366	Co-Op Physics	12.00			
COOP 368	Co-Op Psychology	12.00			
COOP 369	Co-Op Counseling	12.00			
COOP 370	Co-Op Student Life Serv	12.00			
COOP 371	Co-Op Student Affairs	12.00			
COOP 372	Co-Op Acad Supp Serv	12.00			
COOP 374	Co-Op Human Relations	12.00			

COOP 376	Co-Op Sped	12.00	COOP 406	Intrn-Art	12.00
COOP 377	Co-Op Rehab Sciences	12.00	COOP 408	Intrn-Biology	12.00
COOP 378	Co-Op Learn Disab	12.00	COOP 409	Intrn-Environ Ed	12.00
COOP 379	Co-Op Ment Retard	12.00	COOP 410	Intrn-Outdoor Ed	12.00
COOP 381	Co-Op Speech Pathology	12.00	COOP 411	Intrn-Science Ed	12.00
COOP 382	Co-Op Audiology	12.00	COOP 412	Intrn-Chemistry	12.00
COOP 383	Co-Op Speech	12.00	COOP 413	Intrn-Communication	12.00
COOP 384	Co-Op Theatre	12.00	COOP 414	Intrn-Advertising	12.00
COOP 385	Co-Op/Respiratory Care	6.00	COOP 415	Intrn-Journalism	12.00
COOP 386	Co-Op Nursing	12.00	COOP 416	Intrn-Public Relations	12.00
COOP 387	Co-Op Med Tech	12.00	COOP 417	Intrn-Radio	12.00
COOP 388	Co-Op Allied Health	12.00	COOP 418	Intrn-Tv	12.00
	COOP 388 provides as elective co-operational educational experience for allied health students who have achieved junior standing. COOP 388 will augment concepts and skills learned in technical studies and Clarion courses in a structured and supervised clinical environment that enhances independent and effective functioning as a health care professional. Students electing COOP 388 must be enrolled in or have completed an approved technical educational program and must have a minimum 2.5 QPA at Clarion or in technical course work. Co-op experiences must be approved in advance by the Allied Health Chair. COOP 388 is offered as credit-no-record. Prerequisite: Enrollment in or completion of an approved technical health care educational program and approval by Allied Health Department Chair.		COOP 419	Intrn-Computer Science	12.00
			COOP 420	Intrn-Accounting	12.00
			COOP 421	Intrn-International Bus	12.00
			COOP 422	Intrn-Banking	12.00
			COOP 423	Intrn-Finance	12.00
			COOP 424	Intrn-Management	12.00
			COOP 425	Intrn-Marketing	12.00
			COOP 426	Intrn-Real Estate	12.00
			COOP 427	Intrn-Economics	12.00
COOP 389	Co-Op Continuing Ed	12.00	COOP 428	Intrn-Admin	12.00
COOP 390	Co-Op Academic Services	12.00	COOP 429	Intrn-Off Management	12.00
COOP 391	Co-Op Financial Aid	12.00	COOP 430	Intrn-Mgt Library Sce	12.00
COOP 392	Co-Op Research	12.00	COOP 432	Intrn-Early Childhood	12.00
COOP 393	Co-Op Admissions	12.00	COOP 433	Intrn-Elementary Ed	12.00
COOP 395	Co-Op L E I P	12.00	COOP 434	Intrn-Secondary Ed	12.00
COOP 396	Co-Op Paralegal	12.00	COOP 435	Intrn-Education	12.00
COOP 397	Co-Op Planetarium	12.00	COOP 436	Intrn-English	12.00
COOP 398	Co-Op Women & Gender Studies	12.00	COOP 437	Intrn-Writing Center	12.00
COOP 401	Intrn-Anthropology	12.00	COOP 438	Intrn-Geography	12.00
COOP 402	Intrn-Phil	12.00	COOP 439	Intrn-Earth Science	12.00
COOP 403	Intrn-Political Science	12.00	COOP 440	Intrn-Urban Planning	12.00
COOP 404	Intrn-Sociology	12.00	COOP 441	Intrn-Health & Safety	12.00
COOP 405	Intrn-Social Work	12.00			

COOP 442	Intrn-Physical Ed	12.00			
COOP 443	Intrn-Recreation	12.00			
COOP 444	Intrn-Coaching	12.00			
COOP 445	Intrn-Athletic Training	12.00			
COOP 446	Intrn-Water Safety	12.00			
COOP 447	Intrn-Sport Management	12.00			
COOP 448	Intrn-History	12.00	COOP 481	Intrn-Speech Path	12.00
COOP 449	Intrn-Humanities	12.00	COOP 482	Intrn-Audiology	12.00
COOP 450	Intrn-Library Science	12.00	COOP 483	Intrn-Speech	12.00
COOP 451	Intrn-Media	12.00	COOP 484	Intrn-Theatre	12.00
COOP 452	Intrn-Math	12.00	COOP 486	Intrn-Nursing	12.00
COOP 455	Intrn-French	12.00	COOP 487	Intrn-Med Tech	12.00
COOP 456	Intrn-German	12.00	COOP 489	Intrn-Continuing Ed	12.00
COOP 457	Intrn-Russian	12.00	COOP 490	Intrn-Academic Services	12.00
COOP 458	Intrn-Spanish	12.00	COOP 491	Intrn-Financial Aid	12.00
COOP 460	Intrn-Music	12.00	COOP 492	Intrn-Research	12.00
COOP 461	Intrn-Piano	12.00	COOP 493	Intrn-Admissions	12.00
COOP 462	Intrn-Instrumentals	12.00	COOP 495	Intrn-L E I P	12.00
COOP 463	Intrn-Vocal	12.00	COOP 496	Internship-Paralegal	12.00
COOP 464	Intrn-Mus Marketing	12.00	COOP 497	Intrn-Planetarium	12.00
COOP 466	Intrn-Physics	12.00	COOP 498	Intern-Women & Gender Studies	12.00
COOP 468	Intrn-Psychology	12.00	CPSC 101	Intro to Computational Science	3.00
COOP 469	Intrn-Counseling	12.00			
COOP 470	Intrn-Student Life Serv	12.00			
COOP 471	Intrn-Student Affairs	12.00			
COOP 472	Intrn-Acad Supp Serv	12.00			
COOP 474	Intrn-Human Relations	12.00	CPSC 201	Surv Computational Sci Tools	3.00
COOP 476	Intrn-Sped	12.00			
COOP 477	Intrn-Rehab Sciences	12.00			
COOP 478	Intrn-Learning Disab	12.00			
COOP 479	Intrn-Ment Retard	12.00			
COOP 480	Intern-Allied Health	12.00	CPSC 301	Adv Computational Science	3.00
	COOP 480 provides an elective internship experience for allied health students who have achieved senior standing. COOP 480 serves as a culminating clinical/professional experience that reinforces independent and effective functioning of students as health care professionals and facilitates consideration of				
				leadership dynamics in health care environments. Students electing COOP 480 must be enrolled in or have completed an approved technical educational program and must have a minimum 2.5 QPA at Clarion or in technical course work. Internships must be approved in advance by the Allied Health Chair and the SONAH Director. COOP 480 is offered as credit-no-record. Prerequisite: Enrollment in or completion of an approved technical health care educational program and approval by Allied Health Department Chair.	
				This course is an introduction to the interdisciplinary field of Computational Science, which integrates mathematical modeling and visualization to solve problems in the physical, life, behavioral, and social sciences. Students will acquire skills in the development of scientific knowledge using experimentation with models and simulation of scientific systems. Prerequisite: MATH 171 or permission of the instructor.	
				This course presents methods and tools used to implement concepts in mathematics and computational science. The tools will include mathematical and statistical functions such as matrix manipulation and linear algebra, polynomials and interpolation, data analysis and statistics, and optimization. This course will prepare students for further work in mathematics and computational science. Prerequisite: MATH 171. Each semester.	
				This course combines a formal presentation of classical methods of design optimization with detailed instruction in the application of these methods using software tools. It introduces students to the symbolic, numerical, and graphic features of these software tools and integrates this powerful	

	combination in the translation of many algorithms into applied optimization techniques with animation. Prerequisite: MATH 260 or MATH 270	
CPSC 490	Projects Computational Science	3.00
	This course applies computational science methods and tools to real-world applications in a semester-long project in the student's major field of study. This is the capstone course in computational science. Prerequisite: CPSC 301	
CRJT 110	Intro to Criminal Justice	3.00
	Provides an overview of the justice system including processing offenders. Examines the nature of criminal law, causes of criminal behavior and discusses the roles of various agencies including police, courts, and corrections. Fall and Spring semesters.	
CRJT 235	Criminology	3.00
	Examines historical and contemporary attempts to explain the origins of criminal behavior and society's reaction to it from a variety of perspectives. Provides students with an understanding of how these theories have influenced the present criminal justice systems. Annually	
CRJT 245	Corrections	3.00
	Provides students with an overview and analysis of the management and organization of correctional institutions. Discusses current practices and trends in the area of corrections including treatment of criminal personalities. Annually	
CRJT 255	Juvenile Justice	3.00
	Examines the formal and informal methods of dealing with the problems of juvenile crime, including the ways in which procedures differ from those involving adult offenders. Provides an analysis of recent trends in juvenile courts and the control and treatment of juvenile offenders. Annually.	
CRJT 260	Policing	3.00
	Provides an overview of issues in policing and law enforcement as well as an examination of the practices of police agencies in the United States. Examines organizational structures for delivering police services and issues concerning police and community interactions. Annually	
CRJT 275	Substantive Criminal Justice Law	3.00
	Examination of the preliminary crimes of solicitation, conspiracy, and attempt. An analysis of the specific elements of crimes against the person and crimes against property. A consideration of defenses to alleged criminal behavior is also undertaken. Annually.	
CRJT 304	Crime, Politics & Public Policy	3.00
	Course treats the ways in which government treats crime as a public policy matter, with a predominant focus on legislative and executive branch activity. Topics may vary somewhat from year to year. Examples of policies to be examined and evaluated include: reducing the incidence of crime, the politics of imprisonment, punitive and restorative justice, decriminalization, drugs and crime, death penalty, gun control, hate crimes, "zero tolerance" approaches, pornography, corporate crime, organized crime, and terrorism. The constitutional and legal framework of policies will also be considered.	
CRJT 325	Special Topics in Criminal Justice	3.00
	This course will investigate special topics within the criminal justice system.	
CRJT 328	Ethics and Criminal Justice	3.00
	This course is a survey of ethical issues for practitioners within the criminal justice system.	
CRJT 330	Advanced Theoretical Criminology	3.00
	This required course will provide an advanced examination of criminological theory will be conducted. Students will identify, apply, and analyze the various criminological paradigms and how each impacts the main components of the criminal justice system, including the work of the criminal justice practitioner. Prerequisite: CRJT 110, 235 or permission of the instructor. Fall or as needed.	
CRJT 341	Legal Liability and the Criminal Justice Practitioner	3.00
	This required course will provide insight into both civil and criminal legal liability issues facing criminal justice practitioners. Specific and current legal topics for those working in the key areas of the criminal justice system will be examined. Federal civil rights actions, tort actions, and criminal sanctions, against law enforcement, corrections, and court system personnel will be examined in detail. Prerequisite: CRJT 275 or permission of the instructor. Fall or as needed.	
CRJT 350	Current Controversies in Criminal Justice	3.00
	This course will examine current issues that impact the criminal justice system. Topics for discussion will vary but may include (but are not limited to): Issues in Diversity, Critical Issues in Policing, Issues in Corrections, Terrorism, Issues within the Courts, Issues in Corrections, Comparative Criminal Justice, Media and Crime, and Computer Crime. Prerequisite: CRJT 110 or permission of the instructor. Fall or as needed.	
CRJT 363	Criminal Procedure	3.00
	A study of the law as it relates to arrest, search, and seizure with emphasis on present controlling legal decisions and historical development, philosophy, and public policy issues underlying these decisions. Prerequisite: PS 211, CRJT 110 or permission of instructor. Annually	
CRJT 365	Special Population in Criminal Justice	3.00
	This required course provides a detailed look at various special populations that have been impacted and continue to be impacted by the American Criminal Justice System. Some groups to be examined include various racial and ethnic groups, the elderly, females, juveniles, the mentally ill, and the mentally disabled. Prerequisite: CRJT 110. Fall or as needed.	
CRJT 370	Victimology	3.00
	This required course seeks to introduce the student to the role of the victim in the crime equation. Course content addresses theories directly related to both individual and group victimization. In addition, systematic responses to crime victims will also be examined so that a more formative understanding and appreciation of victims of crime can be ascertained. Prerequisite: CRJT 110. Fall or as needed.	
CRJT 375	Leadership Methods and Approaches in Criminal Justice	3.00
	This required course will explore the necessity of leadership as it pertains to the various levels of the criminal justice system. The lectures, resource	

materials and activities are designed to provide both intellectual and experiential opportunities to examine various leadership-based challenges faced by current criminal justice professionals working in the field. While the criminal justice system only loosely conforms to the concept of a true system, the need for leaders to think in terms of an integrated criminal justice system will be emphasized. Prerequisite: CRJT 110 or Permission of the instructor. Fall or as needed.

- CRJT 399 Criminal Justice CO-OP 3.00**
Internship opportunities for students in their particular area of interest with local or state institutions.
- CRJT 400 Research Methods in Criminal Justice 3.00**
This required course introduces students to the fundamental concepts and research methods used in criminal justice. Provides students with an understanding of how and why criminologists conduct various types of research and the ultimate impact it has on laws, policy, formal justice-related procedures, and the larger community. Prerequisite: CRJT 330. Fall or as needed.
- CRJT 425 Administratin and Management of Criminal Justice Organizations 3.00**
This required course provides the student with a comprehensive understanding of various topics related to the administration and management of our nation's formal criminal justice organizations. Organizational and managerial theories along with specific and current issues/topics relevant to the daily operations of each branch of the crimial justice system will be examined and explored. Prerequisite: CRJT 110. Spring or as needed.
- CRJT 450 Senior Seminar in Criminal Justice 3.00**
This required course is the capstone class for the entire bachelor's degree program in Criminal Justice Administration. Senior Seminar in C.J. seeks to synthesize knowledge and skills acquired in lower-division courses through a series of culminating assignments, including a final analytical research paper. Prerequisite: CRJT 400. Spring or as needed.
- CSD 125 Intro Comm Disorders 3.00**
Introduces communication disorders. Encompasses the variety of problems humans may have in speech, language, and hearing. Focuses on the nature of such problems, their causes, their impacts on people, methods for their evaluation, and methods for their management. Includes an orientation to the professions of speech-language pathology and audiology.
- CSD 150 Speech Science 3.00**
Analyzes models of the speech mechanism. Emphasizes normal aspects of the physiology and acoustics of speech production. Fall, annually.
- CSD 156 Phonetics & Phonology 3.00**
Transcription of normal and deviant speech using the International Phonetic Alphabet. Applies phonetics and phonemics to language and speech pathology. Explores instruments used in speech and hearing. Spring, annually.
- CSD 251 Anat Speech Hear Mech 3.00**
Study of the anatomy and physiology of the speech and hearing mechanisms. Fall, annually.
- CSD 257 Developmental Sequences in Language and Speech 3.00**
Study of the development of language and speech in the normal child. Normative data in speech and language development are studied.
- CSD 258 Lang Disorders in Children 3.00**
Provides students with an understanding of language disorders in children, etiological factors associated with them, diagnostic and evaluative techniques, and therapeutic methodologies. Prerequisite: CSD 257. Spring, annually.
- CSD 290 Speech, Lang & The Young Child 3.00**
Emphasizes the language development of young children as a portion of their physical, cognitive and social-emotional growth from birth to eight years of age. Provides a framework for observation of normally developing phonological, morphosyntactical, semantic, and pragmatic skills in the young child as well as the documented changes which can be observed in the child with a language disorder. Focuses on the role physical, cognitive, social-emotional, and linguistic factors play in the preliteracy and early literacy experience. Prerequisite: ED 110, ED 121, ECH 235.
- CSD 352 Speech Disorders 3.00**
Begins with an overview of the professions of speech pathology and audiology. Discusses communication disorders using the theoretical basis for service delivery models, communicative development, and cultural differences. Emphasizes diagnosis, team management, and treatment strategies of articulation, voice, resonance, and stuttering disorders. Observation experience is provided. Fall, annually.
- CSD 353 Adult Comm Disorders 3.00**
Reviews the theoretical basis for communication disorders. Emphasizes diagnosis, team management, and treatment strategies of adult language disorders such as aphasia, apraxia, and swallowing disorders.
- CSD 357 Applied Linguistics 3.00**
Study of linguistics fundamentals and theories. Explores specific techniques for analyzing phonological, morphosyntactical, semantic, and pragmatic aspects of speech/language in children and adults. Emphasizes the application of these assessment results to clinical practice. Prerequisite: ENG 263.
- CSD 359 Autism and Communicative Competence 3.00**
Emphasis will be placed on the speech, language, communication and behavioral concerns of individuals with autism spectrum disorders (ASD). A team approach will be emphasized as clinical methods for assessment of and intervention of language and social communication skills are introduced.
- CSD 422 Clinical Externship 12.00**
Supervised observation of and participation in clinic and/or school environments. Provides observational experience.
- CSD 433 Instrm & Psychoacoustics 3.00**
Deals with instruments used in a speech and hearing program and also covers basic principles of hearing science. Provides some information on psychoacoustics. Spring, annually.
- CSD 454 Professional Practicum 3.00**
Explores current professional issues and trends in the practice of speech-language pathology and audiology. Includes licensure and certification. Emphasizes ethical/legal restrictions and obligations that influence professional practitioners.

CSD 455	Spch Lang & Hear Prob	3.00	ECH 122	Preschool Develop & Learning	1.00
				Acquisition of understanding and appreciation of the cognitive, social-emotional, ecological-systems, and physical-motor dimensions of human growth and changes during the preschool years. Emphasizes cultural influences on human growth and change with respect to cognition, learning theories, individual differences, personality, growth, abilities and interests. Explores cross-cultural and multiethnic perspectives with respect to holistic development of preschoolers; involvement with and observation of preschoolers.	
CSD 460	Intro to Audiology	3.00			
	Investigates the nature of hearing disorders and the audiological, medical, social, psychological, and educational implications. Fall, annually.				
CSD 463	Aural Rehabilitation	3.00			
	A comprehensive study of auditory rehabilitation, emphasizing auditory training, speech reading, and speech training. Prerequisite: CSD 460. Spring, annually.				
CSD 465	Manual Communication	3.00	ECH 123	Mid Chld & Adolescent Dev Lrn	1.00
	Covers a comprehensive review of the theories of manual communication, including an introduction to the major manual communication systems. Students learn to sign and finger spell for use in communicating with and rehabilitation of the deaf and hard of hearing.			Acquisition of understanding and appreciation of the cognitive, social-emotional, ecological-systems, and physical-motor dimensions of human growth and changes during middle childhood. Emphasizes cultural influences on human growth and change with respect to cognition, learning theories, individual differences, personality, growth, abilities, and interests. Explores cross-cultural and multiethnic perspectives with respect to holistic development os school age children and adolescents; involvement with and observation of school-aged children and adolscents.	
CSD 467	Clinical Observation	3.00			
	Covers basic information pertaining to the profession of speech pathology and audiology. Provides an orientation to the facilities, equipment, and operations of the Clarion University Speech and Hearing Clinic. Examines various types of clinical reports and teaches basic observational skills both in the classroom and clinic as a prerequisite for client contact for speech and hearing science majors.				
CSD 472	Sem In Speech Science	3.00	ECH 124	Infant & Toddler Dev & Learn	1.00
	Begins with a review of the speech mechanism as a servosystem and transducer, and basic knowledge of the physics of sound. Focuses on the concept that the speech mechanism is a chain of events physiologically, acoustically, and perceptually. Examines each link in this chain of events in terms of basic knowledge, pertinent research, and each link's contribution to the speech chain as a whole. Prerequisite: CSD 156.			This course will provide information that will allow students to identify the characteristics of and design effective and developmentally appropriate learning environments for young children that promote interaction, exploration and knowledge construction. In addition, experiential opportunities will be developed which allow the student to apply this knowledge to various age groups of children.	
CSD 475	Augmentative & Altern Comm	3.00	ECH 231	Creativity in Early Child Curriculum	3.00
	Introduces the student to various augmentative/ alternative communication systems prevalent in the field. Current and comprehensive information relative to type of disorder. Disgnosis and treatment discussed. Emphasizes the application of unique criteria in diagnostic and the administration of competent and flexible management strategies in rehabilitation. Fall, annually.			Explores the nature of creativity and its value in the growth of young children. Students develop and present various open-ended and child-centered projects for the enhancement of creativity and the creative whole learning experience using art, music, and movement. Students demonstrate how to guide young children in creative learning and expression through individual and group projects. Examines the creative process as a source of choosing content, planning lessons, organizing materials, and designing assignments to enable children to develop essential skills and attitudes for creativity. In addition, experimental opportunities will be developed which allow the students to apply this knowledge to various age groups of children. Prerequisites: ED 100. Each semester.	
CSD 498	Special Topics	6.00	ECH 233	Puppetry in Early Child Curriculum	1.00
	Examines various areas of speech pathology and audiology. Professor selects format most suitable to the study. May be offered on request of students, subject to the availability of staff. Enrollment by consent of the instructor. On demand.			Participants will learn the knowledge and skills necessary to implement the use of puppets in the Early Childhood classroom and to appreciate the power of puppets as a vehicle in developing creativity, imagination and self-expression in children. Topics will focus on play, the history of puppets, types of puppets, and the use of puppets in Early Childhood Curriculum.	
CSD 499	Independent Study Csd	3.00	ECH 234	Observation & Assessment in Early Childhood Education	3.00
	Provides students with an opportunity to explore an area of special need or interest in speech pathology and audiology in depth under the supervision of a member of the department. Students must develop a proposed study plan and secure the approval of the proposed director and department chair prior to registration. Prerequisite: Junior or senior standing. Repeatable for a maximum of 6 credits.			Young children from birth to age eight are cared for and educated in diverse early childhood settings. Gives undergraduate students experience in using effective methods for observing, assessing, and documenting young children's development for the purpose of planning appropriate programs, environments, interactions, and adaptations.	
ECH 120	Child Care Health Advocate	3.00			
	Ensuring the health and safety of children is a fundamental component of an early childhood program. This course emphasizes the promotion of the health and safety of children, including recognizing and correcting health and safety problems. This course focuses on best practices in health safety and nutrition for young children.				

- Emphasizes developmentally appropriate practices and legal and ethical responsibilities. Directs students' participation with children of different age groups in a variety of early childhood settings through field-based/case study approaches. Includes 20 hours of field placement. Prerequisite: ED 121. Offered Annually.
- ECH 235 Obs: Const Ech Knowledge Base 3.00**
Young children from birth to age nine are cared for and educated in diverse early childhood settings. Gives undergraduate students experience in using effective methods for observing young children's development, environments, interactions, and adaptations while constructing a wide early childhood knowledge base. Emphasizes developmentally appropriate practices and legal and ethical responsibilities. Directs students' participation with children of different age groups in a variety of early childhood settings through field-based/case study approaches. Includes one hour of class meetings with two-hour field placement per week. Prerequisites: Straight early childhood majors and dual early childhood/elementary majors must take ED 110 and EH 231 prior to this course. Each semester.
- ECH 236 Assess/Plan Ech Knowledge Base 3.00**
Young children from birth to age nine are cared for and educated in diverse early childhood settings. Gives undergraduate students experience in using effective methods for observing, assessing, and documenting young children's development for the purpose of planning appropriate programs, environments, interactions, and adaptations. Emphasizes developmentally appropriate practices and legal and ethical responsibilities. Directs students' participation with children of different age groups in a variety of early childhood settings through field-based/case study approaches. Includes two hours of class meetings with one-hour field placement per week. Field experience assignments are designed for the students to use various types of assessments with young children. Prerequisites: ECH 235. Each semester.
- ECH 240 Nutrition & The Young Child 1.00**
Acquisition and appreciation of the role nutrition plays in the development of the young child. Students will acquire knowledge, skills, and attitudes in planning nutritious meals and snacks. An awareness of the role of the family will be emphasized. Offered on a two-year rotation.
- ECH 245 Lang & Lit in Early Childhood 3.00**
This course will provide information that will allow students to identify specific developmental milestones in speech/language development. In addition, information related to cognitive, social-emotional, and physical growth will be analyzed and synthesized as it relates to the overall maturation of the child and specifically to the speech and language development. Finally, experiential opportunities will be developed which allow the student to evaluate and apply this knowledge to various age groups of children.
- ECH 260 Early Childhood Environments 3.00**
This course will provide information that will allow students to identify the characteristics of and design effective and developmentally appropriate learning environments for young children that promote interaction, exploration and knowledge construction. In addition, experiential opportunities will be developed which allow the student to apply this
- knowledge to various age groups of children.
- ECH 301 Child Development & Guidance 3.00**
This course will provide information that will allow students to understand the process of child guidance and master techniques in child guidance. Through increased knowledge of child development, students will gain understanding of effective child guidance strategies. Experimental opportunities will be developed which allow the student to develop his or her own approaches to child guidance.
- ECH 310 Family-Community Collaboration 3.00**
This course will provide information that will allow students to identify the benefits of family-teacher partnerships, methods for developing partnerships with families and community members. In addition, information related to Family Systems Theory, including the Ecological Systems Theory, collaborating with other professionals and role of the early childhood professional in the community, including advocacy will be discussed and practiced. Finally, experiential opportunities will be developed which allow the student to develop relationships and work collaboratively with families and community members.
- ECH 320 Dev Bases for Learning & Teaching 3.00**
Acquisition of understanding and appreciation of advanced child development for young children birth through eight years. Examines the physical, social, emotional, linguistic, and intellectual characteristics of children of diverse cultural backgrounds within and outside of the United States. Focuses on both typical and atypical development as well as challenging conditions. Must be taken concurrently with ECH 322, 323, 325, 413, and HPE 410. Prerequisites: ED 121 and ECH 235. Each semester.
- ECH 322 Curriculum Bases for Learning and Teaching 3.00**
Focuses on developmentally appropriate curriculum design and implementation and the Pennsylvania Standards Aligned System, including the Common Core for infants, toddlers, and young children ages three to nine. Emphasizes the child's and the teacher's roles in designing, integrating, and adapting curriculum and the physical setting where the curriculum is implemented to meet the needs and interests of all young children including those with disabilities, developmental delays, or special abilities, including instructional strategies and classroom materials. Field experience includes planning, designing, intergrating and implementing curriculum activities with young children. Must be taken concurrently with ECH 301, ECH 310, ECH 323, and ECH 325. For straight ECH majors, ECH 412 must be taken with these courses. Prerequisites: ECH 235, ECH 236. Straight early childhood majors must have also taken ECH 245 and ECH 260. Each semester.
- ECH 323 Language, Literacy and The Young Child 3.00**
Emphasizes three areas: (1) promoting the understanding a learning environment should match how children develop and learn literacy, (2) creating an integrated curriculum for the birth through five years that are linked to standards and benchmark competencies, and (3) enhancing the literacy development of children through appropriate interactions with families and caregivers. Field experience includes teaching literacy lessons to young children and sharing literacy materials and activities with families. Must be taken concurrently with ECH 301, ECH 310, ECH 322, and ECH 325. For

- straight ECH majors, ECH 413 must be taken with these courses. Prerequisites: ECH 235, ECH 236. Straight early childhood majors must have also taken ECH 245 and ECH 260. Each semester.
- ECH 325 Young Children as Theory Bld 3.00**
Explores the process and learning environment that will support, facilitate, and translate course-content areas of science, mathematics, social studies, and technology into a developmentally appropriate constructivist educational practice. Applies theoretical perspective of constructivism to enhance the young child's scientific traits of experimentation, curiosity, creativity, and theory test. Must be taken concurrently with ECH 310, ECH 322, and ECH 325. For straight ECH majors, ECH 413 must be taken with these courses. Prerequisites: ECH 235, ECH 236. Straight early childhood majors must have also taken ECH 245 and ECH 260.
- ECH 410 Motor Learning & Development 3.00**
Provides understanding of motor development and motor learning and how motor activities enhance the total development of young children. Emphasizes the design and implementation of open-ended, developmentally appropriate movement activities to stimulate problem solving and to be the cornerstone of an integrated curriculum. Additional focus on assessment of motor development and motor learning environments. Must be taken concurrently with ECH 320, 322, 323, 325, and 413. Prerequisites: ED 121. Each semester.
- ECH 413 Leadership in Early Childhood Settings 3.00**
Explores knowledge and skills needed to be a leader in early childhood. Emphasis will be placed on developing and managing a caring learning environment that enhances positive interactions among children, parents, staff, instructional teams, and community members. Focus will be on leadership skills in advocacy for families and educational and social systems, and other issues related to families and young children. Grant-writing, advocacy and ethics of professionalism will also be explored. Field experience will consist of a "Stand for Children" advocacy project. Prerequisites: ECH 231, ECH 235, ECH 323, ECH 245, ECH 260. Taken concurrently with ECH 301, ECH 310, ECH 322, ECH 323, ECH 325. Each semester.
- ECH 414 Tch & Lrn Lang & Lit-Grade 1-4 3.00**
Overview of current definitions and basic approaches in literacy assessment and instruction in the primary grades. Investigates literacy development and important instructional considerations for teachers of learners in the primary grades. Prerequisites: ECH 235, ECH 236, ECH 301, ECH 310, ECH 322, ECH 323, ECH 325. Must be taken concurrently with ECH 415, ECH 416, ECH 418, and HPE 410.
- ECH 415 Lrn & Tch Math-Grade 1-4 3.00**
Focuses on principles in teaching mathematics to young children, mathematics processes in early childhood, the National Council of Teachers of Mathematics Principles and Standards for School Mathematics, and involving and assisting parents and communities in understanding childhood development in mathematics. Field experience opportunities will allow the teacher candidate to plan and teach mathematics lessons to children in grades one through four.
- ECH 416 Lrn & Tch Soc Study: Grades1-4 3.00**
This course coordinates theory and practice in the teaching of early childhood school social studies. It provides historical perspective, and examines current research, curriculum programs and trends, and methods and materials applicable to social studies teaching in a pluralistic society. ECH 416 emphasizes the development, selection, management and evaluation of materials and experiences that foster concept development, inquiry, and knowledge construction in social studies. The course also addresses the needs of diverse students populations, integration of content areas and application of technology. Field experience opportunities will allow the student to plan and teach social studies lessons to children in grades 1-4. Prerequisites: Early Childhood COre ECH 235, ECH 236, and PreK-K Block (ECH 301, ECH 310, ECH 322, ECH 323, ECH 235). Each semester. Must be taken concurrently with ECH 414, ECH 415, ECH 417, ECH 418, and HPE 410.
- ECH 417 Tech for Early Child Educators 3.00**
This course is designed to facilitate future early childhood educators with the knowledge skills, and dispositions for integrating technology into their classroom instruction and for using technology to improve professional productivity. Students will explore the relationship among ISTE (International Society for Technology in Education) standards, NAEYC (National Association for the Education of Young Children) standards, and PA Learning standards for Early Childhood and those PA Academic Standards related to PreK-4 learners and the appropriate and effective uses of contemporary educational technology. These concepts will be applied to the development of instructional materials that can be used for assessing learning and promoting achievement for all students in grades PreK-4. Prerequisites: ED 121, ECH 235 and 236, acceptance in the early childhood certification, Pre-K Block. Each semester. Must be taken concurrently with ECH 414, 415, 416, 418 and HPE 410.
- ECH 418 Lrn & Tch Science-Grades 1-4 3.00**
Focuses on principles in teaching science to young children, scientific inquiry and processes in early childhood, the National Science Teachers Association and National Science Education Standards, and involving and assisting parents and communities in understanding childhood development in mathematics. Emphasis will also be placed on developing effective learning environments to promote science explorations, investigation and inquiry. Field Experience opportunities will allow the teacher candidate to plan and teach science lessons to children in grades one through four. Prerequisites: Early Childhood Core ECH 235, ECH 236, and PreK-K Block (ECH 301, ECH 310, ECH 322, ECH 323, ECH 325). Must be taken concurrently with ECH 414, ECH 415, ECH 416, ECH 417 and HPE 410.
- ECH 420 Iss & Advocacy in Ech Ed 3.00**
Examines incidental learning of children through their interactions with the people and society's major institutions. In-depth exploration of the family as a diverse and primary institution influencing children and the interface with the educational and social systems. Analyzes current issues and public policies as related to systems theory. Topics vary by semester. Emphasizes advocacy and ethics of professionals to help young children cope with issues that affect them and will contribute to institutional change to meet the needs of young children. Prerequisite: ECH 322 and ECH 413. Annually.

ECH 421	Child Care Management and Admin.	3.00	This course is designed to provide an overview of management and administration of child care centers. The focus is to provide a foundation for early childhood professionals in order to be able to operate, manage and oversee a child care center. Emphasizes the business of child care, including fiscal management, insurance, risk management, strategic planning, marketing, human resources, data and technology management, facilities operations and management, grant writing, time organization and management strategies.	
ECH 424	Early Child Student Tch	6.00	Professional practicum requires integration and application of instructional, management, and professional knowledge and competencies in school and agency settings. After an orientation to the school and agency setting, students teach under the direction of a cooperating professional and university supervisor. Two field assignments offer diversity in grade levels (N-K, 3), ability levels of pupils, content areas, school and community size, multicultural settings, and/or cooperating professionals. Prerequisites: Completion of 90 semester hours, satisfactory standing in admission and retention standards in the college, completion of all required professional courses in certification area with a minimum grade of C, a cumulative 2.75 QPA, and meeting university residence requirements. Each semester.	
ECH 425	Early Child Student Tch	6.00	Professional practicum requires integration and application of instructional, management, and professional knowledge and competencies in school and agency settings. After an orientation to the school and agency setting, students teach under the direction of a cooperating professional and university supervisor. Two field assignments offer diversity in grade levels (N-K, 3), ability levels of pupils, content areas, school and community size, multicultural settings, and/or cooperating professionals. Prerequisites: Completion of 90 semester hours, satisfactory standing in admission and retention standards in the college, completion of all required professional courses in certification area with a minimum grade of C, a cumulative 2.75 QPA, and meeting university residence requirements. Each semester.	
ECON 140	Personal Money Management & Consumer Economics	3.00	Examines major aspects of personal financial management, including budgeting of income and expenditures, transactions, and relations with banks and other lending institutions, insurance and retirement plans, home ownership, personal taxes, savings, and investment plans. B.S.B.A. majors may apply this course only as a free elective. Each semester.	
ECON 150	Econ Aspects of Aging	3.00	Introductory analysis of economic factors associated with an aging population. Includes the economics of providing for income maintenance, housing, health care, social service, and leisure activities. Discusses the economic implications of individuals and the economy. Spring, biennially.	
ECON 161	Global Bus & Econ Issues	3.00	Introduction to basic principles of economics through the examination of contemporary global economic problems. Issues include basic economic	development and trade, economic causes of global conflict, patterns of international capital flows, global energy dependence, and international human capital transfers. The course is aimed at developing a basic understanding of the economic dimension of global business and political issues. Every Fall.
	ECON 175	Free Ent & Pub Policy	3.00	Introduces the history of economics as a social science, the theory and application of microeconomics and macroeconomics, international economics, and economic alternatives in current social problems. Freshman-level course can be used only as general education elective in either the associate's degree program or the baccalaureate degree programs. Majors in the College of Business Administration are excluded from the course. Each semester.
	ECON 202	Ecological Economics	3.00	Examines the interdependence between the economy and the environment. Analyzes alternative theories of justice used in deciding environmental issues. Explores economic perspectives of problem resolutions in general and with respect to specific environmental problems. Spring, annually.
	ECON 211	Prin of Macro	3.00	Introduces macroeconomics, national income analysis, money and banking, monetary and fiscal policies, inflation, unemployment, and international finance. Note: ECON 211 and 212 may be taken in either sequence. Each semester. Fall, annually at Venango.
	ECON 212	Prin of Micro	3.00	Introduces microeconomics, consumer behavior and demand, organization of production, market structures, the pricing of inputs and outputs, and international trade. Note: ECON 211 and 212 may be taken in either sequence. Each semester.
	ECON 215	Prin of Economics (Honors)	4.00	This course is an accelerated combination of Economics 211 and Economics 212. Topics covered are national income analysis, money and banking, monetary and fiscal policies, inflation, unemployment, consumer behavior and demand, organization of production, market structures, the pricing of inputs and outputs, and international trade and payments.
	ECON 221	Econ-Bus Stat I	3.00	Covers descriptive statistics, probability, probability distributions, mathematical expectation, sampling distributions, and confidence intervals. Emphasizes application of these statistical techniques in the areas of business and economics. Prerequisites: College algebra or equivalent and sophomore standing. Each semester. Fall, annually at Venango.
	ECON 222	Econ-Bus Stat II	3.00	Covers hypothesis testing, the analysis of variance, regression and correlation analysis, non-parametric statistics, and time series and index numbers analysis. Emphasizes applications of these techniques in the area of business and economics. Introduces students to the use of a prewritten computer statistical estimation program. Prerequisite: ECON 221. Each semester.
	ECON 230	Econ & Bus Stats (Honors)	4.00	This course is an accelerated combination of Economics 221 and Economics 222. Topics covered are descriptive statistics, probability, probability distributions, mathematical expectation, sampling distributions, confidence intervals, hypothesis testing, the analysis of variance and covariance, regression

- and correlation analysis, nonparametric statistics, and time series analysis. Applications of these techniques in the area of business and economics are emphasized. Statistical computer routines will be used. This course cannot be used to meet general education requirements.
- ECON 309 Managerial Economics 3.00**
The application of microeconomic analysis to managerial decision-making in the global environment. Topics include decision-making under uncertainty, demand and demand estimation, production and cost theory, statistical estimation of production and cost functions, market structures, and pricing decisions. The course is designed for upper-division business administration students and utilizes tools covered in required lower-division prerequisite courses. Prerequisite: ECON 222.
- ECON 310 Interm Micro 3.00**
Examines the behavior of consumers, producers, and the economic theory of production and output determination in commodity and resource markets. Prerequisite: ECON 212. Each semester.
- ECON 311 Interm Macro 3.00**
Explores national income accounting and analysis, theories of consumption and investment expenditures, the role of money in a dynamic economy, economic growth, and public policy. Prerequisite: ECON 211. Fall, annually.
- ECON 312 Compara Econ Syst 3.00**
Analyzes alternative patterns of economic control, planning, and market structure. Compares and evaluates experiences under capitalism, socialism, and mixed economics. Prerequisites: ECON 211 and 212. Spring, annually.
- ECON 314 Urban & Reg Econ 3.00**
Introduces subnational economics. Includes elementary trade theory, location theory, systems of cities, land use changes, and the employment and income generating activities of cities. Emphasizes the economics of housing, transportation, poverty, discrimination, and public sector activity. Prerequisites: ECON 211 and ECON 212. Spring, biennially.
- ECON 323 App of Bus & Econ Stats 3.00**
Applies the statistical methods of probability, sampling, estimation, analysis of variance, regression, and correlation in the areas of economics and business. Prerequisite: ECON 222.
- ECON 342 Econ of Governmt & Bus 3.00**
Examines theoretical and empirical analysis of the effects of government policy on business behavior and economic efficiency in a market economy. Includes regulatory theory and policy; antitrust policy; social regulation of business and markets; and international trade policy. Prerequisites: ECON 211 and 212. Spring, biennially.
- ECON 351 Labor Economics 3.00**
Applies theory of the market to labor. Stresses the evolution of labor law, collective bargaining, labor unions, and government policy. Prerequisites: ECON 211 and 212. Fall, annually.
- ECON 361 Inter Econ Relat 3.00**
Examines theory and practice of international trade. Considers balance of payments, foreign exchange, national commercial policies, international investment, and foreign aid. Prerequisites: ECON 211 and 212. Fall, annually.
- ECON 363 Economic Development 3.00**
Surveys development models, development policies,
- and problems of development in developing countries. Identifies major economic questions relevant to less-developed economies and showing how economic analysis can be used to further understanding of the obstacles to development and formulating appropriate policies. Prerequisites: ECON 211 and ECON 212. Spring, annually.
- ECON 370 Money and Banking 3.00**
Explores nature and origins of money; the commercial banking system and money creation; central banking and the Federal Reserve System; monetary policy and domestic and international economic stability. Prerequisites: ECON 211 and 212. Spring, annually.
- ECON 371 Public Finance 3.00**
Analyzes public sector activity and its impact upon resource allocation and income distribution. Includes the theory of public expenditures, public choice, cost-benefit analysis, and fiscal federalism. Investigates the structure, incidence, and incentive effects of the personal income tax, corporate income tax, and various consumption and wealth taxes. Prerequisites: ECON 211 and 212. Fall, annually.
- ECON 450 Business Honors Seminar 1.00**
This course is designed to give students a broad range of opportunities to enhance professional experience in their chosen field by developing a relevant service project, working with a business leader in a mentorship arrangement, or presenting research at a regional or national academic conference. A thesis derived from HON 350 (Junior Seminar) would also qualify if professionally presented. Each project must be approved by the director of the honors program and chairperson of the Economics Department. Junior standing is required. Enrollment is restricted to students in one of the following: enrolled in the Honors Program or PHAROS program; have an overall QPA of 3.4 or higher; are in a post-baccalaureate status; or are enrolled in a graduate program. Spring, annually.
- ECON 461 Int'l Fin Econ & Capital Mkts 3.00**
An applied analysis of international economics and the behavior of multinational corporations, with a special emphasis on the economics of technology transfer. Topics include: theory of the firm; foreign direct investment; intellectual property rights; market imperfections; international trade; international finance; economic development; and technology transfer. Prerequisite: ECON 361, or consent of the instructor. Spring, biennially.
- ECON 470 Business Cycles and Forecastng 3.00**
Explores theories of business fluctuations; applications of modern income theory to business cycles; examination of business cycle indicators and forecasting techniques. Prerequisites: ECON 211 and 222, or consent of the instructor. Spring, annually.
- ECON 490 Hist of Econ Thgt 3.00**
Examines development of economic ideas from ancient times to the present. Emphasizes the period from Adam Smith onward. Considers the economic and political environment in which ideas emerged as well as the leading economists advancing or defending the ideas. Prerequisites: ECON 211 and 212 and senior standing. Spring, annually.
- ECON 491 Independent Study 3.00**
Provides an opportunity to explore in depth a problem or area of economics, according to the student's interest, under the direction of a faculty member of the department. Prerequisites: 2.75 QPA

- and consent of both instructor and department chair. Maximum credit granted in ECON 491 is six credits.
- ECON 492 Special Topics in Econ 3.00**
Provides an opportunity for students to investigate specific topics or current issues. Prerequisites depend upon the subject to be covered.
- ED 110 Ed Found For Middle & High Sch 3.00**
Familiarizes teacher candidates with middle/senior high schools by emphasizing the role, philosophy, and organization of middle/senior high schools in today's diverse society. Covers historical, philosophical, psychological, and sociological perspectives by examining major concepts, principles, theories, and research of developmentally responsive middle/senior high programs and schools; examines middle/senior high school governance, finance, teachers' legal, ethical and professional rights and responsibilities; highlights effective teaching practices and integrative curriculum at the middle/senior high levels; explores current issues in American education. Classroom field observations and explorations in a middle/senior high school, requiring state and federal clearances, are required in addition to regularly scheduled class sessions.
- ED 121 Human Develop & Learn 3.00**
Acquisition of understanding and appreciation of the cognitive, social-emotional, ecological-systems, and physical-motor dimensions of human growth and changes (birth through adolescence). Emphasizes cultural influences on human growth and change with respect to cognition, learning theories, individual differences, personality, growth, abilities, and interests. Explores cross-cultural and multiethnic perspectives with respect to holistic development of children and adolescents; involvement with and observation of individuals at various levels of development. Each semester.
- ED 122 Educational Psychology 3.00**
Examines pre-adolescent and adolescent development, learning theories, and education environments in a multicultural society from the perspective of educational psychology. Emphasizes learning theory and adolescent characteristics, including development and motivation as they impact teacher decision-making in the middle and high school levels of learning. Special attention paid to critical thinking and experiential processes to engage students in a critical constructivist process. Prerequisite: ED 110; Clearances required for school observations.
- ED 217 Micro Applications in Classroom 3.00**
Introduces pre-service educators (K-12) to microcomputer technology and prepares them to use microcomputers as tools in their classroom. While acquiring computer skills, students explore, use, and demonstrate competence in each of the following areas: word processing, databases, spreadsheets, multimedia/hypermedia, CD-ROM, desktop publishing, software applications, instructional design, telecommunications, and major issues associated with the use of technology in education. Course complements students' specific areas of expertise.
- ED 225 Multicultural Education 3.00**
Provides prospective teachers with a comprehensive understanding of the complexity of ethnic diversity and pluralism in the United States, and explores pluralism from a global perspective. Analyzes the goals, rationale, meaning, assumptions, and necessary school conditions for effective teaching and learning in multicultural multi-ethnic schools, fostering multicultural competencies and preparing prospective teachers for multicultural multi-ethnic classrooms. Emphasizes interpersonal and pedagogical skills needed for success of teacher and learner.
- ED 327 Inst Strat & Mgmt Sec & K-12 3.00**
Explores basic skills of planning, designing, implementing, and evaluating the teaching-learning and management process through a clinical approach to teaching. Focuses on teacher effectiveness research and its application to instructional strategies and materials, classroom and behavior management, and educational technology. Includes peer teaching and simulations as integral components of the course. Incorporates variety of instructional strategies: lecture, discussion groups, simulations, peer teaching, and group and individual analysis peer teaching experiences. Prerequisite: ED 121 or 122.
- ED 328 Methods of Teaching & Evaluating Language Arts 3.00**
Prepares aspiring secondary school teachers in the methods of teaching such language-based subjects as speech, composition, literature, grammar, and reading, as well as media use. Observations and teaching experiences in area schools are included. Prerequisite: ED 327.
- ED 329 Educational Assessment 3.00**
Examines construction, selection, administration, interpretation, and utilization of evaluation techniques and instruments, including statistical interpretations. Emphasizes analysis of standardized tests applicable to various content areas, as well as the construction and utilization of qualitative assessment techniques. Taken concurrently with the methods courses (block) for secondary education majors. Taken prior to the methods courses (block) for elementary education majors. Prerequisite: ED 327 and admission to Certification Program. Each semester.
- ED 332 Meth of Teaching Secondary Science 3.00**
Prepares biology, chemistry, earth science, general science and physics teachers for the secondary schools. Emphasizes formulating objectives, selecting and organizing content, developing skill in using a variety of teaching strategies, and evaluating pupil progress. Stresses the investigatory approach to teaching biology in laboratory, field, and simulated teaching experiences. Includes observations and teaching experiences in area schools. Prerequisite: ED 327. Each semester.
- ED 333 Tchng Reading-Sec 3.00**
Examines techniques for helping secondary students develop reading skills needed to comprehend content-area textbooks. Students will examine those skills in their certification area. Applies skills and competencies developed in ED 225: MULTICULTURAL EDUCATION. Required course for secondary education majors. Requires participation experiences in the schools. Prerequisite: ED 327.
- ED 337 Meth Tch & Eval Soc Stu 3.00**
Coordinates knowledge of the social science disciplines with various teaching strategies appropriate for instruction at the junior and senior high school levels. Provides a historical perspective, examination of current research, curriculum programs and trends, and methods and materials applicable

	to unit type social studies teaching in a pluralistic society. Emphasizes the development, selection, management, and evaluation of materials and experiences that foster concept development, inquiry and critical thinking in social studies. Considers addressing the needs of diverse student populations, integrating social studies with other current areas, addressing national and state standards, and the applications of technology. Prerequisite: ED 327. Each semester.		chair and the instructor. McKeever Center in Sandy Lake, PA, will be a site for this course. Offered for two weeks at a time during Summer Pre-session.
ED 339	Meth Tch & Eval Math 3.00 Explores place and function of mathematics in secondary education, content improvement and evaluation of instruction in mathematics, acquaintance with current literature and research, and observation in secondary schools. Includes observations and teaching experiences in area schools. Prerequisites: ED 327 and nine hours of college mathematics. Fall, annually.	ED 406	Gender Issues in Ed 3.00 Examines the ways in which schools perpetuate gender bias and how educational institutions, as a reflection of the patriarchal society in which they coexist, provide different experiences and outcomes for female and male students and teachers. Prerequisite: ED 110 or WS 100 for WS 406 or permission of instructor.
ED 350	Tch English Lang Learners 3.00 Introduces participants to background, methods, and strategies needed to effectively teach English Language Learners. Includes research and theory of second language acquisition, bilingualism, the difference between social and academic proficiency, and the roles that culture and language play in learning. Explores importance of native language support in achieving academic success and teacher's role in building a safe classroom where diversity of languages and cultures are welcomed and encouraged. Investigates culturally diverse students' values expressed through beliefs and behaviors. Requires active participation through class discussion, opportunities for practice-teaching, evaluation and development of materials and instructional plans, reflection and self-critique. Prerequisite: ED 121 or 122.	ED 407	Assessment for Online Learning 3.00 This course will focus on the use of performance-based assessments and summative and formative assessment methods used in online learning environments. The course will include best practices for grading online, plagiarism, evaluation tools, rubrics for online portfolios, and record keeping. Prerequisite: ED 400.
ED 400	Foundations of Distance Learning 3.00 This course provides the basic information you need to become a knowledgeable distance education educator. The course will cover theory and research that influences distance learning, the practical skills and knowledge needed to function in a distance learning environment, and will explore management and administrative issues that arise in distance education learning environments. Prerequisite: Senior undergraduate education standing. Offered each fall.	ED 409	Fld Based Multicul Ed: Obs Urb 3.00 Provides opportunities for pre-service teachers, both elementary and secondary education majors, and both undergraduate and graduate students, to interact with teachers and students in urban public schools whose backgrounds are different from their own. Analysis the goals, rationale, meaning, assumptions, and necessary school conditions for effective teaching and learning in multicultural/multi-ethnic, urban schools, fostering multicultural competencies and preparing prospective teachers for multicultural/multi-ethnic, urban classrooms. Emphasizes interpersonal and pedagogical skills needed for success of teachers and learners in urban schools. Includes community service in neighborhoods near the host school. Prerequisite: ED 110, 121 or 122. Offered each Summer, on demand.
ED 401	Meth Environ Ed 3.00	ED 413	Advanced Techniques for Online Teaching 3.00 This course builds upon the fundamental concepts and structures of online teaching and learning. This course addresses the advanced teaching and learning applications of a Learning Management System. The course will explore and implement techniques for online instructions such as using a variety of online tools, technologies, and web 2.0 tools, to help instructors transfer knowledge most effectively in the online environment. Prerequisite: ED 400. Offered in Fall and Summer.
ED 402	Creative Response to Conflict 3.00 A study of the current research in the development of a classroom environment which fosters cooperation, communication, affirmation, and problem-solving for children as well as for teachers, staff, instructional teams, parents, support personnel, and other adults. Emphasizes human capabilities for resolving conflicts at various life stages and situations. Examines a range of discipline models as their implementation relates to the classroom environment. (Designed to be taken in conjunction with student teaching in the undergraduate program, or as an elective in the master's program.) Prerequisite ED 121 or 122 for undergraduate credit. Summer only, on demand..	ED 414	Literacy Training 3.00 Enables student volunteers to teach in literacy programs aimed at adult and secondary school learners in different settings. Integrates basic methods for instruction in vocabulary, comprehensive study skills, and writing with the aim of fostering an appreciation for reading. Open to all university students regardless of major. Prerequisites: 2.50 QPA minimum, sophomore or above standing, and consent of instructor.
ED 403	Field Exp & Meth Envr Ed 3.00 Focuses on methods used to teach environmental knowledge, concepts, and concerns, including the history and research in environmental education. Examines the relationship of all curriculum areas to environmental education. May be taken for graduate credit with the approval of the Education Department	ED 417	Technology Integration for Middle Level and High School Educators 3.00 This course is designed to facilitate future middle level and high school educators with the knowledge, skills, and dispositions for integrating technology into their classroom instruction and for using technology to improve professional productivity. Students will explore the relationship between ISTE and those PA Academic Standards related to middle level and high school learners. These concepts will be applied to the development of instructional materials that

can be used for assessing learning and promoting achievement for all students in the middle and high school grades. Prerequisites: Acceptance into the COEHS certification program.

