

THE MISSION

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The mission of Lycoming College is to provide a distinguished baccalaureate education in the liberal arts and sciences within a coeducational, supportive, residential setting.

THE BACCALAUREATE DEGREE

Lycoming College is committed to the principle that a liberal arts education is the ideal foundation for an informed and productive life. The liberal arts - including the fine arts, the humanities, mathematics, the natural and social sciences - have created the social, political, economic and intellectual systems which help define contemporary existence. Therefore, it is essential that students grasp the modes of inquiry and knowledge associated with these disciplines.

Consequently, the Baccalaureate degree (Bachelor of Arts or Bachelor of Science) is conferred upon the student who has completed an educational program incorporating the two principles of the liberal arts known as distribution and concentration. The objective of the distribution principle is to insure that the student achieves breadth in learning through the study of the major dimensions of human inquiry: the humanities, the social sciences, and the natural sciences. The objective of the concentration principle is to provide depth of learning through completion of a program of study in a given discipline or subject area known as the major. The effect of both principles is to impart knowledge, inspire inquiry, and encourage creative thought.

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The general regulations and policies stated in this catalog are in effect for the 2014-15 academic year. Freshmen beginning their first terms at Lycoming College in the fall of 2014 or the spring of 2015 are thereafter governed by the policies stated in this catalog.

If changes are made in subsequent editions of the catalog to either distribution requirements, major, or minor requirements, a student has the option of following the original program as outlined in the catalog in effect at the time of matriculation as a freshman or of following a subsequent catalog version. The College always reserves the right to determine which requirements apply.

If a student interrupts his or her education but returns to the College after no more than one academic year has passed, he/she will retain the same requirements in effect at the initial date of entrance. A student who withdraws from the College for more than one year will, upon return, be required to complete the requirements currently imposed upon other students of the same academic level. A student who transfers to the College with advanced standing will be subject to the requirements imposed upon other students at the College who have attained the same academic level. Postbaccalaureate students will be subject to the requirements stated under the Academic Program.

Lycoming College reserves the right to amend or change the policies and procedures stated in this catalog without prior notice to those who may be affected by them. The provisions of this publication are not to be regarded as an irrevocable contract between the applicant and/or the student and Lycoming College.

ACADEMIC CALENDAR 2014 - 2015

	Fall Semester	Spring Semester
Bills are due	August 2	December 14
Residence halls open for freshmen	August 22 at 9 a.m.	January 11 at 10 a.m.
Residence halls open for upperclassmen	August 23 at 8 a.m.	January 11 at 10 a.m.
Classes begin first period	August 25	January 12
Processing of drop/add begins	August 25	January 16
Last day for drop/add	August 29	January 16
Last day to elect audit and pass/fail grades	August 29	January 16
Last day for submission of final grades for courses for which Incomplete grades were recorded in Spring, May, and Summer terms	October 3	
Last day for submission of final grades for courses for which Incomplete grades were recorded in Fall semester		February 20
Early Assessment reports due at noon	October 6	February 23
Enrollment deposit deadline		February 28
Residence halls close at 6 p.m. for spring recess		March 9
Residence halls open at 10 a.m.		March 15
Classes resume first period after spring recess		March 16
Last day to withdraw from courses	October 27	March 23
Last days to withdraw from half semester courses.	1st 7 weeks 2nd 7 weeks	February 11 April 8
Residence halls close at 9:00 p.m. for Thanksgiving recess	November 25	
Residence halls open at 10 a.m.	November 30	
Classes resume first period after Thanksgiving	December 1	

Final examinations begin	December 8	April