- ED 420 Ind Interven for Stu Tch 6.00**
Professional development program of intervention designed for students who require individualized experiences to successfully demonstrate professional knowledge and competencies in school and agency settings. Implementing an Individualized Intervention Plan (IIP) prepares students for successful field experiences and enables them to develop the knowledge, skills, and attitudes needed to become successful classroom practitioners. Does not fulfill the student teaching requirement. Prerequisites: Recommendation of director of field services, university student teaching supervisor, Elementary/Secondary Block Committee, and/or Education Department chair. Completion of 90 semester hours, satisfactory standing in admission and retention standards in the college, completion of all required professional courses in certification area with a minimum grade of C, a cumulative QPA of 2.75, and meets university residence requirements. On demand.
- ED 421 Modern Lang Student Tch 6.00**
Professional practicum requires integration and application of instructional, management, and professional knowledge and competencies in elementary and secondary school settings. After an orientation to the school setting, the student teaches under the direction of a cooperating professional and university supervisor. Two field assignments will offer diversity in grade levels K-12, ability levels of pupils, content areas, school and community size, multicultural settings, and/or cooperating professionals. Prerequisites: Completion of 90 semester hours, satisfactory standing in admission and retention standards in college, completion of all required professional courses in certification area with a minimum grade of C, a cumulative 2.75 QPA, and meeting university residence requirements. Each semester.
- ED 423 Libr Pract in Sec Sch 6.00**
Professional practicum requires integration and application of instructional, management, and professional knowledge and competencies in library settings in secondary schools. After an orientation to the school and library, the student participates in management, technical services, literary enrichment, and instructional activities under the direction of a cooperating professional and university supervisor.
- ED 424 Sec Student Teaching 6.00**
Professional practicum requires integration and application of instructional, management, and professional knowledge and competencies in library settings in secondary schools. After an orientation to the school and library, students participate in management, technical services, literary enrichment, and instructional activities under the direction of a cooperating professional and university supervisor. Two field assignments offer diversity in grade levels, ability levels of pupils, content areas, school and community size, multicultural settings, and/or cooperating professionals. Prerequisites: Completion of 90 semester hours, satisfactory standing in admission and retention standards in the college, completion of all required professional courses in

certification area with a minimum of grade of C, a cumulative 2.75 QPA, and meeting university residence requirements.

- ED 425 Sec Student Teaching 6.00**
Professional practicum requires integration and application of instructional, management, and professional knowledge and competencies in library settings in secondary schools. After an orientation to the school and library, students participate in management, technical services, literary enrichment, and instructional activities under the direction of a cooperating professional and university supervisor. Two field assignments offer diversity in grade levels, ability levels of pupils, content areas, school and community size, multicultural settings, and/or cooperating professionals. Prerequisites: Completion of 90 semester hours, satisfactory standing in admission and retention standards in the college, completion of all required professional courses in certification area with a minimum of grade of C, a cumulative 2.75 QPA, and meeting university residence requirements.
- ED 426 Environ Ed Student Tch 6.00**
Professional practicum requires integration and application of instructional, management, and professional knowledge and competencies in an environmental education setting. After an orientation to the environmental education setting, the student will teach under the direction of a cooperating professional and university supervisor. Two field assignments will offer diversity in grade levels, ability levels of pupils, content areas, school and community size, multicultural settings, and/or cooperating professionals. Prerequisites: Completion of 90 semester hours, satisfactory standing in admission and retention standards in the college, completion of all required professional courses in certification area with a minimum grade of C, a cumulative 2.75 QPA, and meeting university residence requirements. Each semester.
- ED 432 Student Tch In Music Ed 6.00**
Professional practicum requires integration and application of instructional, management, and professional knowledge and competencies in music settings in elementary, middle, and secondary schools. After an orientation to the school and music settings, students teach classes and participate in choral and instrumental music activities under the direction of a cooperating professional and university supervisor. Two field assignments offer diversity in grade levels K-12, ability levels of pupils, content areas, school and community size, multicultural settings, and/or cooperating professionals. Prerequisites: Completion of 90 semester hours, satisfactory standing in admission and retention standards in college, completion of all required professional courses in certification area with a minimum grade of C, a cumulative 2.75 QPA, and meeting university residence requirements. Each semester.
- ED 433 Student Tch In Music Ed 6.00**
Professional practicum requires integration and application of instructional, management, and professional knowledge and competencies in music settings in elementary, middle, and secondary schools. After an orientation to the school and music settings, students teach classes and participate in choral and instrumental music activities under the direction of a cooperating professional and university

	supervisor. Two field assignments offer diversity in grade levels K-12, ability levels of pupils, content areas, school and community size, multicultural settings, and/or cooperating professionals. Prerequisites: Completion of 90 semester hours, satisfactory standing in admission and retention standards in college, completion of all required professional courses in certification area with a minimum grade of C, a cumulative 2.75 QPA, and meeting university residence requirements. Each semester.	
ED 434	Workshop 2.00 Provides opportunities for in-service teachers to encounter new ideas, knowledge, and methods in meeting problems in today's schools. Prerequisite: Teaching experience in the elementary or secondary schools.	
ED 439	Sec Lang Acq & Mtd Tch Wrld Lg 3.00 Examination of the physiological and linguistic foundations of modern language acquisition. Techniques of teaching and evaluating modern languages and cultures. Analysis of recent research in the area of second language acquisition with a focus on the integration of the National Standards for Foreign Language Education.	
ED 450	Independent Study 3.00 Provides students with opportunity to explore an area of special need or interest in education in-depth, under the supervision of a member of the department. Students develop a proposed study plan and secure the approval of the proposed director and department chair before registration. Prerequisite: Junior or senior standing.	
ED 490	Prof Sem in Social Studies 1.00 Examines problems, practices, regulations, and other information relevant to social studies majors during their student teaching semester. Using a constructivist approach, students will reflect on and apply: federal and state law relevant to the work of student teachers and beginning teachers, student teaching objectives and educational objectives of student teaching centers, professional ethics, function of professional organizations, Praxis preparation, classroom management and conflict resolutions strategies. Prerequisite: Secondary block. Each semester.	
ED 499	Special Topics 3.00 Examines current topics and issues in education. Topics, announced in advance, focus on the needs and interests of educators.	
EDML 322	Tch of Elem Sci 3.00 Examines methods of presenting science in the elementary school. Provides experiences in learning process, scope and sequence of science concepts, methods of investigation, problem solving, laboratory skills, scientific attitudes, newer curricula, reading materials, observing and working with elementary school children, and developing, teaching, and evaluating lessons. Two hour lecture and two hours laboratory weekly. Each semester.	
EDML 324	Tch Elem & Middle Sch Math 4-8 3.00 Focuses on principles in teaching mathematics to children in the middle grades (4-8), mathematics processes in middle grades, the National Council of Teachers of Mathematics Principles and Standards for School Mathematics, and involving and assisting parents and communities in understanding childhood development in mathematics. Prerequisites: MATH 111, SPED 422, SPED 418. Must be taken with ELED	
	327, ELED 329, and ELED 332 as a part of the ELED pre-block.	
EDML 325	Meth Tch El & Mid Sc Soc Stdy 3.00 This course for teachers in grades 4-8 emphasizes the development, selection, management and evaluation of materials and experiences that foster concept development, inquiry and critical thinking in social studies. The course also addresses the needs of diverse student populations, integration of content areas and application of technology. Prerequisite: ELED 327 and ELED 329.	
EDML 327	Instructional Strategies & Classroom Management for Middle Level 3.00 Explores basic skills of planning, designing, implementing, and evaluating the teaching-learning and management process at the Middle School level. Focuses on teacher effectiveness research and its application to instructional strategies, materials, and classroom/behavioral management. Includes peer teaching and field observations as integral components of the course. Prerequisites: ED 122 and certification program admission.	
EDML 329	Educational Assessment 3.00 Examines construction, selection, administration, interpretation, and utilization of evaluation techniques and instruments, including statistical interpretations. Emphasizes analysis of standardized tests applicable to various content areas, as well as the construction and utilization of qualitative assessment techniques. This is taken prior to the methods courses (block(s)).	
EDML 332	Connect Lit & Literacy Mid Grd 3.00 Surveys appropriate literature and a variety of expository and narrative texts, emphasizing development of a knowledge base for using meaningful, appropriate texts to enhance comprehension, fluency, and vocabulary development as well as a rich general knowledge base. Focuses on the history and development of literature for children and adolescents, evaluation and selection criteria, literature representative of diverse cultures, the most recent areas of expansion in literature for the middle grades and its uses in developing content area knowledge and supporting literacy learning and development. Each semester.	
EDML 333	Content Area Reading Strategies 3.00 Overview of current definitions and basic approaches in intermediate and middle grades literacy assessment and instruction. Familiarizes students with techniques, strategies, and materials used to provide literacy assessment and instruction for intermediate and middle grade levels.	
EDML 334	Integ Lang Arts Middle Grades 3.00 Reflects an integrated approach for teaching language arts throughout the middle grades. Irrors the constructivist approach to teaching. Bases teaching strategies on cognitive, psycholinguistic, and sociolinguistic theories of how individuals learn to effectively communicate within a diverse society. Models standards-based strategies for teaching the six language arts across the middle gradew curriculum. Authentic assessment of both process and product is emphasized. Each semester.	
EDML 424	Middle Level Student Teaching 6.00 Professional practicum requires integration and application of instructional, management, and professional knowledge and competencies in school settings. After an orientation to the school setting, students teach under the direction of a cooperating professional and university supervisor.	

- Two field assignments offer diversity to grade levels (K-3, 4-6), ability levels of pupils, content areas, school and community size, multicultural settings, and/or cooperating professionals. Prerequisites: Completion of 90 semester hours, satisfactory standing in admission and retention standards in the college, completion of all required professional courses in certification area with a minimum grade of C, a cumulative 2.75 QPA, and meeting university residence requirements. Each semester.
- EDML 425 Middle Level Student Teaching 6.00**
Professional practicum requires integration and application of instructional, management, and professional knowledge and competencies in school settings. After an orientation to the school setting, students teach under the direction of a cooperating professional and university supervisor. Two field assignments offer diversity to grade levels (K-3, 4-6), ability levels of pupils, content areas, school and community size, multicultural settings, and/or cooperating professionals. Prerequisites: Completion of 90 semester hours, satisfactory standing in admission and retention standards in the college, completion of all required professional courses in certification area with a minimum grade of C, a cumulative 2.75 QPA, and meeting university residence requirements. Each semester.
- ELED 323 Teaching Reading 3.00**
Overview of definitions and basic approaches in elementary school reading instruction. Familiarizes students with techniques, strategies, and materials used to teach reading to preschool, elementary, and middle school children from a variety of cultural backgrounds. Prerequisite: ED 121. Each semester.
- ELED 324 Tch Elem & Middle Sch Math 4-8 3.00**
Focuses on principles in teaching mathematics to children in the middle grades (4-8), mathematics processes in middle grades, the National Council of Teachers of Mathematics Principles and Standards for School Mathematics, and involving and assisting parents and communities in understanding childhood development in mathematics. Prerequisites: MATH 111, SPED 422, SPED 418. Must be taken with ELED 327, ELED 329, and ELED 332 as a part of the ELED pre-block.
- ELED 423 Libr Pract in Elem Sch 6.00**
Professional practicum requires integration and application of instructional, management, and professional knowledge and competencies in library settings in elementary schools. After an orientation to the school and library, the student participates in management, technical services, literary enrichment, and instructional activities under the direction of a cooperating professional and university supervisor.
- ENG 110 Writing I 3.00**
Introduces students to the composing strategies of college writing through a gradual progression from expressive discourse toward explanatory discourse. When necessary, work is done in punctuation, grammar, and spelling. Each semester.
- ENG 111 College Writing 3.00**
Emphasizes development of critical thinking through analytical and argumentative writing and introduces students to research writing. Each semester. (Credit for advanced placement English or satisfactory SAT verbal scores do not exempt students from fulfilling the university writing requirement.) Students who have received credit for courses equivalent to
- ENG 111 must document such transfer credit on a checksheet from the Office of the Registrar. Unless exempt, all students must take ENG 111.
- ENG 115 Comp for Inter Students 3.00**
Helps ESL writers to develop an understanding of the English grammar system, to discern the systematic patterns that exist in the language, to develop a vocabulary in order to express their ideas in English, and to recognize the rhetorical structure of the language. Satisfies the requirement for ENG 111.
- ENG 130 Literary Experience 3.00**
Provides a wide selection of literature to introduce the student to various literary genres. No prerequisite. Recommended for all students. Each semester.
- ENG 140 Drama as Lit 3.00**
Introduces students to the structures and strategies playwrights use to create different experiences for their readers. Draws on a variety of plays to focus on how to read a dramatic text so as to perceive the special cues it uses to stimulate imaginative engagement and how the text can be translated into theatrical performance. No prerequisites.
- ENG 160 Discovering Language 3.00**
Introduces students to the world of language-how it works, how it's used, what it's made of, what it does, and the myriad ways that language shapes and affects our lives and experience of the world.
- ENG 198 Intro Eng Stdy: Rhhet & Poet I 3.00**
For English majors. Introduces students to reading, writing, and interpreting texts, and to different theoretical and critical approaches within English Studies. Students will learn and apply rhetorical theories and strategies for the analysis and production of texts. Emphasis on research methods and writing within the discipline. Course fulfills General Education English 111 requirement (I.A.) for English majors.
- ENG 199 Intro to English Studies 3.00**
Designed for and required of English majors. Provides intensive introduction to reading, discussing, and writing about literature. A small number of texts will be read, allowing for an introduction to different theoretical and critical approaches to English studies. Students will apply various theories as they analyze texts. Students will use research techniques appropriate for English majors. Prerequisite: Exemption from or successful completion of the general education writing requirement. Spring, annually.
- ENG 200 Comp & Lit 3.00**
Stresses the writing of papers as a direct result of reading, analysis, discussion, and interpretation of a variety of literary types. Examines fiction, plays, essays, and poems from various cultural perspectives. Addresses research techniques and related skills. Includes studies of women and minority writers. Prerequisite: Exemption from or successful completion of the general education writing requirement. Each semester.
- ENG 202 Beg Creat Writing 3.00**
Introduces the techniques of creative writing in prose and poetry. Emphasizes writing practice for students and opportunities for guidance and critical examination of their work. Prerequisite: Exemption from or successful completion of the general education writing requirement.
- ENG 207 Research Meth & Writing 3.00**
Teaches how to conduct research and how to write

- a research paper. Prerequisite: Exemption from or successful completion of the general education writing requirement. Each semester.
- ENG 221 Lit Beg to 1800 3.00**
Surveys English literature and its historic, intellectual, and cultural contexts beginning with Beowulf and extending through the works of such writers as Chaucer, Shakespeare, Milton, Pope, Swift, Dryden, and Johnson, and provides highlights of the development of modern English. Fall, annually.
- ENG 222 Eng Lit 1800 to Present 3.00**
Surveys English literature from circa 1800 and includes selected works of such major writers as the Wordsworths, Coleridge, the Shelleys, Keats, Tennyson, Browning, Arnold, Woolf, Joyce, Eliot, and Lessing. Spring, annually.
- ENG 225 Us Lit Beg to 1860 3.00**
Surveys major periods and writers of American literature from its beginnings to 1860. Enables students to understand the continuities and discontinuities of American literature. Includes writings by traditional male and female authors, as well as minority authors. Instructors may use historical and/or thematic approaches. Fall, annually.
- ENG 226 Us Lit 1860 to Present 3.00**
Surveys major periods and writers of American literature from 1860 to the present. Enables students to understand the continuities and discontinuities of American literature. Includes writings by traditional male and female authors, as well as minority authors. Instructors may use historical and/or thematic approaches. Spring, annually.
- ENG 227 World Lit: Backgrd & Trad 3.00**
Examines some of the world's most influential literature, providing an overview of literary history from antiquity into the 19th century. Considers Asian, Middle Eastern, and pre-colonial American literatures as well as works from the European tradition. Fall, annually.
- ENG 228 Modern Contemp World Lit 3.00**
Surveys international literature from the past 150 years, with a focus on the fiction, drama, and poetry of significant authors. Studies national literatures within their respective social, historical, and geographical contexts, with an effort to identify cross-cultural developments. Spring, annually.
- ENG 230 Intro Afri-Amer Lit 3.00**
Provides insight into the African-American experience through the reading and discussion of the works of African-American writers who have made significant contributions to literature. Includes various genres: poetry, short fiction, drama, film, the novel, autobiography. No prerequisite.
- ENG 231 Intro Asian-Amer Lit 3.00**
Provides an overview of Asian-American literature, introducing students to representative authors from its various periods of development, emphasizing contemporary works in different genres. No prerequisite.
- ENG 232 Intro to Native Am Lit 3.00**
This course features Native American folktales and narratives, literature and contemporary films in order to discuss the Native American experience in relation to and independent of Europeans. The course will involve plotting an American history timeline and mapping reservations, as well as featuring moments in Native American history in conjunction with the literature under examination. External American and African American authors will also be used to fully understand the value of Native American literature.
- ENG 241 Voices in Canadian Lit 3.00**
Introduces major English-Canadian writers, presented in their cultural and historical contexts. Selected French-Canadian works in English supplement the core offerings. No prerequisite.
- ENG 242 Intro to Amer Folklore 3.00**
Introduces the major genres of American folklore: legend, tale, folk belief, song and ballad, and material folk culture; and various folk groups in America: occupational, gender, ethnic, age, regional, and their traditions. Analyzes examples of American literature and American popular culture through an examination of their American folk elements. Provides students with fieldwork experiences and methods of analysis of oral, customary, and material traditions. No prerequisite. Fall, annually.
- ENG 243 English Bible as Lit 3.00**
This course offers a literary, historical and folkloric approach to the Bible in English. We will read much of the Bible, using a modern English translation of the King James version. We will place these readings in their literary, cultural, historical and geographical contexts, approaching the Bible as an anthology of sorts, containing writings of considerable literary merit and literary and cultural interest.
- ENG 244 Spec Topics 3.00**
Focuses on themes and topics of universal and/or current interest as embodied in literature. The special subject of Each semester's offerings will be announced in pre-registration. Suitable for both English and non-English majors and may be taken up to three times for credit, provided different topics are offered. On demand.
- ENG 249 Satire 3.00**
Provides an understanding of what satire is, what it accomplishes, and how it is related to other literary modes. Students will analyze subjects often targeted by satirists, such as racism, sexism, etc., and satiric techniques in such forms as fiction (which will include short stories by women and minority writers), poetry, art, music, films, and television satire. No prerequisite. Fall, annually.
- ENG 250 Western Mythology 3.00**
Concentrates on Greco-Roman myth and legends to demonstrate the systematic nature and recurrent patterns of mythology. Designed to give students a thorough knowledge of content and to clarify questions of form. No prerequisite. Spring, annually.
- ENG 254 Movie Studies 3.00**
Explores how movies mean through readings of various classic and popular texts, how movies construct viewers, and how they simultaneously mirror and create the cultures of which they are a part. Prerequisite: Successful completion of Gen. Ed. writing requirement. Each semester.
- ENG 262 Intro to Eng Lang 3.00**
Deals generally with the nature of language and specifically with the grammatical structures of modern English, its regional and social varieties, and certain highlights of its historical development. Each semester.
- ENG 263 Eng Grammars & Eng Usage 3.00**
Provides an intensive study of English grammar and problems in usage. Emphasizes differences between prescriptive and descriptive approaches to usage, and between traditional and generative approaches to grammar. Each semester.

- ENG 265 Survey of Women's Lit 3.00**
Surveys women writers from the Medieval period to the present. The contributions of these women to a distinctly female literary tradition provides the focus of study, but critical issues regarding women's literature will also be discussed and explored. Pedagogical techniques will include lecture, discussion, film, and collaborative learning, among others. Fall, annually.
- ENG 270 Trng for Writing Ctr Tut 1.00**
In conjunction with weekly staff meetings throughout the semester, tutors learn methods of responding to student writing, implementing corrective measures, and teaching as well as using word processing. Tutors are accepted by invitation only on the basis of performance in writing courses; minimum 3.0 QPA. Venango Campus only. Each semester.
- ENG 297 Writing & Visual Argument 3.00**
Provides instruction in composing a visual, rhetorically driven argument based on an alphabetic text traditionally taught in composition classrooms. Elements of composition instruction such as planning, organization, rhetorical choices, audience awareness, purpose, and argument provide the foundation for written and visual assignments. Prerequisite: Successful completion of ENG 111.
- ENG 298 Read & Writ Argmt & Persuasion 3.00**
Offers advanced practice in analyzing and creating argumentative and persuasive texts, both written and visual. Students will analyze, write about, and produce written and visual arguments and persuasive texts in popular, political, legal, and academic fields. Includes readings, writing, research, and presentations. Prerequisite: Exemption from or successful completion of the general education writing requirement.
- ENG 301 Writing Non-Fict Prose 3.00**
Provides experience in writing non-fiction. Focuses on any of several types of non-fiction, including formal essay, autobiography, and creative non-fiction. Students will also study published examples of the genre under consideration and will critique examples presented by peers. Prerequisite: Exemption from or successful completion of the general education writing requirement. Each semester.
- ENG 303 Craft of Fiction 3.00**
Provides extensive practice in writing fiction. Student work receives intensive group critique. Course standards roughly approximate those of commercial fiction editors. Prerequisite: ENG 202 or permission of instructor, based on examination of writing samples. Spring, even-numbered years.
- ENG 304 Craft of Poetry 3.00**
Provides the advanced writer intensive practice in the writing of poetry. Students must produce a portfolio of high-quality poetry by the end of the course. Prerequisite: ENG 202 or permission of instructor based on examination of writing samples. Spring, annually.
- ENG 306 Scien and Tech Writing 3.00**
Provides experience in writing practical prose in a variety of scientific and/or technical settings for a broad spectrum of readers. Involves techniques of writing documents of definition, mechanism, and process description; sets of instructions; proposals and reports; and the use of appropriate document and graphic designs. Especially useful to majors in biology, chemistry, computer science, laboratory technology, nursing, physics, and others. Prerequisite: Junior standing. Spring, odd-numbered years.
- ENG 307 Business Writing 3.00**
Uses specialized formats and the composing process to introduce the unique type of writing used in the business and organizational world. Emphasizes identifying and addressing diverse audiences with the specific messages needed. Students critique all types of communications, use collaborative learning techniques, and develop skills needed to communicate in a pluralistic society. Requires students to compose letters, memos, persuasive messages, and reports. All documents must be typewritten. Prerequisite: Exemption from or successful completion of the general education writing requirement. Each semester.
- ENG 311 16th Century Prose/Po 3.00**
Examines the non-dramatic literature of the 16th century and focuses on such figures as Sidney, Spenser, and Shakespeare. Spring, odd-numbered years.
- ENG 312 Autobiographical Writing 3.00**
Introduces students to the theories, criticism, and techniques that inform autobiographical writing. Students will read and respond to diverse narrative texts and experiment with a variety of narrative forms while developing their own autobiographical writing. Students will also write critically and reflectively about the autobiographical texts they produce. Prerequisite: Successful completion or exemption from the general education writing requirement.
- ENG 313 17th Century Eng Lit 3.00**
Provides critical examination of the works, genres, and contexts of such figures as Bacon, Browne, Jonson, Donne, Herbert, Marvell, and Milton. Fall, odd-numbered years.
- ENG 314 The Profession of Editing 3.00**
Provides students with skills and tools to be able to edit the writing of others. Features instruction in proofreading techniques and standard editing marks, and introduction to the various levels of editing required in the workplace. Editor-writer relationships will also be discussed and practiced. Prerequisite: Successful completion of Gen. Ed. writing requirement.
- ENG 315 18th Cent Eng Lit 3.00**
Provides a critical examination of the words, contexts, and genres of such representative writers as Dryden, Pope, Swift, Defoe, Johnson, Boswell, and Gray, and traces the rise of the modern novel from Defoe through Austen and the role of women as authors and audience. Spring, even-numbered years.
- ENG 317 Eng Romanticism 3.00**
Considers the major works of Wordsworth, Coleridge, Byron, Shelley, Keats, and their contemporaries such as Mary Shelley, Mary Wollstonecraft, and others, and relates them to the intellectual, political, and social currents of the time. Spring, even-numbered years.
- ENG 319 Studies In Victorian Lit 3.00**
Focuses on such poets and essayists as Carlyle, Newman, Tennyson, the Brownings, Arnold, the Rossettis, and Meredith. Examines the current renewal of interest in poetry by women and noncanonical writers. Spring, odd-numbered years.
- ENG 324 Images of Working-Class Life 3.00**
Examines the experience of working-class people from a number of perspectives: non-fiction, fiction,

- poetry, song, drama, film. Focuses on themes of class, identity, cultural influences, and economic and political power as they explicitly relate to the issue of work. Offered Spring odd years. Prerequisite: For ENG credit successful completion of or exemption from general education writing requirement; for SOC credit SOC 211. Spring, odd years.
- ENG 325 Studies In Early American Lit 3.00**
Explores various topics in 17th and 18th century American literature against the backdrop of Puritanism. Bradstreet, Taylor, Edwards, Franklin, and Wheatley are among the major figures encountered. Gives attention to the dynamics of molding a distinctively national literature. Spring, even-numbered years.
- ENG 326 Studies In Amer Romanticism 3.00**
Studies a selected group of writers to illustrate their contributions to American art and thought and their relationships with the development of Romanticism in the first half of the 19th century. Emphasizes Poe, Hawthorne, Melville, Emerson, Thoreau, and Whitman. Fall, odd-numbered years.
- ENG 327 Studies in American Realism & Naturalism 3.00**
Studies a selected group of writers to illustrate the development of realism and naturalism in American literature in the latter half of the 19th century. Emphasizes Twain, James, Howells, Crane, Norris, and Dickinson. Spring, even-numbered years.
- ENG 328 Studies In Am Lit 1900-1945 3.00**
Examines the period less as a unified site to be surveyed in terms of fiction, poetry, and drama than as a problematic field to be studied in terms of race, gender, and class. Authors include Wharton, Cather, Dos Passos, Hemingway, Hurston, and Faulkner. Fall, annually.
- ENG 329 Studies In Contemp Amer Lit 3.00**
Investigates the very idea of a canon for American literature since World War II and discusses strategies for reading such representative authors as Roth, Coover, Oates, and Morrison. Spring, odd-numbered years.
- ENG 331 Stu In Afri-Amer Novel 3.00**
Studies in depth the development of the African-American novel from its origins in the slave narratives to the present. How do African-American novels fit into the larger tradition of African-American literature? What modes of thematic and narrative discourse mark the particular characteristics of the African-American novel? Includes Douglass, Chesnutt, McKay, Hurston, Wright, Ellison, Reed, Walker, and Morrison.
- ENG 332 Brit Novel 19th Cent 3.00**
Explores the English novel from Austen to Hardy. Nine or ten novels are studied with selections from Austen, Scott, Eliot, Dickens, Thackeray, Disraeli, Meredith, Trollope, the Brontes, Gaskell. No prerequisite; however, one semester of English literature survey (ENG 221 or 222) is recommended. Fall, even-numbered years.
- ENG 334 Studies In Modern British Lit 3.00**
Examines the relationship between social and cultural change and the creation of literature and theory in British literature from 1900 to the close of World War II. Provides an opportunity to compare genres and to study key literary movements. No prerequisite. One semester of ENG 221 or 222 is recommended.
- ENG 335 Studies In Contemp British Lit 3.00**
Examines British literature produced from the end of World War II to the present. Provides an opportunity to compare genres and to study significant literary and cultural movements. No prerequisite. One semester of ENG 221 or 222 is recommended. Spring, even-numbered years.
- ENG 339 Short Stories 3.00**
Traces the evolution of the short story from the 19th century to the present. Elements such as plot, character, theme, style, and point of view are studied. Readings are drawn from a variety of writers representing a diversity of cultures: Poe, deMaupassant, Chopin, Gilman, Faulkner, Ellison, Kafka, Hurston, Fuentes, Lessing, Silko, Walker, and LeGuin. Spring, annually.
- ENG 340 Studies in Graphic Narratives 3.00**
Introduces students to the scholarly study of sequential art, comics, graphic novels, and graphic narratives. Texts and approach will vary. Prerequisites: ENG 111 or equivalent.
- ENG 341 20th Century Poetry 3.00**
Provides explication and discussion of works by such writers as Yeats, Frost, Eliot, Plath, L. Hughes, Auden, Brooks, and Rich. Fall, odd-numbered years.
- ENG 342 English Drama 1642 3.00**
Presents an overview of English drama in its first two phases, Medieval and Renaissance (non-Shakespearean). Includes literary, theatrical, and cultural studies. No prerequisite. Fall, odd-numbered years.
- ENG 343 Eng Drama 1660-1850 3.00**
Presents some of the major forms of drama in this extremely varied 200-year period, with possible focuses on heroic tragedy, Restoration comedy, sentimental comedy, Victorian melodrama, and the precursors of modern English drama. No prerequisite. Fall, even-numbered years.
- ENG 344 Modern Drama to 1950 3.00**
Surveys influential dramatic literature of the Continental, British, and American theater from 1850 to 1950 through lectures, discussion, and experiences related to the modern stage. No prerequisite. Spring, even-numbered years.
- ENG 345 Contemporary Drama 3.00**
Explores the diversity and vitality of British, American, and World theater since 1950 through selected texts and theatrical experiences. No prerequisite. Spring, odd-numbered years.
- ENG 350 Movie Genres 3.00**
Explores genre as sets of narrative conventions that have vitalized American movies. Demonstrates genre to be a socializing force as well as a mirror of social change. Considers representations of race, gender, and class in various genres. Spring, odd-numbered years.
- ENG 352 Topics In Folklore 3.00**
Provides intense study of one or more aspects of folklore study. Focuses on one or more folk groups, a particular folk genre, folklore and popular culture, or folklore and literature. Offers students a fieldwork experience-collection, transcription, classification-and methods of analysis of oral traditions. No prerequisite. Spring, annually.
- ENG 353 American Voices 3.00**
Provides an introduction to American dialectology and sociolinguistics. Emphasizes the great diversity and vitality of American English. Covers the causes

- and mechanisms of linguistic changes, the role of language differences in society, and the relevance of dialectology to language teaching. Pays special attention to the regional speech patterns of Pennsylvania. No prerequisite. Spring, odd-numbered years.
- ENG 354 Topics In World Lit 3.00**
Provides an in-depth study of world literature through the examination of the development of a particular literary genre, movement, or theme that crosses national or cultural boundaries; or a significant national or cross-cultural English language tradition that falls outside the conventional canons of British and American literature. Fall, odd-numbered years.
- ENG 355 Topics Lit Theory 3.00**
Provides a historical study of literary criticism and aesthetic theory with emphasis upon modern trends. Spring, even-numbered years.
- ENG 356 Rhetor Thy for Writers 3.00**
Explores such questions as why do we communicate in writing, how does writing help us learn, how does writing facilitate, change, or affect the nature of communication? Students examine in detail the works of figures such as Plato, Cicero, Nietzsche, Bakhtin, Derrida, and Kristeva, and study how rhetorical theory is used in everyday communication. Prerequisite: Exemption from or successful completion of the general education writing requirement.
- ENG 361 English Study Off-Campus 3.00**
Provides students with an opportunity to travel to significant literary and historical sites while reading and discussing related texts. Students would travel during university breaks and would meet with the instructor for orientation prior to travel. After travel is completed, students will turn in assignments according to a schedule developed by instructor. No prerequisite. Spring, even-numbered years on demand.
- ENG 363 Literature and Medicine 3.00**
Explores the broad range of literature (short fiction, novel, poetry, memoir, drama/film) that expresses the human experiences of illness, disability, healing, and dying from the perspectives of patients, caregivers, and health care practitioners (physicians, nurses, allied health professionals). The course will emphasize social and historical contexts and represent the diversity of these experiences, especially in terms of race/ethnicity, gender, and class, with further consideration of the influences of scientific and technological advances over time. Prerequisite: Exemption from or successful completion of the general education writing requirement.
- ENG 364 Literature of Aging 3.00**
Explores the broad range of literature (short fiction, novel, poetry, memoir, drama/film) that expresses the human experiences of aging and depicts images of aging and the aged, with a focus on aging in relationship to identity, love, family, and community and on the concerns of independence/dependence, loneliness/alienation, friendship, faith, creativity and renewal, ageism, death, and bereavement from literary and social scientific perspectives. Prerequisite: Exemption from or successful completion of the general education writing requirement.
- ENG 365 Images Women Lit 3.00**
Examines images of women in myth, literature,
- and the culture at large and applies contemporary feminist critical approaches to the study of these images. Spring, annually.
- ENG 368 Gender, Lit, Popular Culture 3.00**
Examines representations, issues, constructions of gender in literature, myth, and popular culture. The focus and theme will vary. Applies feminist, queer, and cultural theory to the texts. Prerequisite: Successful completion of ENG 111, and sophomore standing.
- ENG 380 Language and Culture 3.00**
An introduction to linguistic anthropology. Focuses on the main areas of intersection between language and culture. Topics may include: animal communication systems; primate language studies; the evolution of language; linguistic diversity; linguistic relativity (a.k.a. the Sapir/Whorf Hypothesis); language endangerment and revival; nonverbal communication; linguistic field methods; ethnopoetics; sociolinguistics; language and identity; language and gender; and the ethnography of speaking. From an examination of such topics, students will learn to see how people use language to create and maintain their cultures, and to recognize the ways in which language itself influences human thought and behavior.
- ENG 381 Documentary Writing 3.00**
Examines the historical, social, literary, and rhetorical significance of the genre of documentary writing combined with practice of the genre itself. Emphasizes documentary writing as a means of witness, inquiry, and persuasion. Students select a field site and use ethnographic and secondary research to produce a portfolio of documentary essays. Historical and current examples of documentary writing will provide models for students throughout the course.
- ENG 401 Chaucer 3.00**
Studies in Middle English of Chaucer's early poems, Troilus and Criseyde, and the Canterbury Tales. Spring, even-numbered years.
- ENG 404 Adv Creative Writing 3.00**
Advanced course for experienced creative writing students. Provides independent and extensive explorations into a creative writing project. Helps prepare students for future writing careers and/or graduate school in creative and professional writing. Prerequisite: ENG 202 and ENG 301 or 303 or 304 or permission from instructor. Offered: Every other Spring.
- ENG 406 Studies In Medieval Lit 3.00**
Examines medieval British literature (ca 800 - 1550) in its historical and cultural contexts. Content will vary. May focus on a genre (epic, romance, saga, drama, poetry, saints' lives, and allegorical pilgrimage), major writer (Gawain-poet, Malory), or theme (such love and violence, the nature of evil, the monstrous). May be repeated twice for credit provided that content (topic and texts) change. Prerequisite: Successful completion of or exemption from the general education writing requirement; upper-level standing or permission of instructor. Fall, even years
- ENG 410 Studies In Arthurian Lit/Film 3.00**
Examines texts and issues in Arthurian tradition, from early medieval to modern. Texts will vary, but may include Chretien de Troyes' Arthurian Romances, Sir Thomas Malory's Morte D'arthur, Tennyson's Idyllis of the King, T.H. White's Once and Future King, Zimmer-Bradley's Mists of Avalon and the films Excalibur,

- Lancelot and King Arthur. Texts may be approached through the lens of genre, historical development, cultural/political context, depiction and development of characters.
- ENG 412 Shakespeare: Com & Hist 3.00**
Provides study and discussion of problems of style, characterization, and motivation in Shakespeare's maturing and experimental comedies and his history plays. Also examines how the plays reflect and challenge the cultural attitudes of Shakespeare's time. Fall, annually.
- ENG 413 Shakespeare: Trage & Rom 3.00**
Provides study and discussion of problems of style, characterization, and motivation in Shakespeare's tragedies and romances. Also examines the production practices of Shakespeare's time and contemporary production approaches. Spring, annually.
- ENG 454 The Novel Across Culture 3.00**
Examines the genre of the novel from an international perspective, with readings from several national or cultural traditions. Includes an overview of theoretical approaches to the novel that focus on its adaptability across national and cultural borders. Spring, even-numbered years.
- ENG 455 Stud In Drama & Theory 3.00**
Provides an intensive exploration of drama, concentrating especially on contemporary developments in both drama itself and in the theoretical study of drama, including recent critical developments in ethnic, feminist, and performance approaches to dramatic texts. Focus of course varies. No prerequisite.
- ENG 457 Intro to Linguistics 3.00**
Presents key concepts and basic analytical procedures common to many contemporary linguistics theories. Covers phonetics and phonology, morphology, and syntax in detail. Analyzes the integration of these sub-systems in the overall design of a generative grammar. Prerequisite: ANTH/ENG 262. Fall, annually.
- ENG 458 Hist-Eng Lang 3.00**
Studies the history of the language, including its origins and changes in structure, usage, pronunciation, spelling, vocabulary, and meaning. Intensive readings in Old and Middle English. Spring, even-numbered years.
- ENG 459 Lang Across Cult: Mat & Assess 3.00**
Introduces current research in first and second language acquisition with emphasis on the preparation of classroom teachers and other professionals to work with children/adults coming from a background where languages other than English are spoken. Prerequisite: ENG 262 recommended but not required. Spring, odd-numbered years.
- ENG 460 Independent Study 6.00**
Permits students to explore an area of special interest in the English language or its literature. Students must develop a plan of study, secure the approval of a member of the English faculty willing to supervise the project, and submit the plan to the department chair. Maximum credits--six. Prerequisite: Junior or senior standing.
- ENG 462 Meth Teach Eng Non-Nat Speak 3.00**
This course provides an overview of the current trends in Teaching English as a Second Language
- Methodology. It will explore techniques that may be used to teach students who are part of the regular classroom but who need to develop skills in language to be able to succeed. Techniques involving speaking, reading, writing and listening activities will be discussed along with interactive exercises utilizing the culturally diverse language styles found in a regular classroom. Students will be trained to utilize the comprehensible input of native-speaking members of the class as well as to improve upon their own interaction style. Major approaches and methods in language teaching such as grammar translation, audiolingualism, communicative language teaching, and the natural approach will be discussed, along with syllabus design, teaching activities, teacher and learner roles, and materials.
- ENG 463 Second Language Acquisition 3.00**
This course provides an overview of the current state of the art in Second Language Acquisition studies and explores the linguistic, psycholinguistic, and sociolinguistic factors in learning a second language. Pre-requisite: ENG 262.
- ENG 470 Literature for Young Adults 3.00**
Introduces future teachers to classical and contemporary literature for young adults. Includes works from various genres written by American, British, and American minority authors. Also includes some world literature and film. In addition to developing first-hand knowledge of important works in the field, students will also become familiar with its history and with the controversies that have shaped it. Fall, annually.
- ENG 480 Writing for Professions 3.00**
A workshop in applied writing--specifically, writing for the professions: business, education, law, and among others, academic research. Prerequisite: One of the following: ENG 207, a 300 -level writing course, or consent of the instructor.
- ENG 482 Cont Pract Teach Writ 3.00**
Provides a systematic study of theory and practice in the teaching of composition, conducted through workshop methods. Requires extensive writing and a major written project. Prerequisites: secondary education majors in English must have completed ENG 111, 200, or 301 and have taken or be taking their methods course; others by permission of the instructor. Fall, annually.
- ENG 499 Senior Seminar 3.00**
Explores in a seminar setting a theme, an idea, or an issue beyond the scope of individual courses. Studies primary literature and relevant criticism. A major paper is required of all participants; other course requirements will be established by the instructor prior to the semester of offering. Required of senior liberal arts English majors. Fall, annually.
- ENVR 261 Physics of Energy & Environ 3.00**
This course is the study of the physical laws and processes that underlie environmental phenomena with a special focus on energy (mechanical, thermal and electrical). We will establish both a qualitative and quantitative understanding of the underlying physical processes. Technical, economic, and social consequences of these laws and processes will be examined to better delineate the complex decisions related to human energy use and environmental issues. This course might serve as a substitute for PH 251 (General Physics I) and will prepare students equally well for PH 252 (General Physics II) should

	that course be required of their major. Prerequisite: Algebra		
ENVR 275	Envir Studies & Policies Introduces students to the basic language and methodologies used in environmental studies. Examines management policies and diversity of land uses associated with each property. Students study key ecological habitats, some rather pristine and others highly impacted by humans. Students learn the role science plays in each situation, conduct basic laboratory and field research to learn how scientific data are obtained, and learn the roles history, sociology, politics, economics, etc. play in policy decisions. The course is presently linked to ecological economics for those students enrolled in the transdisciplinary environment and society minor. Two lectures and three laboratory hours weekly. Prerequisite: One semester of biology, chemistry, or earth science. Spring, annually.	3.00	
ENVR 475	Field Nat History Explores competencies in biology, meteorology, geology, and astronomy. Emphasizes developing competencies which will be valuable in teaching environmental (outdoor and conservation) education. For non-science majors. Prerequisite: Upper-division standing. Spring, annually.	3.00	
ENVR 490	Sem In Environ & Society Interdisciplinary seminar synthesizes knowledge and skills acquired in lower-division courses through unifying environmental studies. Broad theme offers a variety of dimensions for study and research. Bases studies and research around environmental situations existing in this northwest region of Pennsylvania. Two lecture and three laboratory hours weekly. Prerequisites: Junior standing, ENVR 275, PHIL 212, ECON 202, plus nine additional hours of environment and society courses, or consent of instructor. Spring, annually.	3.00	
ES 111	Basic Earth Science Surveys the earth sciences, including Earth-space relations. Includes Earth motions, development of landforms, weather and climate, soils and related vegetation, water as a resource, and oceans. Emphasizes the lithosphere (mountain building and erosion) and the atmosphere. Each semester. ES 111 or permission of instructor.	3.00	
ES 140	Natural Disasters Focuses on natural disasters and the normal processes of the earth/atmosphere system which produce them. Particular attention is placed on the energy sources that cause underlying disasters such as plate tectonics, weather/storm processes, climate change, processes operating in rock, water and the atmosphere, the significance of geologic time, complexities of multiple variables operating simultaneously, and detailed case histories of significant events. The course is acceptable for natural science credits. Prerequisite: none. Annually.	3.00	
ES 150	Physical Geology w/Lab Study of the earth, including minerals and rocks, and the processes, both constructional and destructional, which have shaped it since it was formed. Constructional processes include volcanism, mountain building, and sedimentation. Destructional processes include the erosional activity of streams, glaciers, ground water, waves, and wind. Acquaints students with the methods and work of geologists and with some of the research at the frontiers of	4.00	
ES 160	Explorations In Earth Sci Designed to fully explore the physical landscape of a predetermined region/location. The chosen region/location varies annually. Interactions between climate, weather, landscape evolution, soils, water resources, oceanographic influences (where applicable), glacial processes (where applicable), and plate tectonics are examined relative to the resulting physical environment for the region/location. Online and field methodologies are combined to examine applicable physical processes. A capstone field course will be administered during the last week of the semester to directly explore the region/location. The course is acceptable for natural science credits. Prerequisite: sophomore standing. Annually during summer.	3.00	
ES 200	Solar System Astron Examines the motions of Earth, moon, and the planets and their effects on the appearance of the sky; the nature of the sun and the planets; the instruments of the astronomer; and the role the history of astronomy played in the development of our understanding of the sky. Includes constellation identification through the use of the planetarium. Each semester.	3.00	
ES 201	Stellar Astronomy Explores human understanding of the nature, formation, and evolution of those celestial objects that lie beyond the solar system. Includes stellar properties and spectra, stellar evolution, special stars and star systems, the milky way and other galaxies, cosmology, and cosmogony. Uses the planetarium for constellation study and the development of coordinate systems. Prerequisite: ES 200. Spring, annually.	3.00	
ES 210	Fundamentals of Digital Mapping Introduces the basic knowledge required to work with digital maps. General and specialized online and desktop mapping options are discussed, and an introduction to the geo-spatial technologies, including Geographic Information Systems (GIS), Global Positioning Systems (GPS) and Remote Sensing is emphasized. The potential uses of those technologies in the areas such as environmental studies, forestry, marketing, demographics, and utilities are also presented.	3.00	
ES 225	Cartography I With Lab Systematic study of basic concepts and components of thematic map-making. Emphasizes familiarization with and utilization of drafting instruments and equipment essential to map design and construction. Presents techniques of photographic reproduction of student map projects. Two lectures and three hours of laboratory weekly. Prerequisite: GEOG 125 or consent of instructor. Offered annually.	3.00	
ES 250	Historical Geology w/Lab Deals with the changes the Earth has experienced through time. Emphasizes the geologic evidence for plate tectonic movements of ocean basins and continents, uplift and erosion of mountains, and deposition of strata in various sedimentary basins. Examines in detail the evolutionary changes and mass extinction of life-forms, as preserved in the fossil record. Prerequisite: ES 150 (may be taken concurrently). Offered Spring Semester annually.	4.00	

ES 255	Geomorphology With Lab	4.00		
	Study of the physical forces that sculpt and modify the landforms of the earth, including chiefly weathering, streams, glaciation, and shore processes. Includes some preliminary work on topographic and geologic maps and rocks. Called geomorphology in older catalogs. Prerequisite: ES 150. Offered annually.			cartography in use today. Designing and constructing computer maps is an integral part of the course. Students create computer maps with a number of programs, including Atlas Graphics, Atlas Draw, Microam, Map Info. PC Globe, PS USA, Systate, etc. Introduces the use of the digitizer. Prerequisite CIS 110 or equivalent course, or consent of the instructor. Every other spring.
ES 260	Environmental Geology	3.00	ES 350	Structural Geology
	Examines the uses of geology in the solution of human problems with the physical environment. Includes hazardous geologic environments, mineral and energy resources, water supply, waste disposal, and the uses of geology in urban and regional planning. Draws many examples from western Pennsylvania. Prerequisite: ES 150 or 111. Offered annually.			4.00 Investigates the geometry, origin, and recognition of the main structural features of the rocks of the earth's crust, including folds, faults, joints, unconformities, larger igneous bodies, cleavage, lineation, etc. Explores interpreting structure from geologic maps, structural petrology, and geophysical methods used in structural geology. Prerequisite: ES 150. Every third semester.
ES 270	Oceanography	3.00	ES 355	Invert Paleontol
	A study of the physical properties, marine biology, chemistry, and geology of the oceans, and to a minor extent, the role of the sea in the history, culture, and technical developments of humankind. Once annually.			3.00 Explores the outstanding invertebrate animals preserved in the fossil record. Examines the nature of the fossil record itself, evolution as shown by fossils, and classification problems in paleontology. Prerequisite: ES 250. Every other year.
ES 280	Meteorology	3.00	ES 360	Mineralogy
	Introduces the earth's atmosphere. Emphasizes the laws and underlying principles of atmospheric motion and change, earth-sun relationships, atmospheric composition and structure, the general circulation of the atmosphere, winds and wind systems, the precipitation process, and the genesis and life cycle of storms. Prerequisite: ES 111.			4.00 Examines the identification, uses, physical and chemical properties, occurrence, origin, and crystallography of the common minerals. Prerequisite: At least high school chemistry. Every third semester.
ES 300	Special Topics	3.00	ES 370	Petrology
	Topics of special interest in various areas of earth science. The professor selects and designs the format most suitable to the study. Enrollment by consent of the instructor.			4.00 The identification, occurrence and origin, classification, physical and chemical properties, and uses of the common rocks. Includes a brief study of the important rock forming minerals. Prerequisite: ES 150. Every third semester.
ES 310	Intro to Geophysics	3.00	ES 385	Climatology
	Explores theoretical and exploration geophysics, including physical characteristics of the earth such as its shape, rotation, and procession; seismology and the interior conditions of the earth; geomagnetism and paleomagnetism; radioactivity and dating techniques; gravity and tides; internal heat; well logging; electrical techniques, such as resistivity; and plate tectonics and its mechanisms. Prerequisites: ES 150, 250, PH 251, 252; or permission of instructor. Every other year.			3.00 Examines the major components of climate and climate change. Analyzes physical aspects of the atmosphere as a series of long-term weather phenomena. Studies regional characteristics of climate on the basis of worldwide weather patterns. Emphasizes how applied aspects of climate demonstrate the interrelationships and importance of both physical and regional climatology to humankind. Also examines the causes of long-term climate change and variability. Acceptable for social science or natural science credits. Prerequisite: Sophomore standing or higher.
ES 325	Cartography II With Lab	3.00	ES 390	Strat & Sedime Petrology
	A systematic study of the new dimensions of cartography in use today. Emphasizes the techniques used in the construction of three-dimensional maps and models of statistical surfaces, diagrams, cartograms, negative scribing, and color separation. Two lectures and three hours of laboratory weekly. Prerequisites: Cartography I and consent of instructor. Every other year.			4.00 Systematic study of clastic and carbonate stratigraphic sequences, emphasizing interpretation of lithofacies, tectono-sedimentary settings, and sequence stratigraphy. Laboratories include study of petrologic/diagenetic characteristics of sedimentary strata, recent advances in seismic stratigraphy, and basin analysis. Prerequisite: ES 150. (ES 250, ES 360, and ES 370 are recommended.) Every third semester.
ES 330	Hydrogeology With Lab	4.00	ES 400	Intro Remote Sensing/Lab
	Hydrogeology deals with both surface water and groundwater in the hydrologic cycle using quantitative methods. Examines aquifer systems, water wells, water quality, water resource management, groundwater flow, and pollutant transport in detail during labs, field trips, and site tours. Prerequisite: ES 150. Offered Fall Semester annually.			3.00 Explores aerial photographs for geographic investigation of physical and cultural features of the landscape; the application of remote sensing to topographic and planimetric map construction, agricultural and land use identification, landform study, and forestry. Each Fall Semester.
ES 345	Computer Cartog w/Lab	4.00	ES 404	Soils With Lab
	Systematic study of the newest dimension of			4.00 Comprehensively examines the classification, formation, and interpretation of soils. Students examine the processes of soil classification (both

- the zonal classification and the soil taxonomy classification), soil formation (parent material, climate, slope, time and organic activity), and the interpretation of pedogenic sequences (as it relates to deposition, diagenesis, and climate change). Laboratory (one credit, two hours) complements lecture portion of the course. Emphasizes the field interpretation of soils as well as the geochemistry and textual classification of soils. Prerequisites: ES 150 and 255 or permission of the instructor.
- ES 425 Adv Remote Sensing w/Lab 3.00**
Examines satellite-based earth imaging instruments, data sources, and products, and their applications to land use management, geologic assessments, agriculture, forestry, soil resources, archeology, meteorology, and oceanography. Utilizes visual and digital data. Prerequisite: GEOG 400 (can be waived by permission of instructor). Every Spring.
- ES 450 Field Geography w/Lab 3.00**
Explores techniques essential to geographic field investigation. Emphasizes practical, first-hand experiences in the field where students learn the techniques and procedures of rural and urban land use, surveying, and field research. Prerequisites: consent of instructor. Summer on demand.
- ES 455 Field Methods in Geoscience 5.00**
Field-based course provides upper-level undergraduates hands-on experience in hydrogeology, meteorology, bedrock, and surficial geology projects. Group projects include GIS-based analysis of a small watershed, geologic mapping, and measurement of a stratigraphic section, soils and terrace mapping, and surveying a strip mine remediation site. Emphasizes proper use of traditional and state-of-the-art instruments and equipment. Prerequisites: ES 150 and ES 330. Offered Summer Session I annually.
- ES 460 Geospatial Data Handling & Integration 3.00**
This course concentrates on how geographic data can be compiled from different sources into a GIS project. This includes geo-referencing scanned paper maps, translating the real-world into a geographic database, digitization of vector features, editing attribute data, working with and integrating GIS data available from different online sources, and manipulating metadata.
- ES 470 Intro Geog Info Systems 4.00**
Addresses basic concepts and principles of geographic information systems, data models, data structures, applications, and technical issues. Lab focuses on how these basic principles are implemented in a GIS. These include an entire sequence of building spatial database: data capturing, editing, adding attributes, building topography, registering layers to real-world coordinates, making map compositions, data conversion, and basic analysis. Prerequisite: GEOG/ES 345 (can be waived by instructor). Fall, annually.
- ES 476 Sci Tech & Soc: Topics 3.00**
Interdisciplinary course designed to acquaint students with information, curricula and teaching methodologies appropriate for integrating STS topics into science and social studies instruction. Includes topics in nature of science, history of science, history of technology, ethical decision-making, and the influences of changes in science and technology on society. Required for all secondary science and social studies education majors. Spring semester. Prerequisite: Junior Standing
- ES 481 Spatial Analysis & Modeling 4.00**
This course builds upon previous knowledge of GIS vector and raster data model handling. It concentrates on the use of those spatial data in analyzing different environmental phenomenon. It emphasizes how to derive new information from existing data, and handling them through interpolation methods and raster calculations. It will also involve the extraction of new knowledge in support of a decision making process through cell-based operations in an automated fashion using scripting and modeling techniques.
- ES 490 Adv Geog Info Sys w/Lab 3.00**
Provides students with the ability to apply GIS for spatial problem solving in applied settings. Lecture and application-/project-based. Lecture covers spatial modeling and analysis based on a raster data structure. Laboratory sessions introduce students to three-dimensional surface modeling, cost-distance analysis, runoff modeling, and diffusion analysis. Prerequisite: GEOG/ES 470. Each Spring Semester.
- FIN 170 Intro to Finance 3.00**
Introduces students to the rudiments of finance and elementary financial decision making. Surveys the basics of investments, financial management, and financial markets and institutions. No prerequisites. Annually.
- FIN 370 Financial Management 3.00**
Examines the acquisition, management, and analysis of short-term and long-term funds both in the domestic and international environment. Emphasizes financial analysis, time value of money and valuation of securities, working capital management, capital budgeting under certainty and uncertainty, risk and return, cost of capital, and the optimal capital structure. Prerequisites: ECON 212 and ACTG 252. Each semester.
- FIN 371 Intern Finance 3.00**
In-depth study of corporate financial issues that face today's financial manager. Students learn to incorporate risk into capital budgeting decisions; study mergers and acquisitions; analyze bankruptcies, reorganizations, and lease financing; and study other advanced financial issues prevalent in today's domestic and multinational corporations. Prerequisite: FIN 370. Annually.
- FIN 373 Fund of Insurance 3.00**
A study of the concept of risk management and the several methods for handling risks. Emphasizes insurance as transfer method. Discusses fundamental principles of insurance, insurance as a contract, and the insurance policy, including property and liability coverage, life and health, and social insurance. Annually.
- FIN 374 Prop/Casualty Ins 3.00**
In-depth study of property and liability risk exposures, personal and commercial lines, production, underwriting, claims, ratemaking, and loss control functions as well as regulations of insurance. Prerequisite: FIN 373. Spring, annually.
- FIN 375 Mgmt Finan Inst 3.00**
Descriptive analysis of the operations of financial institutions, such as commercial banks, savings banks, insurance companies. Examines techniques and principles involved in the management of financial institutions. Prerequisites: ECON 211 and

FIN 376	<p>FIN 370. Annually.</p> <p>Investments 3.00</p> <p>Examines investment goals and the current environment for investments, including the nature of the investment process and securities markets; analysis of risk and return, especially as it applies to common stocks, preferred stocks, and bonds; introduction to portfolio management and portfolio theory. Prerequisite: FIN 370. Fall, annually.</p>	FIN 476	<p>Prerequisite: FIN 370. Spring, annually.</p> <p>Portfolio Theory & Mgmt 3.00</p> <p>Examines modern portfolio theory and its application to investment strategies; study of options and future markets; investigation of market efficiency. Prerequisite: FIN 376. Annually</p>
FIN 377	<p>Medical Care Fin 3.00</p> <p>The role of a financial manager in the health care setting. A study of the theoretical and analytical procedures involved in medical fund raising, capital budgeting, expense analysis, rate structuring, and hospital asset management as well as other financial abilities required in the operation and planning of modern health care facilities. Prerequisite: FIN 370. Offered on demand.</p>	FIN 478	<p>Financial Modeling 3.00</p> <p>This course will examine the fundamentals of computational finance using Excel. It will explore methods for building financial models, calculating capital costs, financial statement modeling, an introduction to Monte Carlo methods, and real option analysis. Prerequisite: FIN 370. Offered annually.</p>
FIN 378	<p>Personal Finance 3.00</p> <p>This course will contain a review of each of the major segments of personal finance, including the financial planning process, cash budgeting, credit card and debt management, investing, insurance policies and strategies, tax planning strategies, retirement plans, employee benefits, and estates, wills, and trusts. This course is not available for Personal Finance majors or for any student who has completed FIN 474: Personal Financial Planning. Prerequisite: Junior standing or instructor's permission. Fall, biennially.</p>	FIN 480	<p>Multinational Finance 3.00</p> <p>Examines the theory and practice of financial management in the multinational firms. Focuses on important differences between domestic and international financial decision-making. Prerequisite: FIN 370.</p>
FIN 399	<p>Special Topics 3.00</p> <p>Presents various current topics in finance theory and practice. Covers different topics from year to year, as subjects of importance are identified. Prerequisite: FIN 370. On demand.</p>	FR 101	<p>Special Topics 3.00</p> <p>Experts on individual countries cover historical and contemporary developments on the European intellectual scene with regard to their relevance for the present American student generation. The special subject is announced at pre-registration. Open to all students, and may be taken up to three times for credit, provided that different topics are offered. Course conducted in English. No prerequisite.</p>
FIN 463	<p>Tax Planning 3.00</p> <p>Acquaints students with tax planning techniques that can be used to accomplish an individual's financial goals. Enables students to suggest actions that fit the individual's financial priorities based on an understanding of financial position, cash flow and income, gift and estate tax matters. Prerequisite: ACTG 353.</p>	FR 103	<p>French Civilization 3.00</p> <p>Introduces contemporary French society, enlightened by glimpses at France's rich history. A study of geography, politics, family life, immigration, art, music, literature, the current status of French feminism, and French media will help students define and understand the multiple aspects of French identity. Course conducted in English. No prerequisite.</p>
FIN 471	<p>Financial Problems 3.00</p> <p>Capstone course challenges students to integrate and synthesize, through case methods, their knowledge in finance. Emphasizes corporate finance in application of theoretical underpinning, but some cases also will deal with investments, financial institutions, and markets. Prerequisite: FIN 371.</p>	FR 109	<p>French Lit In Trans 3.00</p> <p>A study of representative French literary works emphasizing the characters and ideas that have influenced both French literature and literature of other countries. Course conducted in English. No prerequisite. Fall, annually.</p>
FIN 473	<p>Retrmt Est Plan 3.00</p> <p>An overview of individual income taxation, including an in-depth look at pensions, profit sharing, and other deferred compensation plans, estates, trusts, and applicable tax laws. Prerequisite: FIN 463. Once annually.</p>	FR 140	<p>French Film 3.00</p> <p>Surveys major French films with English subtitles, and provides an introduction to trends of French cinema. Emphasizes cultural differences between Francophone and Anglo-American cultures as revealed through film. Course conducted in English. No prerequisite. Fall, annually.</p>
FIN 474	<p>Personal Financial Planning 3.00</p> <p>Capstone course requires that students apply through case studies, written reports, and presentations each of the major segments of personal financial planning including the financial planning process, ethical and professional considerations of financial planning, insurance policies and strategies, risk management, investment vehicles, tax planning strategies, retirement plans and employee benefits, and estate planning. Students are encouraged to complete the other courses within the Personal Financial Planning major prior to or contemporaneous with completion of this course.</p>	FR 150	<p>Intensive Elem French I 6.00</p> <p>Equivalent to FR 151 and 152 combined. Fall, annually.</p>
		FR 151	<p>Elementary French I 3.00</p> <p>Introduces the French language, emphasizing all language skills -- listening, speaking, reading, and writing. Each semester.</p>
		FR 152	<p>Elementary French II 3.00</p> <p>Continuation of FR 151. Prerequisite: FR 151 or equivalent. Each semester.</p>
		FR 153	<p>Elementary Conversation 3.00</p> <p>Conversational practice emphasizing communication skills. Designed for students who want to increase their aural-oral proficiency. May be taken concurrently with FR 251. Prerequisite: FR 152 or equivalent.</p>
		FR 250	<p>Intensive Inter Fr II 6.00</p> <p>Equivalent to FR 251 and 252 combined.</p>

- Prerequisite: FR 150 or FR 152, or equivalent. Spring, annually.
- FR 251 Intermed French I (French III) 3.00**
Continuation of FR 152, with greater emphasis on reading and writing. Prerequisite: FR 150 or 152, or equivalent. Fall, annually.
- FR 252 Interm French II (French IV) 3.00**
Continuation of FR 251. Prerequisite: FR 251 or equivalent. Spring, annually.
- FR 253 Business French 3.00**
Study of the language needed to conduct common business transactions, and discuss financial and technological matters in French. Includes writing of business letters and reports in French. Emphasizes cultural differences between French and American business practices. Prerequisite: FR 250 or 252, or equivalent.
- FR 257 French Immersion 3.00**
This course consists of a week of intensive instruction in French language and culture, prior to a two-week trip to France. During this period, students will visit places of historical and cultural interest in the country, receive lectures on the historical, cultural, artistic and literary importance of the sites visited, and conduct as much of their daily routines in French as possible.
- FR 260 French Short Story 3.00**
Study of 19th and 20th century French short stories. All readings, discussions, and assignments in French. Required for French and French education majors. Prerequisite: FR 250 or 252, or equivalent.
- FR 265 Inter Conversation 3.00**
Practice creative language use in conversation to develop oral proficiency. May be substituted for FR 252, with permission of instructor. Required for French and French education majors. Prerequisite: FR 251 or equivalent.
- FR 270 Intro to French Phon & Pronun 3.00**
Introduces the French phonetic system, including the study of phonemes, intonation, stress, and rhythm. Provides intensive aural/oral training through phonetic dictation with transcription in the International Phonetic Alphabet and practice in diction. Introduces corrective phonetics. Recommended for French majors. Required for French education majors. Prerequisite: FR 252 or equivalent. Three-year cycle.
- FR 281 French for Oral & Written Proficiency I 3.00**
Intensive review of French grammar, designed to increase students' proficiency in all language skills with particular attention to intermediate speaking and writing. Readings cover a range of topics including French culture, history, current affairs, and literature. One course in FR 281 or FR 282 is required for French and French education majors. Prerequisites: FR 250 or 252 or equivalent.
- FR 282 French for Oral and Written Proficiency II 3.00**
Continuation of FR 281. One course in FR 281 or FR 282 is required for French and French education majors. Prerequisite: FR 250 or 252 or equivalent.
- FR 301 French Civilization 3.00**
Introduces contemporary French society, enlightened by glimpses at France's rich history. A study of geography, politics, family life, immigration, art, music, literature, the current status of French feminism, and French media will help students define and understand the multiple aspects of French identity. Required for French and French education majors. Course conducted in French. Prerequisite: FR 250 or 252, or equivalent. Spring, two-year cycle.
- FR 302 Topics in French Literature and Culture 3.00**
In-depth examination of a French literary movement, literary theme or cultural topic. This course may be taken up to three times for credit, provided that different topics are offered. Course taught in English. Assignment done in French for French majors and minors. Prerequisite (only for French majors and minors): FR 250 or FR 252 or equivalent.
- FR 340 French Film 3.00**
Surveys major French films with English subtitles, and provides an introduction to trends of French cinema. Emphasizes cultural differences between Francophone and Anglo-American cultures as revealed through film. Lectures in English; assignments in French. Prerequisite: FR 252 or permission of instructor. Fall, annually.
- FR 341 Survey French Lit Middle Ages to 17 century 3.00**
Survey and discussion of the main trends of French thought and literary expression from the Middle Ages to the seventeenth century. This course emphasizes the emergence and evolution of literary genres.
- FR 342 Survey French Lit 18th Century to Present 3.00**
Survey and discussion of the main trends of French thought and literary expression from the Age of Enlightenment to Postmodernity. This course emphasizes the concepts of experimentation with subversion of the established literary genres.
- FR 353 Development French Drama 3.00**
Examines development of French drama from the Middle Ages to the 20th century. Course conducted in French. Prerequisite: FR 252 or permission of instructor.
- FR 354 Develop of French Novel 3.00**
Study of the French novel, with selections from major works in the genre. Course conducted in French. Required for French and French education majors. Prerequisite: FR 252 or permission of instructor.
- FR 356 Development French Poetry 3.00**
Study of French poetry from the Middle Ages to modern times. Introduces poetic form, from the ballad to free verse. Course conducted in French. Prerequisite: FR 252 or permission of instructor.
- FR 358 French Thinkers 3.00**
Study of major French thinkers from the Middle Ages to the 20th century. Course conducted in French. Prerequisite: FR 252 or permission of instructor.
- FR 360 Canadian Writers 3.00**
Study of the major trends in French Canadian theatre, prose, and poetry. Course conducted in French. Prerequisite: FR 252 or permission of instructor.
- FR 361 Black Writers French Lit 3.00**
Study of the major trends in Francophone African literature. Includes selections from among the works of Jacques Roumain, Sembene Ousmane, Amadou Kourouma, Francis Bebey, Ferdinand Oyono, Leopold Sedar Senghor, Ame Cesaire, Leo Damas, Bernard DadiA, and others. Lectures conducted in English; assignments in French for French majors or minors, in English for other students. Prerequisite: FR 252 or permission of instructor. Spring, annually.
- FR 400 Senior Seminar in Literary, Linguistic and Cultural Studies 3.00**
Explores in a seminar setting a comparative literary, cultural, linguistic or pedagogical topic, including primary sources and relevant theory and criticism. The course teaches analytical and writing skills

- relevant to cultural, linguistic and literary analysis. A major paper or unit plan is required of all participants. Required of senior majors in World Languages and Cultures. Prerequisite: Senior status during semester of enrollment, at least one 300-level course in the Department of Modern Languages and Cultures.
- FR 451 Readings: French Lit 3.00**
Selected readings determined in relation to the needs and interests of the individual student. Prerequisite: FR 252 or permission of instructor.
- GEOG 100 Intro World Geography 3.00**
Provides an overview of important human and physical characteristics of the world's cultural realms. Examines issues of economic and social development, and religions and cultures found around the world in a regional or systematic context. Explores contemporary environmental, political, and ethnic/racial problems.
- GEOG 115 Conservation 3.00**
Integrates the social and natural sciences by examining the concepts, methodologies and history of the Conservation of Natural Resources. Includes soil, water, land, forest, wildlife, energy, clean air, and historic resources. Explores the many controversial issues surrounding the management of public lands and regulation of private land. Examines the rational and logic of federal and state environmental laws. Every fall or spring. (Values Flag.)
- GEOG 210 Fundamentals of Digital Mapping 3.00**
Introduces the basic knowledge required to work with digital maps. General and specialized online and desktop mapping options are discussed, and an introduction to the geo-spatial technologies, including Geographic Information Systems (GIS), Global Positioning Systems (GPS) and Remote Sensing is emphasized. The potential uses of those technologies in the areas such as environmental studies, forestry, marketing, demographics, and utilities are also presented.
- GEOG 225 Cartography I With Lab 3.00**
Systematic study of basic concepts and components of thematic map-making. Emphasizes familiarization with and utilization of drafting instruments and equipment essential to map design and construction. Presents techniques of photographic reproduction of student map projects. Two lectures and three hours of laboratory weekly. Prerequisite: GEOG 125 or consent of instructor. Offered annually.
- GEOG 244 Planning the Human Environment 3.00**
The course introduces students to the theory and practice of urban and regional planning. Examines the means and ways of managing land resources with respect to enhancing the use of land for residential, commercial, industrial and agricultural purposes. The course focuses on comprehensive planning, planning strategies, planning analysis, regulatory systems and the preservation and conservation of land resources for future generations and for aesthetic purposes. The ecological implications of development on natural resources is pivotal in the course in order to explain and analyze growth management practices in urban and rural communities. Offered occasionally.
- GEOG 257 U.S. & Canada 3.00**
Analyzes geographic problems, natural and cultural, of the United States and Canada; the synthesis of physical, biotic, economic, and social patterns and problems of geographic regions of North America; the interrelationship of North American political structures and their ties with the rest of the world.
- Each semester.
- GEOG 260 Economic Geog 3.00**
Explores the production, exchange, and use of the basic commodities of the world; the relationship between the physical factors and economic conditions and the patterns of major economic activities, world trade, and trade routes; economic landscapes; problems of economic development. Recommended for majors in economics, history, and political science. Every other year.
- GEOG 300 Special Topics 3.00**
Topics of special interest in various areas of physical, human, or regional geography. Professor selects format most suitable to the study. Enrollment by consent of the instructor. Offered occasionally.
- GEOG 310 Sustainable Development 3.00**
Examines the commonalities developing countries have faced and continue to face in their push toward development, particularly as they relate to the spatial aspects affecting the conditions of the development process. Analyzes theories of growth and social and economic development, as well as the historical and contemporary relationship between the developed and the developing world. Discusses issues such as population growth and human settlement patterns, the rural/urban dichotomy, industrialization and urbanization, regional trading blocks, transportation and development, and the socio-economic development planning. Examines the impact of cultural elements such as religion and the role of women in development. Writing intensive course. Prerequisite: Sophomores and above. On demand.
- GEOG 315 Human Geog:Race,Class,Ge 3.00**
Focuses on methods and theories geographers have used to explore how social relations of race, class, and gender have been structured, influenced, and expressed spatially. Exposes students to social/spatial construction theories (the social construction of race and gender, the social production of space, and the role of space in the construction of gender and race), and postmodern economic restructuring and its impact on the location and (race, class, and gender component of the) employment structure of flexible industries. Explores contemporary theories on the role of race/gender and class intersection in the reproduction process, and the colonial and postcolonial geographies of gender and race. Writing intensive course. Prerequisite: None. Offered fall, odd numbered years.
- GEOG 325 Cartography II With Lab 3.00**
A systematic study of the new dimensions of cartography in use today. Emphasizes the techniques used in the construction of three-dimensional maps and models of statistical surfaces, diagrams, cartograms, negative scribing, and color separation. Two lectures and three hours of laboratory weekly. Prerequisites: Cartography I and consent of instructor. Every other year.
- GEOG 345 Computer Cartog w/Lab 4.00**
Systematic study of the newest dimension of cartography in use today. Designing and constructing computer maps is an integral part of the course. Students create computer maps with a number of programs, including Atlas Graphics, Atlas Draw, Microam, Map Info. PC Globe, PS USA, Systate, etc. Introduces the use of the digitizer. Prerequisite CIS 110 or equivalent course, or consent of the instructor. Every other spring.

- GEOG 358 Geography of The Caribbean 3.00**
Study of the Caribbean, with a special tour on the geography and the cultural and socio-economic aspects of the Caribbean. Emphasizes socio-economic history of slavery and the plantation economy, including issues of race relations and their spatial dimensions. Traces the economic transition away from the plantation economy, the rise of an active black leadership, urbanization and urban planning in the region, attempts at economic and political regional integration, economic development strategies of small Caribbean islands, and the impact of tourism as the new mono culture of the region. Offered occasionally.
- GEOG 385 Climatology 3.00**
Examines the major components of climate and climate change. Analyzes physical aspects of the atmosphere as a series of long-term weather phenomena. Studies regional characteristics of climate on the basis of worldwide weather patterns. Emphasizes how applied aspects of climate demonstrate the interrelationships and importance of both physical and regional climatology to humankind. Also examines the causes of long-term climate change and variability. Acceptable for social science or natural science credits. Prerequisite: Sophomore standing or higher.
- GEOG 400 Intro Remote Sensing/Lab 3.00**
Explores aerial photographs for geographic investigation of physical and cultural features of the landscape; the application of remote sensing to topographic and planimetric map construction, agricultural and land use identification, landform study, and forestry. Each Fall Semester.
- GEOG 404 Soils With Lab 4.00**
Comprehensively examines the classification, formation, and interpretation of soils. Students examine the processes of soil classification (both the zonal classification and the soil taxonomy classification), soil formation (parent material, climate, slope, time and organic activity), and the interpretation of pedogenic sequences (as it relates to deposition, diagenesis, and climate change). Laboratory (one credit, two hours) complements lecture portion of the course. Emphasizes the field interpretation of soils as well as the geochemistry and textual classification of soils. Prerequisites: ES 150 and 255 or permission of the instructor.
- GEOG 411 Fundamentals of Geospatial Technologies 4.00**
This online course was developed as one of four online courses for the post baccalaureate Geographic Information Systems Certificate. It introduces the students with the nature of geographic information and the general field of geospatial technologies. It exposes the wide variety of applications where GIS can be used and provides a basis for future studies in the field. Within this class students are exposed to the emerging technologies in GIS, GPS and Remote Sensing. It enables the students to work with a wide variety of geographic data types, methods and computer applications towards the understanding spatial phenomena. Prerequisite: Bachelor degree in related field. Offered Annually.
- GEOG 412 Understanding and Developing GIS Data 5.00**
This online course was developed as one of four online courses for the post baccalaureate Geographic Information Systems Certificate. This class concentrates on the nature of GIS data, it discusses their types, sources, and methods for reading and manipulating such data. Basic and advanced spatial data editing is also introduced in this class. Different data models are presented and basic storage and retrieval methods are also introduced. Metadata is discussed in depth including their development methods, infrastructure and standards. Translating real world cases to geographic databases is also discussed in depth; all stages of data design and development will be presented and applied. Prerequisite: GEOG 411. Offered annually.
- GEOG 412 Understanding and Developing GIS Data 5.00**
This online course was developed as one of four online courses for the post baccalaureate Geographic Information Systems Certificate. This class concentrates on the nature of GIS data, it discusses their types, sources, and methods for reading and manipulating such data. Basic and advanced spatial data editing is also introduced in this class. Different data models are presented and basic storage and retrieval methods are also introduced. Metadata is discussed in depth including their development methods, infrastructure and standards. Translating real world cases to geographic databases is also discussed in depth; all stages of data design and development will be presented and applied. Prerequisite: GEOG 411. Offered annually.
- GEOG 413 Spatial Data Visualization and Map Design 4.00**
This online course was developed as one of four online courses for the post baccalaureate Geographic Information Systems Certificate. This class introduces the concepts and principles of map design from planning to composition. Color theories and text material and typography will be discussed at length in this class. Also, issues pertaining to scale and generalization are presented. Concepts and applications of map projections will be employed to create successful map compositions, Symbol use for points, lines and polygons in single and multivariate mapping are implemented. Students in this class will be using spatial and non-spatial data to compile various traditional and non-traditional maps and cartograms while receiving and providing educative critiques from the instructor and their colleagues in the class. Prerequisite: GEOG 412. Offered annually.
- GEOG 414 Analysis, Modeling and Problem Solving 5.00**
This online course was developed as one of four online courses for the post baccalaureate Geographic Information Systems Certificate. This class encompasses the basic data-driven of exploratory GIS and provides a basis for model-driven analysis for hypothesis testing and prediction. Approaches of handling geographical problems and scenarios will be discussed, this include the planning of the analysis procedures from data collection, adjustments and refinements, to the determination of the most suitable methods for analysis. Object-based (vector) as well as advanced techniques in cell-based (raster) analysis are discussed and the identification of when and how each should be used is presented. Modeling the analysis phases for automation and tool customization is described and used to facilitate the alteration of the procedures with different inputs, iterations, and tools. Prerequisite: GEOG 413. Offered annually.
- GEOG 425 Adv Remote Sensing w/Lab 3.00**
Examines satellite-based earth imaging instruments, data sources, and products, and their applications

to land use management, geologic assessments, agriculture, forestry, soil resources, archeology, meteorology, and oceanography. Utilizes visual and digital data. Prerequisite: GEOG 400 (can be waived by permission of instructor). Every Spring.

- GEOG 450 Field Geography w/Lab 3.00**
Explores techniques essential to geographic field investigation. Emphasizes practical, first-hand experiences in the field where students learn the techniques and procedures of rural and urban land use, surveying, and field research. Prerequisites: consent of instructor. Summer on demand.
- GEOG 460 Geospatial Data Handling & Integration 3.00**
This course concentrates on how geographic data can be compiled from different sources into a GIS project. This includes geo-referencing scanned paper maps, translating the real-world into a geographic database, digitization of vector features, editing attribute data, working with and integrating GIS data available from different online sources, and manipulating metadata.
- GEOG 470 Intro Geog Info Systems 4.00**
Addresses basic concepts and principles of geographic information systems, data models, data structures, applications, and technical issues. Lab focuses on how these basic principles are implemented in a GIS. These include an entire sequence of building spatial database: data capturing, editing, adding attributes, building topography, registering layers to real-world coordinates, making map compositions, data conversion, and basic analysis. Prerequisite: GEOG/ES 345 (can be waived by instructor). Fall, annually.
- GEOG 481 Spatial Analysis & Modeling 4.00**
This course builds upon previous knowledge of GIS vector and raster data model handling. It concentrates on the use of those spatial data in analyzing different environmental phenomenon. It emphasizes how to derive new information from existing data, and handling them through interpolation methods and raster calculations. It will also involve the extraction of new knowledge in support of a decision making process through cell-based operations in an automated fashion using scripting and modeling techniques.
- GEOG 490 Adv Geog Info Sys w/Lab 3.00**
Provides students with the ability to apply GIS for spatial problem solving in applied settings. Lecture and application-/project-based. Lecture covers spatial modeling and analysis based on a raster data structure. Laboratory sessions introduce students to three-dimensional surface modeling, cost-distance analysis, runoff modeling, and diffusion analysis. Prerequisite: GEOG/ES 470. Each Spring Semester.
- GEOG 499 Sem: Meth In Geog Resear 3.00**
Presents the opportunity for students with considerable interest and background in geography to utilize the various methods of analysis of the discipline to examine a concrete issue or research problem. Emphasizes analysis, synthesis, and communication. Students produce a written report and give an oral presentation of their project. Prerequisites: Junior or senior status in geography or permission of instructor. Every other spring.
- GER 101 Special Topics 3.00**
Experts on individual countries cover historical and contemporary developments on the European intellectual scene with regard to their relevance for the present American student generation. The special

subject is announced at pre-registration. Open to all students, and may be taken up to three times for credit, provided that different topics are offered. Course conducted in English. No prerequisite.

- GER 103 Ger Civilization & Cult 3.00**
Introduces the geography, history, government, literature, and arts of German-speaking countries (Germany, Switzerland and Austria). Emphasizes comparison of the cultures and values of German societies to those of Anglo-American society. Conducted in English. No prerequisite.
- GER 109 Germ Lit In Trans 3.00**
Examines representative German literary works, emphasizing the characters and ideas that have influenced both German literature and the literature of other countries. Conducted in English. No prerequisite.
- GER 140 German Film 3.00**
Surveys major German films with English subtitles. Through film, students learn about cultural and social changes in 20th-century German-speaking countries and become aware of differences between German and Anglo-American cultures. Conducted in English. No prerequisite.
- GER 150 Intensive Elem Ger I 6.00**
Equivalent to GER 151 and GER 152.
- GER 151 Elementary German I 3.00**
Introduces the German language, emphasizing all language skills--listening, speaking, reading, and writing. Fall, annually.
- GER 152 Elementary German II 3.00**
Continuation of GER 151. Prerequisite: GER 151 or equivalent. Spring, annually.
- GER 250 Intensive Inter Ger II 6.00**
Equivalent to GER 251 and 252 combined. Prerequisite: GER 250 or 252, or equivalent.
- GER 251 Intermed German I (German III) 3.00**
Continuation of GER 152, with greater emphasis on reading and writing. Prerequisite: GER 150 or 152, or equivalent. Fall, annually.
- GER 252 Intermed German II (German IV) 3.00**
Continuation of GER 251. Prerequisite: GER 251 or equivalent. Spring, annually.
- GER 254 Business German 3.00**
A study of the language needed to conduct common business transactions, and discuss financial and technological matters in German. Requires writing of business letters and reports in German. Emphasizes cultural differences between German and American business practices. Prerequisite: GER 250 or 252, or equivalent.
- GER 255 German Civ I 3.00**
Introduces German society, enlightened by glimpses at Germany's rich history. A study of German geography, politics, family life, immigration, art, education, music, literature, and media helps students define and understand the multiple aspects of German identity. Conducted in German. Prerequisite: GER 250 or 252, or equivalent.
- GER 256 Germanic Civ II 3.00**
A complement to German 255, with greater emphasis on Germany's past.
- GER 257 German Immersion 3.00**
This course, offered in Germany, will introduce students to German culture, including aspects of everyday life in Germany, as well as facilitate understanding of Germany's history and civilization through study of important monuments and urban design. Prerequisite: GER 252 or permission of

	instructor. Pre-session, annually.		
GER 260	The German Short Story Study of German short stories from the turn of the 19th century to the present. All readings, discussions, and assignments in German. Prerequisite: GER 250 or 252, or equivalent.	3.00	
GER 265	Inter Conversation Practice creative language use in conversation to develop oral proficiency. May be substituted for GER 252 with permission of instructor. Prerequisite: GER 251 or equivalent.	3.00	
GER 270	Intro to German Phoe & Pronun Introduces the German phonetic system, including the study of phonemes, intonation, stress, and rhythm. Intensive aural/oral training through phonetic dictation with transcription in the International Phonetic Alphabet and practice in diction. Introduces corrective phonetics. Prerequisite: GER 252 or equivalent.	3.00	
GER 302	Topics in German Literature and Culture In-depth examination of a German literary movements, literary theme or cultural topic. This course may be taken up to three times for credit, provided that different topics are offered. Course taught in English. Assignments done in German for German majors and minors. Prerequisite (only for German majors and minors): GER 251 or GER 250.	3.00	
GER 307	German Conv & Comp I Develops students' abilities in listening, speaking and writing German. This course emphasizes a variety of issues relating to modern Germany. Prerequisite: GER 250 or 252.	3.00	
GER 308	German Conv & Comp II Continuation of GER 307. Prerequisite: GER 307 or permission of instructor	3.00	
GER 340	German Film Surveys major German films with English subtitles. Through film, students learn about cultural and social changes in 20th-century German-speaking countries and become aware of differences between German and Anglo-American cultures. Lectures in English; assignments in German. Prerequisite: GER 250 or 252, or equivalent.	3.00	
GER 341	Survey German Lit Middle Ages to 18th Survey and discussion of the main trends of German thought and literary expression from the Middle Ages through the Classical period. This course emphasizes the emergence and evolution of literary genres. Prerequisite: GER 250 or 252.	3.00	
GER 342	Survey German Lit 19th Century to Present Survey and discussion of the main trends of German thought and literary expression from German Romanticism to Postmodernity. This course emphasizes the concepts of experimentation with and subversion of the established literary genres. Prerequisite: GER 250 or 252.	3.00	
GER 353	Modern German Drama German drama from the middle of the 19th century to the present, covering representative writers of the realist, naturalist, and expressionist movements, as well as selected contemporary writers. Prerequisite: GER 250 or 252 or permission of instructor.	3.00	
GER 355	German Romanticism Study of German Romantic literature and philosophy, with consideration of their influences on American Romanticism. Prerequisite: GER 250 or 252 or permission of instructor.	3.00	
GER 358	Classical German Lit Study of major authors and representative works from the golden age of German literature. Prerequisite: GER 250 or 252 or permission of instructor.	3.00	
GER 400	Senior Seminar in Literary, Linguistic and Cultural Studies Explores in a seminar setting a comparative literary, cultural, linguistic or pedagogical topic, including primary sources and relevant theory and criticism. The course teaches analytical and writing skills relevant to cultural, linguistic and literary analysis. A major paper or unit plan is required of all participants. Required of senior majors in World Languages and Cultures. Prerequisite: Senior status during semester of enrollment, at least one 300-level course in the Department of Modern Languages and Cultures.	3.00	
GER 451	Readings: German Lit	3.00	
GERO 499	Seminar in Gerontology Integrate knowledge and hands-on experience obtained in a field setting. Conducted as a seminar in which students share their experiences and do problem solving. The instructor facilitates this process and provides information to enhance learning. Co-requisite: REHB 495, SOC 499, or PSY 499.	3.00	
GS 109	Foreign Lit and Trans Offered by the Department of Modern Languages and Cultures, listed as FR 109, GER 109, or SPAN 109.	3.00	
GS 123	Intro-Locating Inf	3.00	
GS 140	Personal Money Management & Consumer Economics Examines major aspects of personal financial management, including budgeting of income and expenditures, transactions, and relations with banks and other lending institutions, insurance and retirement plans, home ownership, personal taxes, savings, and investment plans. B.S.B.A. majors may apply this course only as a free elective. Each semester.	3.00	
GS 222	Problem Solving Investigates the elements of solving a variety of problems, beginning with closed problems such as puzzles or cryptograms and progressing through simple games and complex games to the complexities of open-ended problems of personal and political life. Emphasizes development of proficiency in dealing with new situations and techniques through actual practice. No prerequisite. Each semester.	3.00	
GS 230	Special Topics Experts on individual countries cover historical and contemporary developments on the European intellectual scene with regard to their relevance for the present American student generation. The special subject is announced at pre-registration. Open to all students, and may be taken up to three times for credit, provided that different topics are offered. Course conducted in English. No prerequisite.	3.00	
GS 242	You and the Law Surveys the major fields of law. Emphasizes historical development, basic legal principles, legal theory and procedure, and their relation to the individual. Business administration majors may not take this	3.00	

	course. Annually.				
GS 262	Intro to Service Learning	3.00	Provides an overview of service learning. Presents history, legislation, and theory relevant to service in addition to the components and standards of service learning. Students will be prepared for service through readings in the subject area, sensitivity training, conflict resolution, and etiquette. Students will then spend 30 hours in community-based service activity at three of five priority sites. Students will reflect in writing upon their service and will attend weekly seminars. Prerequisite: ENG 110. On demand.		
GS 411	Science and Society	3.00	Describes the process of science as an ongoing and continuously developing means of describing the natural world. Examines what science is and how it is done. Promotes science literacy. Emphasizes written and oral communication skills as well as the ability to understand important topics in science, along with the policy and ethical questions raised. Open to students in all academic areas.		
GU 160	Intro to Global Understanding	3.00	Introduces students to global perspectives that shape how we facilitate and coordinate interactions with people from different backgrounds through the use of verbal and nonverbal codes.	HIST 120	U S to 1877 3.00 Surveys United States history from the period of exploration through the Reconstruction period. Each semester.
GU 340	Global Understanding Seminar	3.00	Capstone course for the Minor in Global Understanding. Interdisciplinary seminar focused on the development of a research project to be implemented during a subsequent approved experience abroad. Students will identify a topic for their research project, develop a well-articulated prospectus and literature survey, and link with and secure the participation of a faculty advisor with whom they will work on this project. Prerequisite: GU 160	HIST 121	U S Since 1877 3.00 Surveys United States history from Reconstruction to the present. Each semester.
GU 341	Global Understanding Res Proj	1.00	Under the supervision of a faculty advisor in their major area of study, students pursue a research project (defined in a proposal written as part of GU 340 - Seminar in Global Understanding) while on an approved experience abroad. The final products of this research are a paper and oral presentation. Prerequisite: GU 340	HIST 130	Africa to 1800 3.00 Explores the history of Africa and its people from ancient times through the Atlantic slave trade. Emphasizes understanding the impact of cultural/ethnic diversity on the development of this history. Examines historical questions concerning the early record, migration, African kingdoms, trade and economy, impact of Islam on Africa, the European Age of Discovery, and the effects of the Atlantic slave trade upon African societies. On demand.
HIST 110	Com Hist of Civ In Asia	3.00	Explores an overview of all of Asian history from the birth of civilization to the present. Emphasizes identification of a number of significant stages of historical development in the life of civilizations. Clarifies the socio-cultural subdivisions within Asia. On demand.	HIST 131	Africa Since 1800 3.00 Explores the history of Africa and its people from the end of the Atlantic slave trade to the modern period. Includes the expansion of European influence on Africa during the 19th century, the partition of Africa, the many forms of African resistance to European rule, the impact of the colonial era, African nationalism and independence struggles, and the challenges facing independent African states. On demand.
HIST 111	Ancient & Med Civ	3.00	Includes a survey of prehistoric cultures and civilization from its historical beginning to 1300. Presents a knowledge of the origins of the broad social, political, intellectual, and economic movements of the past from which the student may gain an understanding of civilization today. Each semester.	HIST 215	Topics In History 3.00 Topical approach to the study of history, permitting students to pursue an in-depth examination of selected problems. Introductory level. On demand.
HIST 112	Early Modern Civ	3.00	A study of significant movements and events from 1300 to 1815. Emphasizes the interrelationships between cultures of various world regions. Stresses the influence of European development on other world areas. Each semester.	HIST 217	History of West Africa 3.00 Examines the history of West Africa from 800 A.D. to the present. Includes the introduction of Islam to West Africa; the internal factors which transformed local societies, states, and empires; the impact of European trade and imperialism; forms of resistance to colonial rule; the rise of nationalism and the struggle for independence; and the challenges of the post-independence period.
HIST 113	Modern Civilization	3.00	A study of significant movements and events of 1789 to the present. Emphasizes interrelationships	HIST 254	Lat Amer Col Per 3.00 Surveys the development of Colonial Latin America from its discovery to 1825. Analyzes economic, social, political, and cultural development. Fall, alternate years.
				HIST 255	Lat Amer Nat Per 3.00 Emphasizes the history of the Latin American countries since 1825. Analyzes economic, social, political, and cultural development. Fall, alternate years.
				HIST 260	Nazism, Hitler & Holocas 3.00 Examines the Nazi Party from its beginnings in 1919, its gestation in the Weimar Republic period, and its supremacy in Germany, from 1933 to the end of World War II. Includes an examination of the social and intellectual background of Nazism. Emphasizes the personalities of the Third Reich leadership. Concludes with an examination of the Holocaust. Spring, annually.
				HIST 275	India Thru Ages 3.00 Examines the historical development of Indian civilization from its early origins to the coming of the Europeans. Emphasizes the classical period, religion, social organizations, and the ancient Hindu and medieval Muslim periods. Spring, alternate years.

- HIST 286 Mod China and Japan 3.00**
Study of the transformation that has taken place in China and Japan in modern times as a result of an external impact as well as forces within Far Eastern societies. Spring, alternate years.
- HIST 298 Historical Methods 3.00**
Introduces the research methods, utilization of historical sources, documentation, and writing skills necessary to complete a significant historical research project. Skills mastered in this course should enable students to improve the quality of all writing and research required in all 300-level courses offered in the History Department. Focuses on American, European, or non-Western civilization, depending upon the instructor. Permission of instructor required. Required for all history majors. Spring, annually.
- HIST 302 Women In The U.S. 3.00**
Explores the history of American women from Colonial times to the present. Examines women's diverse experiences and roles, the relationship between women and the rest of society, gender expectations, 19th and 20th century feminism, reform and political activities. Prerequisite: Sophomore standing. Alternate years.
- HIST 303 History of Mexico 3.00**
A history of Mexico from pre-Columbian times to the present. Emphasizes the rise and fall of advanced ancient civilizations, European conquest and colonialism, the struggle for independence, Mexico's social revolution, the rise of nationalism, and the current drive for modernization in the so-called Third World. No prerequisite. Spring, alternate years.
- HIST 304 Religion and Society in Latin America 3.00**
This course will examine Latin American religious traditions from the 15th century to the present. We will explore such themes as gender, indigenous resistance, church-state relations, and social movements. The course begins with an investigation of pre-Columbian practices and the impact of European conquest and colonization on belief systems. This course also examines the influence of religious ideologies on colonial law, gender relations, early 19th century independence movements and 20th century revolutions. Prerequisite: sophomore standing or permission of instructor.
- HIST 305 Hist S Africa Since 1800 3.00**
Examines the growth of the European population of the Cape Colony; Shaka's Zulu empire; the Great Trek of the Boers; the creation of new states; the discovery of gold and diamonds; the creation of modern South Africa, Lesotho, Swaziland, and Botswana; the rise and fall of apartheid; and regional conflicts.
- HIST 310 Africa, Slavery & Trade 3.00**
Explores the history of slavery within Africa from its origins to its end. Draws on recent historical and anthropological research to investigate such topics as links between internal slavery and the external slave trades; processes of enslavement; the positions and roles of slaves in African societies; the ideology of slavery; slave trading networks and markets within Africa; the effects of slavery on specific African societies; resistance to slavery; and the long-term consequences of slavery. Fall Semester.
- HIST 312 Native American History 3.00**
This course will examine the history of Native American societies from pre-contact to the present, focusing on the past and present diversity of Indian peoples. The course will examine indigenous social structures, languages, and religions. In addition, the course will discuss historic changes in Indian societies as a result of contact with Europeans and Africans and their descendants. In the colonial period, topics covered will include first-contact situations, warfare, disease, and diplomacy. Later topics will include nineteenth- and twentieth-century debates over education, assimilation, economic development, and sovereignty. Prerequisite: HIST 120 or 121. Fall or spring, alternate years.
- HIST 313 History of Spain and Portugal 3.00**
This course will survey Spanish and Portuguese history, society, and culture from the end of the Reconquista in the late 15th century through the recent democratic transitions of the mid-1970s to early 1980s. We will cover such themes as Spanish and Portuguese empire-building, impact of the Napoleonic wars on the Iberian Peninsula, and gender relations during dictatorship. Special emphasis will be given to twentieth century movements, particularly the origins and impact of both the Franco and Salazar regimes.
- HIST 314 Gender and Sexuality in Latin America 3.00**
This course examines social movements and state formation in Latin America through the lens of gender and sexuality. We will consider how gender and sexuality shaped discussions of indigenous rights, race, class, reproduction, revolution and resistance. Using a combination of primary and secondary source materials, including film and popular music, students will analyze Latin American history through the perspective of gender and sexuality.
- HIST 315 Topics In History 3.00**
This course introduces students to new themes in the history of one of America's most tumultuous decades, the 1920's. From the end of World War One through the onset of the Great Depression, students examine the origins of modern America through a focus on such topics as rebellious youth, feminism, and the Harlem Renaissance, as well as reactionary mindsets represented by the KKK, religious fundamentalists, and Prohibition.
- HIST 318 Ancient Greece 3.00**
Examines development of ancient Greece from its earliest precursors in Mycenaean civilization, through the growth of the city-states of classical Greece, to its blending with other cultures in the Hellenistic World. Addresses political, social, and cultural developments, historical problems, and the historical narrative. Fall, alternate years.
- HIST 319 Roman History 3.00**
Examines development of Rome from its foundation as a city-state in central Italy in the mid-eighth century B.C. to its conquest of the Mediterranean World as a republic and finally to the end of the Roman Empire in the West in the fifth century A.D. Addresses political, social, and cultural changes and will be historiographic as well as historic in outlook. Spring, alternate years.
- HIST 320 Medieval History 3.00**
Surveys European development from 500 to 1300. Alternate falls.
- HIST 330 Eur Dur Renaiss & Reform 3.00**
A study of the Renaissance and Reformation emphasizing the important political, social, economic, religious, and cultural forces that emerged during this period of transition and ushered in modern western

- culture. Emphasizes the evolution of modern states, the rise of individualism, and the development of modern religious ideas and institutions.
- HIST 345 Europe 1815-1924 3.00**
A study of the social, economic, political, religious, and cultural experiences of the European people from the Congress of Vienna to the death of Lenin. On demand.
- HIST 349 The American West 3.00**
Study of the Old West of the 19th century and the West as a distinctive region in the 20th century. Emphasizes the continuing relationship to the East and on the geographic, economic, and cultural diversity within the West itself. Pioneers from the East, Native Americas, immigrants from Europe, Mexico, and Asia, farmers, cowboys, and entrepreneurs will all have a place in the course. Romanticized myths of the West will be compared with historical realities. Prerequisite: HIST 120 or consent of the instructor. Fall Semester.
- HIST 350 Colonial America 3.00**
A study of colonial history beginning with the European background of colonization and continuing through the American Revolution. Prerequisite: HIST 120 or consent of instructor.
- HIST 351 United States: The Early Republic 3.00**
A study of the Federalist Era, Jeffersonian and Jacksonian America. Examines the formation of the republic through the federal Constitution, the Jeffersonian revolution, and the age of Jackson. Analyzes the ideas and personalities that shaped the nation. Prerequisite: HIST 120 or consent of instructor.
- HIST 352 Civil War & Reconstruct 3.00**
A basic study of the growth of sectional differences between North and South from 1820 to 1850. Examines the failure of compromise efforts in the 1850s and the causes of secession. The war and the consequences of reconstruction policies to 1877 are traced in light of modern civil rights problems. Fall, alternate years. Prerequisite: HIST 120 or permission of Instructor.
- HIST 353 Us - Age of Reform 3.00**
A detailed look at the gilded age, populist, and progressive periods in American history. Examines the reform phenomena that characterized the late 19th and early 20th centuries. Emphasizes the motivation, objectives, accomplishments, and failures of the various reform movements. Considers each reform group in the context of a period of rapid social and economic change. Prerequisite: HIST 121 or consent of instructor.
- HIST 357 Tudor/Stuart Engl 3.00**
Examines the significant political, cultural, social, and religious developments in England from the accession of Henry VII to the death of Queen Anne and the transition to the House of Hanover. Spring, alternate years.
- HIST 363 Hist of American Labor 3.00**
Examines the history of American working men and women from the colonial period to the present. Explores the growth of the trade union movement and its socio-political and economic impact, and the nature of the work performed by labor and the way laboring people have lived. On demand.
- HIST 366 Russia Since 1815 3.00**
Examines Russia's development during the 19th and 20th centuries. First part of course focuses on Russia and its people under the czar and the drift to
- revolution. Second part of course focuses on Soviet society and communism in theory and practice.
- HIST 367 Comparative Slavery 3.00**
Introduces students to the history and diverse nature of slavery in North America and the Caribbean. Students analyze how the institution of slavery changed over time and differed by geographic region. Includes origins of the Atlantic slave trade and the Caribbean's central role, interstate slave trade, slave cultures and communities, differences between rural and urban slavery, slave hiring, slaveholding by free people of color, and interlocked relationships between white people and people of color. Prerequisite: HIST 120 or permission of instructor. Alternate years.
- HIST 369 African-Amer Hist 1865 To Pres 3.00**
A survey of African-American history from 1865 to the present, with an emphasis on the evolving role of black people in the political, economic, social, and cultural development of the U.S. This course includes a close examination of the junctures in American history where the struggle to improve African-American life took on new meaning for society at large.
- HIST 370 History of Mid East 3.00**
Study of the early classical era by way of an advanced intensive exploration of the civilization in the Mediterranean East and Middle East. Introduces the religion of Judaism and Christianity in their political setting, and examines the cultural contributions of the Semites, Greeks, and Romans. Stresses the Islamic age. Emphasizes modern identification of the countries that make this an explosive part of the world--Jordan, Israel, Lebanon, Iran, Iraq, Arabia, Syria, Egypt - and their relationship to the great powers. On demand.
- HIST 371 Am Popular Cult, 1865-Pres 3.00**
This course examines popular culture in the U.S. from the Civil War to the present, focusing specifically on its relationship to consumption, leisure, politics, race, class, gender, social movements, celebrity, and the corporate world. Topics are drawn from varied arenas of popular culture including sports, film, literature, art, theater music, photography, tourism, amusement venues, and advertising, among others. Prerequisite: HIST 121. Fall or Spring, alternate years.
- HIST 372 The American Revolution 3.00**
This course provides undergraduates with a detailed narrative of the American Revolution. It evaluates the causes and consequences of the colonial rebellion against the British Empire in North America, and assesses the preconditions, constraints, and outcomes of the struggle for independence. Particular attention is given to the clash of values, interests, and ambitions that transformed the thirteen colonies into the United States. Moreover, significant themes of cultural, economic, military, diplomatic, and political conflict are explored. Prerequisite: HIST 120. Fall or spring, alternate years.
- HIST 388 U.S. 1920 - 1960 3.00**
This course surveys the principle social, political, cultural, and economic developments in American Society from 1920 to 1960. Topics include: social tensions and social conflicts during the 1920s; the impact of the Great Depression and the significance of the New Deal; isolationism and internationalism; America during World War II; the Cold War; McCarthyism; the Rise of the Civil Rights Movement;

- and the Affluent Society.
- HIST 389 U.S. 1960 to the Present 3.00**
This course introduces students to the political, economic, social, and cultural forces that shaped America from 1960 to the present. Topics include John Kennedy and the New Frontier; Lyndon Johnson and the Great Society; the modern civil rights movement; American involvement in Vietnam; the counterculture; Richard Nixon and Watergate; the end of the Cold War; the feminist and environmental movements; the New Right of the 1980s and the New Liberalism of the 1990s; and the Gulf War and war on terrorism, among others.
- HIST 398 Quant Meth for Historian 3.00**
Applies statistical techniques to historical research. Students briefly review basic statistical techniques; investigate, in depth, the application of statistical manipulation to historical data; and explore current historical research employing these methods. Introduces students to computer applications of statistics through a social science software package in a hands-on lab. Focuses on the capabilities, appropriateness, and limitations of quantitative methods within the historical discipline. Prerequisite: CIS 217 and PSY 230 or ECON 221 or MATH 221 or 222.
- HIST 402 Independent Studies 6.00**
Variable credit course gives students the opportunity to explore an area of special interest in history not covered by existing courses through field experience or independent study. Focus can be an historical topic and/or the development of skills that aid historical research. Prior to enrolling in the course, students must develop a study plan in conjunction with the faculty member willing to serve as supervisor. The student will work under the direction of an appropriate faculty member. Credit will be given only when the project has been completed to the satisfaction of the project advisor. On demand.
- HIST 410 Historiography 3.00**
Introduces historical method and theory. Explores a variety of interpretive theories and specialized approaches employed by contemporary historians to traditional and non-traditional problems. Emphasizes development of the student's critical abilities. Permission of instructor required. Fall, annually.
- HIST 432 Vietnam War 3.00**
This course examines U.S. involvement in Vietnam from 1945 to the present, with a primary focus on the Vietnam War and its political, economic, social, and cultural impact upon American society. Topics covered include the roots of Vietnamese revolutionary thought, the rise of Ho Chi Minh and communism in Vietnam, the French-Indochina War, U.S. military engagements from 1965 through 1973, the political and cultural antiwar movement in America, the peace accords, and the aftermath of the conflict, among others.
- HIST 433 The History of War 3.00**
An examination of the History of War from the Neolithic Revolution (c. 7000 BCE) to the present. Major themes include Ancient Warfare, Medieval Warfare, the impact of gunpowder in the Early Modern era, the impact of colonies on world warfare, the impact of mass conscription on warfare in the French Revolution, the World Wars, the Cold War, and the War on Terror. Changes in technology and attitudes toward war will be examined as well as
- modern historical approaches to the topic.
- HIST 460 Hist of Religion in the U.S. 3.00**
A study of American religious history from the colonial period to the present. Examines the histories of individual religious institutions and their interaction within their social and intellectual context, focusing upon the paradox of mainstream American Protestantism within a pluralistic religious culture. Prerequisite: HIST 120 or permission of instructor. On demand.
- HIST 481 France: 1483-1715 3.00**
Examines the significant political, cultural, social and religious developments in France from the accession of Charles VIII to the death of Louis XIV. No prerequisite. Alternate years.
- HON 125 Modes of Discourse 6.00**
Interdisciplinary course integrates the student's production of both written and spoken discourse. Alternative method of teaching communication draws upon the skills of instructors from English and Speech, Communication & Theatre. Taken by freshman enrolled in the Honors Program, and will replace ENG 111 and SCT 113. (Not open to students who have taken ENG 111 or SCT 113.)
- HON 128 Modes of Discourse 3.00**
An interdisciplinary course which aims to integrate the student's production of both written and spoken discourse. This course is an alternative method of teaching communication, and draws upon the skills of instructors from English and Speech Communication. Taken by freshmen enrolled in the Honors Program, this course replaces both ENG 111 and SC 113. (Not open to students who have taken ENG 111 or SC 113.)
- HON 129 Modes of Discourse 3.00**
An interdisciplinary course which aims to integrate the student's production of both written and spoken discourse. This course is an alternative method of teaching communication, and draws upon the skills of instructors from English and Speech Communication. Taken by freshmen enrolled in the Honors Program, this course replaces both ENG 111 and SC 113. (Not open to students who have taken ENG 111 or SC 113.)
- HON 130 Spec Topics: Arts & Humanities 3.00**
This interdisciplinary course in the humanities is required of students enrolled in the Honors Program. Focuses is on human values, beliefs, and accomplishments as expressed in art, music, literature, philosophy, and religion.
- HON 131 Classic Works Requirement 3.00**
This interdisciplinary course is designed as an alternative humanities offering to HON 130. Students must fulfill a requirement of attendance of music, dance, theatre, and film events, as well as a literature component. Course will be offered on an as needed basis.
- HON 230 Speci Topics: Sci/Math 3.00**
Interdisciplinary course in the natural sciences and/or mathematics. Focuses on basic principles in the natural sciences and/or mathematics and their development within the context of human civilization. Required of students in the Honors Program.
- HON 240 Spec Topics: Soc Sci 3.00**
Interdisciplinary course in the social sciences. Focuses on human civilization from the perspective of the social scientist. Required of students enrolled in the Honors Program.

HON 280	Special Topics	3.00	HPE 131	Each semester. Beginning Swimming	1.00
HON 350	Junior Seminar	3.00	HPE 132	For students who cannot swim one length of the pool. Consists of drown-proofing and elementary back, breast, and freestyle strokes. Fitness through Pilates and Stability Ball	1.00
HON 430	Special Topics	3.00	HPE 135	Students have the opportunity to increase their fitness level through strengthening their core muscles and improving their lean body mass. The course enables students to learn exercises that they can perform throughout their life with no or minimum need of equipment. Aqua Aerobics	1.00
HON 450	Senior Project	3.00	HPE 141	Achieves various aspects of physical fitness in a water medium. Badminton	1.00
HPE 101	Special Topics	1.00	HPE 142	Emphasizes fundamental techniques, strategy, and rules. Bowling	1.00
HPE 105	Tai Chi for Fitness	1.00	HPE 143	Emphasizes fundamental techniques, strategy, and rules. Golf	1.00
HPE 111	Health Education	2.00	HPE 144	Emphasizes fundamental techniques, strategy, and rules. Racquetball Men	1.00
HPE 120	Child Care Health Advocate	3.00	HPE 145	Emphasizes fundamental techniques, strategy, and rules. Racquetball Women	1.00
HPE 121	Walking for Fitness	1.00	HPE 147	Emphasizes fundamental techniques, strategy, and rules. Beginning Tennis	1.00
HPE 123	Relaxation Skills	1.00	HPE 150	Emphasizes fundamental techniques, strategy, and rules. Canoeing	1.00
HPE 125	Intro to Bicycling	1.00	HPE 161	Explores the skills of the paddling strokes and involves the nomenclature of modern canoes and equipment. Includes rescue techniques and how to plan a river trip. Basketball Men	1.00
			HPE 162	Emphasizes fundamental techniques, strategy, and rules. Basketball Women	1.00
			HPE 163	Emphasizes fundamental techniques, strategy, and rules. Volleyball Men	1.00
			HPE 164	Emphasizes fundamental techniques, strategy, and rules. Volleyball Women	1.00
			HPE 170	Emphasizes fundamental techniques, strategy, and rules. Step Aerobics Challenge	1.00
			HPE 181	Expands the student's understanding of overall fitness. Students utilize step benches to obtain cardiovascular conditioning and hand weights to strengthen muscles and improve endurance. Each semester. Adapted Phy Ed	1.00
			HPE 185	Modified or corrective physical education course for those who by reason of illness or disability are unable to participate in the more vigorous forms of physical education activities. On demand. Phys Fit And Cond	1.00
				Enables students to develop a fitness and conditioning program to fit their individual needs through knowledge gained in areas such as nutrition, use of conditioning equipment, weight control, and fitness tests.	

HPE 186	Phys Fit Thru Stren Trng	1.00	Covers all basic weight lifting techniques and modern principles for developing and improving an aerobic fitness for both male and female students.				
HPE 191	Camp Outdoor Rec	1.00	Offers practical experience in the basic skills necessary for a successful camping excursion following conservation practices and techniques that retain the beauty of the wilderness ecosystems.				
HPE 220	Pers Hlth Promo & Behav Mgmt	3.00	This course will direct students to assess their personal wellness in each of the seven dimensions. The content will explore variables contributing to personal excellence and wellness and completion of a behavioral project.				
HPE 223	Phys Ed Elem Major	1.00	Required of all students majoring in elementary education. Emphasizes modern physical education skills and activities of the elementary child. Each semester.				
HPE 230	Basic/Emerg Water Safety	1.00	Students must demonstrate advanced swimming skills. Designed for participants to become familiar with the hazards of water activities, to prevent accidents, and to respond effectively if an accident does occur. Successful completion of the course leads to Red Cross Certification.				
HPE 231	Interm Swimming	1.00	Multi-stroke refinement, drown-proofing, and physical conditioning through swimming. Prerequisite: Students should be able to swim one length of the pool.				
HPE 235	Intro Ele Health Concept	3.00	Introduces elementary education majors to basic health concepts and issues which elementary students face and are important for developing an appropriate understanding of health education today. Fall, annually.				
HPE 247	Interm Tennis	1.00	Emphasizes fundamental techniques, strategy, and rules.				
HPE 253	Nutrition for Healthy Living	3.00	Teaches about the different food groups and their roles in the human body, the type of chemical reactions during metabolism, the way the body makes and stores energy, and eating habits role in weight control.				
HPE 301	Special Topics	3.00					
HPE 314	C P R	1.00	Required for the Athletic Coaching Program. Follows the recommendations and guidelines of the American Red Cross. Students earn an American Red Cross CPR Certificate upon successful completion of the course.				
HPE 317	First Aid Safety	2.00	Explores responsibilities and duties of the teacher in the development and teaching of programs in first aid and safety that are related to the student's school and community. Includes the American Red Cross Standard First Aid Course.				
HPE 323	Tch Hlth & Wellness Elem Sch	3.00	Required of all students majoring in elementary education. This class will focus on strategies for promoting the health of children both in and outside the educational setting. Students will learn the				
				HPE 330	Lifeguard Training	1.00	Successful completion leads to Red Cross Certification. Prerequisite: Swim 500 yards continuously, using four different strokes, dive to a depth of nine feet, and bring up a 10-pound object, and tread water for one minute.
				HPE 335	Elem Health Curriculum	1.00	Designed for the elementary education major who may eventually work in a classroom setting. Prepares potential teachers to: (a) teach health education in a knowledgeable and effective manner, (b) demonstrate approaches for integrating health instruction with other topics, and (c) familiarize the elementary major with current health curricula. Course offered on demand.
				HPE 410	Motor Learning & Development	3.00	Provides understanding of motor development and motor learning and how motor activities enhance the total development of young children. Emphasizes the design and implementation of open-ended, developmentally appropriate movement activities to stimulate problem solving and to be the cornerstone of an integrated curriculum. Additional focus on assessment of motor development and motor learning environments. Must be taken concurrently with ECH 320, 322, 323, 325, and 413. Prerequisites: ED 121. Each semester.
				HPE 415	Hiv/Aids Education	3.00	Experience-based course covers both the facts and the emotional issues involved in teaching about HIV infection. Psychosocial issues covered by the course include values, attitudes, and beliefs and their effects on teaching and learning about HIV, drugs and drug use, and sex and sexuality. Emphasizes helping students develop the skills needed to make AIDS presentations with a non-judgmental perspective and sensitivity to the cultural diversity in their communities. Upon successful completion of the course, students are Red Cross certified to present facts, answer questions, and identify resources for people who want more information on HIV infection, including AIDS. Prerequisite: HPE 111 or permission of the instructor. Course offered on demand.
				IA 211	Into to Intelligence Analysis	3.00	This course is designed to provide students with an introduction to the field of intelligence. Topics covered provide students with knowledge of the history of intelligence analysis and intelligence services, tools and skills used by the intelligence analyst and the process used in the conduct basic intelligence research.
				IA 491	Synth of Intell Anlys Proc	3.00	IA 491 is the capstone course for the minor in Intelligence Analysis. This course will provide a synthesis of the basic intelligence subjects from IA 211 with the student's knowledge base from their respective major area of concentration. This course focuses on the analysis process, analysis products and reports, and the relationship between the analyst and the policy maker. Prerequisite: IA 211; Senior standing. Annually

<p>INDT 120 Introduction to Industrial Technology 3.00 This new course presents an overview of the careers that comprise the field of industrial technology and the courses and curriculum for the degree. Topical areas include: the concept of technology, overview of materials and manufacturing, safety, network technology, electrical & electronics, robotics, energy technologies, electric utility technology, and other topics that apply to industrial technology.</p>	
<p>NDT 250 Industrial Safety 3.00 This new course is an overview of industrial safety in business and industry. The course will cover aspects of safety incidents and associated costs, the recognition of industrial hazards, OSHA, and other safety issues pertinent to industrial organizations.</p>	<p>LS 357 Organization of Information 3.00 Examines organization of print and non-print materials for effective service, principles and methods of descriptive cataloging, and the structure and application of the Dewey Decimal Classification, the Library of Congress Classification, and standard subject authority lists. Includes study of the use of printed cards and the utilization of other work simplification techniques; filing rules; and maintenance of library catalogs--shelf lists, divided and dictionary card catalogs, and the printed book catalog. Biennially.</p>
<p>INDT 290 Advanced Manufacturing 4.00 Advanced Manufacturing is a hands-on laboratory course designed to give the fundamental skills necessary to work in a nanotechnology production and/or technologically advanced manufacturing environment. The course will discuss basic theoretical concepts behind research, development, production, and processing of nano-scaled materials. Safety, handling techniques, protocols, record keeping, production methodology, and analytical techniques will be the core concepts taken from this course. Prerequisite: MATH 112, PH 251, PH 252. Annually, each fall semester.</p>	<p>LS 358 Media for Children 3.00 Surveys children's literature and related materials. Examines the principles of selection and evaluation of books, periodicals, and other materials for children. Includes reading guidance, with attention to materials for special groups; development of general and subject bibliographies; preparation of annotations; techniques of story-telling; and the selection of materials for the story hour. Includes a required field experience. Biennially.</p>
<p>LS 255 Intro to Librarianship 3.00 Broad overview of libraries and the profession of librarianship beginning with the history of libraries and concluding with the impact of technology on libraries. Annually.</p>	<p>LS 361 Administration of Libr 3.00 Addresses the general principles of administration and their application to the organization and management of different types of libraries. Core components include general management techniques and administrative procedures, budget preparation, human resources issues, and facilities and resources management. Students will learn how to apply standards for evaluation of libraries and how to develop functional library programs. Provides a forum for the discussion of the roles of different types of libraries in society. Includes a required field experience. Biennially.</p>
<p>LS 257 Basic Information Sources & Services 3.00 Examines traditional and technological approaches to locating information. Analyzes the criteria for selecting reference materials and examines reviewing media for new reference sources. Explores the organization of reference service. Includes the study of selected reference sources. Biennially.</p>	<p>LS 370 Access Services 3.00 Examines the concepts, policies, procedures, and technology involved in library access services. Practices for the circulation, interlibrary loan, reserves, document delivery, shelf maintenance, and processing of materials are reviewed. Technology's role in creating, retrieving, and delivering access to information and materials is studied. Covers the ALA Library Support Staff Certification competencies for access services and technology.</p>
<p>LS 258 Select Lib Materials 3.00 Provides familiarity with basic bibliographical tools, including current reviewing media and traditional and electronic publishing. Examines policies and criteria for the selection of and evaluation of book and nonbook resources. Biennially.</p>	<p>LS 371 Direct User Services 3.00 Addresses the role of support staff in direct user services. Covers collection organization, search methods, and the nature of adult, young adult, and children's services and problems in libraries. The role of literary genres, different information formats, and technology in user services as also addressed. Includes coverage of the ALA Library Support Staff Certification competencies for adult's readers' advisory, reference and information services and youth services.</p>
<p>LS 259 Introduction to Library Support Services 3.00 Introduces students to library theory and practice, including basic concepts and terminology, roles and mission, ethical standards, organizational structure, staffing and funding. Basic principles of public, technical, and access services are explored. The role of support staff in customer service, team work and effective communication are examined. Includes coverage of the ALA Library Support Staff Certification competencies for foundations and communicatins and teamwork.</p>	<p>LS 385 Library Automation 3.00 Surveys the use of automation in libraries. Topics covered include the selection of computer hardware and software for instructional purposes; use of automated library systems for library management activities such as circulation, acquisitions, and cataloging; and the importance of computer networks to areas including resource sharing, professional development, and fiscal planning. Biennially</p>
<p>LS 356 Media for Young Adults 3.00 Examines literature and other resources for young adults, including principles related to the selection, evaluation, and use of such materials. Considers and analyzes the reading interests of teenagers, the characteristics of young adult literature, and methods of introducing young adults to books and nonbook resources, including electronic products and services. Examines techniques of developing/ preparing booktalks, reviews, reader advisory services, and other programs for young adults, with attention being paid to underserved and special</p>	<p>LS 420 Student Tch Sem 1.00 Students meet and discuss practical and applicable issues as they occur and relate to their field</p>

- experiences. Concurrent with student teaching.
- LS 440 Copy Cataloging and Materials Processing 3.00**
Addresses copy cataloging and materials processing in libraries, including procedures for ordering, processing, and claiming all types of library materials, copy cataloging, inventory control, and preservation. Applications of information technology are emphasized. Includes coverage of the ALA Library Support Staff Certification competencies for collection management and cataloging and classification. Prerequisite: LS 259 - Introduction to Library Support Services.
- LS 455 Special Topics 3.00**
In-depth discussion, study, and research of a selected topic related to the role of the library in responding to social issues, service to special groups, or problem areas such as media and minorities, OCLC on-line bibliographic control, and media programs for the gifted. (Not creditable toward library science certification.) On demand.
- LS 457 Independent Study 3.00**
Students explore in-depth a facet of librarianship according to need or interest, under the direction of a faculty member of the department. Special area to be approved by a faculty committee. Includes development of research techniques and the preparation of a scholarly paper or completion of a special project. On demand.
- LS 459 Media, Meth, And Curr 3.00**
Introduces planning for the effective use of school library media services in cooperation with the instructional staff. Examines school library media philosophies and educational objectives, the process of developing a library media program, and the librarian's role in designing curriculum, developing teaching-learning strategies, and working with teachers, students, and administrators. Includes a three-week practical experience in a school library media center. Annually. Prerequisites: LS 257, 258, either 356 or 358, and ED 327.
- LS 470 Intern-Librarianship 6.00**
Provides a laboratory experience in the professional atmosphere of a cooperating library or information center; allows undergraduate students who are not interested in school librarianship an opportunity to have an applied field experience in a public or special library. Evaluation based on observation at the field site, an evaluative paper, and participation in professional seminars. Enrollment by permission of instructor Each semester.
- LS 491 Bus Ref Sources & Serv 3.00**
Surveys the literature and services common in a business library or department of business information. Includes in-depth examination of major business reference tools, as well as in-depth examination of the special operations, organization, and management of business libraries and departments of business information. Annually.
- MARS 320 Marine Geology 3.00**
Sedimentary and tectonic characteristics of the continental margins and deep ocean basins; sediment transport and deposition in marine environments; marine geophysical methods at sea; marine mineral resources. Prerequisite: Introductory Geology and Oceanography. Summer, on demand.
- MARS 341 Marine Biology 3.00**
Deals briefly with the history of marine biology, and with the interrelationship of chemical and physical oceanography and marine biology. Marine habitats will be studied in more detail with reference to the adaptations of plant and animal inhabitants. Course taught at the Marine Science Consortium (MSC), Wallops Island, Virginia.
- MARS 345 Marine Ornithology 3.00**
An introductory course on the bird fauna of the sea coast, including avian diversity and ecology. Students will learn to identify coastal birds using plumage, behavior and songs. Lecture material will include information on distribution, behavior, physiology and anatomy of birds. Course taught at the Marine Science Consortium (MSC), Wallops Island, Virginia.
- MARS 360 Marine Ecology 3.00**
Interrelationships among animals, plants, and physical and chemical aspects of the environment will be studied, with an emphasis on adaptations for survival which are unique to the marine environment. Zoogeography and food chain interactions will also be studied with some emphasis placed on the impacts of human activities. Course taught at the Marine Science Consortium (MSC), Wallops Island, Virginia.
- MARS 403 Research Diver Methods 3.00**
Study and practice of aquatic research methods using SCUBA as a tool. Advanced research diving topics include areas such as navigation, search and recovery, underwater photography, survey methods, estimating population parameters, and data acquisition while under water. Specific research techniques will be presented in the context of specific aquatic research project conducted by students under the director of the instructor. Each summer.
- MARS 431 Ecology of Marine Plankton 3.00**
Study of the phytoplankton and zooplankton in marine and brackish environments. Qualitative and quantitative comparisons will be made between the planktonic populations of various types of habitats in relation to primary and secondary productivity. Course taught at the Marine Science Consortium (MSC), Wallops Island, Virginia.
- MARS 443 Marine Ichthyology 3.00**
Study of the internal and external structure of fishes, their classification and evolutionary relationships, their ecology and behavior, their physiology and environmental requirements, and their distribution patterns in marine and brackish environments. Course taught at the Marine Science Consortium (MSC), Wallops Island, Virginia.
- MARS 471 Scan Electron Microscop Marine 3.00**
Trains students in the use of a portable scanning electron microscope (PSEMII), including principles of operation and use the SEM, preparation of geological and biological samples for imaging, size and shape analysis, and elemental and mineralogical analysis with the energy dispersive X-ray spectrometer (EDX). The latter portion of the course is dedicated to the design and execution of independent research projects in investigating a problem in marine science using the SEM and/or EDX. Course taught at the Marine Science Consortium (MSC), Wallops Island, Virginia.
- MATH 10 Prep for College Math 3.00**
Covers basic arithmetic and geometric principles necessary for the subsequent study of introductory algebra and other more advanced courses requiring a basic mathematics competency. Emphasizes

	decreasing mathematics anxiety, developing mathematics text-reading abilities, including the study of vocabulary unique to the mathematics discipline, developing estimation skills, interpreting data, mental mathematics, and critical thinking. Major learning modalities are written response, calculator use and experimentation, analysis activities, and problem-solving.	
MATH 50	Basic Algebra Introduces basic arithmetic and algebraic concepts, including an introduction to real numbers and algebraic expressions, solving equations and inequalities, polynomials, factoring, graphing, and systems of equations. Credits in this course do not count toward general education or graduation. Prerequisite: Appropriate placement determined by the Mathematics Department. Each semester.	3.00
MATH 110	Intermediate Algebra Covers topics in algebra beyond the introductory level, yet less than the precalculus level. No student who has satisfactorily completed MATH 131 or a higher-numbered mathematics course may subsequently receive credit for MATH 110. Prerequisite: C or better in MATH 050 or satisfactory score on the department's placement examination. Each semester.	3.00
MATH 111	Math Conc Grades K-8 Examines operations and properties of integers, fractions, and decimals. Includes elementary set theory, number theory, and functions. Covers conceptual foundations of the numerical content of the mathematics curriculum in the elementary and middle grades, emphasizing problem solving. MATH 111 is the first in a two-part sequence; the study of measurement, geometry, data gathering, and other topics are included in MATH 211. Prerequisite: C or better in MATH 050 or satisfactory score on the departmental placement examination. Each semester.	3.00
MATH 112	Excursions Math Acquaints students with the nature and scope of modern mathematics and its applications. Emphasizes concepts and understanding rather than acquisition of techniques. Prerequisite: C or better in MATH 050 or satisfactory score on the departmental placement examination. Each semester.	3.00
MATH 113	Quantitative Reasoning Helps students develop quantitative reasoning skills. Core content, common to all sections, covers elements of descriptive statistics with particular emphasis on the representation and interpretation of data. Additional topics, covered at the instructor's discretion, may include basic finance, probability, and logic. Prerequisite: MATH 112. Each semester.	3.00
MATH 117	Mathematics for Health Science Mathematics for Health Sciences (MATH 117), a three (3) credit course, will prepare students in health science related majors for the mathematical applications within the healthcare field. Topics that will be included are algebra; fractions and fractional equations; ratios and proportions; percentages, variation; relationships among systems of measure; scientific notation; logarithms; calculation of dosages; and basic geometry, graphing, and statistics. The course will incorporate real world examples in an effort to foster the development of critical thinking and problem solving skills necessary for success in today's healthcare space. Concepts included will be relevant for the various discipline specific certification exams. Prerequisite: The prerequisite for	3.00
MATH 131	Applied Finite Math Covers mathematical techniques with special applications in business and related areas. Includes matrices, linear programming, and mathematics of finance. Prerequisite: MATH 110 or satisfactory score on the departmental placement examination. Each semester.	3.00
MATH 170	Algebra and Trigonometry for Middle School Teachers Investigates topics in algebra and trigonometry including rational expressions, exponential equations, linear equations and systems of linear equations, and right triangle trigonometry. This course is specifically designed to prepare students for topics in algebra and trigonometry that are encountered in the middle school classroom. Prerequisite: MATH 110 or equivalent Mathematics Department Placement and enrollment in the College of Education and Human Services.	3.00
MATH 171	Precalculus Prepares students for calculus by covering high school algebra, functions, inequalities, analytic trigonometry, logarithms, elementary theory of equations, complex numbers, and mathematical induction. Prerequisite: MATH 110 or satisfactory score on the departmental placement examination. Each semester.	4.00
MATH 200	Reasoning & Proof in Mathematics Students will explore mathematical reasoning and learn the basic logic behind mathematical proofs. Prerequisite: MATH 111 and 170 or equivalent. Restricted to students in the College of Education and Human Services.	3.00
MATH 201	Technology in Teaching Mathematics Investigates the use of technology in the practice of teaching mathematics. Topics will include the appropriate use of technology to both present and study mathematics. Prerequisite: MATH 110 or equivalent Mathematics Department Placement and enrollment in the College of Education and Human Services.	3.00
MATH 211	Fund Topics In K-8 Math Investigates selected topics considered essential to the basic mathematics curriculum in the elementary and middle grades. Includes introductions to mathematical reasoning, additional problem-solving techniques, probability and data analysis, geometry and measurement. Math 211 is the second in a two-part sequence beginning with MATH 111. Prerequisite: MATH 111. Each semester.	3.00
MATH 212	Intuitive Geometry Intuitive overview of geometry; Euclid's Axioms, exploration of relationships, measurement and coordinate geometries, geometrics on other surfaces, and geometry in nature and art. Prerequisite: Any 100-level mathematics course. On demand.	3.00
MATH 213	Intuitive Calculus Explores development of the basic properties of the real number system and the calculus, including functions, sequences, limits, continuity, integrals, and derivatives. Examines topics graphically, symbolically, and numerically. Prerequisite: Any 100-level mathematics course. On demand.	3.00
MATH 214	Finite Math Introduces basic properties of finite mathematics, including logic, counting techniques, elementary	3.00

- probability, and application to social and computer science. Prerequisite: Any 100-level mathematics course. On demand.
- MATH 215 Math Concept Lab 2.00**
Develops certain concepts of mathematics using an activity-oriented approach. Conducted in a laboratory atmosphere. Includes the rational number system, number theory, induction, measurement, geometric shapes. On demand. Prerequisite: Any 100-level mathematics course.
- MATH 216 Problem Solving Strategies in Math 3.00**
An introduction to the problem solving nature of mathematics. Focus is on using quantitative reasoning and intuitive logical thought techniques to solve problems (rather than formal rigid processes). Selected topics may include, but are not limited to, set theory, algebra, geometry, number theory, mathematical puzzles and games, estimation, and infinity. Prerequisite: 'C' or better in MATH 110 or equivalent mathematics placement and enrollment in the College of Education and Human Services.
- MATH 217 Historical Development of Mathematics for Teachers 3.00**
Investigates topics in the history of mathematics, including development of number systems, development of important fields of mathematics. Some important mathematical ideas and developments will be seen as products of their times. Prerequisite: MATH 211. Restricted to students in the College of Education and Human Services.
- MATH 221 Elementary Applied Stats 3.00**
Examines basic principles and methods of statistical analysis useful in the social sciences, biology, and education. Designed specifically for students not majoring in mathematics. Prerequisite: C or better in MATH 050 or satisfactory score on the departmental placement examination. Each semester.
- MATH 222 Elem Nonparametric Stats 3.00**
Examines statistical methods for experiments that yield small samples and/or ordinal data, methods for dealing with data from unknown or intractable distributions and the basis for a well-designed experiment. Prerequisite: C or better in MATH 050 or satisfactory score on the departmental placement examination. Spring, odd-numbered years.
- MATH 225 Elem Survey Sampling 3.00**
Addresses the problems of bias--in both the mathematics and the survey designs, while introducing the student to the major survey designs. Prerequisite: MATH 221, 222, or 321 or permission of instructor. Spring, even-numbered years.
- MATH 232 Calculus Bus I 3.00**
Examines differential calculus with application to business and the social sciences. Topics include limits, derivatives, maxima and minima, and an introduction to integration. MATH 232-3 are designed for students outside the natural sciences. Prerequisite: MATH 110 or adequate placement in the mathematics placement examination. Each semester.
- MATH 233 Calculus Bus II 3.00**
Applies integral calculus to business and the social sciences. Includes rules of integration, definite and indefinite integrals, series, and partial derivatives. MATH 232-3 are designed for students outside the natural sciences. Prerequisite: MATH 232 or the equivalent. Each semester.
- MATH 260 Applied Calculus 4.00**
Covers the concepts and applications of differential and integral calculus. Includes derivatives and their applications, integrals and their applications, integration techniques, numerical integration, and the calculus of several variables. For students in the social, behavioral, and biomedical sciences. Prerequisite: MATH 171 or satisfactory score on the departmental placement examination. Each semester.
- MATH 270 Calculus I 4.00**
Covers elementary analytic geometry, limits, continuity, differentiability, applications, definition of the Riemann integral, and the fundamental theorem of Calculus. Students in mathematics and sciences and better-prepared students in other disciplines are encouraged to select MATH 270-271 instead. Prerequisite: C or better in MATH 171 or satisfactory score on the departmental placement examination. Each semester.
- MATH 271 Calculus II 4.00**
Reviews limits and definition of the Riemann integral. Covers applications, integration techniques, and topics in analytic geometry. Prerequisite: MATH 270. Each semester.
- MATH 272 Calculus III 4.00**
Reviews sequences and series. Analyzes geometry of 3-space, vectors, vector functions, basic properties of limits, continuous and differentiable functions of several variables, and multiple integrals. Prerequisite: MATH 271. Each semester.
- MATH 285 Mathematical Modeling 3.00**
Develops higher-level problem solving strategies using mathematics to solve real world problems. Applications from diverse disciplines will be represented by mathematical models that will then be solved and analyzed in the context of each problem. Prerequisite: ENG 110 (or equivalent) and one of either MATH 270 or 260, both with grades of C or better. Annually.
- MATH 290 Calculus Workshop 1.00**
Overview of the calculus sequence that allows students to examine problems in differential and integral calculus by applying simultaneously the methods learned from the entire sequence. Discusses some new topics and techniques in analysis. Prerequisite: MATH 272. Annually.
- MATH 295 Projects in Mathematics 2.00**
The course is designed to provide undergraduates with practical experience in the real-world use of Mathematics. Students will work on projects that provide exposure to emerging areas of Mathematics such as Applied Mathematics, Mathematical Modeling, Industrial Mathematics, Computational Science, and Mathematical Programming. A maximum of eight credits in this course may be applied toward graduation. Prerequisite: permission of instructor. Each semester.
- MATH 300 Intro to Advanced Math 3.00**
Rigorous approach to the study of the standard methods of mathematical proof applied to topics in the theory of numbers, sets, functions, and analysis. Prerequisite: MATH 271. Every semester.
- MATH 321 Inter Applied Stats I 3.00**
Provides an overview of the basic theory and application of mathematical statistics. Emphasizes understanding and applying basic statistical theory. Prerequisite: MATH 271. Fall, annually.
- MATH 322 Intermed Statistics II 4.00**
Examines in further detail the analysis of variance, factorial experiments, and multiple regression.

	Prerequisite: MATH 321 (MATH 221/222 with instructor's permission). Spring, even-numbered years.	
MATH 340	Discrete Mathematical Structures 3.00 Introduces sets, relations, functions, combinations, graphs, and trees, emphasizing concrete models. Includes computer algorithms and mathematical structures useful in computer science. Designed for students in both mathematics and computer science. Prerequisites: MATH 300 and CPSC 201.	
MATH 350	Differentl Equat 3.00 Studies first order differential equations, linear differential equations of higher order, and systems of differential equations. Prerequisite: MATH 272. Spring, annually.	
MATH 357	Modern Geometry 3.00 Axiomatic treatment of topics in geometry. Prerequisite: MATH 300.	
MATH 360	Num Meth In Math I 3.00 Examines types of error, calculus of finite differences, numerical evaluation of integrals, algorithms for the solution of algebraic equations, and systems of algebraic equations with applications to selected problems and computer programming of algorithms. Prerequisite: MATH 271. Each Spring Semester (360); on demand (460).	
MATH 370	Linear Algebra 3.00 Introduces systems of linear equations, vector spaces, linear transformations, matrices, determinants, eigen vectors, and eigen values. Prerequisite: MATH 271. Each semester.	
MATH 390	Junior Seminar in Mathematics 1.00 This course is an introduction to the literature in Mathematics and Mathematics Education. Students will read a collection of articles or chapters of books with topics ranging from history, applications, and creativity, to research in mathematics education and nature of mathematics. Students will write short papers that provide their reactions and insights about the materials from each reading assignment. Each student is also required to choose a topic for the Senior Seminar. Prerequisite: 6 hours of 300-level or higher mathematics courses and the consent of the mathematics department chair.	
MATH 421	Mathematical Stats I 3.00 Explores basic concepts of elementary probability, probability in finite spaces, conditional probability, independent trials, sophisticated counting, and probability in relation to random variables. Prerequisites: MATH 272 and MATH 300. Fall, even-numbered years.	
MATH 422	Mathematical Stats II 3.00 Analyzes mathematical expectation, discrete and continuous random variables, probability densities, sampling distributions, point estimations, interval estimations, tests of hypotheses, regression and correlation, analysis of variation, and moment-generating functions. Prerequisite: MATH 421. Spring, odd-numbered years.	
MATH 451	Modern Algebra I 3.00 Introduces groups, rings, integral domains, and fields. Emphasizes rigorous proof and logical methods. Prerequisite: MATH 300. Fall and spring, respectively.	
MATH 452	Modern Algebra II 3.00 Introduces groups, rings, integral domains, and fields. Emphasizes rigorous proof and logical methods. Prerequisite: MATH 300. Fall and spring, respectively.	
MATH 454	Theory of Numbers 3.00 Examines factorization, congruence, quadratic reciprocity, number theoretic functions, diophantine equations, and continued fractions. Prerequisite: MATH 300.	
MATH 459	Intro to Complex Var 3.00 Covers the complex plane, analytic functions, poles, residues, and their applications, including the fundamental theorem of algebra. Prerequisites: MATH 272 and 300.	
MATH 459	Intro to Complex Var 3.00 Covers the complex plane, analytic functions, poles, residues, and their applications, including the fundamental theorem of algebra. Prerequisites: MATH 272 and 300.	
MATH 460	Numerical Meth Math II 3.00 Examines types of error, calculus of finite differences, numerical evaluation of integrals, algorithms for the solution of algebraic equations, and systems of algebraic equations with applications to selected problems and computer programming of algorithms. Prerequisite: MATH 271. Each Spring Semester (360); on demand (460).	
MATH 471	Intro Real Anal I 3.00 Covers limits, continuity, differentiability, integrability, and convergence for functions of a real variable and several variables. Prerequisites: MATH 272 and 300.	
MATH 472	Intro Real Anal II 3.00 Covers limits, continuity, differentiability, integrability, and convergence for functions of a real variable and several variables. Prerequisites: MATH 272 and 300.	
MATH 473	Elem Topology 3.00 Explores topological spaces, metric spaces, compactness, and connectedness. Prerequisites: MATH 272 and MATH 300.	
MATH 480	Special Topics 3.00 Offers special topics reflecting the interests of the students. The specific topic to be covered each term will be announced in advance. Prerequisites: MATH 272 and permission of the instructor.	
MATH 490	Seminar I 1.00 Individual study under faculty supervision. MATH 390, 12 hours of 300-level or above mathematics courses and written consent of the department chair.	
MATH 491	Seminar II 1.00 Seminar in mathematics. Oral and written presentations are required.	
MATH 492	Seminar III 1.00 Seminar in mathematics. Oral and written presentations are required.	
MATH 495	Industrial Mathematics Wksp 3.00 Serves as the capstone course for students in the Industrial Mathematics Program. Students work to find solutions to problems originating from business, industry, medicine, and government. Requires written and oral presentations. Prerequisites: Completion of MATH 270, 271, 272 (all with C or better), MATH 300, 12 credit hours of mathematics numbered above MATH 300, and permission of instructor. Fall, annually.	
MATH 499	Independent Study 3.00 Individual study under faculty supervision. Prerequisites: 12 hours of math numbered 300 or above and written consent of the department chair.	
MEDD 301	Medical Dosimetry Treatment Planning 12.00 Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in medical dosimetry, MEDD 301 will facilitate transference of a block of 1 to 12 credits for	

- completion of a formal, accredited clinical educational program in medical dosimetry that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).
- MEDD 302 Medical Dosimetry Doseage Calculation 12.00**
Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in medical dosimetry, MEDD 302 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in medical dosimetry that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).
- MEDD 303 Medical Dosimetry Patient Care and Education 6.00**
Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in medical dosimetry, MEDD 303 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in medical dosimetry that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).
- MEDD 401 Medical Dosimetry Radiation Physics 12.00**
Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in medical dosimetry, MEDD 401 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in medical dosimetry that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).
- MEDD 402 Medical Dosimetry Applications to Radiation Oncology 12.00**
Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in medical dosimetry, MEDD 402 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in medical dosimetry that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).
- MEDD 403 Medical Dosimetry Radiation Protection 6.00**
Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in medical dosimetry, MEDD 403 will facilitate transference of a block of 1 to 6 credits for completion of a formal, accredited clinical educational program in medical dosimetry that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).
- MGMT 120 Intro to Business Integration Experience 3.00**
Introduces students to the role of the business institution in society and the challenges it faces. The course integrates the study of business within all functional areas of business, Economics, Accounting, Finance, Management and Marketing. The course introduces students to professional standards in business through experiential learning opportunities. Required of all BSBA majors. Open to all students. Each semester. No prerequisites.
- MGMT 121 Fund of Management 3.00**
Introduces management and organization. Emphasizes managerial processes and functions and the interface of the manager with supervisors, subordinates, and the work environment. B.S.B.A. majors can apply this course to free electives only. Each semester, Venango only.
- MGMT 210 Essentials of Entrepreneurship & Small Business Management 3.00**
Explores the entrepreneurial process associated with new venture formation. Examines managerial processes as they relate to the operation of a small business. The role of a formal business plan is highlighted and developed. Highlights the preparation involved in the formation of a new venture, developing the entrepreneurial plan, and adapting to contemporary challenges facing the entrepreneur. B.S.B.A. majors can apply this course to free electives only. Prerequisite: MGMT 120. Spring, annually, Venango only.
- MGMT 227 Appl Supervision 3.00**
Prepares students for a position as a first-time supervisor and includes the essential elements of good management practices and stresses application rather than theoretical supervision concepts. B.S.B.A. majors can apply this course to free electives only. Prerequisites: sophomore standing and MGMT 120. Spring, annually, Venango only.
- MGMT 228 Human Behav/Orgs 3.00**
Explores how basic psychological principles can be used to describe, explain, and predict individuals' on-the-job thoughts, feelings, and behaviors. Includes personality, motivation, perception, attitudes, stress, communication, learning, leadership, group behavior, cooperation, decision-making, and research methods. B.S. business administration majors can apply this course to free electives only. No prerequisite. On demand at both the Clarion and Venango Campuses.
- MGMT 320 Mgmt Theory and Practice 3.00**
Focuses on the development of management thought and its application. Includes planning, organizing, controlling, decision-making, motivation, leadership, work groups, and organizational change and development. Considers the domestic and international environments and changing societal values. Prerequisites: ECON 211, ECON 212, and junior standing. Each semester.
- MGMT 321 Org Theory & Behavior 3.00**
Focuses on the managerial application of behavioral science research and theory in dealing with individuals, groups, and organizations. Prerequisite: MGMT 121 or 320. Each semester.
- MGMT 322 Management of Business Information Systems 3.00**
Shows managers how to develop business management information systems, either on their own or with the aid of system technicians. Simulates the systems techniques in organizing and analysis that the student will use in practice. Prerequisite: MGMT 320. Each semester.
- MGMT 323 Small Business 3.00**
Explores the challenges and prospects of initiating and operating a small business. Emphasizes strategies for creating and maintaining a sustainable competitive advantage in the marketplace. Highlights sources and uses of information needed for small business decision-making. Prerequisite: MGMT 320. Once every three semesters.
- MGMT 324 Human Resources Mgmt 3.00**
A study of the activities involved in human resource management. Includes high performance work systems, job analysis, human resource planning, recruitment, selection, equal employment opportunity, training and development, performance appraisal, compensation practices, and safety and

- MGMT 330 New Venture Creation Lab 1.00**
health. Prerequisite: MGMT 320. Each semester. This is a hands-on course that provides students with an understanding of innovation and the key entrepreneurial content and process elements to create a successful new enterprise. It emphasizes appropriate resources, the role of business planning, and effective communication of that plan to stakeholders. Prerequisite: Junior standing. Offered annually.
- MGMT 360 Leadership Communication 3.00**
The course provides an overview of the role of communication in leadership in a variety of contexts, including interpersonal, small group, intercultural, organizational, and public sphere. It includes theoretical and experiential approaches to effective leadership communication. Students will analyze their personal leadership styles and develop leadership communication skills.
- MGMT 420 Operations Research 3.00**
Examines scientific methods that provide managers with a quantitative basis for making decisions. Emphasizes deterministic and stochastic methods, including the transportation method, linear and dynamic programming, PERT, inventory control, queuing theory, and Markov analysis. Prerequisite: ECON 222.
- MGMT 423 Bus Society, & Corp Conduct 3.00**
A study of concepts of, and theories about, interrelationships between business units and society in general. Employs the concepts and theories in the analysis of complex environmental problems encountered by business managers. Prerequisite: MGMT 320.
- MGMT 425 Operations Management 3.00**
Examines the philosophy of F.W. Taylor and other management pioneers, the nature of the production cycle, simplification and diversification of product lines, purchasing, materials, control, routing, scheduling, dispatching, and plant layout. Prerequisites: ECON 221, 222, and MGMT 320. Each semester.
- MGMT 426 Global Business Leadership 3.00**
Introduces the international environment and the growing discipline of multinational business in this environment--i.e., multinational management of strategic planning, organization, production, research and development, marketing, finance, and human resources. Prerequisite: MGMT 320. Each semester.
- MGMT 427 Entrepreneurial Leadership Seminar 3.00**
Hands-on approach to the study of small business as it applies to the various sectors of the economy. Students gain direct exposure to small business through the development of a formal business plan for a new small business. Emphasizes the entrepreneurial activities involved as they relate to this process. Prerequisite: MGMT 320. Once every three semesters.
- MGMT 428 Entrepreneurship 3.00**
Explores entrepreneurship and the entrepreneurial process associated with new venture formation. Emphasizes creativity and innovation as they relate to the initiation of a new business. Highlights the preparation involved in the formation of a new venture, developing the entrepreneurial plan, and adapting to contemporary challenges facing the entrepreneur. Prerequisite: MGMT 320. Once every three semesters.
- MGMT 430 Sports Management 3.00**
Provides students with an understanding of how the principles and concepts of management theory can be applied to sports administration. Prerequisite: MGMT 320. Every other semester.
- MGMT 445 Management Seminar 3.00**
Designed for management majors as a follow-up course to MGMT 320. Presents the views of numerous management theorists and practitioners. Includes broad ranging areas of study and an integration of these areas through discussion, individual written and oral reports, and some case analyses. Students analyze and integrate theory and practice as a means of increasing his or her understanding of the management process. Prerequisites: MGMT 320 and senior standing. On demand.
- MGMT 450 Quality Management 3.00**
Examines Total Quality Management (TQM), including the philosophies and principles of Deming, Juran, and Crosby. Focuses on the management and continuous improvement of quality and productivity in manufacturing and service organizations. Includes quality measurement, quality assurance, giving employees responsibility for quality, the team approach to quality, employee recognition, and various TQM tools and techniques. Prerequisite: MGMT 320. Annually.
- MGMT 470 Project Management 3.00**
Introduces students to basic project management concepts and reinforces those concepts through the use of project management software. Provides students with the knowledge and skills necessary to plan, organize and control information technology projects. Key topics include monitoring and controlling schedules, progress reporting, risk management, quality management, cost management as well as contracting and procurement. Graduate students will analyze a case study; present it to the class; and provide a 10-15 page written report on the case study analysis to the instructor. Prerequisites: CIS 301 and MGMT 320 or permission of instructor.
- MGMT 482 Collect Bargaining 3.00**
A study of the negotiation and scope of collective bargaining contracts; the substance of bargaining power and institutional goals are applied in the resolution of industrial conflict. Prerequisite: MGMT 324. Spring.
- MGMT 483 Compensation Management 3.00**
A study of the processes in analyzing, developing, implementing, administering, and performing on-going evaluation of a total compensation and benefit system for all organizational groups. Prerequisite: MGMT 324. Spring.
- MGMT 485 Labor Rel & Pub Policy 3.00**
Examines the industrial relations functions as they relate to federal, state, and local statutes and industrial policies. Includes OSHA, EEOA, NLRA, LMRA, and LMRDA, workers' compensation, and unemployment compensation. Prerequisite: MGMT 324. Fall.
- MGMT 486 Occupant Safety Management 3.00**
Provides students with information concerning management techniques, government regulations and safety, and health program development within organizational settings. Prerequisite: MGMT 320. Fall.

MGMT 499	Special Topics: Mgmt Presents various current topics affecting management practice or theory. Different topics may be covered from year to year as subjects of critical importance or interest occur. Prerequisites: Junior standing and MGMT 320.	6.00		
MKTG 160	Contemp Issues in Mktg Introduces contemporary issues in marketing and e-marketing in society and the world. Includes discussion of and composition of themes dealing with the impact of marketing on the society, its values, and the individual. May not be used to satisfy core or major requirements for degrees in business administration. Students who have passed MKTG 360 may not schedule this course. B.S.B.A. majors may apply this course only as a free elective. On demand.	3.00		
MKTG 360	Prin of Marketing The process in our society by which needs and wants of consumers are anticipated and satisfied. An examination of a systems approach to and analysis of the organizational function and the set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders. Students develop an understanding of the increasing complexity of the modern marketing system, why it is essential, and how it performs in both domestic and international marketing situations. Prerequisites: ECON 175 or 212, and junior standing. Each semester.	3.00		
MKTG 361	Marketing Management A study of coordinative effort in planning, organizing, and controlling marketing and e-marketing activities that direct the flow of goods and services from producer to consumer. Prerequisite: MKTG 360. On demand.	3.00		
MKTG 362	Retail Management Introduces students to the field of retailing and e-tailing where they will study such areas as organizational structure, merchandising practices and procedures, promotional activities, store planning, control, etc. Prerequisite: MKTG 360, or instructor approval. On demand.	3.00		
MKTG 363	Advertising Management Examines the uses of advertising and advertising campaigns by business and e-business which give emphasis to the patterns and types of marketing strategy and its various functions, legal and moral obligations, problems in developing and evaluating advertising programs, budgeting, scheduling, and client-advertising agency relationship. Prerequisite: MKTG 360. On demand.	3.00		
MKTG 366	Channels of Distribution Examines factors involved in the selection of marketing and e-marketing channels and problems involved in managing the task efficiently. Prerequisite: MKTG 360. On demand.	3.00		
MKTG 369	Services Marketing Offers upper-level business students the opportunity to study effective approaches to marketing and e-marketing of services. Includes non-profit and commercial organizations. Utilizes a case study, discussion methodology to study the conceptual background of services marketing. Prerequisite: MKTG 360; junior standing. On demand.	3.00		
MKTG 374	Real Estate Marketing and Brokerage Examines real estate marketing and brokerage management. Topics include the regulatory	3.00		
				environment, marketing, advertising, sales management, and personal selling. Prerequisite or Co-requisite: RE 271 or permission of Instructor. Offered biennially.
MKTG 461	Marketing Research Examines the application of scientific and statistical methods and tools to the solution of marketing and e-marketing problems. Prerequisites: ECON 221, 222, and MKTG 360. Fall.	3.00		
MKTG 462	Personal Selling & Sales Mgmt Covers the process of personal selling and all aspects of the management of a sales force, including the selection and testing of sales representatives, training, devising compensation plans and expense accounts, territories, quotas, and evaluation. E-marketing topics are discussed. Prerequisite: MKTG 360. On demand.	3.00		
MKTG 463	Gender and Diversity in Management and Marketing Explores the changing business, organizational, management and marketing environments as they are influenced by gender and other dimensions of diversity in the marketplace. Examines the special problems, opportunities and advantages that might derive from a professional approach to gender and other types of diversity. Prerequisites: MKTG 360 or MKTG 320 or Junior Standing. Available on demand.	3.00		
MKTG 465	Marketing Problems Utilizes the case and/or simulation gaming methods to consider the problems faced by the producer and reseller, including traditional marketing and e-marketing issues. Prerequisites: MKTG 360 and senior standing. Spring.	3.00		
MKTG 468	Buyer Behavior Examines theories, models, recent research, and research techniques in consumer motivation and decision making, and buyer-seller interaction, including consumer buyers, business and organizational buyers. Includes traditional consumer marketing, business-to-business and e-marketing issues. Prerequisites: MKTG 360 and PSY 211 or permission of the instructor. On demand.	3.00		
MKTG 469	International Marketing Analytical approach to study marketing and e-marketing management decisions involving multinational operations. Focuses on the management of the marketing functions within the multinational corporation. Prerequisite: MKTG 360. On demand.	3.00		
MKTG 471	Real Estate Market and Investment Analysis Provides the necessary background to evaluate prospective real estate investment analysis. Examines both financial and non-financial aspects of investing in real property including risk, market analysis, portfolio impacts, and income taxation consequences. Prerequisites: RE 271. Offered biennially.	3.00		
MKTG 491	E-Marketing The study of concepts, vocabulary, and contemporary practices in e-marketing management including e-marketing planning, e-marketing mix decision-making, ethical and legal issues affecting the environment of e-marketing.	3.00		
MKTG 495	Special Topics Presents various current topics that affect marketing practice or theory. Topics differ from year to year as subjects of critical importance arise. Prerequisite: MKTG 360 or permission of the instructor.	3.00		

MMAJ 100	Intro to Mass Media Systematic study of mass media and their support industries. Includes historical and critical perspectives of legal, ethical and social issues surrounding the influence of the mass media on audiences, characteristics and functions of the mass media, career options, employment trends, and competencies required of a mass media professionals. Each semester.	3.00	
MMAJ 140	Writing for Media Develops fundamental skills in writing and/or visualizing for a variety of media forms. Emphasizes print and broadcast newswriting, advertising copywriting, and public relations writing. Prerequisite: ENG 111 or consent of instructor. Each semester.	3.00	
MMAJ 202	Media Production Planning MMAJ 202, Media Production Planning is a survey class of Graphic Design, Web, Film and Video production processes. Students will learn specific steps for those types of productions as well as how those processes can help to coordinate projects in Advertising, Public Relations, Journalism and other media. Students will also learn real-world management principles, and fundamental budgeting and scheduling skills.	3.00	
MMAJ 208	Intro to Film This course is designed to help the student become literate in the language of film. It will introduce terminology, history, theory and technology of film. The student will take a critical look at the cinema, and will analyze the theory and techniques used by directors and writers, critique a variety of works in a number of film genres.	3.00	
MMAJ 249	News Reporting This course develops basic reporting skills for beginning journalism students including interviewing, gathering and verifying information, covering a beat, and coverage of various types of news. The focus of the course is to help students develop in-field news reporting techniques. Prerequisite: MMAJ 140	3.00	
MMAJ 270	Temporal Media Provides initial instruction on communicating via motion and passage of time. Includes the syntax of motion and production techniques in video and animation. Each semester.	3.00	
MMAJ 302	Film Production Planning This course is designed to give the student practice instruction in the process of film production. All aspects of film production are covered from pre-production to post-production, including location scouting, casting sessions and on-location staging. Special emphasis is placed on roles and responsibilities of personnel.	3.00	
MMAJ 311	Broadcasting Prin & Pract Overview of the broadcasting industry, including history, technical aspects, station and network organization, sales, ratings, programming, and social and ethical influences. A foundation course for radio-TV career preparation, related fields of communication, and the development of knowledgeable consumers of broadcast media.	3.00	
MMAJ 312	P R Prin & Practice Provides fundamental instruction in public relations practices, including program planning and evaluation, working with the media, writing for public relations, and coordinating special events and functions. Explores the structure, ethics, and process of	3.00	
			public relations in business, institutions, and American society through readings and discussion. Prerequisite: COM 100 and grade of C or above in COM 140. Note: Undergraduate students completing COM 315 may enroll in COM 551. Annually
MMAJ 313	Journalism Prin & Pract Examines the history and theory of the practice of journalism paying particular attention to First Amendment issues, the language of the media, changing conditions of information, ethics, and closely examining the role and organizations of a democratic press. Prerequisite: MMAJ 100 or 101.	3.00	
MMAJ 314	Advertising Prin And Practices Introduces students to the basic principles, theories and applications of the advertising field. Examines advertising historical background, planning and management, media strategies, creative development, international issues, and social and legal effects. Prerequisite: MMAJ 100 or MMAJ 101	3.00	
MMAJ 320	Communication Research Introduces students to quantitative research principles guiding mass communication professionals working in areas such as broadcasting, public relations, advertising and journalism. Topics include audience measurement principles, polling research, survey construction and analysis, focus group research, mass media content analysis, and statistical analysis. Calculator required. Prerequisites: COM 100.	3.00	
MMAJ 324	New Mass Media Tech & Prof Introduces students to new mass media technologies that are changing the role of mass communication professionals working in broadcasting, public relations, advertising, and journalism. Topics include evolving mass media implementations of the Internet to reach audiences, evolving copyright issues and their impact on the mass media; discussion of new World Wide Web technologies such as animation formats, streaming media, and digital video production; new digital technologies and formats for broadcasting, and new multimedia technologies. Developing careers and challenges to older professions will be discussed in the context of mass media industry trends. Prerequisite: MMAJ 100 or 101. On demand.	3.00	
MMAJ 331	Media Ethics & Responsibility Prepares future professional communicators to make informed media decisions. Provides a historical, legal, cultural, and philosophical context for judgment of continuing and emerging issues in mass media fields, and creates an experimental frame through discussion, simulation, and modeling. No prerequisites.	3.00	
MMAJ 339	Global Mass Communication Enables students to effectively interact with the new culturally diverse audience and workforce in the American business and industry. Covers the latest innovatively designed resources on cultural diversity, global mass communication competencies, and positive attitudes. Includes imaginative conceptualization techniques of designing mass media messages suited to the new realities of cultural diversity. Prerequisite: Junior standing.	3.00	
MMAJ 340	Newswriting Explores the principles and practice of evaluating, gathering, and writing the fundamental news story and news feature. Includes the preparation of	3.00	

- copy for publication, interviewing, and laboratory experience. Prerequisite: MMAJ 140
- MMAJ 341 Publications Editing 3.00**
Provides fundamental instruction in editing skills, copy editing, headline writing, typography, photographs, copy control, and layout. Examines the role and responsibilities of the editor. Prerequisite: MMAJ 140.
- MMAJ 344 Investigative Journalism 3.00**
Focuses on the skill and techniques used to gather in-depth information for investigative reporting. Students will learn interviewing research, and organizational skills. In addition, the legalities and practicalities of information access will be covered. All of these skills will culminate in the production of an investigative journalism project spanning both written and recorded media. Prerequisite: MMAJ 202 and 340.
- MMAJ 345 Newswriting for Internet Media 3.00**
This course develops reporting, writing and editing skills for internet delivery. Students understand the continuum of the cycle of news demanded by internet news sources, and the fundamental differences between online and traditional media. The internet requires reporters and writers to think differently about the structure, appearance and detail in news stories. Students will report, write and edit news stories for the internet that are interactive and nonlinear. Prerequisite: MMAJ 140
- MMAJ 351 Field Production 3.00**
Provides students with training in television production and experience in the application of communication theory and production techniques. Integrates skills in writing, photography, audio and graphics in a total production context. Prerequisite: MMAJ 270.
- MMAJ 353 Studio Production 3.00**
Develop basic skills in studio production techniques, including producing, crew positions, lighting, and on-camera talent. Prerequisite: MMAJ 270.
- MMAJ 354 Audio Production 3.00**
Covers theory and advanced techniques of audio production for radio and video, from conception through completion, emphasizing multitrack, non-destructive and non-linear production. Prerequisite: MMAJ 270.
- MMAJ 355 Cinematography 3.00**
This course further develops skills in digital/film production by examining the use of lenses, light meters, advanced lighting techniques, and low-tech special effects. Students produce a number of projects that employ these techniques. The student will be able to provide shooting and lighting support to any kind of production and create a DVD resume reel.
- MMAJ 357 Digital/Film Editing 3.00**
This course is designed to introduce and research the various aspects of digital and film postproduction editing. The course will include the aesthetics and techniques of editing, application of editin techniques on Final Cut Pro, the video signal and components, and the role of the editor. Final Cut Pro certification is possible upon successful completion of this course and the Final Cut Prio certification exam.
- MMAJ 370 Narrative Structure 3.00**
This course examines narrative screenwriting through all components of story and mythic structure and exemplar film scripts. Character development in relation to narrative structures is studied. Substantial writing is realized in the production of a synopsis, treatment and other pieces in preparation of a feature-length film script. Several major script components are also written.
- MMAJ 371 Publications Design 3.00**
This course teaches principles of visual communication in print and electronic publications. Students gain design and production skills through extensive application of these principles to a wide variety of publications. Prerequisite: MMAJ 140.
- MMAJ 372 Screenwriting 3.00**
This course is designed to concentrate on the development, execution and formatting of a narrative short script. Designed in a lecture/workshop format, students will produce a polished log line, synopsis, treatment, character profiles, and twenty-minute screenplay. The course will also cover distribution, marketing strategies, and pitching a script.
- MMAJ 375 Photography 3.00**
Provides basic principles of photography and intermediate principles of photojournalism. Study of camera and digital photography processing using programs such as Photoshop including the production of photographs for news, advertising, scientific, and instructional use. Camera required. Prerequisite: Sophomore standing.
- MMAJ 417 Public Relations Campaigns 3.00**
This course explores the processes of public relations research, strategic planning, tactics and evaluation in creating and managing PR campaigns. Students will integrate theory and professional skills by analyzing existing PR campaigns and current events. The course culminates in a PR campaign that students create for an actual client. Prerequisites: MMAJ 140, MMAJ 312 and MMAJ 443 with a grade of C or above in each course.
- MMAJ 422 Communication Law 3.00**
Introduces students to legal principles guiding mass communication professionals working in areas such as broadcasting, public relations, advertising, and journalism. Includes legal principles related to freedom of the press, libel, privacy, copyright, access to government documents, the rules and regulations of the Federal Communications Commission and the Federal Trade Commission, and the impact of new media technologies on legal principles concerning First Amendment, copyright, privacy, and mass media regulations. Prerequisites: COMM 100 and 101. Each semester.
- MMAJ 424 Mass Media Critical Analysis 3.00**
Explores critical methodologies and analysis of electronic media content and programming, emphasizing aesthetic, historical, social, cultural, and industrial factors affecting audience response. Prerequisite: MMAJ 100 or 101
- MMAJ 425 Mass Communication Theory 3.00**
Provides survey and evaluation of current theories of mass communication, examining the role and application of each in mass media products, development and industries. Students explore theories relative to the emergence of the mass press, the effects of mass communication, and media in contemporary society. Prerequisite: COMM 100
- MMAJ 427 Ethnicity, Gender & The Media 3.00**
This course investigates the role of ethnicity and gender in a variety of media. The course critically analyzes how the media have historically portrayed women and people of color, how they portray these groups today in a diverse, global media environment,

and how these portrayals have influenced public opinion and public policy. The course also examines the historical and current role of women and minority communities in the media business.

- MMAJ 430 Public Relations Ethics 3.00**
Addresses ethics and professional responsibility in public relations. Through study of theory, cases and current events, students will learn to identify the ethical and moral dimensions of issues that arise in the practice of public relations. Students will gain the knowledge and skills necessary to reach and justify ethical decisions, and a sense of personal and professional responsibility. Prerequisites: COM 140, COM 312 and COM 443, with a grade of C or above in each course. Annually
- MMAJ 441 Adv Media Writing 3.00**
Extensive work in research, writing, and marketing of written products for magazines, newspapers, and other publications. Requires selection and acquisition of appropriate photographs and graphics to complement the articles. Prerequisites: MMAJ 140. Spring, annually.
- MMAJ 442 Newswriting Electronic Media 3.00**
Provides students with advanced instruction and experience in writing and reporting news for radio and television. Topics include script types and formats, leads, writing for the eye and ear, interviewing techniques, feature writing, packages, readers and teasers and investigative research and reporting techniques. Prerequisites: MMAJ 140.
- MMAJ 443 Public Relations Writing 3.00**
Provides students with instruction and experience in writing for the public relations and advertising professions. Projects include news releases, media kits, advertisements, newsletters, brochures, and web pages. Coursework also stresses ethical and legal responsibilities of the public relations writer, research, persuasion, and visual elements of communication. Prerequisites: MMAJ 100 or 101, and 140.
- MMAJ 444 World Wide Web Publication Design 3.00**
Develops competencies in writing and editing copy for World Wide Web media. Students will learn to structure web sites, layout copy, use color and text effectively, position images, and deploy sound and video. Students develop skills in editing public relations, advertising, and news-oriented web sites. On demand.
- MMAJ 445 Digital/Film Producing 3.00**
This course will explore all aspects of the role of the producer for film. The student will examine the business of film production, from the development of script proposals through final distribution. The student will become involved in all areas of script breakdown, storyboard development, planning, budgets and legal aspects. Prerequisite MMAJ 302
- MMAJ 446 Advertising Copywriting 3.00**
Introduces student to the theories and skills required to write effective advertising copy to market products, services and ideas. Students will learn copywriting techniques for media forms that are both traditional (print, broadcast and outdoor), as well as nontraditional (Internet and other interactive media). Topics include research, creative concepts and execution. Prerequisites: MMAJ 312 or MMAJ 314.
- MMAJ 448 Integrated Communication Campaigns 3.00**
This course provides theory and skills to create an integrated communication campaign for a selected product, company, person or service. Students will explore the processes of research, strategic planning, tactics and evaluation in creating and managing integrated communication campaigns. Students will study and analyze existing campaigns and the course culminates in an integrated communication campaign developed for an actual client. The integrated approach to campaigns assists students in practicing skills in public relations and advertising. Prerequisite: MMAJ 443 or MMAJ 446.
- MMAJ 455 Digital/Film Directing 3.00**
This course is designed to provide the students with hands-on experience as a single camera director. Students will critique professional directors and examine directing theories and techniques. Students will apply theory and techniques of script breakdown, directing talent and blocking, camera placement, shot execution and communication of the director's vision to crew and talent. Students will direct a narrative short or one-act screenplay.
- MMAJ 473 Documentary Film 3.00**
This course surveys the history, theory and style/genres of documentaries and reviews documentary production techniques culminating in individual student ten to twenty minute documentary productions. Prerequisites: MMAJ 445 and MMAJ 455
- MMAJ 474 Advanced Web Site Design 3.00**
Provides students with advanced design strategies and techniques for implementing world wide web sites. Topics include advanced strategies for structuring web sites aimed at journalism, broadcasting, corporate, and public relations functions, structural designs to meet a variety of audience needs, working with advanced web design layout strategies and techniques, and implementing web-based multimedia formats. Prerequisite: COMM 444. On demand.
- MMAJ 475 Presentation Graphics 3.00**
Design and production of graphic materials for the presentation of information in training sessions, sales and stockholder meetings, and other small and large group situations. May be taken concurrently with COM 214.
- MMAJ 476 Short Film 3.00**
A film production course. Students will make up a crew that will produce a feature-style film short. The capstone course in the film concentration applies previous coursework and experience to the creation of a major work and will allow students the full expression of the concentration. Prerequisite: MMAJ 445, 455.
- MMAJ 482 Internship 12.00**
Students apply theory and techniques to communication tasks of a cooperating business, industry, agency, or institution. Students must obtain approval of a detailed proposal before registering for the course. The determination of credit hour production is to be made in consultation with the internship advisor, in compliance with the media organization's policies, and in consideration of the intensity of the internship experience. Prerequisites: 80 credits completed, and a minimum of 2.5 QPA.
- MMAJ 495 Senior Portfolio 6.00**
This capstone course enables students to develop their work utilizing the theory and application techniques of planning, writing, producing and

	directing to complete their digital/film portfolio for the B.F.A. exhibit. Prerequisites: MMAJ 4455 and MMAJ 4455		
MMAJ 499	Special Topics 3.00 Focuses on a single, broad contemporary topic of current interest in communication and related fields. Course content varies from semester to semester. Topics to be considered will be announced in advance. May be taken three times for credit.		
MS 110	Intro to Military Science 3.00 Surveys the organization of the United States Army and the role of the military in today's society, emphasizing the customs and traditions of the Army and the fundamentals of leadership. Students study land navigation, physical fitness, and military bearing; values and ethics, Army Life and communications. Leadership labs reinforce classroom instruction.	MS 305	Fund of Organ Leadership 3.00
MS 112	Fund of Military Science 3.00 A progressive course that explores concepts that must be applied by the officer corps of the United States Army. Students learn basic soldier skills and leadership techniques and gain an appreciation for the institutional values and procedures that define the Professional Army Ethic.	MS 401	Management of Military Complex 3.00 A progressive course where students conduct practical application of principles of leadership/management as applied in the classroom and the field. Continues the leader development process and prepares cadets for the transition from cadet to second lieutenant, solidifying their commitment to officership, reinforcing individual competencies, and affording practical officer leadership experience. By the end of the course, cadets will have a better understanding of a wide range of military operations and their purposes. Individually and in groups, students solve leadership problems common to small units. Students participate in class and in Leadership Labs. The Military science department provides the textbook for the class, titled Leadership and Management, MS 401 and all other materials and uniforms required for the course.
MS 201	Fundamental Tactical Operations & Leadership Techniques 3.00 For the second year Military Science student. Designed to provide practical application of fundamental leadership techniques in preparation for the advanced course of Military Science and future service as an Officer in the U.S. Army. Students will learn oral and written communication skills and leadership fundamentals in the classroom, practicing them at weekly leadership labs. The goal of the curriculum and training is to enhance supervisory skills that can be applied in a management position in a civilian or military career. The focus will be on individual leadership development and small group leadership techniques used to train and motivate teams within larger organizations.	MS 402	Sem In Military Mgmt & Anal 3.00 A progressive course where students continue the practical application of principles of leadership/management as applied in classroom and field environments. Students analyze the use of military assets in world affairs to include importance of strategic mobility and neutralization of insurgent movements. Students assess and solve management problems regarding military justice, administration, and the obligations and responsibilities of an officer. Students participate in class and in Leadership Labs. The Military science department provides the textbook for the class, titled Officership, MS 402 and all other materials and uniforms required for the course.
MS 202	Natl Sec & Fund Mil Topography 3.00 The study of national security concepts, policies, and the national decision-making process with emphasis on national resources, national will, and economic factors, included will be a study of response options. Fundamentals of military topography including the use of military maps to determine topographic features, to conduct land navigation, and to perform terrain analysis will be covered. Also, see Leadership Laboratory.	MT 401	Clin Micro 9.00 Explores identification and clinical pathology of bacteria, fungi, viruses, and parasites. Presents techniques to isolate, stain, culture, and determine antimicrobial susceptibility. Includes instrumentation and quality control.
MS 301	Leadership in Modern Learning 3.00 A progressive course where students conduct practical application of principles of leadership/management as applied in classroom and field to include case studies in psychological, physiological, and sociological factors that affect human behavior. Individually and in groups, students solve leadership problems common to small units. Students participate in class and in Leadership Labs. The Military science department provides the textbook for the class, titled Leadership and Problem Solving, MS 301 and all other materials and uniforms required for the course.	MT 402	Clin Chem 9.00 Examines enzymology, endocrinology, biochemistry of lipids, carbohydrates and proteins, metabolism of nitrogenous end products, physiology and metabolism of fluids and electrolytes, and toxicology as related to the body and diseases. Includes colorimetry, spectrophotometry, electrophoresis, chromatography, automation, and quality control.
MS 302	Adv Ldrshp Plan & Mod Combat 3.00 A progressive course where students continue the practical application of principles of leadership/management as applied in classroom and field environments. It offers an analysis of the leader's role in directing and coordinating efforts of individuals	MT 403	Clin Hemo 6.00 Analyzes the composition and functions of blood; diseases related to blood disorders; the role of platelets and coagulation. Includes manual and automated techniques of diagnostic tests for abnormalities.
		MT 404	Clin Imm 6.00 Examines blood antigens, antibodies, crossmatching, hemolytic diseases, and related diagnostic tests. Includes an in-depth study of blood donor service and its many facets such as transfusions, medico-legal aspects, etc.

MT 405	Clin Imm/Serv 4.00 Explores immune response, immunoglobulins, autoimmunity and complement, and related tests and diseases. Includes survey and demonstration of serological diagnostic tests.	
MT 406	Clin Seminar 4.00 Other courses which are not included in the above (such as orientation, laboratory management, education, clinical microscopy) are unique to the individual hospital program.	
MUS 110	Applied Music Seminar 0.00 Student recital series satisfies departmental requirement. All music students must elect this course Each semester in residence as an extension of their curricular and performance activities. Music majors experience and/or perform music literature of all periods appropriate to their instrument or voice.	
MUS 111	Intro to Music 3.00 Introduces the enjoyment and understanding of music. Uses recordings, concerts, and other media. No prerequisite courses or special abilities required. Each semester.	
MUS 112	Intro to African-Ame Mus 3.00 Introduces the enjoyment and understanding of African-American music. Uses audio-visual materials to provide examples of musical styles presented. Non-performance course. No prerequisites. Each semester.	
MUS 113	History of Rock Music 3.00 Surveys rock music from its origins to the present. Focuses on musical developments within the genre, as well as, historical, sociological, literary and other cultural influences related to this subject. No prerequisite. Fall, annually.	
MUS 114	Intro to World Music 3.00 Introduces traditional and contemporary musical styles from Algeria to Zanzibar. Examines the diversity of styles such as Zouk, Soukour, Salsa, Rai, and Zydeco to name a few. Introduces the myriad of styles collectively known as World Music. No prerequisite. Spring, annually.	
MUS 125	Found of Musicianship 3.00 Basic training for the music major, to precede the study of MUS 126. Rigorous, hands-on course fosters mastering essential skills, including theory fundamentals, sight singing, and ear training. Intended as a prerequisite to the theory sequence currently in place. Students may be granted an exemption via a theory exam. Fall, annually.	
MUS 126	Music Theory I 3.00 Introduces fundamental elements of music construction, function, and analysis. Covers scale construction and identification, triad and seventh chord construction and identification, elements of rhythm, functional harmony, and voice leading. Prerequisite: Music majors or by permission. Fall, annually.	
MUS 127	Music Theory II 3.00 Continuation of Music Theory I. Provides students with fundamental knowledge of music construction and analysis. Covers voice leading, non-chord tones, diatonic seventh chords, secondary functions, modulations, phrase/period structure, cadences, and simple forms (binary and ternary). Prerequisite: MUS 126, Grade of C or better. Spring, annually.	
MUS 128	Aural Skills I 1.00 Aural skills are essential to the success of all students studying music. Covers melodic and harmonic interval recognition, scale recognition and	
		identification, triad recognition and identification, sight singing (melodic and rhythmic), melodic dictation, and rhythmic dictation. Should be taken concurrently with MUS 126. Prerequisite: Music majors or by permission. Fall, annually.
MUS 129	Aural Skills II 1.00 Continuation of Aural Skills I. Covers interval recognition, triad and seventh chord recognition (root position and inversions), sight singing, melodic dictation, harmonic dictation, and error detection. Prerequisite: MUS 128, Grade of C or better. Spring, annually.	
MUS 131	Fund of Music 3.00 Examines the basic vocabulary of music fundamentals: notation, scale structures, key signatures, triads and seventh chords, rhythm and meter, harmony and its functions, intervals, sight-singing and ear training, dynamics, transposition, and practical application by use of a keyboard instrument. No prerequisite. Each semester.	
MUS 132	Chamber Singers 1.00 MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.	
MUS 160	Piano Class I 1.00 Serves two categories of students: the non-piano music major and the non-music major. The purpose for both is the same: teaching piano to beginners in such a manner that they attain an acceptable degree of elementary technical proficiency at the keyboard, a basic knowledge of fundamental scales and chords, and a burgeoning comprehension of the existence and desirability of musicianship. Stresses the development of basic keyboard skills and upon a musical performance on all levels of performance. Limited to 12 students; therefore the possibility exists that a non-music major may be required to reschedule the class so freshman/sophomore music majors can elect the class to meet curriculum requirements. Prerequisite: MUS 131 or equivalent background. Each semester.	
MUS 161	Piano Class II 1.00 Helps students develop the ability to perform the skills begun in Piano Class I at a more advanced level. Prerequisite: MUS 160, Piano Class I, or permission of instructor. Each semester.	
MUS 182	Voice Class 1.00 Gives students an approach to vocal methods in order to eliminate problems. Teaches students to treat their voices as instruments. Designed for the student with little or no vocal training. Emphasizes development of the vocal instrument and artistic quality at all levels of performance proficiency. Prerequisite: MUS 131 or permission of instructor.	
MUS 220	Piano Class III 1.00 Continues developing skills acquired in Piano Class II to prepare music majors for piano competency exam, including sight reading, transposition, technique, and repertoire. Prerequisite: MUS 161. Each semester.	
MUS 221	Piano Skills Seminar 1.00 Continues group instruction in preparation of the Piano Competency Exam for music majors. Continues development of functional and applied piano skills including piano technique, chording, harmonization, and accompaniment skills. Credits	

- earned do not apply toward graduation. Prerequisite: MUS 220 or MUSA 125. Each semester.
- MUS 224 Music In Elem Classroom 3.00**
Investigates the pertinent fundamentals of music which can be incorporated by the non-music teacher. Presents pedagogical techniques that develop singing, listening, rhythm, movement, and musical skills. Equips future elementary teachers with skills to employ a variety of musical techniques in the classroom. No prerequisites. Each semester.
- MUS 225 Integ Arts Into Elem Classroom 3.00**
Investigates fundamentals of music, theatre, dance, and the visual arts which can be incorporated as primary media for communication, inquiry, and engagement by the elementary classroom teacher into instruction in other subject areas. Presents pedagogical techniques that address elements and standards for each arts area.
- MUS 226 Music Theory III 2.00**
Continuation of Theory II. Emphasizes chromaticism and musical **forms as** developed in the Baroque and Classical periods. Prerequisite: MUS 127, Grade of C or better. Fall, annually.
- MUS 227 Music Theory IV 2.00**
Continuation of Theory III. Emphasizes advanced harmony and analysis of musical forms from the 18th, 19th, and 20th century. Prerequisite: MUS 226, Grade of C or better. Spring, annually.
- MUS 228 Aural Skills III 1.00**
Continuation of Aural Skills II. Emphasizes increasingly complex melodies, rhythmic and harmonic progressions. Prerequisite: MUS 129, Grade of C or better. Fall, annually.
- MUS 229 Aural Skills IV 1.00**
Continuation of Aural Skills III. Emphasizes complex melodies (modal, tonal, and atonal), rhythmic and harmonic material. Study includes 20th models of tonal organizations. Prerequisite: MUS 228, Grade of C or better. Spring, annually.
- MUS 240 Intro to Music Technology 3.00**
Introduces the principles and applications of computers, synthesizers, and music synthesis to new music technologies. Achieves understanding through lectures, reading assignments, and hands-on experience with computers, synthesizers, and appropriate computer software programs. Stresses applications of these new technologies to educational settings. Prerequisite: Satisfactory completion of MUS 160 or equivalent proficiency as verified by the instructor.
- MUS 243 Brass Class 1.00**
Introduces playing and teaching brass instruments. Includes techniques of tone production, fingering, and class procedure learned through individual and ensemble playing. Students expected to develop an elementary proficiency on each instrument. Spring, annually.
- MUS 244 String Class 1.00**
Introduces playing and teaching the string instruments. Includes techniques of tone production, fingering, and class procedure learned through individual and ensemble playing. Students expected to develop an elementary proficiency on each instrument. Fall, annually.
- MUS 245 Percussion Class 1.00**
Introduces playing and teaching standard percussion instruments. Includes the characteristics of various standard percussion instruments, performance techniques, development of performing ability necessary to develop an elementary proficiency on each instrument. Fall, annually.
- MUS 246 Guitar Class 1.00**
three sections. First section introduces folk guitar techniques and styles, covering basic guitar chords, chordal progressions, melodic harmonization and chord chart reading. Second section introduces finger picking styles, such as classical, country, and jazz styles. Final section introduces the bass guitar. Students must provide their own acoustic six-string classic or folk guitar for class. Prerequisite: MUS 131 or permission of the instructor. Each semester.
- MUS 247 Woodwinds Class 1.00**
Introduces playing and teaching techniques woodwind instruments. Includes techniques of tone production, fingering, and class procedure learned through individual and ensemble playing. Students expected to develop an elementary proficiency on each instrument.
- MUS 253 History of Jazz 3.00**
Emphasizes the nature and process of jazz and particularly its historical background and development in the United States. Presents logical musical derivatives and developments and demonstrates the important elements that comprise individual jazz styles as they have evolved to the present time. Alternate years.
- MUS 254 Survey of American Music 3.00**
Provides a complete historical survey of American music from approximately 1620 to the 1980s. Includes musical trends and various styles and musical forms, i.e., religious music, folk music, popular music, and classical music of significant American composers. Presents and analyzes styles and trends in their historical context. Utilizes tapes and live concerts. Prerequisite: MUS 111 or 112, or the permission of the instructor. Course offered in the spring term of each year, and also fall term as faculty load permits.
- MUS 260 Vocal Pedagogy 2.00**
Examines the physical nature and function of the vocal instrument and breathing process and how they relate to the fundamental principles of teaching vocal technique. Applies knowledge to the principles of vocal production and technique through lectures, demonstration, and discussion, as well as group participation in instructing each other. Prerequisite: Minimum of four semesters of voice or Voice Class I and II, or permission of instructor. Spring, biennially.
- MUS 274 Intro to Music Business 3.00**
Introduces today's multi-faceted music industry. Includes music retailing, instrument sales, the music agent, artist management, contracts, concert promotion, licensing, publishing, copyright, songwriting, unions and guilds, music in production, advertising and promotion, music in broadcasting and film, and career planning and development. Does not count toward humanities requirement. Prerequisite: sophomore standing.
- MUS 301 Survey of Western Music History 3.00**
Explores the musical styles of western art music from the Middle Ages to the present. All influential and historically important genres, techniques, innovations, composers, and literature will be presented in relation to artistic, social, political, and economic conditions of the periods. This course is not for Music Education majors.

MUS 310	Junior Recital	0.00	MUS 346	Music From Antiqui-1750	2.00
	Music majors elect this course if they are presenting a recital in their junior year of applied study. Elected concurrently with MUS 110. Prerequisite: Must be enrolled in upper-division applied study and successfully complete an audition. Each semester.			Intensive study of the musical styles from the ages of classical Greece and Rome through the Baroque period, including the foundations of plainchant, early polyphony, sacred, and secular music of the 13th to mid-18th centuries. Discusses important composers and their literature in relation to artistic, social, political, and economic conditions of their period. Emphasizes analysis and listening. Prerequisite: MUS 127 or by permission. Spring, annually.	
MUS 312	Foundations of Instrumental Conducting	3.00	MUS 347	20th Century Music	3.00
	This is a competency-based course that is, specific techniques are introduced, practiced, and evaluated before moving to the next level of difficulty. It is designed to develop skilled baton technique and clarity of gesture and focuses on traditional and modern beat patterns, expressive gestures, cues, and development of the left hand. Other areas of study include effective rehearsal technique, understanding of performance problems involving tonal balance, tempo, complex rhythmic situations, especially related to intermediate and secondary school instrumental groups. Prerequisite: Music Education majors only.			Intensive study of the musical styles of the late Romantic Period (1890) through the 20th century. Discusses important composers and their literature in relation to artistic, social, political, and economic conditions of their period. Emphasizes analysis and listening. Prerequisite: MUS 127, 345, or by permission. Fall, annually.	
MUS 332	Chamber Singers	1.00	MUS 349	Art Song Lit	2.00
	MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.			Explores representative song repertoire of the German lied and the English language art song from historical and performance perspectives. Stresses the songs of Schubert, Schumann, Brahms, Wolf, Strauss, Britten, and Rorem. Prerequisites: MUS 345, 347, or permission of the instructor. On demand.	
MUS 333	Elem Music Meth	2.00	MUS 350	Art Song Lit II	2.00
	Explores the role of music in elementary school; the roles of classroom teachers, the music specialists, and the consultant. Plans, attitudes, and problems in teaching vocal and instrumental music; curriculum development. Evaluation of musical experience and growth in primary, intermediate, and upper elementary grades. Includes music reading as an integral part of the total music program, musical growth and experience in singing, part-singing, listening, instrumental and rhythmic activities. Emphasizes development of ability to use the voice effectively in teaching, and on the thorough familiarity with music series texts, use of keyboard, rhythmic instruments, recordings, and new developments in teaching aids. Introduces the Orff and Kodaly methods. Required observations and supervised teaching experiences arranged Each semester. For music majors or minors only. Prerequisites: MUS 127; MUSA 130/330 or 131/331; MUSA 135/335, 136/336, 137/337, 138/338, or 301; MUSA 136/336; and completed early field experience requirement.			Explores representative song repertoire of French, Italian, Slavic, and Russian composers from historical and performance perspectives. Stresses the songs of Faure, Debussy, Ravel, Poulenc, and Moussorgsky. Prerequisites: MUS 345, 347, or permission of the instructor. On demand.	
MUS 334	Jr High-Sec Mus Meth	3.00	MUS 351	Keyboard Lit	3.00
				Surveys keyboard music from the Renaissance to the present. Representative works from each period are selected for careful study and analysis, emphasizing performance practices as well as formal and stylistic elements in the music. Includes the development of various keyboard instruments. Prerequisites: MUS 345, 347, or permission of instructor. Offered when faculty is available.	
MUS 335	Music Composition for Non-Musicians	3.00	MUS 352	Symphonic Lit	3.00
	Explores the fundamental elements of music - rhythm, melody, harmony, texture, timbre, and form - the characteristics and parameters of each, their interactions, and how they are manipulated in creating music. Focus will be placed on analyzing existing musical compositions and composing original musical works in a variety of mediums.			Intensive study of orchestral music from the Baroque period to the present, using scores, live performances, and recordings with particular reference to performance practices and stylistic analysis. Prerequisites: MUS 345, 347, or permission of instructor. Offered when faculty is available.	
MUS 345	Music From 1750-1900	3.00	MUS 353	Chamber Music Lit	3.00
	Intensive study of the musical styles of the pre-classical, classical, and romantic periods of western music. Discusses important composers and their literature in relation to artistic, social, political, and economic conditions of their period. Emphasizes analysis and listening. Prerequisite: MUS 127 or by permission. Fall, annually.			Intensive study of music written for small ensembles from the Renaissance period to the present. Representative works from each period are carefully investigated and analyzed. Performance by members of the class or by faculty groups whenever possible. Prerequisites: MUS 345, 347, or permission of instructor. Offered when faculty is available.	
			MUS 355	Operatic Lit	3.00
				Surveys the entire field of operatic music from 1600 to the present, including 17th century Baroque opera; 18th century operatic reforms (Gluck and Mozart); opera in the 19th century (Verdi, Wagner, Strauss, and Puccini); 20th century trends in opera (Stravinsky, Berg, Britten, Menotti, etc.) Prerequisites: MUS 345, 347, or permission of instructor. Offered when faculty is available.	
			MUS 356	Choral Literature	3.00
				Surveys choral music from the 15th century to the present. Emphasizes masses, motets, and madrigals of the Renaissance period; oratorios, cantatas, and	

passions of the Baroque period; major choral works of Haydn, Mozart, Beethoven, Berlioz, Mendelssohn, Verdi, and Brahms; choral works of the 20th century. Prerequisites: MUS 345, 347, or permission of the instructor. Offered when faculty is available.

- MUS 357 Band Literature 3.00**
Surveys the available published and recorded literature for marching, military, and concert bands, symphonic and wind ensembles, and woodwind and brass chamber ensembles. Includes transcriptions and arrangements; major publishers in the field; evaluation of various editions; and also a study of the principal trends of instrumental pedagogy, repertoire, and performance. Prerequisite: MUS 131. Offered when faculty is available.
- MUS 359 Methods of Teaching Vocal and Classroom Music 4.00**
Examines and analyzes principles and procedures of organizing and conducting vocal music ensembles and teaching classroom music grades K-12. Course content includes introduction of Orff, Dalcrose, and Kodaly methods, vocal technique, tone production, diction, rehearsal techniques, the role of classroom teacher, lesson planning, student development, attitudes, and problems in teaching vocal and classroom music, curriculum development, professional ethics, and student assessment/evaluation. In-field supervised teaching experiences are arranged each semester. Restricted to music majors or minors only. Prerequisites: Admission to the Music Education program or permission of instructor. Fall, annually.
- MUS 360 Basic Conducting 1.00**
Develops skilled baton technique and clarity of gesture. Focuses on traditional and modern beat patterns, expressive gestures, cues, and development of left hand. Prerequisite: Music majors or by permission of the instructor. Fall, annually.
- MUS 361 Piano Tch Meth 3.00**
Surveys modern piano teaching methods and available published teaching materials. Emphasizes the teaching of notation and the development of reading skills; the teaching of keyboard techniques through an understanding of the player's physical mechanism and the coordination of timing and touch; problems of fingering, pedaling, and memorization. Evaluates materials for beginning students; easier teaching pieces by the great composers; anthologies; appropriate music for the intermediate student, leading to a more advanced technique and musicianship and to acquaintance with a wide range of composers and musical styles. Prerequisites: MUS 346 or 131 and permission of the instructor. Offered when faculty is available.
- MUS 362 Instrumental Meth 2.00**
Analyzes principles and procedures of organizing and conducting instrumental classes, bands, and orchestras in the public schools. Includes examination and use of texts, methods, and other materials. For music majors or by permission. Prerequisites: MUS 127; MUSA 130/330 or 131/331; MUSA 135/335, 136/336, 137/337, 138/338, or 301; MUSA 136/336; and completion of Early Field Experience requirement. Spring, annually.
- MUS 363 Vocal Methods 2.00**
Analyzes principles and procedures of organizing and conducting vocal classes and choral ensembles in the public schools. Includes vocal techniques,

tone production, proper vowel placement, proper focus on tone, diction, diaphragmatic breathing, and investigation of choral literature. For music majors or by permission. Prerequisites MUS 127; MUSA 130/330 or 131/331; MUSA 135/335, 136/336, 137/337, 138/338, or 301; MUSA 136/336; and completion of Early Field Experience requirement. Fall, annually.

- MUS 364 Composition 3.00**
Examines the nature of the musical idea and of the various possibilities of its subsequent development, including canonic or fugal treatment, motivic development, and variational procedures. Reviews traditional structural plans and of contemporary formal and stylistic trends. Creative assignments emphasize the understanding of past and present compositional styles and techniques and the gradual development of a personal language. Prerequisites: MUS 127 or permission of instructor. Offered when faculty is available.
- MUS 365 Instrumental Conducting 2.00**
Further develops skilled baton techniques and clarity of gesture. Includes effective rehearsal technique, understanding of performance problems involving tonal balance, tempo, complex rhythmic situations, especially related to intermediate and secondary school instrumental groups. Prerequisite: MUS 360. Spring, annually.
- MUS 366 Choral Conducting 3.00**
Further develops skilled choral conducting techniques and clarity of gesture. Includes effective rehearsal technique, understanding of performance problems involving tonal balance, tempo, complex rhythmic situations, especially related to intermediate and secondary school choral groups. Prerequisite: MUS 360. Spring, annually.
- MUS 368 Band Arranging 3.00**
Explores instrumentation and scoring problems in marching, military, and concert bands, symphonic wind ensembles, and woodwind and brass chamber ensembles. Emphasizes score layout and notation, copying and multiple reproduction of parts, copyright implications, and knowledge of effective combination of instrumental sounds. Prerequisites: MUS 131 (or equivalent background) and consent of instructor. Offered when faculty is available.
- MUS 369 Marching Band Tech 2.00**
Examines the marching band, including organization, music materials, care of instruments and uniforms, marching essentials, administration, and contemporary techniques. Prerequisites: MUS 127 or permission of instructor. On demand.
- MUS 370 Orchestration/Arranging 3.00**
A study of basic orchestration/arranging procedures and principles relative to instrumental and vocal ensembles. Emphasizes music for school use. Prerequisites: MUS 136, 162, 24245. Spring, annually.
- MUS 374 Inter Stu In Music Business 3.00**
Explores special topics in the music industry, including the record industry; advanced issues in broadcasting and film; and career planning and development. Emphasizes individual projects in accordance with student interest. Prerequisite: MUS 274. Fall, annually.
- MUS 375 Western Music History I: Antiquity-1825 4.00**
This course is designated as the first course in the music history sequence required for music majors.

- This course explores the historically important genres, techniques, innovations, composers, and literature from the Romantic Period to the present. Further, this information will be related to the artistic, social, political, and economic conditions of each period. Prerequisites: MUS 127 or by permission of instructor.
- MUS 376 Western Music History II: 1825 to Present 4.00**
This course is designated as the second course in the music history sequence required for music majors. This course explores the historically important genres, techniques, innovations, composers, and literature from the Romantic Period to the present. Further, this information will be related to the artistic, social, political, and economic conditions of each period. Prerequisites: MUS 127 or by permission of instructor.
- MUS 410 Senior Recital 0.00**
The Music Department's Senior Recital series, which satisfies a department requirement. Music majors elect this course if they are preparing for a recital in their senior year of study. Elected concurrently with MUS 110. Prerequisite: Must be enrolled in upper-division applied music study. Each semester.
- MUS 411 Special Topics 3.00**
Topics of special interest in the field of music will be offered. Previous subject areas have included Orff--music for children; Kodaly method; and Mozart, the man and his music. Topics will be announced in advance. Offered occasionally.
- MUS 451 Advanced Conducting 3.00**
Analyzes selected works by band, choral, and orchestral literature with particular reference of performance problems involving tonal balance, tempi, complex rhythmic and polymetric situations, vocal intonations, and diction. Provides conducting experience with band, choir, and/or madrigal singers, and orchestra in rehearsal. Emphasizes thorough understanding of the musical score and on effective rehearsal techniques. Prerequisites: MUS 365, 366, or permission of instructor. Offered when faculty is available.
- MUS 452 Western Music 3.00**
Examines Western music in its stylistic relationship to the fine arts from the Middle Ages through the 20th century. Explores how the various arts responded to each other in the pattern of cultural history. No prerequisite courses are required, but a rudimentary background in music or art is desirable. Offered when faculty is available.
- MUS 453 Melodic Impro 2.00**
Provides advanced music students with fundamental concepts of improvisational techniques that may be applied to the development of skills for the invention and performance of improvised melodies. Prerequisite: MUS 227, or equivalent music theory background. Offered when faculty is available, alternate years.
- MUS 455 Jazz Comp And Arr 2.00**
Explores basic techniques and methods of jazz composition and arranging. Participants write musical arrangements and original compositions for various jazz and popular idioms, and have the opportunity to conduct and perform their own works. Alternate years.
- MUS 461 Adv Strg Tech And Ped 2.00**
The sequence of courses listed below constitutes further study of the symphonic instruments. Specialized techniques, which are employed by each instrumental family, will be presented and mastered (strings, woodwinds, brasses, percussion.) Students develop sufficient techniques to enable them to introduce and teach these instruments successfully at the elementary or secondary level. Includes methods, materials, manufacturers, suppliers, repair procedures, and procedures for private, homogeneous and heterogeneous group instruction, studio teaching and management, musicianship and creativity as part of the lesson, planning for various grade levels, history of teaching, and study of leading methods.
- MUS 462 Adv Woodwind Tch And Ped 2.00**
The sequence of courses listed below constitutes further study of the symphonic instruments. Specialized techniques, which are employed by each instrumental family, will be presented and mastered (strings, woodwinds, brasses, percussion.) Students develop sufficient techniques to enable them to introduce and teach these instruments successfully at the elementary or secondary level. Includes methods, materials, manufacturers, suppliers, repair procedures, and procedures for private, homogeneous and heterogeneous group instruction, studio teaching and management, musicianship and creativity as part of the lesson, planning for various grade levels, history of teaching, and study of leading methods.
- MUS 463 Adv Brass T And P 2.00**
The sequence of courses listed below constitutes further study of the symphonic instruments. Specialized techniques, which are employed by each instrumental family, will be presented and mastered (strings, woodwinds, brasses, percussion.) Students develop sufficient techniques to enable them to introduce and teach these instruments successfully at the elementary or secondary level. Includes methods, materials, manufacturers, suppliers, repair procedures, and procedures for private, homogeneous and heterogeneous group instruction, studio teaching and management, musicianship and creativity as part of the lesson, planning for various grade levels, history of teaching, and study of leading methods.
- MUS 464 Adv Perc T And P 2.00**
The sequence of courses listed below constitutes further study of the symphonic instruments. Specialized techniques, which are employed by each instrumental family, will be presented and mastered (strings, woodwinds, brasses, percussion.) Students develop sufficient techniques to enable them to introduce and teach these instruments successfully at the elementary or secondary level. Includes methods, materials, manufacturers, suppliers, repair procedures, and procedures for private, homogeneous and heterogeneous group instruction, studio teaching and management, musicianship and creativity as part of the lesson, planning for various grade levels, history of teaching, and study of leading methods.
- MUS 470 Form And Analysis 3.00**
Analyzes musical styles from the pre-Baroque to the 20th Century, with emphasis on the common practice period. An overview of the operative generators of art music such as substructure (motives and phrases); normative structure (e.g. rondo, sonata, variation forms); and aspects of melody, rhythm, counterpoint, and elements of sound. Prerequisites: MUS 236 or permission of instructor. Fall, annually.

- MUS 490 Independent Study 3.00**
Provides opportunity to explore, in depth, an area of music of particular interest under the guidance of a faculty member. Requires a scholarly paper or special project(s) for credit and grade. Prerequisite: permission of the instructor and department chair.
- MUSA 110 Ap Mus: Violin I 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 111 Ap Mus: Viola I 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 112 Ap Mus: Cello I 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 113 Ap Mus: Doub Bass I 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 114 Ap Mus: Flute I 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 115 Ap Mus: Oboe I 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 116 Ap Mus: Clarinet I 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 117 Ap Mus: Saxophone I 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 118 Ap Mus: Bassoon I 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 119 Ap Mus: Trumpet I 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 120 Ap Mus: Fren Horn I 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 121 Ap Mus: Euphonium I 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 122 Ap Mus: Trombone I 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 123 Ap Mus: Tuba I 1.00

Individual instruction in strings, woodwinds, brass,

percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 124 Ap Mus: Percussion I 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 125 Ap Mus: Piano I 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 126 Ap Mus: Voice I 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 127 Ap Mus: Organ I 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors

is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

- MUSA 128 Ap Mus: Guitar I 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 130 Concert Choir 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 131 Chamber Singers 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 132 Chamber Singers 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 133 Gospel Choir 1.00**
Performing Organizations: courses MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under health and personal performance and under free electives. Open to all students with permission of instructor.
- MUSA 134 Pep Band 1.00**
Performing Organizations: courses MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under health and personal performance and under free electives. Open to all students with permission of instructor.
- MUSA 135 Symphony Orchestra 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 136 Marching Band 1.00**
MUSA 130-145 may be taken for one credit or for no

credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.

- MUSA 137 Symphonic Band 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 138 Wind Ensemble 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 139 Jazz Band 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 142 Woodwind Ensemble 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 143 Brass Ensemble 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 144 String Ensemble 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 145 Percussion Ensemble 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 149 Piano Accompanying/Ensemble 1.00**
A practical course involving discussion of problems relating to the art of accompanying and supervised rehearsal and public performance of works for voice, instrument and piano ensemble. Skills to be developed include sight reading, score reading and rehearsal techniques. Students will meet with

instructor for supervised rehearsal/discussion and will be assigned vocal and instrumental accompaniments as appropriate to their level. Prerequisite: MUSA 125

MUSA 150	Ap Mus: Violin Perf I	4.00
MUSA 151	Ap Mus: Viola Perf I	4.00
MUSA 152	Ap Mus: Cello Perf I	4.00
MUSA 153	Ap Mus: Dbl Bass Perf I	4.00
MUSA 154	Ap Mus: Flute Perf I	4.00
MUSA 155	Ap Mus: Oboe Perf I	4.00
MUSA 156	Ap Mus: Clar Perf I	4.00
MUSA 157	Ap Mus: Sax Perf I	4.00
MUSA 158	Ap Mus: Bassoon Per I	4.00
MUSA 159	Ap Mus: Trump Perf I	4.00
MUSA 160	Ap Mus: Fr Hrn Perf I	4.00
MUSA 161	Ap Mus: Euphon Perf I	4.00
MUSA 162	Ap Mus: Tromb Perf I	4.00
MUSA 163	Ap Mus: Tuba Perf I	4.00
MUSA 164	Ap Mus: Percus Perf I	4.00
MUSA 165	Ap Mus: Piano Perf I	4.00
MUSA 166	Ap Mus: Voice Perf I	4.00
MUSA 167	Ap Mus: Organ Perf I	4.00
MUSA 210	Ap Mus: Violin II	1.00
	Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.	
MUSA 211	Ap Mus: Viola II	1.00
	Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors	

MUSA 212	Ap Mus: Cello II	1.00
	Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.	
MUSA 213	Ap Mus: Doub Bass II	1.00
	Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.	
MUSA 214	Ap Mus: Flute II	1.00
	Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.	
MUSA 215	Ap Mus: Oboe II	1.00
	Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.	
MUSA 216	Ap Mus: Clarinet II	1.00
	Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence.	

	more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.		
MUSA 226	Ap Mus: Voice II Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.	1.00	
MUSA 227	Ap Mus: Organ II Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.	1.00	
MUSA 228	Ap Mus: Guitar II Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.	1.00	
MUSA 250	Ap Mus: Violin Perf II	4.00	
MUSA 251	Ap Mus: Viola Perf II	4.00	
MUSA 252	Ap Mus: Cello Perf II	4.00	
MUSA 253	Ap Mus: Dbl Bass Per II	4.00	
MUSA 254	Ap Mus: Flute Perf II	4.00	
MUSA 255	Ap Mus: Oboe Perf II	4.00	
MUSA 256	Ap Mus: Clar Perf II	4.00	
MUSA 257	Ap Mus: Sax Perf II	4.00	
MUSA 258	Ap Mus: Bassoon Per II	4.00	
MUSA 259	Ap Mus: Trump Perf II	4.00	
MUSA 260	Ap Mus: Fr Hrn Perf II	4.00	
MUSA 261	Ap Mus: Euphon Perf II	4.00	
MUSA 262	Ap Mus: Tromb Perf II	4.00	
MUSA 263	Ap Mus: Tuba Perf II	4.00	
MUSA 264	Ap Mus: Percus Perf II	4.00	
MUSA 265	Ap Mus: Piano Perf II	4.00	
MUSA 266	Ap Mus: Voice Perf II	4.00	
MUSA 267	Ap Mus: Organ Perf II	4.00	
MUSA 301	Instrumental Ensemble Pract Provides ensemble performance experience for music majors on secondary instruments. Also provides student conductors the opportunity to develop rehearsal technique through experiences directing an ensemble. Prerequisites: At least two of the following: MUS 241, 242, 243, or 245; and MUS 365. Each semester.	1.00	
MUSA 302	Choral Ensemble Practicum Course is designed to provide ensemble performance experience for music majors on secondary instruments. Also provides student conductors the opportunity to develop rehearsal technique through experiences directing an ensemble. Prerequisite: MUS 182; MUS 366 to conduct	1.00	
MUSA 310	Ap Mus: Violin III Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.	1.00	
MUSA 311	Ap Mus: Viola III Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.	1.00	
MUSA 312	Ap Mus: Cello III Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence.	1.00	

Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 313 Ap Mus: Doub Bass III 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 314 Ap Mus: Flute III 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 315 Ap Mus: Oboe III 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 316 Ap Mus: Clarinet III 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 317 Ap Mus: Saxophone III 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 318 Ap Mus: Bassoon III 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 319 Ap Mus: Trumpet III 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 320 Ap Mus: Fren Horn III 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 321 Ap Mus: Euphonium III 1.00

Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence.

- Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 322 Ap Mus: Trombone III 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 323 Ap Mus: Tuba III 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 324 Ap Mus: Percussion III 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 325 Ap Mus: Piano III 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 326 Ap Mus: Voice III 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 327 Ap Mus: Organ III 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 328 Ap Mus: Guitar III 1.00**
Individual instruction in strings, woodwinds, brass, percussion, piano, voice, organ and guitar. Stresses development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.
- MUSA 330 Concert Choir 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 331 Chamber Singers 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
- MUSA 332 Show Choir 1.00**
MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.

MUSA 333	Gospel Choir	1.00	Performing Organizations: courses MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under health and personal performance and under free electives. Open to all students with permission of instructor.	permission of instructor. 300-level reserved for music majors only.
MUSA 334	Pep Band	1.00	Performing Organizations: courses MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under health and personal performance and under free electives. Open to all students with permission of instructor.	MUSA 344 String Ensemble 1.00 MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
MUSA 335	Symphony Orchestra	1.00	MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.	MUSA 345 Percussion Ensemble 1.00 MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.
MUSA 336	Marching Band	1.00	MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.	MUSA 349 Piano Accompanying/Ensemble 1.00 A practical course involving discussion of problems relating to the art of accompanying and supervised rehearsal and public performance of works for voice, instrument and piano ensemble. Skills to be developed include sight reading, score reading and rehearsal techniques. Students will meet with instructor for supervised rehearsal/discussion and will be assigned vocal and instrumental accompaniments to their level. Prerequisite: MUSA 125
MUSA 337	Symphonic Band	1.00	MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.	MUSA 350 Ap Mus: Violin Per III 4.00
MUSA 338	Wind Ensemble	1.00	MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.	MUSA 351 Ap Mus: Viola Perf III 4.00
MUSA 339	Jazz Band	1.00	MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.	MUSA 352 Ap Mus: Cello Per III 4.00
MUSA 342	Woodwind Ensemble	1.00	MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with permission of instructor. 300-level reserved for music majors only.	MUSA 353 Ap Mus: Dbl Bass Pf III 4.00
MUSA 343	Brass Ensemble	1.00	MUSA 130-145 may be taken for one credit or for no credit. Credits earned may not be counted among the humanities in general education but may be counted under personal development and life skills and under free electives. Open to all students with	MUSA 354 Ap Mus: Flute Per III 4.00
				MUSA 355 Ap Mus: Oboe Perf III 4.00
				MUSA 356 Ap Mus: Clar Perf III 4.00
				MUSA 357 Ap Mus: Sax Perf III 4.00
				MUSA 358 Ap Mus: Bassoon Per III 4.00
				MUSA 359 Ap Mus: Trump Per III 4.00
				MUSA 360 Ap Mus: Fr Hrn Per III 4.00
				MUSA 361 Ap Mus: Euphon Per III 4.00
				MUSA 362 Ap Mus: Tromb Perf III 4.00
				MUSA 363 Ap Mus: Tuba Perf III 4.00
				MUSA 364 Ap Mus: Percus Per III 4.00
				MUSA 365 Ap Mus: Piano Perf III 4.00
				MUSA 366 Ap Mus: Voice Perf III 4.00
				MUSA 367 Ap Mus: Organ Perf III 4.00

development of an attitude of artistic maturity on the part of the student and upon artistic performance at all levels of proficiency. All matriculated music majors must elect applied music credits on their major instrument/voice Each semester in residence. Admission by audition and permission of instructor and department chair. Admission of non-majors is dependent upon availability of the staff. For more information, see Music Department chair. Prerequisite: MUS 131 or equivalent background. 200-, 300-, and 400-levels reserved for music majors only.

MUSA 450	Ap Mus: Violin Perf IV	4.00
MUSA 451	Ap Mus: Viola Perf IV	4.00
MUSA 452	Appl Mus: Cello Per IV	4.00
MUSA 453	Ap Mus: Dbl Bass Per IV	4.00
MUSA 454	Ap Mus: Flute Perf IV	4.00
MUSA 455	Ap Mus: Oboe Perf IV	4.00
MUSA 456	Ap Mus: Clar Perf IV	4.00
MUSA 457	Ap Mus: Sax Perf IV	4.00
MUSA 458	Ap Mus: Bassoon Per IV	4.00
MUSA 459	Ap Mus: Trump Perf IV	4.00
MUSA 460	Ap Mus: Fr Hrn Perf IV	4.00
MUSA 461	Ap Mus: Euphon Perf IV	4.00
MUSA 462	Ap Mus: Tromb Perf IV	4.00
MUSA 463	Ap Mus: Tuba Perf IV	4.00
MUSA 464	Ap Mus: Percus Perf IV	4.00
MUSA 465	Ap Mus: Piano Perf IV	4.00
MUSA 466	Ap Mus: Voice Perf IV	4.00
MUSA 467	Ap Mus Organ Perf IV	4.00
NSCI 150	Integrated Science I	3.00
	The first of a two semester sequence of basic science for elementary education majors. Integrates elements of earth science, physical science, biology, and chemistry as recommended in state and national accreditations. Emphasis is placed on the application of the information into the elementary school classroom.	
NSCI 151	Integrated Science II	3.00
	The second of a two semester sequence of basic science for elementary education majors. Integrates elements of earth science, physical science, biology, and chemistry as recommended in state and national accreditations. Emphasis is placed on the application of the information into the elementary school classroom.	
NUCM 301	Nuclear Medicine I	15.00
	Within the B.S. in Medical Imaging Sciences degree, the concentration in nuclear medicine has been proposed so 30 - 60 clinical credits may be	

transferred into Clarion from formal nuclear medicine educational programs that are accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT). The curriculum of every JRCNMT-accredited nuclear medicine program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses (NUCM 301, 302, 401, and 402) will facilitate transference of clinical credits from accredited nuclear medicine programs into Clarion. Prerequisite: Placement into Math 112.

NUCM 302	Nuclear Medicine II	15.00
	Within the B.S. in Medical Imaging Sciences degree, the concentration in nuclear medicine has been proposed so 30 - 60 clinical credits may be transferred into Clarion from formal nuclear medicine educational programs that are accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT). The curriculum of every JRCNMT-accredited nuclear medicine program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses (NUCM 301, 302, 401, and 402) will facilitate transference of clinical credits from accredited nuclear medicine programs into Clarion. Prerequisite: Placement into Math 112.	
NUCM 303	Nuclear Medicine Clinical III	15.00
	Within the B.S. in Medical Imaging Sciences degree and concentration in nuclear medicine, placeholder courses facilitate the transference of block credits for completion of a formal nuclear medicine educational program in nuclear medicine that is recognized by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT).	
NUCM 401	Nuclear Medicine III	15.00
	Within the B.S. in Medical Imaging Sciences degree, the concentration in nuclear medicine has been proposed so 30 - 60 clinical credits may be transferred into Clarion from formal nuclear medicine educational programs that are accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT). The curriculum of every JRCNMT-accredited nuclear medicine program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses (NUCM 301, 302, 401, and 402) will facilitate transference of clinical credits from accredited nuclear medicine programs into Clarion. Prerequisite: Placement into Math 112.	
NUCM 402	Nuclear Medicine IV	15.00
	Within the B.S. in Medical Imaging Sciences degree, the concentration in nuclear medicine has been proposed so 30 - 60 clinical credits may be transferred into Clarion from formal nuclear medicine educational programs that are accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT). The curriculum of every JRCNMT-accredited nuclear medicine program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses (NUCM 301, 302, 401, and 402) will facilitate transference of clinical credits from accredited nuclear medicine programs into Clarion. Prerequisite: Placement into Math 112.	

NUCM 403	Nuclear Medicine Clinical VI 15.00 Within the B.S. in Medical Imaging Sciences degree and concentration in nuclear medicine, placeholder courses facilitate the transference of block credits for completion of a formal nuclear medicine educational program in nuclear medicine that is recognized by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT).		"Pass" in NURS 111. Spring, annually.
NURS 100	Intro to Professional Nursing 3.00 Students who participate in this course will develop a beginning understanding of the role of the professional nurse. The history of nursing and fundamental nursing principles will be examined. The role of nursing within the healthcare delivery system will be explored. An overview of the nursing process will be provided and students will have the opportunity to practice some basic psychomotor skills that are required in nursing.	NURS 121	Nursing Process I: Practice Lab 1.00 Provides students with the opportunity to learn basic nursing skills required to deliver nursing interventions to clients experiencing alterations in their health status. Enables nursing students to acquire beginning skills and confidence through practice in the college learning laboratory. Three laboratory hours weekly. Pass/ Fail. Co-requisites: NURS 101 and 111. Prerequisite or co-requisite: NURS 131. Fall, annually.
NURS 101	Nurs Proc I: Fund Pract 3.00 Introduces students to the concepts of individual, health, and environment. Emphasizes the nursing process as the basis for client-centered care. Provides the theoretical foundation for the development of cognitive, psychomotor, and communication skills necessary to care for clients and promote healthy responses. Examines the needs of culturally diverse individuals within the context of their functional health patterns. Three lecture hours per week. Prerequisites or co-requisites: BIOL 258 and PSY 211. Co-requisites: NURS 111, 121, and 131. Fall, annually.	NURS 131	Nursing Health Assessmt 2.00 Teaches students beginning skills in assessing the health of clients through health histories and physical examinations. Provides students with opportunities to practice assessment skills. Required of all ASN students. Open to any student with permission of the instructor. Fall, annually.
NURS 102	Nursing Process II 4.00 Focuses on the application of the nursing process in acute care settings to individuals across the life span. Explores the nursing process as it relates to the care of clients in crisis from rape/sexual assault/domestic violence and clients with ineffective response to crisis (chemical dependency/suicide). Considers the nursing care of clients with musculoskeletal, gastrointestinal, and gynecologic dysfunction. The last portion of the class focuses on human reproduction in health and illness. Four class hours weekly. Prerequisites: A minimum grade of "C" in BIOL 251/261 and a minimum grade of "B" in NURS 101, 121, 131 and "Pass" in NURS 111. Co-requisites: NURS 112, 133. BIOL 252/262 and PSY 260 may be taken as a prerequisite or co-requisite. Spring, annually.	NURS 132	Pharmac Aspects of Nurs 3.00 Presents principles of pharmacology with practical application to the care of clients. Emphasizes major drug classifications, actions/interactions, side effects, and related nursing interventions. Introduces learning strategies to develop student abilities in making critical assessments and decisions about pharmacological interventions. Required of all ASN students. Open to any student with permission of the instructor. Spring, annually.
NURS 111	Nurs Proc I:Fnd Nurs Clin Prac 2.00 Clinical practice experience provides opportunities for the student to implement the objectives identified in NURS 101 and 131. Students care for elderly and/or chronically ill clients who require basic nursing interventions in long-term care settings. Six clinical hours weekly. Co-requisites: NURS 101 and 121. Fall, annually.	NURS 133	Pharmacological Aspects of Nursing: Part I 1.00 Provides the foundation for the pharmacological aspects of nursing. Emphasizes the nursing processes and drug therapy; pharmacologic principles; lifespan considerations; legal, ethical, and cultural considerations; and patient education and drug therapy. Correlates with content delivered in NURS 102 Nursing Process II. Focuses on the pharmacological management of the client with Musculoskeletal, Pain, Gastrointestinal, Nutritional, Substance Abuse, Women's Health Disorders. Emphasizes major drug classifications, actions and drug effects, indications, adverse effects and toxicity, nursing interventions and patient teaching in these areas. Required of all ASN students.
NURS 112	Nursing Process II: Clinical Practice 4.00 Clinical practice experience provides opportunities for the student to implement the objectives identified in NURS 102 and NURS 133. Students care for clients in crisis and clients across the life span having musculoskeletal, gastrointestinal, and gynecologic dysfunction. Provides clinical experience in the obstetrical setting with mothers and newborns. Offers increased opportunities for medication administration. Twelve clinical hours weekly. Co-requisites: NURS 102 and NURS133. Prerequisites: A minimum grade of "C" in BIOL 251/261 and a minimum grade of "B" in NURS 101, 121,131 and a	NURS 150	Fundamental Skills in Nursing 2.00 This course introduces students to the essential skills required in professional nursing practice. Students will begin to examine the professional, legal and ethical standards of practice. Therapeutic strategies are presented for the integration of assessment, communication and safety skills necessary for promoting health in clients of all ages. Required competencies for licensure are introduced. Co-requisite: NURS 152. Fall annually and as needed.
		NURS 152	Fundamental Skills in Nursing Clinical Laboratory 1.00 Skills presented in theory portion of this course will be practiced in the lab experience of the course. Emphasis is placed on interactions between students and clients through clinical simulations. Co-requisite: NURS 150. Fall annually and as needed.
		NURS 160	Critical Thinking in Nursing 3.00 This course focuses on thinking as a skill and its practical application in education and clinical practice. Emphasis is placed on the skill acquisitions of critical thinking, clinical reasoning and judgment, decision making, and problem solving as components of clinical thinking. Students are introduced to moral and ethical reasoning in professional nursing practice. Opportunities are

- provided for students to transfer these skills to personal learning styles, test taking and strategies for success. Fall annually and as needed.
- NURS 170 Health Promotion through the Nursing Process 2.00**
This course introduces students to the principles of the nursing process that provide the building blocks for all nursing care models. The course explores each phase of the nursing process. Health promotion of clients with specific health care needs will be used to demonstrate the nursing process. Students will apply the nursing process in the development of a patient and family health education plan. Emphasis is placed on the principles of delegation, accountability and prioritization. Prerequisite: NURS 150; 152; 160; BIOL 251; 252; Co-requisite: NURS 172; Pre or Co-requisite: BIOL 261; 262. Spring annually and as needed.
- NURS 172 Health Promotion through the Nursing Process Clinical Laboratory 1.00**
This introductory laboratory course provides students the opportunity to demonstrate the principles of the nursing process. Students will apply each phase of the nursing process in care of clients with specific actual and potential alterations in health status. Students will complete a health literacy assessment, identify health education needs of a client, and develop a patient education plan. Concepts of prioritization, accountability and delegation will be emphasized. Prerequisite: NURS 150; 152; 160; BIOL 251; 252; Co-requisite: NURS 170; Pre or Co-requisite: BIOL 261; 262. Spring annually and as needed.
- NURS 180 Introduction to Nursing Practice, Theory and Research 3.00**
This introductory course provides the basis for understanding the historical development and application of theory and research in nursing. Students are introduced to models of health with an emphasis on health promotion and prevention. The role of the nurse as a consumer of research is stressed. Emphasis is placed on developing the clinical thinking skills necessary to evaluate nursing research and to use the results of research in practice. Students will identify researchable nursing questions, review nursing research literature related to these questions, and collaborate with faculty to answer these questions. The evidence-based approach will be used as the framework for relating research to undergraduate education and clinical practice. Opportunities will be provided for students to develop a personal philosophy of nursing. Prerequisites: NURS 150;152;160. Spring annually and as needed.
- NURS 201 Nursing Process III 4.00**
Focuses on the application of the nursing process to individuals across the life span in acute care and community settings. Utilizes the nursing process in determining the care of clients having cancer, and the care of clients with respiratory, cardiovascular, sensory, and urinary and renal dysfunctions. Four class hours weekly. Co-requisite: NURS 211. Prerequisites: PSY 260, minimum grade of C in BIOL 259 and NURS 102 and 132, and Pass in NURS 112. Fall, annually.
- NURS 202 Nursing Process IV 4.00**
Focuses on the application of the nursing process in a variety of settings to individuals across the life span. Explores the nursing process as it relates to the care of clients having immune, neurologic, endocrine and psychiatric-mental health dysfunction. Emphasizes the nursing management of selected clients requiring critical care. Co-requisite: NURS 212. Prerequisites: Minimum grade of C in NURS 201 and Pass in NURS 211. Spring, annually.
- NURS 203 Nursing Seminar 2.00**
Introduces students to relevant issues and current and future trends in nursing healthcare. Provides opportunities for students to explore ethical issues that nurses often encounter. Emphasizes role transition from student to graduate nurse. Prerequisites: Minimum grade of "B" in NURS 101, 102, and 201. Spring, annually.
- NURS 211 Nurs Proc III: Clin Practice 4.00**
Clinical practice experience provides opportunities for students to implement objectives identified in NURS 201. Students care for clients across the life span having cancer and clients having respiratory, cardiovascular, sensory, urinary, and renal dysfunctions. Provides opportunities for administration of intravenous medications and development of skills in comprehensive client assessment. Twelve clinical hours weekly. Co-requisite: NURS 201. Prerequisites: Minimum grade of C in BIOL 259 and NURS 102 and 132 and Pass in NURS 112. Fall, annually.
- NURS 212 Nurs Proc IV: Clinical Practice 4.00**
Clinical practice experience provides opportunities for students to implement objectives identified in NURS 202 and 203. Students care for acutely ill clients across the life span having immune, neurologic, endocrine, and psychiatric-mental health dysfunctions. Provides opportunities for delivery of care to increasing numbers of clients, and guided practice in refining interpersonal and decision-making skills required of the graduate nurse. Twelve clinical hours weekly. Co-requisites: NURS 202 and 203. Prerequisites: Minimum grade of C in NURS 201, and Pass in NURS 211. Spring, annually.
- NURS 233 Pharmacological Aspects of Nursing: Part II 1.00**
Builds on the foundations of the pharmacological aspects of nursing in NURS 133 (part I) and correlates with content delivered in NURS 201 Nursing Process III. Focuses on the pharmacological management of the client with Cancer, Cardiovascular, Anemia, Respiratory, Infection, Sensory, and Urinary/Renal disorders. Emphasizes major drug classifications, actions and drug effects, indications, adverse effects, indications, adverse effects and toxicity, nursing interventions and patient teaching in these areas. Required of all ASN students.
- NURS 234 Pharmacological Aspects of Nursing: Part III 1.00**
Builds on the foundations of the pharmacological aspects of nursing in NURS 133 (part I) and NURS 233 (part II) and correlates with content delivered in NURS 202 Nursing Process IV. Focuses on the pharmacological management of the client with Immune, Endocrine, Neurologic, psychiatric-mental disorders. Emphasizes major drug classifications, actions and drug effects, indications, adverse effects and toxicity, nursing interventions and patient teaching in these areas. Required of all ASN students. Pre-requisite NURS 133 and NURS 233.

- NURS 241 Clinical Reasoning & Problem Solving in Nursing 2.00**
Students who participate in this course will develop clinical reasoning and problem solving skills necessary for effective decision making by professional nurses. Factors that influence clinical reasoning and problem solving will be examined to facilitate higher level thinking in clinical situations. This course will be open to all second year ASN students. Other nursing students may be admitted with permission of instructor.
- NURS 242 Service Learning in Nursing 1.00**
This seminar course provides an opportunity for nursing students to participate in community based learning. The focus is on participating in experiences in the community that reinforce skills and concepts addressed in Nursing Process Courses. The emphasis is on nursing assessment of community needs, patient teaching within the community, and professional commitment to the health of the community. This course helps the student develop community assessment, problem-solving, and reflective skills, while encouraging engagement. This course will be open to all ASN nursing students. Each semester as needed. Prerequisite: Must have completed or be enrolled in NURS 101.
- NURS 250 Health Assessment Across the Lifespan 3.00**
The conceptual focus of this course is the nursing process with emphasis on clinical thinking and health assessment of individuals and families across the lifespan. Concepts of physical, psychosocial, spiritual, cultural, familial and environmental assessments will be examined. Emphasis is placed on health beliefs of clients and families and factors that affect health promotion practices. Prerequisites: NURS 150; 152; 160; 170; 172; 180; BIOL 251; 252; 261; 262; Co-requisite: NURS 252; 260; Pre or Co-requisite: PSY 260. Fall annually and as needed.
- NURS 252 Health Assessment Across the Lifespan Clinical Laboratory 1.00**
This course provides students with the opportunity to demonstrate a systematic assessment of individuals and families across the lifespan. Students will demonstrate physical, psychosocial, spiritual, cultural, familial, and environmental assessment. Students will identify variations from normal assessment findings. Students will identify factors that affect health promotion practices. Prerequisite: NURS 150; 152; 160; 170; 172; 180; BIOL 251; 252; 261; 262. Co-requisite: NURS 250; 260. Pre or Co-requisite: PSY 260. Fall annually and as needed.
- NURS 260 Culture & Caring Across the Lifespan 3.00**
This course will introduce students to the concept of holistic nursing practice in a multicultural society. Nursing theories related to culture, caring, death and grief will be used as frameworks to explore the influence of cultural values and beliefs on health promotion practices and end of life care. Professional nursing interventions are identified which facilitate health promotion and end of life care for culturally diverse clients and family. Concepts of diversity and universality will be introduced in caring for clients and families at the end of life. Topics related to vulnerability, migration, social justice, and nurses as global citizens will be explored. Prerequisite: NURS 150; 152; 160; 170; 172; 180 and BIOL 251; 252; 261; 262. Co-requisite: NURS 250; 252. Pre Co-requisite: PSY 260. Fall annually and as
- needed.
- NURS 270 Pharmacotherapeutics 2.00**
Pharmacotherapeutic aspects of nursing care are introduced and substantiated by evidence based findings to promote health. Emphasis is placed on the use of the nursing process in safe administration of medications and patient education. The impact of technology and economic forces as well as collaboration with the health care team will be discussed. Ethical, legal and cultural considerations will be explored. Prerequisites: NURS 150; 152; 160; 170; 172; 180; 189; 250; 252; 260; BIOL 251; 252; 262; MATH 117. Co-requisite: NURS 272. Spring annually and as needed.
- NURS 272 Pharmacotherapeutics Clinical Laboratory 1.00**
This course provides students the opportunity to demonstrate the use of the nursing process in safe medication administration in a laboratory setting. Cultural, ethical, and legal issues will be explored. Students will develop an individualized health education plan with an emphasis on pharmacotherapeutics. Prerequisites: NURS 150; 152; 160; 170; 172; 250; 252; MATH 217; BIOL 251; 252; 261; 262; Co-requisite: NURS 270; Co-requisite or Prerequisite: CHEM 205; BIOL 260. Spring annually and as needed.
- NURS 299 Special Topics In Nurs 3.00**
This course deals with topics of special interest for all nursing students. It will focus on identified nursing subjects needed to keep students abreast of the changing trends in the profession and provide them with a mechanism for updating their nursing knowledge and clinical competencies. This course may be offered summers and weekends during the academic year according to demand, and will be open to all students.
- NURS 310 Health Promotion Adult I Acute Care 2.00**
The conceptual focus of this course is the nursing process with emphasis on clinical thinking and health education related to the care of acutely and critically ill adults experiencing alterations in health. Concepts and issues are discussed related to the complex physiological and psychosocial concerns during actual or potential acute alterations in adult clients. Emphasis is on individuals with acute and life-threatening illnesses. Professional nursing interventions are identified which facilitate health promotion for the adult client and family. Opportunities are provided for the student, as client advocate, to apply the acquired evidenced-based knowledge to the care of clients within the health care environment. Prerequisite: NURS 250; 252; 260; Co-requisite: NURS 312. Spring annually and as needed.
- NURS 312 Health Promotion Adult I Acute Care 1.00**
The focus of this lab experience is on the skill development required to care for adults experiencing acute and/or life-threatening alterations in health. Specific assessments, treatment protocols, and other nursing skills presented in theory portion of this course will be practiced in this lab experience. Emphasis is placed on skill development and interactions between students and clients through clinical simulations. Prerequisite: NURS 250; 252; 260; Co-requisite: NURS 310; Prerequisite or Co-requisite: CHEM 205; BIOL 260; SOC 211. Spring annually and as needed.
- NURS 320 Death And Grief 3.00**
Explores the dying process from various conceptual

- and theoretical frameworks. Focuses on historical, ethical, socio-cultural and interpersonal perspectives on death. Students address their own mortality and develop a personal philosophy of death and grief. Opportunities are provided for students to interact with professional experts as well as individuals experiencing grief/death issues. Annually, and as needed. Open to all students.
- NURS 330 Health Promotion Adult II Chronic Care 2.00**
The conceptual focus of this course is the nursing process with emphasis on clinical thinking and health education related to the care of older adults and adults experiencing chronic alterations in health. Concepts and issues related to complex physiological and psychosocial alterations in adult clients are examined. Emphasis is on elderly clients and individuals with chronic illnesses. Professional nursing interventions are identified which facilitate health promotion for the adult client and family. Opportunities are provided for the student, as client advocate, to apply the acquired evidenced-based knowledge to the care of clients within the health care environment. Prerequisite: NURS 270; 272; 310; 312; Co-requisite: NURS 332. Fall annually and as needed.
- NURS 332 Health Promotion Adult II Chronic Care Clinical Lab 1.00**
The focus of this lab experience is on the application of the nursing process in the care of older adults and adults experiencing chronic alterations in health. Specific assessments, treatment protocols, and other nursing skills presented in theory portion of this course will be practiced in this lab experience. Emphasis is placed on skill development and interactions between students and clients through clinical simulations. Prerequisite: NURS 270; 272; 310; 312; Co-requisite: NURS 330. Fall annually and as needed.
- NURS 335 Alternative Therapies 3.00**
Explores various approaches to health and healing that lie outside the realm of conventional Western medicine. Focuses on how these therapies are presented on the World Wide Web and how the registered nurse can evaluate their effectiveness. Students will research selected topics and critically appraise the quality of information found on the internet.
- NURS 340 Nursing In Transition 3.00**
This course provides a theoretical foundation for the transition from technical to professional nursing practice. Students will address the concepts of nursing, health, individual, and environment and explore nursing as an evolving profession with emphasis on the historical perspectives, environmental context, and future trends that could impact health care. This course views individuals from a holistic perspective, and explores the spectrum of health and wellness. Clinical thinking, theory, evidence-based practice, and nursing research are introduced as the basis for professional nursing practice. Writing skills for the professional nurse are developed in the course. (Open to students who are licensed RNs. Fall and spring as needed.)
- NURS 341 Culture and Care in Nursing Practice 3.00**
This course will promote an understanding of holistic nursing practice in a multicultural society. Nursing theories related to culture and caring will be used as frameworks to explore the influence of cultural values, beliefs, and practices on health. Specific ethnic groups will be examined in terms of lifestyles, healthcare decisions, and cultural care modalities. Topics related to social justice and nurses as global citizens will be explored.
- NURS 342 Clinical Thinking in Nursing 3.00**
This course focuses on clinical thinking as a nursing skill and its practical application in the health care arena. Emphasizes is placed on defining critical thinking as well as exploring critical thinking, creative thinking, reasoning, decision making, problem solving, and metacognition as they relate to the many facets of professional nursing practice. Provides students opportunities to transfer skills to problems of a professional and personal nature. Open to students who are licensed RNs and others with permission of instructor. Spring annually, or as needed
- NURS 343 Health Literacy in Nursing Practice 3.00**
This course examines concepts related to health literacy in professional nursing practice. Topics include the teaching/learning process in health education at the individual, family, and community levels. Content will explore locating and evaluating pertinent information technology to improve safety in healthcare. Focus will be placed on interpersonal and professional communication skills necessary within a multidisciplinary term. (Open to licensed RN's and others with permission of the instructor).
- NURS 345 Trends and Issues in Professional Nursing Practice 3.00**
This course explores current issues and trends influencing professional nursing practice. Areas of discussion include the political arena of health care, innovative nursing practices, societal demands on nursing, evaluation of professional organizations, and the legal and ethical issues of professional nursing. The course provides students with an opportunity to study factors impacting the health of individuals, families, and communities internationally. Open to licensed RN's and others with permission of the instructor.
- NURS 346 Health Assessment 2.00**
Enables the registered nurse to enhance skills in assessing the health status of individuals. Provides an opportunity to obtain a comprehensive health history and perform a screening physical assessment. Emphasizes recognizing deviations from normal and integrating physiological, psychosocial, developmental, spiritual, and transcultural dimensions in order to formulate diagnostic hypothesis. Open to students who are licensed RNs. Spring, annually and as needed.
- NURS 347 Creating a Wellness Lifestyle 3.00**
Introduces the student to the concepts of wellness and health promotion from a holistic perspective. Within this framework, students explore how to gain more control over their lives through effective stress management, management of time and change, and adequate self and social support. Assists students in increasing self-responsibility and negotiating the health care delivery system. Discusses health measures such as diet, exercise, and sleep as they relate to a wellness lifestyle. Explores the balance of caring for others and caring for self. Each student is guided in formulating an individualized wellness plan. Open to all students. Annually, and as needed.
- NURS 348 Nursing Leadership in the Healthcare Environment 3.00**
The conceptual focus of this course is the nurse as a

leader in a rapidly changing and complex healthcare environment. Concepts and issues related to nursing leadership, conflict resolution, and change are examined. Students will explore concepts of ethics, safety, and quality improvement within the healthcare organization. Concepts of prioritization, delegation, accountability and advocacy will be emphasized. Prerequisite: NURS 270; 272; 310; 312; Pre or Co-requisite: Nurs 330; 332; 350. Fall annually and as needed.

NURS 350 Health Promotion in the Community 3.00

The Conceptual focus of this course is the nursing process with emphasis on clinical thinking and health education related to the care of individuals, families, and populations within the community setting. Concepts and issues related to public health, epidemiology, and environment are examined. Students will also explore concepts of global health, disasters, and violence. Professional nursing interventions are identified which facilitate health promotion for communities. Opportunities are provided for the student, as client advocate, to apply evidence based knowledge to the care of clients in the health care environment. An emphasis is placed on vulnerability and social justice. Assignments will provide students with the opportunity to practice skills related to the course content. Prerequisite: NURS 270; 272; 310; 312; Co-requisite: NURS 330; 332; 348; Pre or Co-requisite: SOC 352. Fall annually and as needed.

NURS 355 Health Promotion in Nursing 3.00

The focus of this course is health promotion of individuals and families from an epidemiological perspective. Nursing theory is used as an organizing framework for the course. Course content addresses theories related to health promotion, lifestyle and risk assessment, and motivation as it relates to behavioral change. Therapeutic interventions for health promotion across lifespan, nursing roles in health promotion, and future health care trends which impact health promotion, will be explored. (Opened to licensed RN's). Prerequisites: A minimum grade of "C" in NURS 340. Co-requisite: NURS 342.

NURS 361 Nurse as Educator 3.00

Requires students to develop and provide health education to individuals, families, and communities. Focuses on the nursing process, the teaching/learning process, and health care informatics. Provides opportunities for the student to implement the teaching/learning process in the delivery of health education programs. Open to students who are licensed RNs. Fall, annually and as needed.

NURS 365 Health Promotion for Elderly 3.00

Provides students with information and strategies related to the promotion and maintenance of health in a holistic manner for the elderly population. Promotes inquiry and stimulates the critical-thinking processes of the student by emphasizing health and wellness concepts. Open to all students. Annually as needed.

NURS 368 Human Caring 3.00

Provides an opportunity for in-depth exploration of the concept caring. Appropriate to students entering any human service major. Derives content primarily from scholarly works in the discipline of nursing. Supplements Jean Watson's theory of human caring with guided experiences designed to facilitate personal discovery of one's caring capacities and opportunities to more fully integrate them into

the work of one's discipline. Open to all students. Annually as needed.

NURS 370 Health Promotion for Women, Children and Families 2.00

The conceptual focus of this course is the nursing process with emphasis on clinical thinking and health education related to the care of women, children and families. Concepts and issues related to human development and family-centered care are explored. Emphasis is on women's reproductive health, the birth experience, infants, children, and the family unit. Professional nursing interventions are identified which facilitate health promotion for the childbearing family. Opportunities are provided for the student, as client advocate, to apply the acquired evidenced-based knowledge to the care childbearing families that is developmentally and culturally appropriate. Health promotion interventions targeting socially vulnerable populations will be explored. Related pharmacology information will also be presented. Prerequisite: NURS 330; 332; 348; 350; Co-requisite: NURS 372. Spring annually and as needed.

NURS 372 Health Promotion for Women, Children and Families Clinical Lab 1.00

The focus of this lab experience is on the skill development required to care for women, children, and child-bearing families in various health care settings and the community. Specific assessments, treatment protocols, and other nursing skills presented in theory portion of this course will be practiced in this lab experience. Emphasis is placed on skill development and interactions between students and child-bearing families through clinical simulations. Prerequisite: NURS 330; 332; 348; 350; Co-requisite: NURS 370. Fall annually and as needed.

NURS 376 Frontiers In Health Care 3.00

Provides an opportunity for students to explore the U.S. health care system, its complexities, problems, alternatives for managing problems, and its impact on individuals and populations. Social, technological, political, and economic contexts provide a framework to explore the collaborative efforts of professionals to transform health care delivery both nationally and internationally. Students address current, complex national and international health issues. Open to all RN students and others with permission of instructor. Fall annually and as needed.

NURS 380 Appl Stats for Health Care Professions 3.00

Introduces students in health care professions to the knowledge and understanding of statistics as applied to health care practice and research. Introduces the basic rules and principles of statistics through investigation of quantitative and qualitative problems in health care. Prerequisite: C or better in MATH 050 or satisfactory score in the Mathematics department placement examination. Spring semester.

NURS 388 Nursing Research 3.00

This course emphasizes the role of research in developing evidence-based nursing practice. Students will explore the principles of systematic method of inquiry and the application of clinical thinking, group process, and decision-making skills. The course focuses on the ways research influences decisions in nursing and nursing care. As consumers of research, students will have an opportunity to critique current research for applicability to professional nursing practice. Prerequisite: NURS

- 330; 332; 348; 350; MATH 221; Pre or Co-requisite: PHIL 301. Spring Annually and as needed.
- NURS 390 Psychosocial Health 3.00**
The conceptual focus of this course is the nursing process with emphasis on clinical thinking and health education related to the care of client and families experiencing alterations in psychosocial health. Psychosocial health concepts and issues are examined. Professional nursing interventions are identified which facilitate health promotion for the client and family. Opportunities are provided for the student, as client advocate, to apply evidence based knowledge to the care of clients in the health care environment. Related pharmacotherapeutic topics will be presented. Emphasis is placed on therapeutic use of self and client advocacy. Assignments will provide students with the opportunity to practice skills related to the course content. Prerequisite: NURS 330; 332; 348; 350; SOC 352; PSY 211; 260; Co-requisite: NURS 370; 372; 388. Spring annually and as needed.
- NURS 400 Violence Prevention in Nursing 3.00**
This online course was developed as one of six online courses for the post baccalaureate Forensic Nursing Certificate. NURS 400 provides an opportunity for students to explore violence as a major health problem in the United States while investigating the impact on individuals, communities, and our health care system. Students will explore the role of the nurse as both a victim of workplace violence and as the healthcare provider treating victims of violence. Students will develop nursing care projects that include the identification of victims, risk-assessments of potential victims, effective health care interventions, and preventive strategies. Open to licensed RN's and others with permission of the instructor. Fall annually and as needed.
- NURS 402 Introduction to the Health Environment 2.00**
The purpose of this course is to introduce students to the healthcare work environment. Volunteer experiences in selected healthcare agencies provide students with patient contact and the opportunity to gain insight into the healthcare system. Emphasis is placed on understanding the role of the professional nurse within the specific healthcare environment. Pre-co-requisite: NURS 270; 272; 388; 390. (80 volunteer hours). Summer annually and Spring if necessary.
- NURS 406 Health Promotion Adult I Acute Care Clinical 3.00**
This course provides an opportunity for clinical application of holistic care of adults experiencing acute and/or life-threatening alterations in health. Emphasis is on health promotion, disease management, and injury prevention. Students have an opportunity to develop assessment and therapeutic communications skills while caring for adult clients and their families. Nursing interventions and health education plans are developed through the nursing process. Safe delivery of professional nursing care and pharmacological therapies are demonstrated. Prerequisite: NURS 370; 372; 388; 390; 402. Fall and Spring annually as needed.
- NURS 410 Introduction to Forensic Nursing 3.00**
This online course was developed as one of six online courses for the post baccalaureate Forensic Nursing Certificate. NURS 410 provides students with an overview of forensic nursing science as a specialty area of practice. Forensic nursing standards of practice and performance are the foundation of the course. In addition, students explore evidence collection in the clinical role of the nurse, legal and ethical aspects of forensic nursing, victim advocacy, and career opportunities. Knowledge and skills of forensic health care are integrated into current nursing practice to provide comprehensive, culturally appropriate care to individuals, families, and communities. Open to licensed RN's and others with permission of the instructor. Fall and spring annually and as needed.
- NURS 412 Health Promotion for Women, Children and Families Clinical 3.00**
This course provides an opportunity for clinical application of holistic care of women, children and families. Emphasis is on health promotion, disease management, risk reduction and injury prevention in childbearing families. Students have an opportunity to develop assessment and therapeutic communications skills while caring for clients and their families. Nursing interventions and health education plans are developed through the nursing process. Safe delivery of professional nursing care and pharmacological therapies are demonstrated. Prerequisite: NURS 370; 372; 388; 390; 402. Fall and Spring annually as needed.
- NURS 414 Psychosocial Health Nursing Clinical 3.00**
This course provides an opportunity for clinical application of individuals and families experiencing alterations in psychosocial health with emphasis on health promotion, disease management, and injury prevention. Students have an opportunity to develop assessment and therapeutic communications skills while caring for clients and families. Nursing interventions and health education plans are developed through the nursing process. Safe delivery of professional nursing care will be demonstrated. Prerequisite: NURS 370; 372; 388; 390; 402. Fall and Spring annually or as needed.
- NURS 416 Health Promotion: Adult II Chronic Care Clinical 3.00**
This course provides an opportunity for clinical application of holistic care of older adults and adults experiencing chronic alterations in health. Emphasis is on health promotion, disease management, risk reduction, and injury prevention. Students have an opportunity to develop assessment and therapeutic communications skills while caring for adult clients and their families. Nursing interventions and health education plans are developed through the nursing process. Safe delivery of professional nursing care and pharmacological therapies are demonstrated. Prerequisite: 370; 372; 388; 390; 402. Fall and Spring annually as needed.
- NURS 418 Health Promotion in Communities Clinical 3.00**
This course provides an opportunity for clinical application of holistic care of individuals, families, and populations within a community setting. Emphasis is on health promotion, disease management, risk reduction and injury prevention in the community setting. Students have an opportunity to develop assessment and therapeutic communications skills while caring for individuals, families, and populations. Concepts of vulnerability and social justice will be highlighted. Nursing interventions and health promotion plans are developed through application of nursing process. Prerequisite: NURS 370; 372; 390; 402. Fall and

- Spring annually and as needed.
- NURS 420 Forensic Nursing and the Justice System 3.00**
This online course was developed as one of six online courses for the post baccalaureate Forensic Nursing Certificate. The purpose of this course is to fully introduce the nursing student to the role and responsibilities of the criminal justice professionals he/she will work with during all aspects of a criminal investigation both in and out of the formal hospital environment. Open to licensed RN's and others with permission of the instructor. Prerequisite of Corequisite in NURS 410. Fall annually and as needed.
- NURS 430 Applied Principles and Techniques of Interviewing and Investigation 3.00**
This online course was developed as one of six online courses for the post baccalaureate Forensic Nursing Certificate. NURS 430 provides a detailed look into the specific investigative principles and techniques used by forensic nurses during their experience with an actual victim of a crime. The aim of this class is to fully introduce and discuss the various stages of the criminal investigative process specific to the forensic nurse. Content will focus upon the specific techniques, skills, and procedures used to carry out a forensic assessment, including physical evidence collection and documentation, interviewing of victims, and testifying in criminal court. Open to licensed RN's and others with permission of the instructor. Prerequisite or Corequisite NURS 410, 420. Spring annually and as needed.
- NURS 440 Emergency and Disaster Preparedness for Nurses 3.00**
This online course was developed as one of six online courses for the post baccalaureate Forensic Nursing Certificate. NURS 440 introduces the student to the nurse's role in emergency and disaster planning and management, including mass casualty events. Nursing care of populations including psychological and behavioral manifestations of disaster victims and responders in natural and man-made disasters are highlighted. Ethical considerations of vulnerable populations and standards of nursing practice during disasters will be explored. Open to licensed RN's and others with permission of the instructor. Spring annually and as needed.
- NURS 445 Research in Nursing 3.00**
This course emphasizes the role of research in developing evidence-based nursing practice. Students will explore the principles of systematic method of inquiry and the application of clinical thinking, group process, and decision-making skills. The course focuses on the ways research influences decisions in nursing and nursing care. As consumers of research, students will have an opportunity to critique current research for applicability to professional nursing practice. As novice producers of research, students will work in groups to develop a research proposal of value to nursing. (Open to licensed RN's) Prerequisites: A minimum grade of "C" in NURS 340, 341, 342, 343, 355 and MATH 221. Co-requisite: 470. Fall, and as needed.
- NURS 450 Field Exp In Health Agen 3.00**
In consultation with the faculty, opportunities are provided for the student, as a client advocate, to apply selected concepts to the health promotion of clients in a variety of settings. Prerequisites: Junior standing, NURS 365, or permission of the instructor. As needed.
- NURS 457 Leadership In Nursing 3.00**
Provides a theoretical foundation for the practice of independent and interdependent nursing. Introduces the principles of leadership and management, and emphasizes their application to professional nursing. Focus includes concepts of motivation, change, group process, empowerment, and nursing care delivery systems. Open to licensed RN students and others with permission of instructor. Spring annually, and as needed.
- NURS 460 Forensic Nursing Seminar and Practicum 3.00**
This online course was developed as one of six online courses for the post baccalaureate Forensic Nursing Certificate. NURS 460 provides students with an opportunity to appraise current trends, issues, and research findings related to forensic nursing practice. Through the completion of the practicum experience, students apply forensic nursing knowledge and skills in a specialty area with a selected population of interest. Prerequisites: NURS 400, 410, 420, 430, and 440.
- NURS 463 Acute Care 6.00**
- NURS 465 Capstone I: Topics in Nursing Research 2.00**
The capstone course is designed to provide students with a culminating learning experience that reinforces, integrates, and synthesizes knowledge gained through general education and nursing coursework. Emphasis is on actively engaging students to identify questions of concern in professional nursing practice and foster students' ability to systematically answer these important questions through empirical observation. This course is completed in small groups over the students' final two semesters of the program. The goals of this portion of the course include group process, question identification, proposal development, instrument identification, and obtaining Institutional Review Board approval. Prerequisite: NURS 370; 372; 388; 390; 402. Fall annually.
- NURS 466 Capstone II: Topics in Nursing Research 2.00**
The capstone course is designed to provide students with a culminating learning experience that reinforces, integrates, and synthesizes knowledge gained through general education and nursing coursework. Emphasis is on actively engaging students to identify questions of concern in professional nursing practice and foster students' ability to systematically answer these important questions through an empirical observation. This course is completed in small groups over the students' final two semesters of the program. The goals of this portion of the course include data collection, data analysis, and completion of the written research report. Dissemination of research findings from capstone project will be completed through both an oral presentation and a poster display. Prerequisite: NURS 370; 372; 388; 390; 402; 465. Spring annually.
- NURS 467 Clinical Preceptorship 3.00**
This course is the culminating clinical experience designed to support the students' transition to professional nursing practice. Students will work with an individual preceptor to integrate knowledge and skills gained throughout the program. Students have an opportunity to advance assessment and communications skills while caring for a select

	population. Emphasis is placed on refining nursing process skills in the safe delivery of professional nursing care. Prerequisite: NURS 406, 412, 414, 416 and 418. Co-requisite: NURS 466. Spring annually and as needed.		
NURS 470	Promoting Healthy Communities 3.00 Introduces essential knowledge and important nursing roles for health promotion and illness prevention at the family and community level. Students will explore principles of epidemiology, demography, and relevant nursing and health-related theories and models as they apply to the health of individuals, families, and aggregates. Pre-requisites: NURS 340, 342, and 361. Pre or co-requisite NURS 346. Fall annually, and as needed.		
NURS 480	Role Seminar In Prof Nursing 3.00 This capstone course provides a culminating experience in the exploration of the professional nursing roles. Emphasizes present and evolving nursing contributions in a reformed health care system. Students are guided in the development of a self-directed exploration of a selected role. Must be taken as a co-requisite to NURS 481. Open to RN students only. Prerequisites: Earned grade of C in NURS 340, 342, 346, 361, 380, 445, 470. Spring annually.		
NURS 482	Role Exploration In Prof 2.00 This capstone course provides opportunities for students to explore a professional nursing role through research, interviews and other scholarly activities. The role under investigation can be one of possible graduate study or career advancement. The student may select from a variety of roles such as CRNP, CRNA, clinical specialist, nurse educator, administrator, researcher, etc. Must be taken as a co-requisite with NURS 480. Prerequisites: minimum grade of C in NURS 340, 342, 346, 357, 361, 376, 380, 445 and 470. Spring annually		
NURS 494	Advanced Concepts of Professional Nursing 3.00 This is the capstone course for the RN-BSN program. The student will engage in a capstone project that reflects application, synthesis, and evaluation of concepts and nursing issues studied throughout the program. Application of educational experience to professional growth and contribution to the nursing profession is emphasized. Prerequisite: A minimum grade of "C" in NURS 340, 341, 342, 355, 445, and 470.		
NURS 499	Special Topics In Nurs 6.00 Deals with topics of special interest to professional nurses. Focuses on identified nursing subjects pertinent to the practice of professional nursing. May be offered during the academic year as well as summers and weekends, according to demand.		
PH 200	Solar System Astron 3.00 Examines the motions of Earth, moon, and the planets and their effects on the appearance of the sky; the nature of the sun and the planets; the instruments of the astronomer; and the role the history of astronomy played in the development of our understanding of the sky. Includes constellation identification through the use of the planetarium. Each semester.		
PH 201	Stellar Astronomy 3.00 Explores human understanding of the nature, formation, and evolution of those celestial objects that lie beyond the solar system. Includes stellar properties and spectra, stellar evolution, special stars		
PH 251	General Physics 4.00 Introductory course for non-physics majors. Emphasizes mechanics, including vectors, kinematics, dynamics, energy, momentum, rotational motion, harmonic motion, and waves. Integrates computer-based laboratory and lecture into three two-hour class periods. Prerequisite: Algebra. Each fall.		
PH 252	General Physics II 4.00 Introductory course for non-physics majors. Emphasizes electromagnetism and light, including electrostatics, circuits, magnetic fields, geometrical and physical optics, optical instruments, and atomic spectra. Integrates computer-based laboratory and lecture into three two-hour class periods. Prerequisites: Algebra and either PH 251 or 261. Each Spring.		
PH 254	Ex In Spc: Exc Nanotechnology 3.00 Introductory course for science and mathematics majors. Discusses current and developing sub-micron range technologies. Includes an exposition of the physical laws governing matter-energy interactions at a microscopic level and their consequences and applications to nanotechnology in areas such as mechanosynthesis, molecular sorting, assembly and manufacture, nanomechanical computation systems, and fabrication of nanoscale structural components. Relevant demonstrations and experiments may be incorporated, depending on time and equipment availability. Prerequisites: PH 251 and/or PH 252.		
PH 258	Intro to Ph I 3.00 Introductory course for physics majors, pre-engineers, and students in other disciplines seeking an understanding of physics at a rigorous mathematical level. Emphasizes mechanics, including vectors, kinematics, dynamics, energy, momentum, rotational motion, harmonic motion, and waves. PH 268 must be taken concurrently by physics majors and pre-engineers. Prerequisite: MATH 270, which may be taken concurrently. Each fall.		
PH 259	Intro to Physics Lec II 3.00 Continuation of PH 258, an introductory level course for physics majors, pre-engineers, and students in other disciplines seeking an understanding of physics at a rigorous mathematical level. Emphasizes electromagnetism and optics, including electrostatics, circuits, magnetic fields, geometrical and physical optics, and optical instruments. PH 269 must be taken concurrently with PH 259 by physics majors and pre-engineers. Prerequisite: PH 258. Each spring.		
PH 261	Physics of Energy & Environ 3.00 This course is the study of the physical laws and processes that underlie environmental phenomena with a special focus on energy (mechanical, thermal and electrical). We will establish both a qualitative and quantitative understanding of the underlying physical processes. Technical, economic, and social consequences of these laws and processes will be examined to better delineate the complex decisions related to human energy use and environmental issues. This course might serve as a substitute for PH 251 (General Physics I) and will prepare students		

equally well for PH 252 (General Physics II) should that course be required of their major. Prerequisite: Algebra

- PH 268 Intro to Ph I Lab 1.00**
Complements PH 258, and should not be scheduled by students not enrolled in PH 258. Experiments include free-fall, kinematics, momentum and energy conservation, collisions, and wave phenomena. Each fall.
- PH 269 Physics Lab II 1.00**
Complements PH 259, and should not be scheduled by students not enrolled in PH 258. Experiments include electrostatic phenomena, potential, circuits, magnetic forces, refraction, lens properties, atomic spectra, and interference and diffraction. Utilizes computers for data analysis and presentation. Each spring.
- PH 270 Condensed Matter Lab Practicum 18.00**
This course is an introduction to the processes for constructing sub-micron sized mechanisms. The practicum consists of six emphases: Materials, Safety & Equipment; Basic Contact Lithography, Basic Etching and Deposition Techniques: Thin Film Deposition and Etching Practices; Design and Mast Fabrication; Material Modification Processes; and Characterization, Packaging, and Testing of sub-micron devices. Prerequisite: PH 254, and acceptance into the NMT Capstone Semester at Penn State, and must complete a university petition for an independent study course prior to enrollment. Each semester (Summer recommended)
- PH 301 Astrophysics I 3.00**
Explores the lives of stars using the principles of physics and the tools of astronomy. Topics include celestial mechanics, spectroscopy, stellar atmospheres, stellar interiors, binary stars, nucleosynthesis, energy transport, supernovae, white dwarfs, neutron stars, and black holes. Prerequisites: PH 258 and PH/ES 201. Spring, every other year.
- PH 302 Astrophysics II 3.00**
Explores the objects of the Solar System and the Universe using the principles of physics and the tools of astronomy. Topics include the nature and formatin of the planets and asteroids, the morphology and dynamics of the Milky Way, the nature and evolution of galaxies, the large-scale structure of the Universe, and cosmology. Prerequisites: PH 301 and MATH 272. Fall, odd-numbered years.
- PH 351 Mech & Dynamics 3.00**
Intermediate course in the mechanics. Uses techniques from vector analysis and differential equations to study mechanics at a level above that of PH 258. Includes Newton's laws of motion, rectilinear motion under the influence of a variable force, oscillatory motion, energy, momentum, motion in three dimensions, central forces, celestial mechanics, systems of particles, and rigid body motion. Prerequisites: PH 252 or 259; MATH 350. Fall, odd-numbered years.
- PH 352 Elec & Magnetism 3.00**
An intermediate-level course in electricity and magnetism. Uses vector algebra extensively in the presentation and development of the basic empirical laws of electromagnetism, and introduces vector calculus as required in the derivation and expression of Maxwell's equations. Includes electrostatics, dielectric media, current and circuits, magnetic fields, magnetic media, Maxwell's equations for vacuum and dielectric media, and electromagnetic waves.
- PH 353 Modern Physics I 3.00**
Intermediate course in modern physics. Includes relativity, kinetic theory of matter, the photon, electron waves, the Bohr model of the hydrogen atom, the Schrodinger wave equation, solution of the Schrodinger wave equation for the hydrogen atom, atomic physics. Prerequisites: PH 252 or 259; MATH 270 with MATH 271 concurrently. Fall, even-numbered years.
- PH 354 Optics 3.00**
Intermediate course in geometrical, physical, and modern optics. Includes thin lenses, thick lenses, interference, diffraction, polarization, color theory, spectra, lasers, holography, and fiber optics. Prerequisites: PH 252 or 259; MATH 271, with MATH 272 concurrently. Fall, odd-numbered years.
- PH 355 Mod Physics II 3.00**
Continuation of Modern Physics I. Includes structure and spectra of molecules, band theory of solids, structure of the nucleus, radioactive decay, nuclear reactions, radiation detectors, and elementary particles. Prerequisites: PH 353, MATH 272. Spring, odd-numbered years.
- PH 356 Thermodynamics 3.00**
Intermediate course in heat. Develops basic concepts and principles more intensively in the study of properties of gases and in thermodynamics. Some of the specific topics studied are temperature measurements, thermal expansion, specific heat, thermal conductivity of solids and liquids, thermal properties of gases, change in phase, and heat engines. Prerequisites: PH 252 or 259; MATH 350, which may be taken concurrently. Spring, even-numbered years.
- PH 357 Condensed Matter Physics 3.00**
The course is an introduction to the structure and properties of the solid state of matter. Topics to be covered are the energy band theory of solids, composition and symmetry of crystal lattices, bonding and imperfections in crystals, and semiconductor composition and construction. Prerequisite: MATH 272, which may be taken concurrently. Spring, even-numbered years.
- PH 371 Experimental Physics I 3.00**
Intermediate-to advanced-level laboratory. Includes experiments spanning the areas of heat, mechanics, electricity and magnetism, optics, and atomic and nuclear physics. Students select experiments from these areas according to their interests and background, and as dictated by equipment availability. Emphasizes measurement precision and careful error analysis. Includes one lecture hour per week and three laboratory hours per week (individually arranged). Prerequisites: junior-senior standing, and completion (or co-registration in) at least two of the following courses: PH 351, 352, 353, 354, or 355. Each fall.
- PH 372 Experimental Physics II 2.00**
Continuation of Experimental Physics I. The one-hour lecture requirement is omitted, and the student completes a different set of experiments. Prerequisites: PH 371 and completion of (or co-registration in) at least four of the following courses: PH 351, 352, 353, 354, 355, 356, or 357. Each fall.
- PH 400 Special Topics 3.00**
This course includes an introduction to gate circuits,

	Boolean algebra in the minimization of gate circuits, flip-flops, counters, timers, the design, operation, and programming of microcomputers, D/A and A/D conversion, and the interfacing of integrated circuits to external devices. Prerequisite: PH 259/269 or PH 252, and MATH 271.		
PH 453	Ind Study Phys Mea	6.00	
	Examines the theory and application of precision measuring instruments spanning many areas of physics. Experiments are developed to fit the background and needs of the individual student, utilizing equipment from the various laboratories of the Physics Department. Students spend from three to six hours in the laboratory, depending on the number of credits elected in consultation with their advisors.		
PH 455	Analog Electronics	3.00	
	Introduces network analysis, A.C. circuits, and solid state devices. Includes discrete devices, power supplies, amplifiers, oscillators, and operational amplifiers. Emphasizes application of circuits to scientific instruments. Prerequisites: PH 259/269 or PH 252, and a course in integral calculus. Spring, even-numbered years.		
PH 457	Demo In Physics	2.00	
	Designed for the secondary education major in physics and may not be used as a physics elective for the B.A. or B.S. in physics major. Stresses preparation and performance of classroom demonstrations for use in secondary schools. Prerequisite: PH 252 or 259. On demand.		
PH 460	Intro to Math Physics	3.00	
	Uses the techniques of vector calculus and differential equations to treat problems in mechanics, electricity, and other areas of physics at a level intended to prepare the physics major for graduate level work. Discusses and applies analog and digital computer techniques to a variety of physical problems. Prerequisites: PH 258, 259, mathematics through MATH 350. On demand.		
PH 461	Seminar	1.00	
	Develops skills in literature-survey and library research in specific areas in conjunction with the preparation and presentation of formal reports on research topics. Prerequisites: Senior standing, science major. Spring, annually.		
PH 498	Research In Physics I	3.00	
	Gives junior or senior physics majors useful experience in the techniques of laboratory research in physics. Students will either participate in an on-going research project under the guidance of a faculty member, or initiate an investigation of their own. A final report in a form suitable for publication will be expected upon conclusion of the project. Can serve as a substitute for PH 372: Experimental Physics II. Prerequisites: Permission of the instructor. Students wishing to enroll in PH 498 must complete a university petition for an independent study course during the semester prior to enrollment in the course.		
PH 499	Research In Physics II	3.00	
	Continuation of PH 498, to permit completion of lengthy research activities initiated in PH 498, for which one semester is insufficient. Continuation is at the discretion of the project director, and the credits may not be substituted for other physics requirements. The same prerequisites must be fulfilled as for PH 498, except that notification of the department chair must precede any independent		
PHIL 100			study deadlines set by the university. Philosophy Goes to the Movies 3.00 This course will explore and evaluate various philosophical themes and problems through the use of popular films chosen for their philosophical content. No prerequisite. Annually.
PHIL 111			Logic I - Critical Thinking 3.00 Develops students' skills in analyzing arguments. Examines forms of faulty reasoning and evaluates criteria for the evaluation of arguments. No prerequisite. Annually.
PHIL 115			Philosophy & Pop Culture 3.00 Introduces students to traditional philosophical topics and problems by reflecting on popular culture and contemporary cultural products such as films, literature, and music. Annually
PHIL 211			Intro To Phil 3.00 Introduces students to philosophical topics spanning the history of philosophy. Includes the nature of reality, knowledge and morality. Students will gain a deeper appreciation of the Socratic maxim: an unexamined life is not worth living. No prerequisite. Annually.
PHIL 212			Ethics 3.00 Introduces students to theoretical ethics and the consequences these theories have both personally and for public policy. Examines controversial moral issues. No prerequisite. Annually.
PHIL 215			Religions of the World 3.00 Examines the philosophies and practices of the religions of the world, emphasizing Judaism, Christianity, Islam, Hinduism, and Buddhism. No prerequisite. Annually
PHIL 300			Ancient Greek Phil 3.00 Thinkers of ancient Greece, with special attention to Plato and Aristotle. No prerequisite. Annually.
PHIL 301			Bioethics 3.00 An inquiry into traditional and contemporary ethical issues in medicine, one of the most popular topics in applied ethics. Medical research, practice and public policy are addressed. Prerequisite: Sophomore standing (minimum)
PHIL 302			Environmental Philosophy 3.00 An inquiry into the philosophical aspects of issues concerning the environment. Environmental theories, policies, and practices are addressed. Prerequisite: Sophomore standing (minimum). Every other year
PHIL 303			Freud and Philosophy 3.00 The task of this course is to study Freud's psychoanalytic theory and its influence on philosophy. Prerequisite: Sophomore standing (minimum). Offered annually
PHIL 306			Modern Philosophy 3.00 A survey of philosophy during the 17th and 18th century, with special focus on Continental Rationalism and British Empiricism. No prerequisite. Annually.
PHIL 308			Contemp Ethical Issues 3.00 This course will examine and critically evaluate contemporary ethical issues. Topics may include, but are not limited to, biomedical ethics, business ethics, ethics and education, and environmental ethics. No prerequisite. Annually.
PHIL 311			Logic II - Symbolic Logic 3.00 A course in formal logic. Consists of a detailed examination of the logical structure, semantics, and proof methods of both sentential and predicate logic, as well as the application of those logics to ordinary English sentences and arguments. No prerequisite.

- Annually.
- PHIL 312 Philosophy and Literature 3.00**
This course will examine and critically evaluate various philosophical themes and problems through the use of literature chosen for its philosophical content. No prerequisite. Annually.
- PHIL 317 Logic III-Scientific Reasoning 3.00**
This course is a critical thinking course focused specifically on scientific claims and theories and on the scientific method itself. Students will be taught how to recognize and reconstruct inductive arguments typically employed by scientists; e.g., inductive generalizations, arguments from analogy, hypothetico-deductive arguments, etc., and will be taught how to evaluate these arguments for logical merit. Common problems in reasoning effectively regarding scientific issues (e.g. ad hoc auxiliary hypothesis, rival theories, etc.) will be discussed as will be solutions to these problems.
- PHIL 325 Spec Top In Phil 15.00**
As needed.
- PHIL 328 Ethics and Criminal Justice 3.00**
This course is a survey of ethical issues for practitioners within the criminal justice system. Topics include: ethics of decision-making, origins of the concept of justice, dilemmas of police officers as crime fighters and public servants, fighting corruption, ethics and investigative methods, ethics as it relates to punishment, institutional and community corrections.
- PHIL 330 Philosophy of Art 3.00**
The task of the course is to examine the nature and value of art and artistic activity. The course examines the main theories of what art is and what role art should play in our lives. Sophomore standing or permission of instructor.
- PHIL 352 Theory of Knowledge 3.00**
Detailed examination of the concepts of knowledge and of justified belief. Considers and evaluates various theories regarding the nature of these concepts. Investigates the possible sources of knowledge and justified belief. Critically examines various skeptical hypotheses. No prerequisite. Every other year.
- PHIL 357 Philosophy and Feminism 3.00**
Examines traditional and contemporary feminist theories and their consequences for social and political philosophy. Explores various aspects of gender and attitudes concerning the nature of human beings discussed. No prerequisite. Every third year.
- PHIL 360 Existentialism 3.00**
Existentialism understands the human being as the one for whom its own existence is in question. To be human is to ask, implicitly or explicitly, the question of what it means to be. Existentialism, therefore, accords the self-questioning individual a privileged position from which to draw out philosophical insights on (1) rationality, (2) language, (3) values, (4) time, (5) meaning of human existence, (6) interpersonal relations, and (7) God, among other themes. No prerequisite. Annually.
- PHIL 400 Independent Study: Philosophy 3.00**
Concentrated exploration of an area of philosophy not covered by existing courses and under the direction of department faculty member. Prior to enrolling, students are required to submit a written proposal outlining their plan of study. Enrollment limited to juniors and seniors with consent of the instructor. Maximum number of credits in PHIL 400
- is limited to nine.
- PHIL 410 Philosophy of Mind 3.00**
Detailed investigation into the fundamental nature of mental phenomena. Discusses various theories of mind, e.g., dualism, philosophical behaviorism, philosophical functionalism, etc. Examines issues involving mental content, mental causation, and consciousness. Prerequisite: PHIL 111 or 211 or permission of instructor. Every other year.
- PHSC 110 Intro to Environ Chemistry 3.00**
Provides a knowledge of basic chemical principles. Applies this knowledge to environmental issues such as water resources and water pollution, air quality, ozone depletion, and disposal of dangerous wastes. Three hours lecture. Open to all students in all academic areas. No prerequisites. Each semester.
- PHSC 111 Physical Science Chem 3.00**
Explores selected chemical principles with the purpose of providing a background that will enable students to understand issues involving the interaction of science and society. Intended for non-science majors and does not assume prior familiarity with chemistry. Does not count toward requirements for science majors, but can be applied to fulfill the general education math-science requirements for non-science majors. Students who prefer a more traditional chemistry course may elect either CHEM 151 or 153 to fulfill their general education requirements. No prerequisites. Each semester.
- PHSC 112 Bas Phys Sci Phys & Astr 3.00**
Intended for students not majoring in the sciences or mathematics, and does not presume any prior familiarity with the subject. Science and math majors will not receive credit for this course. Discusses the nucleus of the atom and radioactivity, fundamentals of electricity and simple circuits, and descriptive astronomy. Integrates experiments with the subject matter to develop theory from an experimental basis. Uses the Planetarium extensively in conjunction with the section in astronomy. No prerequisite. Each semester or on demand.
- PHSC 113 Exp 20th Cent Phy For Non Sci 3.00**
Intended for students not majoring in the sciences or mathematics and presumes no prior familiarity with the subject. Science and math majors will not receive credit for this course. Discusses a variety of topics in solid state physics and modern quantum mechanics including energy levels and bands, emission of electromagnetic radiation, wave-particle duality, and quantum tunneling. Integrates demonstrations, hands-on experiments, computer visualization programs, and in-class discussion to develop conceptual models from an experimental basis. No prerequisite. Each semester or on demand.
- PHSC 116 Aerodynamics: Ph/Bio of Flight 4.00**
The biomechanics of flight. Students will use techniques in physics and evolutionary biology to study how animals fly and swim. Drawing upon bats, birds, insects, and even winged seeds, we will discuss and test the basic operating principles of wings. We will apply results obtained with a wind tunnel to the locomotion of objects in water. Students will then be able to compare and contrast the flyers and swimmers of nature with those of human invention. The course will have a substantial studio laboratory component. Offered every other fall.

PHSC 117	Explor Phy Sci: Phys & Astron	3.00	Explores selected physical principles with the purpose of providing a background that will enable students to understand physical phenomena. Intended for non-science majors and does not presume any prior familiarity with the subject. Students who have already successfully completed PHSC 112 will not get credit for the course. Topics may include motion, heat, the nucleus of the atom and radioactivity, fundamentals of electricity and simple circuits, atmospheric physics, and descriptive astronomy. Every spring	
PHSC 320	Phy Sci Antiquity to 20th Cent	3.00	Focuses on the most important and influential theories that scientists have developed to explain the natural world and examines how those theories were conceived and refined. Considers both the process and the content of Western science and examines the progression of science from ancient Egypt and Mesopotamia through the quantum revolution of the early 20th century. Explores how the work of scientists has been affected by the historical and cultural settings in which they lived. Prerequisites: PHSC 111 or 112 or permission of instructor	
PS 110	Politics and Public Affairs	3.00	An introduction to the study of politics through examination of the ways the political process affects, shapes and frames selected current issues or policy dilemmas. Topics will vary from semester to semester, but may include the following issues in public affairs: terrorism, immigration, health care, social movements, civil liberties, education, foreign and defense policy, budgeting, environmental issues, and energy policy.	
PS 210	Intro to Political Sci	3.00	A comprehensive introduction to the political world, examining the multidimensional force shaping the contemporary scene. In addition to coverage of the classical topics such as political theory, ideologies, political regimes, bureaucracy, comparative and international politics, the course examines the impacts of the contemporary factors such as globalization and political economy, the demand for universal human rights, terrorism, and environmental politics. Each semester.	
PS 211	American Government	3.00	Study of the general principles of the American system of constitutional government emphasizing the organization and functions of the national government--legislative, executive, and judicial. Examines the rights and duties of citizenship, the electorate, political parties, civil rights, and the growing regulatory function of government. Each semester.	
PS 302	Politics and Film	3.00	Explores the relationship between movies, political attitudes, and the real world of American politics and government. Examines Hollywood's depiction of the presidency, campaigns and candidates, the mass media, political culture, and the struggle for civil rights and social justice. Introduces students to seminal political films and relevant readings that help place the movies and their messages in the context of important political events. Prerequisite: PS 210 or 211 or permission of the instructor. Every year.	
PS 304	Crime, Politics & Public Policy	3.00	Course treats the ways in which government treats crime as a public policy matter, with a predominant focus on legislative and executive branch activity.	
				Topics may vary somewhat from year to year. Examples of policies to be examined and evaluated include: reducing the incidence of crime, the politics of imprisonment, punitive and restorative justice, decriminalization, drugs and crime, death penalty, gun control, hate crimes, "zero tolerance" approaches, pornography, corporate crime, organized crime, and terrorism. The constitutional and legal framework of policies will also be considered.
	PS 311	Comparative Politics	3.00	Considers the central issues of comparative political inquiry, with an emphasis on advanced industrial nations and Latin America. On demand.
	PS 325	Politics And Religion	3.00	Investigates the ways in which politics and religion interrelate, using theoretical and behavioral approaches. Examines issues in both domestic and international politics. Prerequisite: PS 210 or 211 or permission of instructor. Every other year.
	PS 350	Special Topics	6.00	Offered occasionally.
	PS 351	State Local Government	3.00	Detailed study of how our state and local governments function. Emphasizes Pennsylvania government. Requires independent study through outside projects. Every other year.
	PS 352	Internat Politics	3.00	Presents a framework for analyzing the behavior of states, the basic factors which motivate and affect international policies, and the techniques of resolving international conflicts. Every other year.
	PS 354	Constitutional Law of the United States	3.00	A study of the development of the Constitution through the interpretations of the Supreme Court. Includes a study of the separation of governmental powers, political and judicial processes, federalism as a legal device, and the relationship of liberty and authority to the individual living under government. Prerequisite: PS 211 or HIST 120 or HIST 121 or consent of instructor. Alternate Fall Semesters.
	PS 355	Media, Elections and Party Politics	3.00	A survey course emphasizing the electorate, pressure groups, and public opinion, nature and history of political parties, party organization, methods of nominations, and elections. Examines the place of political parties and elections as instruments of democracy and their place in the framework of Pennsylvania's government. Fall, alternating years.
	PS 356	Congress & Legislative Process	3.00	Examines the legislative process in American representative government with primary concern given to the structure, operation, and development of the U.S. Congress.
	PS 357	The American Presidency	3.00	Examines the history, practice, and political ideas related to the institution of the American presidency. Emphasizes the presidency's place within the constitutional system of separated powers and how that institution has evolved into the office we see today. Alternate Fall Semesters.
	PS 363	Criminal Procedure	3.00	A study of the law as it relates to arrest, search, and seizure with emphasis on present controlling legal decisions and historical development, philosophy, and public policy issues underlying these decisions. Prerequisite: PS 211, CRJT 110 or permission of instructor. Annually

PS 364	Cons Law-Civil Rghts/Lib 3.00 A study of the development of the Constitution of the United States through an examination of the decisions of the Supreme Court in the area of civil rights and liberties. Introduces some legal terminology and the case method. Prerequisite: PS 211 or HIST 120 or HIST 121 or consent of instructor. Alternate Springs.		
PS 365	Anc-Med Pol Thgt 3.00 Explores the development of political theory from Plato to Machiavelli. Every year.		
PS 366	Political Ideologies 3.00 Explores the development of political thinking in the modern period, emphasizing the development of ideologies. Particular attention given to liberalism, conservatism, Marxist and non-Marxist socialism, fascism, libertarianism, environmentalism, and contemporary liberation ideologies. Prerequisite: Sophomore standing		
PS 375	Public Policy and Admin 3.00 Introduces public administration emphasizing its function in the American political process. Applied public administration theory and practice to enduring and contemporary public policy challenges and achievements. Every other year.		
PS 395	Amer Political Thought 3.00 Examines major political thinkers and ideas which have shaped the American political tradition. Emphasizes the competing ideas of government which were influential at the time of the American founding. Considers contemporary competing paradigms in American political thought.		
PS 398	Empirical Political Analysis 3.00 Introduces students to the fundamental concepts and research methods used in political science. Provides students with an understanding of how and why political scientists conduct political research. Because the use of statistical/ empirical analysis is an important part of the research process, students will be introduced to statistical applications used in political science. Prerequisites: MATH 221 or 222, CIS 110 and 217, or consent of instructor. Every other year.		
PSY 111	Psych of Personal Growth 3.00 Emphasizes personal growth, enabling each student to explore self-identity, social relationships, and environmental influences. Explores problems of personality, resolution of conflicts and stress, and the role of emotions in behavior, relationships, and health. No prerequisite. Each semester at Clarion. Annually at Venango.		
PSY 122	Drugs, Society & Behavior 3.00 Reviews common legal and illegal drugs, modes of action, causes of abuse, and available treatments. The focus of this class is to raise students' awareness of these issues, not to provide treatment or training in drug abuse rehabilitation. No prerequisite. Annually.		
PSY 211	General Psychology 3.00 Introduces the general subject matter of psychology as a science and its major findings. Emphasizes genetics, development, learning and motivation, emotions, sensation and perception, personality and abnormal adjustment, and other social behavior. No prerequisite. Each semester at both Clarion and Venango Campuses.		
PSY 212	Brain and Behavior 3.00 Introduces the relationships between brain and		
			behavior.
PSY 220	Human Sexuality 3.00 Provides students with an overview of the area of human sexuality. Begins with an explanation of how human sexuality is studied. Includes a discussion of sex roles; the biological division of males and females; the physiology of the human sexual response cycle; and sexual behavior such as homosexuality, sexual coercion, and sexual dysfunctions. Covers health issues such as sexually transmitted diseases, birth control, pregnancy, and childbirth. No prerequisite. Each semester.		
PSY 228	Human Behav/Orgs 3.00 Explores how basic psychological principles can be used to describe, explain, and predict individuals' on-the-job thoughts, feelings, and behaviors. Includes personality, motivation, perception, attitudes, stress, communication, learning, leadership, group behavior, cooperation, decision-making, and research methods. B.S. business administration majors can apply this course to free electives only. No prerequisite. On demand at both the Clarion and Venango Campuses.		
PSY 230	Stat Methods 3.00 Covers basic descriptive and inferential statistical techniques (frequency distributions, measures of variability and central tendency, correlation, regression, z, t). Gives special attention during class and a required laboratory meeting to the use of those techniques in dealing with data in the behavioral sciences and their importance in the research endeavor. Prerequisite: PSY 211. Each semester.		
PSY 240	Crit Think & Writing In Psych 3.00 Develops cognitive and writing skills linked with success in psychology, a field in which thinking and writing critically enable effective writing and work. Prerequisites: PSY 211; limited to psychology and sociology/psychology majors. Annually.		
PSY 251	Research Methds Beh Sci 3.00 Familiarizes students with methods used by psychologists to systematically collect information about the behavior of people and other animals. Experiments are conducted during laboratory meetings, and the appropriate style of writing research reports is emphasized. PSY 211 and 230, with at least a C in PSY 230, are prerequisites; concurrent registration with PSY 230 permitted only with consent of the instructor. Each semester.		
PSY 252	Research Meth Lab 1.00 Experiments are conducted during laboratory meetings and particular attention is given to the appropriate A.P.A. style of writing research reports. Concurrent registration or previous credit for PSY 251 is required. Prerequisites: PSY 211 and at least a C grade in PSY 230. Each semester.		
PSY 253	Intro to Gerontology 3.00 Provide a general introduction to social gerontology. Emphasizes the typical aspects of aging. Reviews current hypotheses and findings concerning aging processes. No prerequisite. Annually.		
PSY 260	Developmental Psych 3.00 Surveys research and theory on human life-span development. Students study social, cognitive, emotional, and physical aspects of development from conception to death. Prerequisite: PSY 211. Each semester at Clarion. Annually at Venango.		
PSY 300	Cross-Cultural Psychology 3.00 Introduces students to research on the similarities		

- and differences among different racial and ethnic groups in the United States and around the world. Examines research in several areas of psychology, such as developmental, social, cognitive, etc. Encourages students to apply the research to daily life in discussions of stereotyping, aggression, intelligence, motivation, etc. Prerequisite: PSY 211
- PSY 321 Psy of Adolescence 3.00**
Focuses on the cognitive, emotional, social, and physical changes of adolescence. Through such topics as emerging sexuality, intimacy, identity formation, moral development, and vocational development, students will gain an appreciation for the unique developmental challenges of adolescence. Prerequisites: PSY 211 and 260. Annually.
- PSY 325 Community Psychology 3.00**
Community psychology focuses on the connections between the individual and the community in order to develop interventions which will prevent social problems and promote psychological health. Students will learn how to apply the community psychology approach to specific social issues. They will become familiar with local and national community based intervention programs and will learn how to conduct assessment and evaluation research on such programs. Prerequisite: PSY 211.
- PSY 330 Psychology of Happiness 3.00**
What is happiness? How can we achieve happiness? This course is an exploration of the new area of positive psychology which is concerned with using science to discover the factors which make life meaningful, create happiness, and enable individuals and communities to thrive. Positive psychologists see happiness as a skill which can be studied, taught and learned. This course will look at evidence from the biological, cognitive, social, and clinical areas of psychology in order to understand happiness, with the aim of using what we learn to improve our own lives. Prerequisite: PSY 211 or by permission of instructor. Spring or summer, once every two years
- PSY 331 Child Psychology 3.00**
Focuses on cognitive, social, emotional, and physical development from conception through childhood. Prerequisites: PSY 211 and 260. Annually at both Clarion and Venango.
- PSY 340 Psych of Women 3.00**
Introduces students to the roles involved with being men and women, to the ideologies in various feminist theories, and to past and present research in the area of psychology of women. One of the purposes of the course is to demonstrate how bias (especially sexism) can creep into the research process, work situations, and personal lives, and the importance of both male and female perspectives in each of these areas. Prerequisite: PSY 211. Annually.
- PSY 350 Industrial Psychology 3.00**
Focuses on applying theories and methods of scientific psychology to improve the way organizations select, train, motivate, retain, and evaluate employees. No prerequisite, but PSY 211 and 230 are recommended. Annually.
- PSY 351 Biological Psychology 3.00**
Reviews the field of Biological Psychology, including basic behavioral genetics, neuroanatomy sensation, perception, psychopharmacology and the biological basis of psychological problems and treatments. Prerequisite: PSY 211.
- PSY 352 Psychopharmacology 3.00**
Examines how drugs effect neurotransmitter systems to control behavior. Emphasizes neurochemical and neuroanatomical explanations of pharmacological effects. Examines the major classes of psychoactive drugs with respect to the mechanism of action of the drug and what the drug effect reveals about normal central nervous system functioning. Prerequisite: PSY 211 or consent of instructor. Annually.
- PSY 354 Abnormal Psychology 3.00**
Surveys the principal forms of behavior disorders, emphasizing their etiology, diagnosis, prognosis, and treatment. Prerequisite: PSY 211. Each semester.
- PSY 355 Social Psychology 3.00**
The scientific study of social behavior and interpersonal relationships. Prerequisite: PSY 211. Annually.
- PSY 357 Intro to Psy Test 3.00**
Covers the nature and use of tests, including intelligence, personality, aptitude, interests, and achievement. Students prepare behavior objectives, construct tests of items which sample the objectives, administer the tests, and analyze the results. Prerequisite: PSY 211, 230, or the permission of the instructor. On demand.
- PSY 360 Current Topics 3.00**
Focuses on a single, broad contemporary issue of current interest in psychology and related fields of study. Course content varies from semester to semester. May be taken three times for credit. Prerequisite: PSY 211. On demand.
- PSY 362 Cognitive Psychology 3.00**
Examines information processing, human memory, attention, mental representation, problem solving, and intelligence, to understand the complexities of human cognitive processes. Considers contemporary and historical models of mind to determine their usefulness in understanding the psychological bases of thinking. Prerequisite: PSY 211. Annually.
- PSY 364 Intro to Counseling & Psychotherapy 3.00**
Introduces students to basic methods in counseling and psychotherapy. Students will practice entry-level writing and communication skills with peers under close supervision. Annually.
- PSY 370 Forensic Psychology 3.00**
Reviews the emerging field of Forensic Psychology, including issues related to legal competency, insanity plea, eyewitness testimony, determination of "truth", criminal profiling, jury selection, discrimination, sexual harrassment, and child custody determination with a focus on the role of the professional Psychologist in these areas. Prerequisite: PSY 211
- PSY 380 App of Behavioral Prin 3.00**
Assists students in applying general behavioral principles to personal change as well as to change that they initiate with clients in entry-level human services positions. Prerequisite: Nine hours in psychology or by permission of instructor. Annually.
- PSY 390 Research In Gender Psych 3.00**
Students will conduct empirical research on gender as a biological, psychological, and social experience. Through reading, lecture, and discussion they will have the opportunity to compare the results of their own investigations to those found in both classic and current studies of gender. Prerequisite: PSY 211 and a course in statistics (PSY 230, MATH 221, or ECON 221)

PSY 392	Independent Study	3.00	
PSY 393	Independent Study	3.00	
	Students explore an area of special interest in depth for variable credit under the supervision of a member of the department and with approval of the chairperson. Open to juniors and seniors. Prerequisite: PSY 211.		
PSY 401	Indiv Research Project	3.00	
	Students conduct research under the direction of an individual faculty member in the department. Work culminates in a paper of professional quality. Students present their research in a public forum. Registration requires prior approval of instructor. Taught on an individual instruction basis. Prerequisites: PSY 211, 230, 251, and approval of instructor. As approved.		
PSY 427	Tests & Measurements In Psych	4.00	
	Reviews theories of test construction and measurement theory with application to Psychological tests and research instruments. Students will develop an instrument and provide data to support its reliability and validity. Prerequisite: a course in statistics or by permission of instructor.		
PSY 452	Physiological Psychology	3.00	
	Analyzes the physical and biological mechanisms underlying behavior. Includes drugs and behavior, perception, emotions and motivation, sleep, learning and memory, language, psychopathology, etc. Introduces a variety of laboratory methods and techniques via demonstrations. Open to juniors and seniors. Prerequisites: PSY 211, 230, and 251 or with consent of instructor. Annually.		
PSY 453	Human Neuropsychology	3.00	
	This course will focus on what is known about the human brain, particularly the neocortex, and how it effects behavior. The course will examine principles of brain function, basics of neurological examination, and the structural-functional relationships emerging from the frontiers of neuroscience, particularly the study of the human neocortex.		
PSY 454	Personality	3.00	
	Surveys several of the major theories of personality development and structure from the classic ideas of Freud and Jung to the current cognitive theories of Bandura. Also covers trait and humanistic approaches. Prerequisite: PSY 211 and 6 credit hours in Psychology or permission of instructor. Annually.		
PSY 455	Learning and Memory	3.00	
	Surveys attempts to understand and explain learning and memory. Emphasizes a comparison of current theories and their implications when applied to forms of learning and memory from the simple to the complex. Prerequisites: PSY 211, 230, and 251 or with consent of instructor. Annually.		
PSY 456	History and Systems	3.00	
	Examines the foundations of psychological thought and its development from Greek civilization through the reformation and to a period of quasi-maturity in the formal system of the late 19th and early 20th centuries. Prerequisites: PSY 211, 230, and 251. Annually.		
PSY 458	Sensation Percep	3.00	
	Examines the sensory-perceptual processes with a view to understanding their structure, properties, and role in psychological functioning. Emphasizes physiological processes involved in sensation and their concomitant limitations on the psychological		
			processes of perception. Prerequisite: PSY 211, 230, and 251 or with consent of instructor. Every other year.
PSY 464	Theories of Counseling	3.00	
	Introduces the field of counseling and psychotherapy. Surveys the major models in the field, with focus on assumptions and applications in a variety of settings. Covers professional issues, ethics, and current topics. Prerequisites: PSY 211 and 354 (or approval of instructor). Each semester.		
PSY 467	Adult Development and Aging	3.00	
	Study of the changes in human behavior from late adulthood until death. Emphasizes the physical, emotional, intellectual, and social aspects of later life. Prerequisites: PSY 211 and 260. Annually.		
PSY 470	Senior Seminar	3.00	
	Applies what students have learned about psychological theory and practice to controversial issues, with the intent of developing students' expertise in psychology. Prerequisites: PSY 211, 230, and 251. Annually.		
PSY 471	Intro to Clinical Child Psychology	3.00	
	Introduces clinical work with children. Includes major diagnostic categories and theories of etiology related to clinical problems in children, as well as an overview of evaluation methods and treatment modalities designed specifically for children. Covers professional issues and ethics related to child clinical psychology. Prerequisites: PSY 211 and 260; PSY 331 is recommended; (or approval of instructor). Annually.		
PSY 475	Health Psychology	3.00	
	The area of psychology that is concerned with the interaction between biological, psychological, and social factors that influence people's health and susceptibility to illness. Discusses health promotion and illness prevention from a biopsychosocial perspective. Examines extensively the relationship between stress and illness, and discusses medical compliance, the Type A Behavior Pattern, and patient physician interactions. Prerequisite: PSY 211, 230 & 251. On demand.		
PSY 499	Supervised Field Experience	12.00	
	Professional practicum requires integration and application of psychological theory, knowledge, ethics, and skills. Interns work in community agencies under the direction of a cooperating professional and university supervisor, and will meet weekly as a group to discuss issues of ethics and professional practice. Course may be taken for 3-12 credits but only 3 credits can count toward the major. Prerequisites: Junior standing, PSY 211, and at least one of PSY 350, 364, 464, 467. Each semester.		
RADT 301	Radiation Therapy Treatment Planning	12.00	
	Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in Radiation Therapy, RADT 301 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in radiation therapy that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).		
RADT 302	Radiation Therapy Treatment Delivery	12.00	
	Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in radiation Therapy, RADT 302 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in radiation therapy that is		

	recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).		
RADT 303	Radiation Therapy Patient Care and Education	6.00	
	Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in radiation Therapy, RADT 303 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in radiation therapy that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).		
RADT 401	Radiation Therapy Clinical Concepts	12.00	
	Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in radiation Therapy, RADT 401 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in radiation therapy that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).		
RADT 402	Radiation Therapy Clinical Applications	12.00	
	Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in radiation Therapy, RADT 402 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in radiation therapy that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).		
RADT 403	Radiation Therapy Radiation Protection	6.00	
	Within the Bachelor of Science in Medical Imaging Sciences degree program and concentration in radiation Therapy, RADT 403 will facilitate transference of a block of 1 to 12 credits for completion of a formal, accredited clinical educational program in radiation therapy that is recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT).		
RE 270	Real Estate Fund	3.00	
	Introduces the broad area of real estate. Lays foundation of important principles for in-depth study. First in a two-sequence course (with RE 271) required to fulfill the educational requirement for licensure as a real estate salesperson in the state of Pennsylvania. Each semester.		
RE 271	Real Estate Practice	3.00	
	Introduces the practice of real estate brokerage, real estate appraisal, real estate finance, and real estate investments. Second in a two-sequence course (with RE 270) required to fulfill the educational requirement for licensure as a real estate salesperson in the state of Pennsylvania. Prerequisite: RE 270. Annually.		
RE 372	Real Estate Law	3.00	
	Covers the legal relationships and legal instruments used in the practice of real estate. Prerequisite: RE 270. Annually.		
RE 373	Real Estate Finance	3.00	
	A study of the methods of financing the purchase of real estate. Prerequisite or co-requisite: RE 271 or FIN 370. Annually.		
RE 374	Real Estate Marketing and Brokerage	3.00	
	Examines real estate marketing and brokerage management. Topics include the regulatory environment, marketing, advertising, sales management, and personal selling. Prerequisite or Co-requisite: RE 271 or permission of Instructor. Offered biennially.		
RE 470	Residential Real Estate Appraisal	3.00	
	Introduces the principles of real estate appraisal. Focuses primarily upon those appraisal techniques and analyses which concern the estimation of the value of residential and commercial properties. Prerequisite or co-requisite: RE 271. Offered biennially.		
RE 471	Real Estate Market and Investment Analysis	3.00	
	Provides the necessary background to evaluate prospective real estate investment analysis. Examines both financial and non-financial aspects of investing in real property including risk, market analysis, portfolio impacts, and income taxation consequences. Prerequisites: RE 271. Offered biennially.		
RE 472	Income Prop Appraisal	3.00	
	Provides advanced instruction in income property appraisal. Addresses the techniques and analysis necessary to estimate the value of an income producing property. Prerequisite: RE 470. Offered on demand.		
RE 475	Real Estate Mgmt	3.00	
	Provides instruction in the management of real property. Examines the maintenance, operation, and marketing of real estate. Prerequisite or co-requisite: RE 271. Offered biennially.		
REHB 126	Introduction to Rehabilitation and Human Services	3.00	
	Serves as an interdisciplinary orientation to the field of rehabilitation and human services, including education, mental health, addictions, gerontology, disability, youth services, and criminal justice. The history and philosophy of human services, human services careers and function of human services agencies are explored with an emphasis placed on the reciprocal interactions between human service providers and their consumers. Offered each semester.		
REHB 211	Paraeducators & Hum Ser Pract	3.00	
	This course serves paraprofessionals functioning as instructional assistants in the classroom and those providing home-health and long-term care services in a variety of settings. Knowledge and practical skills in the history of the profession; legal requirements and parameters; mental, physical, and emotional conditions affecting students and clients; roles and responsibilities; communication; effective strategies and techniques; and required tasks in a variety of work environments will form the basis of the course. Prerequisite: REHB 126. Venango Campus.		
REHB 227	Neuro Impair & Phys Disorders	3.00	
	Presents the major physical disabilities, the reaction of family and individuals to the disability, therapeutic procedures, rehabilitation services, and direct contacts with persons with disabilities. Prerequisite: REHB 126. Each semester on Clarion Campus, and Fall Semester at Venango Campus.		
REHB 250	Human Relations Skills	3.00	
	Assists students in acquiring knowledge and skill in the performance of required tasks and/or roles of rehabilitative service staff in developing humanizing environments for persons with disabilities in various settings. Prerequisites: SPED 126.		
REHB 295	Field Experience	6.00	
	A half-time, full-semester field experience in selected programs. Focuses on assisting in the delivery of human/educational services to persons with disabilities. Prerequisites: Minimum of 45 semester		

- hours and SPED 230, 235, and 245. Offered at Venango Campus only.
- REHB 296 Seminar for Rehb 295 1.00**
This required companion course to REHB 295 will enable students to have the opportunity to come together to discuss their field experiences in a structured seminar setting. This will provide them with the opportunity to better understand and integrate agency activities such as assessment, treatment planning, team meetings, case management, and therapeutic interventions. In addition, the students will be able to discuss and appreciate agency policies, procedures, and interpersonal communication. Prerequisite: REHB 126, SPED 220, REHB 227, SPED 230, SPED 235.
- REHB 345 Sec Trans & Voc Serv 3.00**
Examines issues and options relative to secondary educational and vocational services for the disabled. Prerequisites: REHB 227 and SPED 220. Each semester.
- REHB 370 Assessment in Human Services and Rehabilitation 3.00**
This course features a practical hands-on approach to assessment with a variety of specific populations. Target groups include persons in need of human services, to include disadvantaged, developmental disabilities, mental health and substance abuse/dependency disorders, and aging and child/adolescent populations. The course covers assessment fundamentals, standardized instruments for use with specific populations and practical techniques and strategies, leading to the formulation of therapeutic treatment plans. Prerequisites: REHB 126 and REHB 250.
- REHB 378 Seminar for COOP 377 and REHB 295 1.00**
This required companion course to COOP 377 and/or REHB 295 enables students to have the opportunity to discuss their field experiences in a structured seminar setting, providing them with the opportunity to better understand and integrate agency activities such as assessment, treatment planning, team meetings, case management, and therapeutic interventions. In addition, the students will be able to discuss and appreciate agency policies, procedures and interpersonal communication. Prerequisite: REHB 126, SPED 245, REHB 250.
- REHB 405 Substance Abuse 3.00**
Participants study the physiological and psychosocial implication of drug or alcohol abuse, over-medication, and drug dependence, emphasizing intervention, advocacy, treatment, and prevention. Fall Semester.
- REHB 410 Prev & Trmt Stg Sub Abus 3.00**
Participants engage in the study of societal pressures, attempts to prevent substance abuse, and treatment strategies along with the comparative analysis of efficacy. Prerequisite: REHB 405. Spring Semester.
- REHB 424 Field Exp In Rehb Sci 6.00**
- REHB 430 Aging & The Human Services 3.00**
This course will provide information related to older adult care management from the framework of human services systems. Concepts of client triage, assessment, planning, and brokering will be reviewed within the context of identifying problems associated with aging, identifying components of human services delivery systems, and case management skill development. Prerequisite: REHB 250.
- REHB 440 Principles of Psychiatric Rehabilitation & Recovery 3.00**
This course introduces students to the principles of psychiatric rehabilitation and recovery. Inherent in this philosophy is the belief that every individual has the capacity for recovery and that desirable treatment systems build upon strengths and encourage and support the involvement of persons in normative community living, learning and working situations. Prerequisite: REHB 126 and REHB 250.
- REHB 460 Models of Hum Ser System 3.00**
Analyzes the purposes, structure, and context of the entire network of human services delivery models in Pennsylvania with comparative reference to selected models outside of Pennsylvania. Prerequisite: REHB 227 and SPED 230. Fall, annually.
- REHB 465 Assessment 3.00**
- REHB 470 Intervention Strategies in Human Services & Rehabilitation 3.00**
This course features a practical hands-on approach to intervention and treatment with a variety of specific populations. Target groups include people with developmental disabilities, mental health and chemical dependency disorders, as well as the treatment of aging and adolescent populations. The course covers fundamental issues, knowledge and the practical application of applied strategies and techniques, including the formulation, implementation, and evaluation of therapeutic treatment plans. Prerequisite: REHB 126, 250 and 370.
- REHB 475 Admin Rehb Deliv Systems 3.00**
A study of the business and personnel aspects of functioning in and managing human service delivery systems. Examines organizing, operating, and managing human service systems relative to legal, economic, and personnel standards and practices. Prepares students to interact with legal, financial, and business experts in the operation and development of rehabilitation services. Prerequisite: REHB 460. Spring, annually.
- REHB 495 Fld Exp In Rehb Sci 6.00**
A full-time, semester-long supervised experience that includes professional development experiences in community residential programs, vocational rehabilitation services, and MH/MR Base Service Units or similar social services. Prerequisites: REHB 460, 470, and 475. Each semester.
- REHB 496 Seminar for Rehb 495 1.00**
This course will enable students involved in the REHB 495 Field Experience to have bi-weekly peer contact to assure that the qualitative experience involving knowledge and values are being appropriately integrated by the students. This type of seminar course is required by the Council for Standards in Human Service Education for students involved in fieldwork involving direct exposure to human service agencies and clients. It is designed to complement and enhance the supervised field experience. Prerequisite: REHB 460, 475, 470.
- RESP 100 Fund of Respiratory Care 4.00**
- RESP 101 Introduction to Respiratory Care 3.00**
This course will introduce the student to basic

	respiratory care modalities such as medical gas therapy, humidity therapy, aerosol therapy, bronchodilator administration via nebulizer and metered dose inhalers, and incentive spirometry. Basic care topics will be related to patients with chronic obstructive pulmonary disease and asthma. Concepts will be examined in the classroom while practical demonstration and clinical simulation will take place in the laboratory. Students must have BLS Healthcare provider CPR certification by April 1st of the semester in which the course is taught. Prerequisite: Respiratory care majors, with the approval of the Department of Allied Health. Term and Frequency: every spring, required of all respiratory care majors with the approval of the Department of Allied Health.	
RESP 102	Intermediate Respiratory Care	3.00
	This course introduces basic principles of bronchial hygiene therapy and lung hyper-expansion therapy such as incentive spirometry, IPPB, and PEP therapy. Additionally, it will introduce other techniques in patient assessment, including assessing breath sounds, ECG and chest radiography. Management of the airway will be presented including coughing techniques, suctioning of the upper airway, and use of artificial airways. Arterial blood glass interpretation will be included. Prerequisite: RESP 101 and RESP 120	
RESP 110	Int Resp Care Proc w/ Clin App	12.00
RESP 121	Clin Application Resp Care I	2.00
	Students will learn to perform chart reviews, patient interviews, basic patient assessment, and patient treatment with modes of care including oxygen therapy, humidity and aerosol therapies with bronchodilators, bronchial hygiene, and hyperinflation therapy. An introduction to arterial blood gas sampling and analysis will also be provided. Prerequisite: RESP 101 and RESP 120; Co-requisite: RESP 102	
RESP 201	Cardio Anatomy and Physiology	3.00
	Students will learn applied anatomy, physiology and mechanics of the cardiopulmonary system. This course is designed to demonstrate the application of physiological principles in the practice of respiratory care. The course will include such concepts as acid-base balance, oxygen transport and utilization, electrolyte interpretation, and an introduction to techniques in measuring basic hemodynamic and pulmonary function. Prerequisite: BIOL 259	
RESP 202	Cardiopulmonary Pathophys	2.00
	Students will learn to examine pulmonary pathologic disorders for each age group (neonate, child, adult, elderly adult). Each disorder reviewed will include a discussion of related medical history, pathophysiology of the disorder, physical findings, lab data, arterial blood gases, pulmonary function studies, chest radiography results and cardiovascular findings. Recommended therapies and prognosis will be included. Prerequisites: RESP 101 and RESP 120; Co-requisite: RESP 201	
RESP 203	Cardiopulmonary Pharmacology	2.00
	Students will learn to examine common pharmacologic agents used in treatment of the cardiopulmonary system. The course will include respiratory drugs, such as mucolytics, bronchodilators, anti-inflammatory agents, inhaled anti-microbials, and surfactant acting agents. It will	
	also provide an introduction to general antibiotic therapy and basic cardiovascular medications. Prerequisites: RESP 101, 102, 120; Co-requisite: RESP 201	
RESP 204	Advanced Respiratory Care	3.00
	This course will include ethical and legal implications of practice, appropriate communication and record keeping and computer application of respiratory care. It will also include a study of pulmonary function testing techniques and an introduction to exercise testing. Advanced airway management techniques and the use of artificial airways will also be discussed. Prerequisite: RESP 102, 201 and 202	
RESP 205	Mech Ventilation & Crit Care	3.00
	Students will learn to initiate mechanical ventilation of the critically ill patient. This will include indications for non-invasive mechanical ventilation and invasive mechanical ventilation. Initial ventilator settings based on patient size (neonatal, pediatric and adult) and diagnosis will be reviewed. The course will provide an introduction to mechanical ventilators and their function. Prerequisites: RESP 102, 201, 202 and 203; Co-requisites: RESP 204 and 206	
RESP 206	Selected Topics in Respiratory Care	3.00
	This course is intended to introduce students to the care of patients in all age groups with chronic pulmonary disorders, such as oxygen-dependent and ventilator-dependent individuals. The delivery of respiratory care in long term acute care and non-acute care facilities will be included. Students will examine programs of cardiopulmonary rehabilitation. Sleep study facilities, sleep apnea testing and care of the patient with a sleep disorder will be reviewed. Prerequisites: RESP 102, 202, 203; Co-requisites: RESP 204 and 205	
RESP 207	Mech Vent & Critical Care II	4.00
	Students will continue to learn management of critically ill patients who require ventilation support. Students will learn how to make appropriate ventilation adjustments based on assessment of patient-ventilator interaction, and pathophysiology. Recognizing complications of mechanical ventilation through ventilator waveform analysis and patient assessment will also be discussed. Students will learn to identify patient readiness for ventilator discontinuation. Alternative techniques such as high frequency ventilation, nitric oxide therapy and unilateral lung ventilation will be presented. Prerequisite: RESP 205	
RESP 208	Neonatal & Pediatric Resp Care	3.00
	This course will emphasize care of the premature infant, newborn and child. A review of the basic forms of therapy for these age groups will be reviewed. Both non-invasive and invasive forms of support and ventilator management for neonatal and pediatric patients will be included. Students will learn advanced cardiac life support techniques for neonatal and pediatric patients. They will examine appropriate responses to emergency situations of cardiopulmonary collapse for newborns and pediatric groups. Additional therapeutic techniques such as nitric oxide, extracorporeal membrane oxygenation and high frequency oscillation of the infant will be presented. Prerequisite: RESP 204 and 205	
RESP 209	Adv Life Support & Case Study	2.00
	Students will learn advanced cardiac life support (ACLS) techniques for adult patients. They will examine appropriate responses to emergency situations of cardiopulmonary collapse. Students will	

	examine various patient cases related to emergency life support. Prerequisites: RESP 204, 205, 207 and 208		
RESP 210	Advanced Clinical Concepts This summative course will provide an overview of all respiratory care procedures presented in the program. It will give students the opportunity to evaluate their understanding of key concepts and review areas needing additional study. Students will be provided an opportunity to focus on a particular area of interest to them. This course will include a review for the NBRC entry level examination. Prerequisites: RESP 204, 205, 206 and 207; Co-requisites: RESP 209 and 211	3.00	
RESP 211	Case Studies - Clin Simulations This course will review patient cases using a case study or clinical simulation approach. The student will review how to gather appropriate data, critically analyze data and recommend patient treatment modalities, evaluate the patient's response to treatment and make appropriate adjustments. The student will participate in an advanced level written registry examination for self-assessment and an advanced level clinical simulation examination for self-assessment. Prerequisites: RESP 204, 205, 206 and 207; Co-requisites: RESP 209 and 210	2.00	
RESP 220	Clinical Applic of Resp Care During this clinical course students will practice respiratory care techniques in the critical care environment, including those techniques previously demonstrated and new techniques in ventilator management. Time management skills will be introduced. Prerequisites: RESP 102, 121, 202, 203; Co-requisites: RESP 204 and 205	3.00	
RESP 221	Clinical Appl Resp Care III Students will gain additional practice in the critical care unit. Clinical rotations will also be provided to pulmonary function laboratories, bronchoscopy suites, and addition facilities of the hospital in which respiratory therapists are active. Prerequisite: RESP 220; Co-requisite: RESP 207	5.00	
RESP 222	Clinical Appl Resp Care IV This clinical rotation will provide students with experience in neonatal, pediatric and adult care units. Additional rotations will also be provided to home care agencies, sleep study centers, cardiac/pulmonary rehabilitation programs, and extended care facilities. Emphasis will be placed on students gaining better patient-and time-management skills. Prerequisites: RESP 206, 207, 208, 221; Co-requisites: RESP 209 and 211	5.00	
RESP 230	Adv Resp Care Proc w/ Clin App	14.00	
RESP 240	Sp Resp Care Proc w/ Clin Appl	12.00	
RESP 250	Adv Monitor & Assess Clin Appl	10.00	
RT 301	Radiographic Procedures	12.00	
RT 302	Radiographic Procedures Clin	12.00	
RT 303	Radiographic Images	12.00	
RT 401	Radiographic Imaging Clinical	12.00	
RT 402	Radiologic Physics	12.00	
RT 403	Radiologic Physics Clinical	12.00	
SCED 205	Lab Experiences in Science This course will engage students in basic scientific inquiries in biology, chemistry, physics and earth science topics. Includes specific instruction in the nature of science and the scientific process, laboratory safety, experimental design and scientific process skills. Prerequisite: Any science course	3.00	
SCED 305	Science, Technology and Engineering in the Classroom This science education course addresses the content and pedagogy necessary for meeting requirements of the PA Academic Standards for Science: Technology and Engineering Education in Grades 4-8. Includes STEM laboratory investigations and other STEM project activities. Prerequisite: SCED 205. Offered each spring.	3.00	
SCED 456	Electronic Science Ed Intended for the science teacher who has had a little or no previous course work in physics or mathematics. Covers the fundamental law of electricity and magnetism, alternating current theory, and the theory and practical application of such devices as ammeters, voltmeters, oscilloscopes, vacuum tubes, transistors, power supplies, amplifiers, and oscillators. Examples of some of these devices will be built in the laboratory, and general procedures for trouble-shooting faulty equipment will be illustrated. Summer only, on demand.	4.00	
SCED 460	Sci Curr Jr High Acquaints students with modern science curricula for the junior high/middle school levels. Stresses recent developments in curricula objectives, science content, teaching strategies, and laboratory activities. Individual projects included. Annually.	3.00	
SCED 463	Field Astronomy Examines experimental tools and methods useful in astronomy. Concentrates on mastery of important techniques and concepts by a do-it-yourself process, not an encyclopedic survey of astronomy. Complements courses in descriptive astronomy (ES 200 and 201 and SCED 550) rather than duplicating them, serving much the same purpose as a laboratory in astronomy. The student will build simple telescopes, spectrometers, and other astronomical instruments. Summer only, on demand.	3.00	
SCED 466	Field Photography Teaches students how to use a modern camera and accessories to photograph subjects in the field. Includes techniques of close-up, telephoto, and wide-angle photography as well as film development, lighting, use of filters, and composition. Provides students with opportunities to learn and practice techniques for photographing such objects as small animals, birds, flowers, large animals, and other field subjects. Students provide camera and film. Summers only, on demand.	3.00	
SCED 471	Pgm Improving Eled Sci	3.00	
SCED 476	Sci Tech & Soc: Topics Interdisciplinary course designed to acquaint students with information, curricula and teaching methodologies appropriate for integrating STS topics into science and social studies instruction. Includes topics in nature of science, history of science, history of technology, ethical decision-making, and the influences of changes in science and technology	3.00	

	on society. Required for all secondary science and social studies education majors. Spring semester. Prerequisite: Junior Standing		
SOC 211	Prin Of Sociology	3.00	
	Introduces the nature and characteristics of human societies, the structure and processes of social life, the impact of social forces on personal and group behavior, and the interdependence of society and the individual. Each semester.		
SOC 216	Women and Culture	3.00	
	Introduces the study of the lives of women in cross-cultural perspective. Explores gender issues including sexual division of labor, inequality, changing position of women in families, and the role of women in development. Alternate years.		
SOC 236	Criminology	3.00	
	Examines historical and contemporary attempts to explain the origins of criminal behavior and society's reaction to it from a variety of perspectives. Provides students with an understanding of how these theories have influenced the present criminal justice systems. Annually		
SOC 253	Intro to Gerontology	3.00	
	Provide a general introduction to social gerontology. Emphasizes the typical aspects of aging. Reviews current hypotheses and findings concerning aging processes. No prerequisite. Annually.		
SOC 305	Juvenile Delinquency	3.00	
	Taking a sociological approach, yet focusing on practice, this course discusses juvenile delinquency as it relates to and emerges from the youth's family, neighborhood, school, peer group, social class, and overall cultural and social environment. Therefore, this course will examine a variety of cultural and social factors related to delinquency, along with implications for assessment, prevention and intervention. The intentions of the course are to prepare students to work with juveniles, to understand risk and protective factors (including individual, family, socioeconomic, peer, school, and community factors). Skills and key practice issues will be addressed including relationship building, ethical issues in youth work, relational elements within the family, community responses and human service delivery. Alternate years.		
SOC 310	Classical Social Theory	3.00	
	Acquaints students with the thoughts of sociologists who have made major contributions to the founding of the discipline and whose work continues to be relevant today. Prerequisite: SOC 211 or permission of the instructor. Fall, annually.		
SOC 311	Social Stratification	3.00	
	Examines class, social status, and power inequalities at the community, national, and world level. Considers a history of inequality, theories of structured inequality, class information, poverty, class, gender, and racial inequalities, modality, and legitimacy. Prerequisite: SOC 211 or permission of instructor. On demand.		
SOC 312	Micro-Sociology	3.00	
	Explores the relationship between the individual and the social environment emphasizing group influences on individual attitudes and behavior. Examines major social psychological theories focusing primarily on symbolic interactionism, ethnoemthodology, dramaturgy, and the sociology of emotions. Prerequisite: SOC 211 or permission of instructor. On demand.		
SOC 315	Social Welfare	3.00	
	Examines the nature of social welfare policies and programs in the U.S. An overview of the history and administration of major social welfare programs is presented. Examines programs for the poor, the mentally ill, the disabled, children and families at-risk, the unemployed, and the aged in our society. No prerequisite. Spring, annually.		
SOC 316	Ending Poverty	3.00	
	Introduces the field of development anthropology, including its applied aspects. Explores the history of development theory; models of cultural change; contemporary issues of poverty and globalization; models of program design. Provides students with a practical background in project design, assessment, and management. Prerequisite: Sophomore standing. Alternate years		
SOC 318	Sociology of Death and Dying	3.00	
	Provides an exploration of the sociological issues related to death, dying and bereavement. Topics examined include: societal definitions and attitudes, societal rituals and responses, and theoretical perspectives on death, dying and bereavement. Societal concerns regarding end-of-life decisions will be addressed. No prerequisite. Fall, annually.		
SOC 320	Contemp Sociological Thy	3.00	
	Acquaints students with the thought of sociologists who have made major contributions to theoretical sociology since the 1930s. Covers the life, historical context, and major works of theorists such as Parsons, Merton, Dehrendorf, Coser, Collins, Homans, Blau, Turner, Goffman, and others. No prerequisite. On demand.		
SOC 321	Sociology of Work	3.00	
	A study of occupational and organizational work settings, social meanings, types, and social functions of work. Analyzes unemployment and its social causes and consequences. Examines selected work place reforms and proposed structural changes of work. Prerequisite: SOC 211 or ANTH 211. Once annually.		
SOC 324	Images of Working-Class Life	3.00	
	Examines the experience of working-class people from a number of perspectives: non-fiction, fiction, poetry, song, drama, film. Focuses on themes of class, identity, cultural influences, and economic and political power as they explicitly relate to the issue of work. Offered Spring odd years. Prerequisite: For ENG credit successful completion of or exemption from general education writing requirement; for SOC credit SOC 211. Spring, odd years.		
SOC 325	Middle Eastern Americans and Society	3.00	
	This course will examine the many histories, experiences, and cultures that shape and define Americans of Middle Eastern origin. It explores the diversity and commonality of experiences among different Middle Eastern immigrant groups and their descendents. The focus will be on the experiences of immigrants from the predominantly Muslim Middle East in American society with a modest attention to the historical trajectory of their immigration and settlement. The course will investigate the social consequences of the events of September 11, 2001, as these have transformed the position of Middle Eastern Americans as an ethnic group. Themes and specific issues outlined in the course will include: immigration to the U.S., assimilation, demographic trends, community, ethnic identity, anti-		

- Middle Eastern/Muslim discrimination and racism, socioeconomic mobility, gender dynamics, family relations, religious diversity and relationships with other racial communities.
- SOC 340 Sociology Conflict Res 3.00**
Analyzes social conflict and introduces the dynamics of conflict resolution. Emphasizes examining theories and methods of active nonviolent conflict resolution in small group and large organizational settings. Includes violence, types of noncooperation, negotiation, adjudication, and mediation. Uses cross-cultural data extensively. Prerequisite: SOC 211. Once, annually.
- SOC 345 Lesbian, Gay, Bisexual, and Transgendered and Queer Communities 3.00**
This course investigates the origins and social consequences of gender and sexual identity and provides a critical examination of the historical context and contemporary social institutions that inform gender and sexual identity in the United States. The course will outline the development, maintenance and positions of lesbian, gay, bisexual, transgender and queer communities in society. The course focuses on the learning, maintaining, and changing of sexual gender identities in various institutional settings, especially the family, education, religion, politics, work and social movements. Prerequisite: SOC 211.
- SOC 351 Contemporary Social Problems 3.00**
Examines the formation and indicators of problems that affect the functioning of society as a whole. Analyzes solutions to selected social problems. Offered annually.
- SOC 352 The Family 3.00**
Deals with development of the family and the home in its historical, economic, and legal aspects. Considers the various factors influencing the organization, disorganization, and reorganization of the family, as well as the modern trends in the basic institution. Prerequisite: SOC 211 or permission of the instructor.
- SOC 353 Aging in Amer Society 3.00**
Human aging takes place within a social and cultural context. Social and social-psychological perspectives will be used to gain a better understanding of the process, problems and prospects of aging in American society. Prerequisite: SOC 211 or SOC 253 or permission of instructor.
- SOC 354 Special Topics 3.00**
Offered occasionally.
- SOC 356 Sociology and Film 3.00**
Uses the sociological perspective to analyze film content. Examine how film reflects society and particular ideologies and how society and ideas about social issues are influenced by film. Topics include family, race relations, substance use, the elderly, sexuality, and social stratification. Prerequisite: Soc 211 or permission of instructor. On demand.
- SOC 361 Soc of Dev Behav 3.00**
A sociological perspective on social deviance; overview of theoretical approaches; research examples of various forms of deviant behavior, attributes and beliefs. Prerequisite: SOC 211 or permission of instructor.
- SOC 362 Race & Ethnic Relations 3.00**
Background of racial and ethnic identity. Examines contemporary aspects of inter-ethnic and inter-racial group relations. Considers proposals for alleviating and resolving problems and their implications. Prerequisite: SOC 211 or permission of the instructor. Once annually.
- SOC 390 Social Movements 3.00**
The objective of the course is to introduce students to the field of social movements. Particular emphasis will be placed on the application of theoretical ideas to case studies in order to enhance student knowledge of community organizing and social movements. Therefore, this course will focus on historical and contemporary social movements, including the American civil rights movement, the women's movement, the gay and lesbian rights movement, environmental and peace movements, the new American right, and the global justice movement. Empirical studies of these movements will be used to explore such general issues as how social movements emerge, grow and decline. Prerequisite: SOC 211.
- SOC 395 Social Change 3.00**
Analyzes social change processes through study of major theories of social change and recent investigations in the general area of social change. Examines major social forces and movements shaping contemporary patterns of social change, e.g., industrialization, rationalization, urbanization. Examines the impact of inventions, discoveries, revolutions, reform movements, and attempts to direct the course of change through various types of planning and development programs. Prerequisite: SOC 211 or permission of the instructor.
- SOC 400 Independent Study 9.00**
Concentrated exploration and study of a problem or area of sociology not covered by existing courses and in accord with the student's interest and needs and under the direction of department faculty member. Prior to enrolling, students are required to submit a written proposal outlining their plan of study for the instructor with whom they will be working. Enrollment limited to juniors and seniors with consent of the instructor. Maximum number of credits in SOC 400 is limited to nine.
- SOC 410 The Sociology of Sport 3.00**
The perspective of this course is that sport is a socially constructed concept. Students will engage in the analysis of sport as a contemporary social institution. Class participants, following the sociological tradition, will try to detect, measure, and explain the reciprocal impact of sport with other institutions such as the family, education, and the economy. For example, sport as presently constituted has numerous economic aspects; it is a form of work for many persons. Examination of sport will be based on the structural functionalist, social conflict and symbolic interactionist paradigms of sociology. Prerequisite: either Soc 211 or permission of instructor. Every third semester.
- SOC 450 Research Methods 3.00**
Fundamentals of the research process and methods including, research design, interview and questionnaire construction, sampling methodology, basic descriptive and inferential statistics, data collection, analysis, interpretation, and presentation. Prerequisites: SOC 211; 3 hours of statistics or permission of the instructor.
- SOC 451 Qualitative Research Methods 3.00**
Qualitative research seeks to integrate the lived experience with principles from the scientific method. This course is designed to provide an overview

	of qualitative research methods and techniques used for conducting sociological research such as case studies, unobtrusive methods, participant observation, choices of observer status role, recording data, uses of technical equipment, key informants, interviewing techniques, and ethical considerations in employing such methods and procedures. The course examines the use of these methods and techniques in both academic and applied research. Prerequisite: SOC 211, SW 211 or SW 212.	
SOC 452	Sex, Gender & Social Investigates the social consequences of the cultural universal that all societies categorize their members according to sex. Focuses on the learning, maintaining, and changing of gender roles in various institutional settings, especially the family, education, religion, politics, and work. Prerequisite: SOC 211.	3.00
SOC 499	Supervised Field Placemnt With the approval and under the supervision of a member of the sociology faculty, students are placed in field-work settings, e.g., child welfare agencies, offices of aging, divisions of the criminal justice system, community development agencies, etc., where they will observe and work with persons responsible for carrying out a range of specific human services. Requires a 10-hour commitment each week. May be repeated once for credit. Prerequisites: Permission of instructor, junior standing, and six hours in sociology.	9.00
SPAN 101	Special Topics Experts on individual countries cover historical and contemporary developments on the European intellectual scene with regard to their relevance for the present American student generation. The special subject is announced at pre-registration. Open to all students, and may be taken up to three times for credit, provided that different topics are offered. Course conducted in English. No prerequisite.	3.00
SPAN 103	Hispanic Civiliz & Cult Taught in English. Provides students with a basic knowledge of Hispanic culture, history and civilization. Emphasizes comparing the cultures and values of Hispanic societies among themselves as well as to those of Anglo-American society. No prerequisite.	3.00
SPAN 109	Span Lit In Trans A study of representative Hispanic literary works emphasizing themes relevant to all cultures. Conducted in English. No knowledge of Spanish required.	3.00
SPAN 140	Hispanic Film This course, taught in English, will examine major Spanish and Latin American films with English subtitles. It offers a special and important perspective to approach the contemporary history and culture of Hispanic countries. Students are encouraged to develop an awareness of differences between Hispanic and Anglo-American Cultures. Lectures and assignments in English.	3.00
SPAN 150	Intensive Elementary Spanish I Equivalent to SPAN 151 and 152 combined. As needed.	6.00
SPAN 151	Elem Spanish I Introduces Spanish language, emphasizing all language skills: listening, speaking, reading, and writing. Fall annually.	3.00
SPAN 152	Elem Spanish II Continuation of SPAN I. Prerequisite: SPAN 151 or	3.00
SPAN 250	Intensive Intermediate Spanish II Equivalent to SPAN 251 and 252 combined. Prerequisite: SPAN 150 or SPAN 152, or satisfactory placement test score. As needed.	6.00
SPAN 251	Spanish III (Interm I) Systematic review of basic grammar: graded readings, conversation, translation, and composition based on selected topics. Prerequisite: SPAN 150 or 152, or satisfactory placement test score. Fall annually.	3.00
SPAN 252	Spanish IV (Interm II) Continuation of SPAN 251. Prerequisite: SPAN 251 or satisfactory placement test score. Spring annually.	3.00
SPAN 253	Business Spanish A study of commercial terminology and style, with extensive practice in the writing of business letters of various kinds. Prerequisite: SPAN 250 or 252, or equivalent.	3.00
SPAN 260	Hispanic Short Story A study of representative short stories by contemporary Spanish and Latin American writers. All readings and discussions in Spanish. Required for Spanish and Spanish education majors. Prerequisite: SPAN 252	3.00
SPAN 265	Inter Conversation Practice creative language use in conversation to develop oral proficiency for everyday situations and travel. May be substituted for SPAN 252, with permission of instructor. Required for Spanish and Spanish education majors. Prerequisite: SPAN 251 or equivalent.	3.00
SPAN 270	Intro to Span Phon & Pronun Introduces the Spanish phonetic system, including the study of phonemes, intonation, stress, and rhythm. Includes intensive aural/oral training through phonetic dictation with transcription in the International Phonetic Alphabet and practice diction. Introduces corrective phonetics. Recommended for majors. Required for Spanish education majors. Prerequisite: SPAN 252 or equivalent.	3.00
SPAN 280	Int Adv Span Gram & Comp Equivalent to SPAN 281 and 282 combined. Meets five days a week. Prerequisites: SPAN 250 or 252, or equivalent. As needed.	6.00
SPAN 281	Spanish for Oral and Written Proficiency I Intensive review of Spanish grammar, designed to increase students' proficiency in all language skills with particular attention to intermediate speaking and writing. Readings cover a range of Hispanic culture, including history, current affairs and literature. One course in SPAN 281 or SPAN 282 is required for Spanish and Spanish education majors. Prerequisites: SPAN 250 or 252 or equivalent.	3.00
SPAN 282	Spanish for Oral and Written Proficiency II Continuation of SPAN 281. One course in SPAN 281 or SPAN 282 is required for Spanish and Spanish education majors. Prerequisite: SPAN 250 or 252 or equivalent.	3.00
SPAN 300	Latin American Civilization Introduces Spanish Culture through its geography, art, history, politics, architecture, music and literature. Intended for World Languages majors concentrating in Spanish and Spanish education. Prerequisites: SPAN 281 or 282 or permission of instructor.	3.00
SPAN 301	Spanish Civilization Introduces Spanish culture through its geography,	3.00

- art, history, politics, architecture, music and literature. Further develops cultural themes introduced in SPAN 281 and 282. Required for Spanish and Spanish education majors. Prerequisite: SPAN 281 or 282 or permission of instructor.
- SPAN 302 Topics In Hispanic Lit & Cult 3.00**
In-depth examination of one or more Hispanic literary movements, literary themes or cultural topics. No pre-requisite. Course taught in English. Not eligible for Spanish minor requirements.
- SPAN 304 Latino Cultures in the U.S. 3.00**
In-depth examination of the major cultural contributions of the Latino population living in the U.S. Course taught in English. Not eligible for Spanish minor or major requirements. May be used for the B.A. World Languages degree as "Additional Required Credits". Prerequisite: 30 university credits completed including English 111 or equivalent.
- SPAN 340 Hispanic Film 3.00**
This course, taught in Spanish, will examine major Spanish and Latin American films with English subtitles. It offers a special and important perspective to approach the contemporary history and culture of Hispanic countries. Students are encouraged to develop an awareness of differences between Hispanic and Anglo-American cultures. Course counts as a 300-level capstone course for BS and BA majors and minors in Spanish. Prerequisite: SPAN 282 or Permission of Instructor.
- SPAN 344 Translation 3.00**
Reviews basic translation theory and introduces advanced translation techniques. Includes Spanish to English translation as well as English to Spanish, and also techniques of oral interpretation. Prerequisite: SPAN 250 or 252 or equivalent.
- SPAN 352 Readings in Spanish Literature from the Middle Ages to the Golden Age 3.00**
Introduces Spanish literature from the 11th to the 17th centuries. Emphasizes the role of Islam, Judaism, and Christianity in the texts of this period, as well as the development of Spain as the most powerful nation in Europe and the New World during this period. Prerequisite: SPAN 281 or 282 or equivalent. As needed.
- SPAN 353 Readings in Spanish Literature from the Golden Age to the 20th Century 3.00**
Surveys readings from the decline of Spain as a world power to its present position as a democracy. Emphasizes the unique role of the Spanish writer as the conscience and consciousness of the nation, as well as the emergence of women writers. Prerequisite: SPAN 281 or 282 or equivalent. As needed.
- SPAN 354 Modern Spanish Novel 3.00**
Examines the development of the novel in Spain during the 19th and 20th centuries, with discussion of Romanticism, Regionalism, Realism and Naturalism. Prerequisite: SPAN 281 or 282 equivalent. As needed.
- SPAN 360 Read Span-Am Lit Pre-Col-19th 3.00**
Surveys literature of Spanish-America from Pre-Columbian times to Romanticism. Emphasizes the clash between the autochthonous and the invading European culture that ultimately led to the formation of the Latin American character. Prerequisite: SPAN 281 or 282 or equivalent. As needed.
- SPAN 361 Spanish-American Literature from Modernismo to 20th Century 3.00**
Covers the period from beginnings of Modernismo to the writers of the 20th century, emphasizing both prose and poetry. Prerequisite: SPAN 281 or 282 or equivalent. As needed.
- SPAN 362 20th Cent Spanish-American Novel 3.00**
Examines development of the novel in Latin America from the early 20th century to The Boom. Prerequisite: SPAN 281 or 282 or equivalent. As needed.
- SPAN 400 Senior Seminar in Literary, Linguistic and Cultural Studies 3.00**
Explores in a seminar setting a comparative literary, cultural, linguistic or pedagogical topic, including primary sources and relevant theory and criticism. The course teaches analytical and writing skills relevant to cultural, linguistic and literary analysis. A major paper or unit plan is required of all participants. Required of senior majors in World Languages and Cultures. Prerequisite: Senior status during semester of enrollment, at least one 300-level course in the Department of Modern Languages and Cultures.
- SPAN 401 St: Hispanic Lang & Culture 3.00**
In-depth examination of contemporary Hispanic literature and cultural issues including but not limited to such topics as Hispanic Women Writers, Latino Cultures in the U.S. and relationships between Hispanic nations and the U.S. Course is taught in Spanish. Prerequisite: SPAN 282 or permission from instructor
- SPAN 417 Span Lang & Culture Immersion 3.00**
This course consists of a trip to a Spanish speaking country for two to five weeks depending on the itinerary planned by the instructor prior to departure (no matter what the length, however, it will consist of the usual number of semester hours). During this period, students will visit places of historical and cultural interest in the country, receive lectures on the historical, cultural, artistic or literary importance of the sites visited, conduct as much of their daily routines in Spanish as possible. Course offered to graduate students and undergraduates.
- SPAN 461 Readings In Hispanic Literature 3.00**
Selected readings determined by the needs and interests of the individual student. Prerequisite: SPAN 281 or 282 or equivalent.
- SPED 110 Human Except 3.00**
A study of the causes, characteristics, and implications--educational, social, and vocational--of people who are exceptional because of intelligence, physical development, behavior, vision, hearing, and/or speech. Acquaints prospective professional personnel with vocational opportunities in special education and rehabilitation. Each semester on Clarion Campus, and Fall Semester at Venango Campus. Multicultural education will be applied.
- SPED 126 Intro to Human Services 3.00**
This course serves as an interdisciplinary orientation to the field of human services, including education, mental health, substance abuse, gerontology, disability, youth services, rehabilitation, and criminal justice. The history and philosophy of human services, human services as careers, and function of human services agencies are explored with an emphasis placed on the reciprocal interactions between human service providers and their consumers.
- SPED 128 High Incidence Except 3.00**
This course provides an introduction to the prevalence, incidence, etiology, development,

	definitions, history, treatment approaches, service delivery options, and characteristics of individuals with high incidence exceptionalities, including mild mental retardation, learning disabilities, attention deficit hyperactive disorder, emotional and behavioral disorders, and gifted and talented.		
SPED 129	Low Incidence Except	3.00	
	This course provides an introduction to the prevalence, incidence, etiology, development, and characteristics of individuals with low incidence disabilities including vision and hearing disabilities, physical disabilities, autism, moderate to profound reatardation, deaf-blind, and multiple disabilities.		
SPED 211	Intellectual Disabilites	3.00	
	This ia comprehensive study of the biological, psychosocial, and educational implications of intellectual disabilities, including a consideration of etiology; assessment and diagnosis; educational programs, including preschool and post school; adult social and vocational adjustment; national and local programs, and research. Prerequisite: One of the following three courses: REHB 126, SPED 128, SPED 129		
SPED 220	Nat of Ment Retar	3.00	
	Comprehensive study of the biological, psychosocial, and educational implications of retarded mental development, including a consideration of etiology; assessment and diagnosis; educational programs, including preschool and postschool; multicultural issues; adult social and vocational adjustment; national and local programs; and research. Prerequisite: SPED 126. Each semester on Clarion Campus, and Spring Semester at Venango Campus. Multicultural education will be applied.		
SPED 227	Neuro Impair & Phys Disorders	3.00	
	Presents the major physical disabilities, the reaction of family and individuals to the disability, therapeutic procedures, rehabilitation services, and direct contacts with persons with disabilities. Prerequisite: REHB 126. Each semester on Clarion Campus, and Fall Semester at Venango Campus.		
SPED 230	Soc Emot Disturbed	3.00	
	Focuses on the nature of social and emotional disturbances, and familiarizes the student with atypical behaviors utilizing current classification systems and theoretical models. Emphasizes history, etiology, nature, characteristics, assessment, and treatment approaches. Prerequisites: SPED 126, 128, 129, 226, and 245. Each semester.		
SPED 245	Applied Behavior Analysis	3.00	
	This course focuses on principles of applied behavioral analysis in an assessment and treatment of behavioral excess or deficiencies, students will design programs to increase skill acquisition or reducing inappropriate behavior for either groups or individuals in special education or rehabilitative settings. Prerequisite: SPED 128 & 129		
SPED 262	Intro to Service Learning	3.00	
	Provides an overview of service learning. Presents history, legislation, and theory relevant to service in addition to the components and standards of service learning. Students will be prepared for service through readings in the subject area, sensitivity training, conflict resolution, and etiquette. Students will then spend 30 hours in community-based service activity at three of five priority sites. Students will reflect in writing upon their service and will attend weekly seminars. Prerequisite: ENG 110. On demand.		
SPED 345	Sec Trans & Voc Serv	3.00	
	Examines issues and options relative to secondary educational and vocational services for the disabled. Prerequisites: REHB 227 and SPED 220. Each semester.		
SPED 350	Seminar-Contem Issues Spec Ed	2.00	
	In this course students will identify critical features that are essential for the implementation of a standards-based instructional delivery system. Students will review the components of a Response to Intervention (RtI) Instructional Delivery System and the application of the RtI process in meeting the instructional needs of all students. Prerequisite: SPED 128, 129, 245		
SPED 381	Special Read & Writ Exp Inst	3.00	
	Provides students with specific data-based strategies to teach reading and writing to students with disabilities. Prerequisite: SPED 126, 220, 226, 227, 230, 235, 245.		
SPED 400	Special Topics	6.00	
	Deals with topical themes in special education to expand the knowledge and competence of teachers. Enrollment is by consent of the instructor. Summers only, on demand.		
SPED 411	Ed Assess Pract	1.00	
	Participants conduct a child study in a school setting by selecting, acquiring, analyzing, and synthesizing information needed for educational decision-making regarding an individual with disabilities or with a suspected disability, and using the results to develop an educational intervention plan. Prerequisite: SPED 320 and students must receive a "C" or better in SPED 462. Each semester.		
SPED 415	In Dev Strat Mild/Mod Hand	3.00	
	This is the study of individualizing instruction for students with mild disabilities. It involves designing basic instructional sequences utilizing behavioral objectives, matching media, learner, and goal characteristics, and evaluating the effectiveness of instruction. Prerequisites: SPED 320, 360, 380, 381. Must be taken concurrently with SPED 416. Each semester.		
SPED 416	Clin Prac-Mild Dis	3.00	
	This is the study of individualizing instruction for students with mild disabilities. It involves designing basic instructional sequences utilizing behavioral objectives, matching media, learner, and goal characteristics, and evaluating the effectiveness of instruction. Prerequisite: SPED 320, 360, 380, 381. Must be taken concurrently with SPED 415.		
SPED 418	Excep Reg Class Id & Ser	3.00	
	Prepares students to deal with the nature and needs of the exceptional person in the regular classroom. Examines contermporary methods of identification, services for the exceptional individual, and legal aspects of the least restrictive environment. Prerequisite: Sophomore standing.		
SPED 420	In Dev Strat S Ph	3.00	
	Study the processes of individualizing instruction for people with moderate, severe, and multiple disabilities. Design basic instructional sequences utilizing behavioral objectives, match instruction with learner and goal characteristics; identify appropriate instructional strategies, and evaluate the effectiveness of instruction. Students will apply oral and written communication skills, quantitative reasoning skills, and other fundamental academic skills to the field of special education. Prerequisite: SPED 320, 360, 380, 381. Must be taken		

- concurrently with SPED 421. Each semester.
- SPED 421 Clin Pract-Mod, Sev, Mult Dis 3.00**
This practicum places preservice teachers into field settings involving people with moderate, severe, and/or multiple disabilities who will use an individualized independence curriculum. Preservice teachers will implement basic instructional sequences utilizing behavioral objectives, matching instruction with learner and goal characteristics, identifying appropriate instructional strategies, and evaluating the effectiveness of instruction. Prerequisite: SPED 320, 360, 380, 381. Must be taken concurrently with SPED 420.
- SPED 422 Special Educ Class Admin 3.00**
In addition to mastering instructional strategies and curricular content, today's special education teachers are required to be knowledgeable about various theories, policies and procedures necessary for the complex daily administration of the special education program. Competencies included in this course will be: adapting the classroom environment to meet the physical, academic and emotional needs of students; classroom management techniques; development of the IEP, behavior and transition plans; and collaboration with other professionals, paraprofessionals and parents. Prerequisite: SPED 320, 360, 380, 381 and must receive a "C" or better in SPED 462.
- SPED 426 Clin Prac for High Inc Disab 1.00**
This practicum places teacher candidates into field settings involving people with high incidence disabilities who use an individualized curriculum. Teacher candidates will match instruction with learner, goal, and curriculum characteristics; identify and implement appropriate instructional strategies and sequences; and evaluate the effectiveness of instruction. Prerequisites: SPED 128, 129, 245, 380, 462, 482. Must be taken concurrently with SPED 5/444. Fall and Spring, every year.
- SPED 427 Clin Prac for Low Inc Disab 1.00**
This practicum places teacher candidates into field settings involving people with low incidence disabilities who use an individualized independence curriculum. Teacher candidates will match instruction with learner, goal, and curriculum characteristics; identify and implement appropriate instructional strategies and sequences; and evaluate the effectiveness of instruction. Prerequisites: SPED 128, 129, 245, 380, 462, 482. Must be taken concurrently with SPED 5/446. Fall and Spring, every year.
- SPED 428 Assistive Technology 1.00**
Students will learn how to assess assistive technology requirements for people with disabilities, make low tech devices, and install and operate computer hardware and software applications in a laboratory experience. Prerequisites: SPED 128, 129, 245, 381, 462, 482 and students must receive a "C" or better in SPED 462..
- SPED 432 Specific Learning Disabilities 3.00**
Focuses on the nature of specific learning disabilities. Includes history, definition, characteristics, assessment, strategies, and tactics of instruction and/or remediation, vocational implications and federal and state laws and regulations in regard to the individual who is learning disabled. Prerequisites: SPED 245 and SPED 350
- SPED 435 Instructional Development & Strategies for Gifted & Talented 6.00**
Develops the capacity of the educator to plan, develop, deliver, and evaluate programs that will help the gifted and talented realize their individual and collective potential. Prerequisite: SPED 110 or teaching certificate.
- SPED 440 Instructional Development & Strategies for Culturally Different Children 3.00**
A study of the process of individualizing instruction for children who are not members of the dominant culture and whose cultural membership significantly influences the educational process and school performance. Involves designing basic instructional sequences, selecting and matching media with learner and goal characteristics, identifying culture-appropriate instructional strategies, and evaluating the effectiveness of instruction. Summer only, on demand.
- SPED 441 Tch Stu w/ Disabilities In Sec 3.00**
This course will prepare educators with the skills and knowledge to deliver and support instruction to students with disabilities in secondary classroom settings. Prerequisite: SPED 418.
- SPED 442 Diff Inst In Inclusive Setting 3.00**
This course focuses on planning, designing, and delivering differentiated instruction to an increasingly diverse general education population, including students with disabilities, students who are gifted, students at risk, and students with cultural differences. Prerequisite: SPED 418.
- SPED 443 Prev & Trmt Acad & Learning 3.00**
This course will review the practice of prevention and intervention in dealing with students who are academically deficient, including, response-to-intervention, scientifically-based instruction, and the teacher, learner, curriculum interface. Prerequisite: SPED 418.
- SPED 444 Meth for Individuals w/ High Incidence Disabilities 3.00**
This course is about individualizing instruction for students with mild and moderate disabilities. It involves designing basic instructional sequences, utilizing behavioral objectives, matching technology, learner and goal characteristics, identifying appropriate instructional strategies, and evaluating the effectiveness of instruction. Prerequisite: SPED 128, 129, 245, 380, 462 and 482. Must be taken concurrently with SPED 416 and students must receive a "C" or better in SPED 462. Fall and Spring, every year.
- SPED 446 Meth for Individuals Low Incidence Disabilities 3.00**
Focuses on individualizing instruction for individuals with low incidence disorders. Includes designing basic instructional sequences, utilizing behavioral objectives, technology, learner and goal characteristics, identifying appropriate instructional strategies, and evaluating the effectiveness of instruction. Prerequisites: Sped 128, 129, 245, 380, 462, 482. To be taken concurrently with SPED 427 and students must receive a "C" or better in SPED 462. Fall and Spring, every year.
- SPED 450 Student Teaching 6.00**
Observation and participation in teaching students with disabilities and in activities related to the performance of a teacher's work. Prerequisites: SPED 411 must receive a "C" or better, 415, 416, 420, 421, 422.

SPED 455	Professional Seminar	2.00	Examines problems, practices, and regulations attending student teaching professional experiences. Coordinates the student teaching program with the educational objectives of the student teaching centers. Examines Pennsylvania school laws relevant to the work of the beginning special educator. Includes practical interpretations of professional ethics and the functions of professional organizations. Limited to student teachers. Each semester.
SPED 462	Educational Assessment	3.00	Assists students in acquiring knowledge and skills needed for decision-making regarding individuals with disabilities or suspected disabilities, and apply these skills in case studies. Prerequisites: SPED 128, SPED 129, SPED 245. Each semester.
SPED 475	Augmentative & Altern Comm	3.00	Introduces the student to various augmentative/alternative communication systems prevalent in the field. Current and comprehensive information relative to type of disorder. Disgnosis and treatment discussed. Emphasizes the application of unique criteria in diagnostic and the administration of competent and flexible management strategies in rehabilitation. Fall, annually.
SPED 482	Special Mathematics Instruct	3.00	Provides students with specific data-based strategies to teach mathematics to students with disabilities. Prerequisites: SPED 128, 129, 245, MATH 111.
SPED 492	Special Mathematics Instr II	3.00	This course builds upon the content of Special Mathematics by providing students with mechanisms to deliver standards-based mathematics instruction to adolescents with disabilities. Prerequisite: SPED 482 or permission of instructor.
SPED 499	Independent Study	3.00	Provides students with an opportunity to explore an area of special needs or interest in special education in-depth under the supervision of a faculty member of the department. Students must develop a proposed study plan and secure the approval of the department chair prior to registration. Prerequisite: Junior or senior standing.
SW 211	Prin of Social Work	3.00	Overview of social work as a profession with an introduction to social work with individuals, groups, families, and communities. Students examine a basic set of concepts, principles, and elements of practice. Fall, annually.
SW 212	Social Work With Groups	3.00	A study of the practice of group work, group dynamics and the use of various types of groups in social work settings. Spring, annually.
SW 225	Soc Work Child & Youth	3.00	The study of social work approaches to prevention, intervention, and treatment of problems facing families and children. Examines concepts, policies, and practice issues in the field of child and family welfare. Spring, annually.
SW 305	Juvenile Delinquency	3.00	Taking a sociological approach, yet focusing on practice, this course discusses juvenile delinquency as it relates to and emerges from the youth's family, neighborhood, school, peer group, social class, and overall cultural and social environment. Therefore, this course will examine a variety of cultural and social factors realted to delinquency, along with implications for assessment, prevention
			and intervention. The intentions of the course are to prepare students to work with juveniles, to understand risk and protective factors (including individual, family, socioeconomic, peer, school, and community factors). Skills and key practice issues will be addressed including relationship building, ethical issues in youth work, relational elements within the family, community responses and human service delivery. Alternate years.
SW 310	Crisis Intervention	3.00	This course is designed to prepare students in the helping professions with the skills to handle short term crisis situations within a generalist social work framework. The focus of the course is on crisis, emergency, disaster management and prevention. At the completion of this course students will understand the nature of crisis and its impact on the lives of diverse individuals, families, groups, and communities. Prerequisites are Soc 211, SW 211 or SW 212.
SW 315	Social Welfare	3.00	Examines the nature of social welfare policies and programs in the U.S. An overview of the history and administration of major social welfare programs is presented. Examines programs for the poor, the mentally ill, the disabled, children and families at-risk, the unemployed, and the aged in our society. No prerequisite. Spring, annually.
SW 320	Human Sexuality and Social Work	3.00	This course lays the foundation for understanding human sex and sexuality for beginning level social work practitioners who will need this information in their work with clients i.e. in sexual counseling, in policy and service discussions about sex education, and in public health issues related to sexual behavior with an emphasis on deiversity and inclusiveness. Prerequisites include Soc 211, SW 211 or SW 212.
SW 330	Ethics in Social Services	3.00	Introduces the upper-level undergraduate student to ethical issues within the social services arena. A variety of real-world topics will be explored, including an introduction to the diversity of ethical perspectives, professional roles, treatment process, populations, and organizational-cultural issues related to ethics in social services. he course will involve lecture, small-group discussion of ethics-related vignettes, audio-video materials, exams, and a writing assignment.
SW 340	Health Care Policies & Systems	3.00	This course explores the role of social work in health care policies and systems. It examines the conceptual framework of health, mental health, and access to health care in society. Students will examine the health status of disadvantaged and at-risk populations and consider implications for policy, practice, and economic justice in society. Prerequisites are SOC 211, SW 211 or SW 212.
SW 350	Geron Soc Wrk Pract	3.00	Concepts, policies, and practice issues in social work with older adults. Examines methods of intervention, social service delivery systems, and the special needs of diverse older populations. Fall, annually.
SW 354	Special Topics	3.00	Examines areas of study in Social Work. Professor selects format most suitable to the study. Topics, announced in advance, focus on the needs and interests of social workers. Course offered on demand. Prerequisites: SW 211, or SW 212 or SOC 211 or permission of instructor.

SW 360	<p>Substance Abuse and Social Work 3.00 Students will study the NASW policy statement on alcohol and other drugs and examine contemporary, evidence-based approaches to prevention, assessment and intervention in social work. A system perspective is applied to this practice area and social and economic justice issues are examined. This course lays the foundation for understanding substance use and abuse for beginning level social work practitioners and related majors who will need this information in their work with clients. An ecological framework is utilized to emphasize the relationship between policy and practice. Social and economic justice issues related to substance abuse are also examined. Prerequisites: Soc 211, SW 211 or SW 212.</p>	THE 103	<p>placed in field-work settings, e.g., child welfare agencies, offices of aging, divisions of the criminal justice system, community development agencies, etc., where they will observe and work with persons responsible for carrying out a range of specific human services. Requires a 10-hour commitment each week. May be repeated once for credit. Prerequisites: Permission of instructor, junior standing, and six hours in sociology.</p>
SW 370	<p>Social Work with the Sexually Deviant 3.00 In the field of social work there is continual need for specialized services to deal with current problems facing society. Sexuality remains a neglected and largely taboo area within practice, but it can be a demanding aspect of social work. This course is outlined to educate students about the unique and specialized treatment of the sexually deviant population. Theories and etiologies of sexual offending will be discussed. Students will gain an overview of sexually deviant behaviors. The course will cover specific areas of assessment and treatment of sexual deviance. Pathways and typologies of offenders will be discussed as well the significant differences when working with the sexually deviant individuals and juveniles. Further, the course will discuss the state and federal laws that govern sexual offenders including Megan's Law and the Welsh Act. Prerequisite: SOC 211 or SW 211 or SW 212.</p>	THE 104	<p>Theatrical Performance 3.00 Students earn one to three credits through performance in University Theatre productions by successfully completing the terms of the Contract for Credit in THE Activities, subject to approval by instructor and department chair. No more than three credits may be earned in THE 103 during any one semester. Students may not enroll concurrently in THE 103 and 254, 350, or 361 without instructor permission. Each semester.</p>
SW 399	<p>Social Work Practicum Seminar 3.00 This is an upper division course for students near the end of their studies. In this course students will examine several social service agencies, how each applies the helping process, and the role and function of the social work professional in a variety of settings. Students will be exposed to a variety of local social service agencies and delivery systems through class visits from social workers and social service professionals whose programs serve primarily vulnerable populations. This course is designed to enhance students' understanding and knowledge of the social determinants of need, community service and civic engagement and to incorporate field service and classroom learning. Prerequisite: SOC 211, SW 211 or SW 212.</p>	THE 120	<p>Theatrical Production 3.00 Students earn one to three credits construction lab in the scene shop and costume shop. Credits will be earned successfully completing the terms of the Contract for Credit in THE Activities, subject to approval by instructor and department chair. No more than three credits may be earned in THE 104. Is a requirement for all BFA theatre majors. Each semester.</p>
SW 451	<p>Qualitative Research Methods 3.00 Qualitative research seeks to integrate the lived experience with principles from the scientific method. This course is designed to provide an overview of qualitative research methods and techniques used for conducting sociological research such as case studies, unobtrusive methods, participant observation, choices of observer status role, recording data, uses of technical equipment, key informants, interviewing techniques, and ethical considerations in employing such methods and procedures. The course examines the use of these methods and techniques in both academic and applied research. Prerequisite: SOC 211, SW 211 or SW 212.</p>	THE 155	<p>Play Production 3.00 Introduces elements of theatre, including directing, acting, make-up, criticism, stagecraft, and stage lighting. No prerequisites. Summer, annually.</p>
SW 499	<p>Supervised Field Placement 9.00 With the approval and under the supervision of a member of the sociology faculty, students are</p>	THE 161	<p>Interpretation I 3.00 Develops expressive presentational skills through practice in the oral interpretation of literature. Focuses on analyzing an author's meaning, responding to it, communicating that meaning to an audience, and correlating oral interpretation with other arts. Fall, annually.</p>
		THE 201	<p>Stagecraft 3.00 A study of the theory, materials, and practice of stage construction. Emphasizes technical instruction and the relationship between the dramatic function of the setting and its actual physical realization. Student projects and required production labs provide practical experience. Fall, annually.</p>
		THE 204	<p>Dance I 3.00 Focuses on alignment, strength, flexibility, balance, and locomotor movement. Surveys jazz, ballet, modern, and tap dance styles. For actors: a working knowledge of dance styles for performance and auditions. For everyone: an exploration of personal movement potential and an appreciation for the art of dance. Fall, annually.</p>
		THE 215	<p>Movement for the Actor 3.00 This class is designed to give student performers the tools to use their bodies as instruments for developing characters, and to develop a vocabulary that will enable them to communicate with directors and movement coaches from a variety of backgrounds. Instruction focuses on building physical presence and body awareness, increasing flexibility and range of motion, and developing control necessary for efficient and communicative movement in a variety of theatre styles.</p>
			<p>Special Topics In Theatre 3.00 Focuses on offering special topics reflecting the interest of students. Content varies from semester to semester. Suitable for both majors and non-majors in</p>

	theatre. May be taken for a maximum of nine credits in the major. On demand.		
THE 251	Voice & Articulation Helps students improve their speech by the elimination of faulty voice and articulation habits. Gives attention to basic skills, including vocal variety, projection, breath control, tonal production, and articulation. Focuses on both the technical production of speech sounds and the student's ability to communicate.	3.00	
THE 253	Intro to Theatre Explores the techniques and contemporary practices in the organization of dramatic material. Surveys the division of labor for creation of dramatic material. Analyzes literary concepts, including realism and existentialism, that motivate the contemporary audience. Each semester.	3.00	
THE 254	Acting I: Intro to Acting A beginning acting course. Familiarizes students with the skills and tools required of today's professional actors. Suitable general elective for non-theatre majors.	3.00	
THE 261	Draft & Rendering for Theatre A practical study of the standard techniques used in drafting and rendering to convey textual information for design and construction of theatrical set designs, lighting designs, and costume designs. Prerequisite: THE 161 or consent of instructor. Enrollment is limited to Theatre majors or minors or with consent of instructor. Spring, odd-numbered years.	3.00	
THE 262	Stage Lighting Introduces the theory and practice of theatre lighting. Examines the purpose and aesthetics of lighting for the theatre and allied fields of television, film, and concerts. Also examines mechanics and control, including sections on optics, electrical theory and color. Student projects and required production labs provide practical experience in stage lighting. Prerequisite: THE 161 - enrollment is limited to Theatre majors or minors or with consent of instructor. Spring, even-numbered years.	3.00	
THE 271	Costume Construction Explores the basic aspects of constructing costumes for the stage, including beginning pattern generation, sewing and fitting. Familiarizes the student with the industry standard in building theatrical costumes.	3.00	
THE 301	Musical Theatre Dance Tech I A practice and historical study of Broadway dance styles. Emphasis is placed on the relationship between dance in musical theatre and the 20th century popular social dance forms traced from minstrelsy and vaudeville to the present day. The stylization of these forms is stressed through original musical theatre choreography from each decade. The main focus is in the jazz idiom; however, strong ballet and tap skills are required. Prerequisite: THE 201 or permission of instructor. Spring, annually.	3.00	
THE 302	Intro to Choreography Introduces dance composition, emphasizing spatial design, sources of movement, and exploring the basic elements of space, time, and energy through improvisation, short movement studies, and dances which are presented, discussed, and reworked in class. Prerequisite: THE 301.	3.00	
THE 304	Dance Repertory Provides students with the opportunity to learn and perform a complete dance choreographed in class by the instructor. Students gain experience as performers in an intensive company-workshop	3.00	
	atmosphere and learn how an experienced choreographer uses skills of dance composition and the strengths of the dancers to choreograph a new work. The finished dance is performed in class and as part of a student dance concert on campus. Prerequisite: THE 301 or 302 or permission of instructor.		
THE 310	Acting the Song Students will do advanced work in character analysis and text analysis through materials that is entirely sung. They will explore songs as monologues, discovering where they can utilize and capitalize on previous training, while also developing new techniques that are unique to acting in musicals. A variety of Musical Theatre genres will be explored as well as the historical significance of the Musical Theatre.	3.00	
THE 311	Musical Theatre Dance Tech II This course is a continuing study of Broadway dance styles with the emphasis on significant choreographers and their work in 20th century musical theatre to the present day. Technique and performance quality is stressed through the understanding and execution of the movement qualities used by historical and current musical theatre choreographers. The main focus is in the jazz idiom; however, strong ballet and tap skills are required. Prerequisite: Dance 1 or permission of instructor. Spring, as needed.	3.00	
THE 321	Musical Theatre Dance Tech III This course is a continuing study of Broadway dance styles. Emphasis is placed on the tap and modern work in musical theatre as well as dance auditioning skills. Technique and performance quality is stressed through the understanding and execution of the movement qualities desired in musical theatre dance auditions. Broadway tap, and modern dance, as it is applied to musical theatre, will be explored in greater depth. Prerequisite: Dance 1 or permission of instructor. Spring, as needed.	3.00	
THE 333	Yoga for Actors Explores the concepts and precepts of yoga in the context of the actor's craft. Students will focus on Hatha Yoga (the postures) as well as other aspects of the ancient art and science of yoga that are directly applicable to the process of developing a character. Instruction focuses on physical alignment, flexibility and strength, mental focus and discipline, breathing and its relation to the actor's vocal instrument.	3.00	
THE 350	Summer Drama Workshop Combines study and practice in the dramatic arts and includes formal, intensive study in acting, play production, direction, makeup, scene design, stage lighting, and stagecraft. In conjunction with the workshop, Clarion University sponsors a Summer Theatre Company consisting of members of the workshop, which produces major shows. Summer, annually.	6.00	
THE 351	Adv Theatre Prod Advanced study and practice in the dramatic arts, including projects in scene design, theatre management, and acting. Students work with members of the Summer Drama Workshop in the production of major plays for the Clarion Summer Theatre. Prerequisite: THE 120 or 350. Summer, annually.	6.00	
THE 352	Play Directing A study of the fundamentals and procedures of play directing and problems faced in educational theatre.	3.00	

- Includes script analysis, casting, and rehearsal methods. Students direct one-act plays for public presentation. Prerequisite: THE 253, 254, 362, or permission of instructor. Fall, even-numbered years.
- THE 356 Playwriting And Script Const 3.00**
Introduces the art of the playwright and dramatic storytelling from plot construction to dialogue construction and the addressing the needs of production, in readings and exercises. Culminates with the crafting of a 10-minute play. Prerequisites: THE 253, 254 or THE 161 or permission of instructor.
- THE 359 Hist of Theatre I 3.00**
The history of the theatre as exemplified in the plays and playwrights from Antiquity to the Baroque. Prerequisites: THE 253, 254 or permission of the instructor. Fall, annually.
- THE 360 History of Theatre II 3.00**
History of the theatre as exemplified in the plays and playwrights from the Romantic Period to Post-Modernism. Prerequisites: THE 253, THE 254 or permission of instructor.
- THE 361 Acting II: Scene Study 3.00**
Further applications of the basic groundwork laid in Acting I. Students work in pairs or groups on scenes from published plays in order to sharpen their skills in character analysis, characterization and truthful playing for the stage. Pre-requisite: THE 254. Enrollment is limited to Theatre majors or minors or with consent of instructor. Spring, even-numbered years.
- THE 362 Set Design 3.00**
Study and practice in the aesthetics, methods, and techniques of scenic design, utilizing epic and Stanislavskian scenographic analysis. Prerequisite: THE 161. Enrollment is limited to Theatre majors or minors or with consent of instructor. Spring, odd-numbered years.
- THE 363 Theatrical Make-Up 3.00**
Fundamentals and application of stage make-up. Fall, odd-numbered years.
- THE 364 Scene Painting for Stage 3.00**
Studio instruction in the use of brushwork and pigment to develop landscape, ornament, paneling, and architectural detail in stage scenery based on the analysis of form and source of light. Enrollment is limited to Theatre majors or minors or with consent of instructor. Fall, even-numbered years.
- THE 366 Production & Stage Mgmt 3.00**
A study of theory and practice of production and stage management in the professional, community, and educational theatre environments, including theatrical organization, rehearsal procedures, and performance duties. Prerequisite: Enrollment is limited to Theatre majors or minors or with consent of instructor. Spring, even-numbered years.
- THE 367 Theatrical Costuming 3.00**
Course examines the principles of Costume Design through the study of modes of dress from ancient to modern times. Includes projects in creativity, script analysis, emotional responses to a text, and beginning costume design. Prerequisite: Majors or Minors only. Fall, Even numbered years.
- THE 368 Prof Pract: The Audition 3.00**
Concentrates on the preparation and practices of talent in an audition situation. Emphasizes presentation for both prepared and cold audition situations and familiarity with the business aspects that are part of the auditioning process. Limited to acting students in the B.F.A. program, or by instructor's consent.
- THE 369 Playing Shakespeare 3.00**
Introduces the advanced acting student to an approach to Shakespeare's texts which requires an open and personal commitment to thought, language, and movement. Prerequisite: THE 361 or THE 254. Enrollment is limited to Theatre majors or minors or with permission of instructor. Spring, even-numbered years.
- THE 370 Stage Dialects 3.00**
Students learn, practice and perform in five commonly used stage dialects: Standard British, Cockney, Irish, Scottish, and Standard American Southern. Uses the International Phonetic Alphabet as a means to understanding the changes in certain key phonemes in each dialect. Utilizes films or videotapes of natural speakers when possible to help familiarize students with the lilt and musicality of each dialect. Students perform both monologues and scenes over the course of the semester. Prerequisites: THE 251 and 361 or 254 with permission of instructor. Spring, odd-numbered years.
- THE 371 Sound Design for the Theatre 3.00**
Introduces the art of sound design to the theatre student form script analysis to technical production and implementation of sound equipment. Prerequisite: THE 161. Enrollment is limited to Theatre majors or minors or with consent of instructor. Fall, odd-numbered years.
- THE 403 Graduation Project 1.00**
Directed Research toward Graduation Project in Acting or Musical Theatre. Prerequisite: Permission of instructor
- THE 404 Graduation Project 1.00**
Directed research toward Graduation Project in Design/Technical Production.
- THE 461 Styles of Acting 3.00**
Examines playing the character within the framework of historical style. Focuses on how to recognize style/period through the text and how to solve the problems of assuming and communicating style. Prerequisites: THE 254 and 361 or consent of instructor. Spring, odd-numbered years.
- THE 490 Independent Study 3.00**
Selected topics for research and/or performance projects in speech communication and theatre. Prior to registration, students need to obtain an advisor who will direct their study. Approval by appropriate dean required.
- THE 495 Internship In Theatre 12.00**
The internship program gives the student the opportunity to apply classroom theory and techniques in business, government, theatre, and other cooperating organizations. Course open to any speech communication and theatre major with a junior or senior standing with consent of department. Student must have a 2.5 QPA or higher and 3.00 QPA in a major. On demand.
- THIS 491 Appl Research Public Policy 3.00**
This research course is offered as part of the Harrisburg Internship Semester. Student interns are required to complete a rigorous research project directly related to the intern's academic major and internship placement. The research topic is selected in consultation with the faculty coordinator, the internship sponsor, and the Resident Faculty Director of the program.
- THIS 492 Seminar in Public Policymaking 3.00**
This seminar course is offered as part of the

	<p>Harrisburg Internship Semester. The seminar exposes participating students to the latest scholarship in public policy formation and includes elements of the legislative process, executive operations and decision-making, governmental budgeting, public personnel administration, and more specialized state governmental topics. Leading policymakers from the commonwealth address the seminar and participate in roundtable discussions with students.</p>	
US 301	<p>Ultrasound Clinical I 15.00 Within the B.S. in Medical Imaging Sciences degree, the concentration in ultrasound was approved so that a block of credits ranging from 30 - 60 credits may be transferred into Clarion from formal ultrasound educational programs that are accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCMDMS). The curriculum of every JRCMDMS-accredited ultrasound program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses (US 301, 302, 401 and 402) will facilitate transference of clinical credits from accredited ultrasound programs into Clarion. Prerequisite: Students may complete their general education course work at Clarion before completing their ultrasound clinical program, or they may complete the clinical ultrasound program prior to completing general education coursework at Clarion.</p>	
US 302	<p>Ultrasound Clinical II 15.00 Within the B.S. in Medical Imaging Sciences degree, the concentration in ultrasound was approved so that a block of credits ranging from 30 - 60 credits may be transferred into Clarion from formal ultrasound educational programs that are accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCMDMS). The curriculum of every JRCMDMS-accredited ultrasound program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses (US 301, 302, 401 and 402) will facilitate transference of clinical credits from accredited ultrasound programs into Clarion. Prerequisite: Students may complete their general education course work at Clarion before completing their ultrasound clinical program, or they may complete the clinical ultrasound program prior to completing general education coursework at Clarion.</p>	
US 303	<p>Ultrasound Clinical III 15.00 Within the B.S. in Medical Imaging Sciences degree and concentration in ultrasound, placeholder courses facilitate the transference of block credits for completion of a formal nuclear medicine educational program in nuclear medicine that is recognized by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT).</p>	
US 401	<p>Ultrasound Clinical III 15.00 Within the B.S. in Medical Imaging Sciences degree, the concentration in ultrasound was approved so that a block of credits ranging from 30 - 60 credits may be transferred into Clarion from formal ultrasound educational programs that are accredited by the</p>	
		<p>Joint Review Committee on Education in Diagnostic Medical Sonography (JRCMDMS). The curriculum of every JRCMDMS-accredited ultrasound program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses (US 301, 302, 401 and 402) will facilitate transference of clinical credits from accredited ultrasound programs into Clarion. Prerequisite: Students may complete their general education course work at Clarion before completing their ultrasound clinical program, or they may complete the clinical ultrasound program prior to completing general education coursework at Clarion.</p>
		<p>US 402 Ultrasound Clinical IV 15.00 Within the B.S. in Medical Imaging Sciences degree, the concentration in ultrasound was approved so that a block of credits ranging from 30 - 60 credits may be transferred into Clarion from formal ultrasound educational programs that are accredited by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCMDMS). The curriculum of every JRCMDMS-accredited ultrasound program must meet the same standards and guidelines although clinical course titles and credits vary slightly with each program. Placeholder courses (US 301, 302, 401 and 402) will facilitate transference of clinical credits from accredited ultrasound programs into Clarion. Prerequisite: Students may complete their general education course work at Clarion before completing their ultrasound clinical program, or they may complete the clinical ultrasound program prior to completing general education coursework at Clarion.</p>
		<p>US 403 Ultrasound Clinical IV 15.00 Within the B.S. in Medical Imaging Sciences degree and concentration in ultrasound, placeholder courses facilitate the transference of block credits for completion of a formal nuclear medicine educational program in nuclear medicine that is recognized by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT).</p>
		<p>WGS 100 Surv of Women & Gender Studies 3.00 Surveys women's studies topics offered in more advanced courses. Uses materials primarily from the social sciences to examine various topics from a feminist perspective. Examines diverse women's lives across the lifespan, feminist pedagogy, sex role socialization, women's relationships, women as students, and women in society and history, among other topics. No prerequisite. Fall, annually.</p>
		<p>WGS 200 Spec Top Women's & Gender Study 4.00 Focuses on themes and topics of contemporary and/or historical interest in the study of women and their contributions across the disciplines and in the culture at large. The special subjects of Each semester's offerings will be announced in pre-registration. May be repeated with approval of the advisor, provided that different topics are offered.</p>
		<p>WGS 300 Spec Top Women's & Gender Study 4.00 Focuses on themes and topics of contemporary and/or historical interest in the study of women and their contributions across the disciplines and in the culture at large. The special subjects of Each semester's offerings will be announced in pre-registration. May be repeated with approval of the advisor, provided that different topics are offered.</p>
		<p>WGS 311 Gender, Violence And Activism 3.00 This course explores the socio-structural and cultural dimensions of gender violence among men and boys, among women and girls and between men/boys,</p>

and women/girls in the United State and world-wide. Multiple forms of gender based violence, the effects of perpetrating and/or being the recipient of violence, and societal response to violence at the intersections of ethnicity, race, class, sexuality and religion will be examined. Additionally, the role of promoting, reducing and preventing violence through social activism and civic engagement will be considered at the individual, family, community, and institutional levels. Prerequisite: At least one course from among WS 100, PSY 211 or SOC 211 (or permission of instructor).

WGS 406 Gender Issues in Ed 3.00

Examines the ways in which schools perpetuate gender bias and how educational institutions, as a reflection of the patriarchal society in which they coexist, provide different experiences and outcomes for female and male students and teachers. Prerequisite: ED 110 or WS 100 for WS 406 or permission of instructor.

WGS 425 Feminist Research Methodology 3.00

Across disciplines, feminists have developed critiques of traditional research methodology and theories of knowledge. They have asked how gender can influence the kinds of observations that are made, the kinds of questions that are asked, who is studied, how they are studied, and what emerges as the truth. In this class, students will learn how to apply feminist methodology to understanding issues in women's and gender studies, as well as applying it to their major field. They will become familiar with key theoretical and methodological issues in women's and gender studies and will learn how to conduct feminist research. Prerequisite: At least one WGS course and junior standing.

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Clarion Campus Facilities

ADMISSIONS BUILDING, located on Wood Street, houses Admissions operations.

BALLENTINE RESIDENCE HALL, located on Wood Street.

BECHT HALL, located on Wood Street.

BECKER HALL, at Greenville Avenue and Thorn Street, houses the Communication and the Computer Information Science departments.

CAMPUS VIEW SUITES is on top of the hill and offers kitchen and living room areas in each unit (two to four students per unit).

CARLSON LIBRARY is on the central campus just off Wood Street (page 10). A complete renovation and expansion of the library was completed in February 2002. It houses the University Art Gallery, the Library Science Department, the library faculty and staff, and the university's collection of resource documents.

CARRIER ADMINISTRATION BUILDING, at Main Street and Arnold Avenue, houses offices for the president and staff, the provost and academic vice president and staff, the vice president for finance and administration and staff; Office of the Registrar, Business Office, Human Resources, Social Equity, Student Accounts, Graduate Studies and Student Financial Services.

CENTER FOR ADVANCEMENT OF CLARION UNIVERSITY, situated at the corner of Greenville Avenue and Corbett Street, houses the offices of alumni development and the Clarion University Foundation, Inc.

CENTRAL SERVICES, located on Wood Street, houses publications/printing offices and mailroom operations.

DAVIS HALL, on Greenville Avenue, has classrooms and offices for the English Department and the Modern Languages Department.

EAGLE COMMONS DINING FACILITY, located at the corner of Ninth and Wood Streets, seats 530 and offers a variety of food styles. The lower level features a Starbucks and a meeting room which can hold up to 100 visitors.

EGBERT HALL is on the central campus behind Carlson Library. It has administrative offices for the vice president for student affairs and staff, the Department of Counseling, Career Services, and the Housing Office.

FOUNDERS HALL is situated at the corner of Wood and Ninth and houses classrooms and a computer laboratory for the History Department and the Political Science, Sociology, and Philosophy Department as well as laboratories for the Anthropology program and studios for the Art Department. Offices for the Dean of Arts and Sciences are on the second floor.

GEMMELL STUDENT COMPLEX, located at the north corner of Wilson Avenue and Payne Street, provides offices for student government and student activities personnel. Also housed in this area are the bookstore, snack bar, meeting rooms and other recreation areas for students. There is also a multi-purpose room.

GIVAN RESIDENCE HALL, situated on the hill along with the Suites, and Ralston Hall.

HART CHAPEL THEATRE is located on Wood Street and Eighth Avenue.

HARVEY HALL is on center campus and houses offices and classrooms for the Psychology Department and Women's Studies program.

JOSEPH P. GRUNENWALD CENTER FOR SCIENCE AND TECHNOLOGY, central campus west of Harvey Hall and houses offices, classrooms, and labs for AGES, Biology, Chemistry and Mathematics, as well as the planetarium.

KEELING HEALTH SERVICES CENTER, off Wilson Avenue behind Givan Hall, has modern clinical and infirmary facilities located on the first floor. The Speech Pathology and Audiology Diagnostic Center is located on the ground floor. The Speech Pathology and Audiology Department is also located on the first floor.

MARWICK-BOYD FINE ARTS CENTER, which stands at the south corner of Payne Street and Greenville Avenue, provides a 1,600-seat auditorium, Little Theatre, Sandford Art Gallery, classrooms, studios, multimedia studio, laboratories, and office and exhibit areas for Art, Music and Theatre Departments.

MCENTIRE MAINTENANCE BUILDING on Wilson Avenue south of Payne Street, is the center for physical plant maintenance, the motor pool, maintenance shops, Purchasing and Accounts Payable.

MOORE HALL, east of Carlson Library, serves as a reception and meeting facility.

NAIR RESIDENCE HALL provides housing for 450 students and is located on Main Street.

RALSTON RESIDENCE HALL is situated on the hill above Gemmell Student Complex.

RECREATION CENTER, is located on Payne Street. It contains three multipurpose courts for basketball, volleyball and tennis, and includes 4-lane track, fitness areas, equipment checkout and a climbing wall.

SPECIAL EDUCATION CENTER, at the corner of Eighth and Greenville, houses the reception area of the Educational Appraisal Clinic and therapy rooms, along with some faculty offices and classrooms.

STEVENS HALL, off Greenville Avenue, provides classrooms and faculty offices for education and human services programs and offices for the College of Education and Human Services.

STILL HALL BUSINESS ADMINISTRATION AND THE LEWIS COMPUTER CENTER are in a single building on the north campus at Main Street and Ninth Avenue housing the information center, computing services, the Office of the College of Business Administration, and the Departments of Accountancy, Marketing and Management, Economics and Finance/Real Estate.

THORN HOUSES 1 AND 2, located on Thorn Street, house the Public Safety Department (Thorn 1) and ROTC and Grounds (Thorn 2).

TIPPIN GYMNASIUM-NATATORIUM stands at the north center of Payne Street and Greenville Avenue. It houses classrooms, offices, and gym areas for the Health and Physical Education Department, a 3,600-seat arena for varsity sports, and a natatorium.

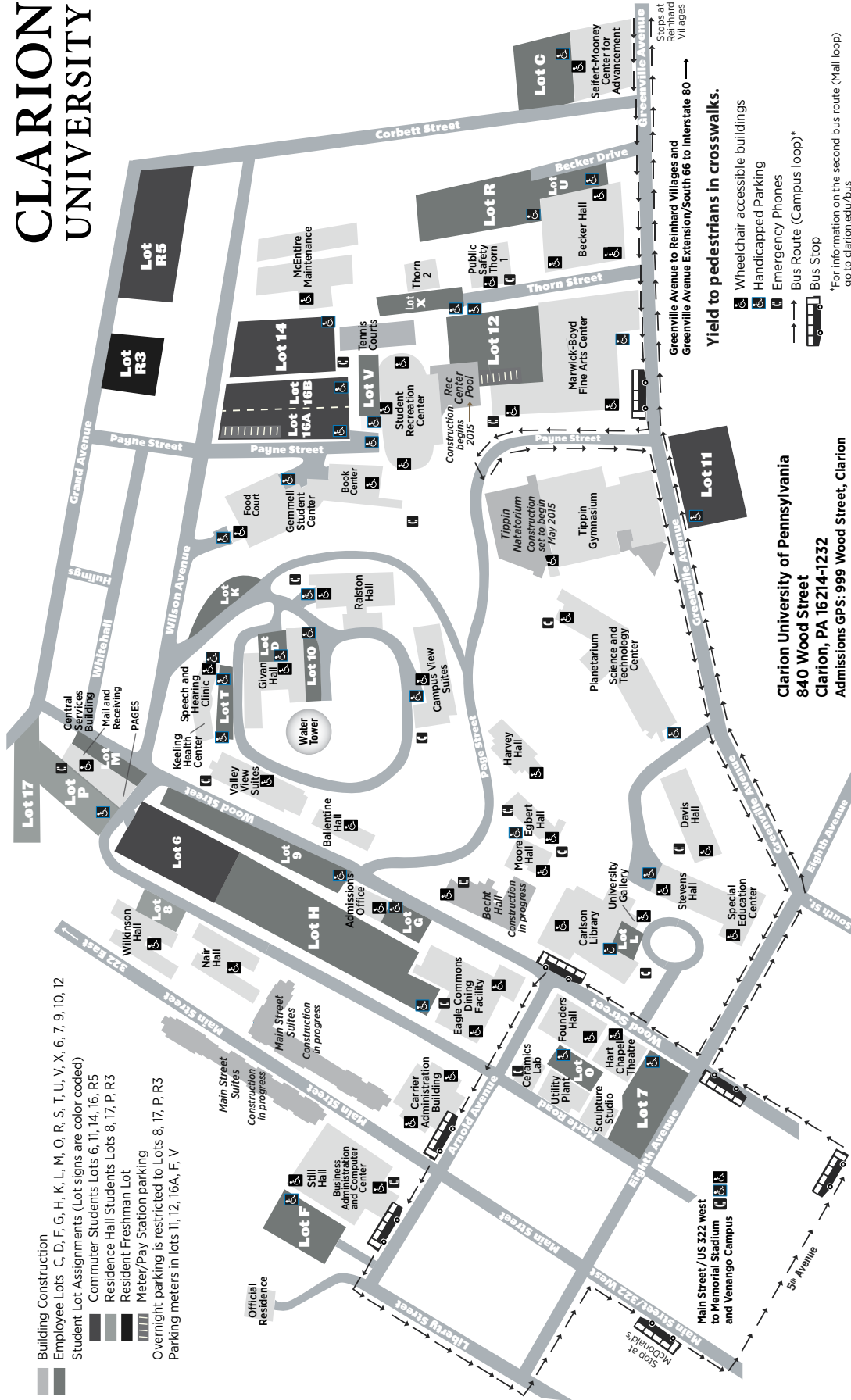
UNIVERSITY ART GALLERY is located on the Greenville Avenue side of the Carlson Library. The permanent collection covers all media, with special emphasis in photography, prints, artist's books, and ceramics. Exhibitions are scheduled throughout the year.

VALLEY VIEW SUITES is located on Wood Street and offers kitchen and living room areas in each unit (two to four students per unit).




WILKINSON RESIDENCE HALL houses 450 students on the Main Street area of the campus.

Facilities and Maps

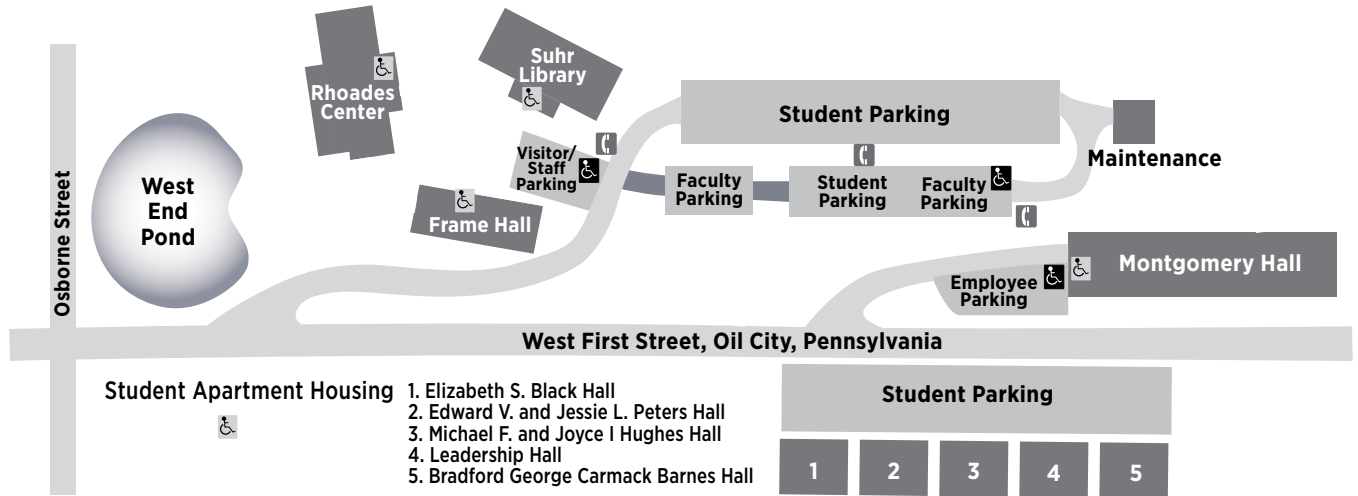
CLARION UNIVERSITY



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of Clarion University**
1801 West First Street
Oil City, PA 16301-3297

-  Handicap Parking
-  Wheelchair Accessible Building
-  Emergency Phones

**CLARION
UNIVERSITY**
VENANGO COLLEGE



Facilities and Maps

Venango College Facilities

RICHARD C. FRAME HALL, the original building, contains the Administrative Office, Admissions and Financial Aid, Continuing Education, Marketing and University Relations, and classrooms.

ROBERT W. RHOADES CENTER houses Student Affairs and provides student lounge and recreation facilities, a gymnasium, an auditorium-theatre, a bookstore, a fitness center, and food services.

THE CHARLES L. SUHR LIBRARY (page 10) houses the library, study facilities, faculty offices, the Department of Applied Technology, and the Barbara Morgan Harvey Center for the Study of Oil Heritage.

MONTGOMERY HALL is a modern classroom and office building which houses the School of Nursing and Allied Health, Career Services, the Computer Laboratory, the Learning Support Center, interactive video classrooms, career services, and faculty offices.

ELIZABETH S. BLACK HALL, EDWARD V. & JESSIE L. PETERS HALL, MICHAEL F. AND JOYCE I. HUGHES HALL, LEADERSHIP HALL, AND BRADFORD GEORGE CARMACK BARNES HALL are attractive, upscale apartment buildings offering students a private bedroom and a semi-private bathroom with shared kitchen facilities and living and dining areas. Each apartment is fully furnished and houses four students.

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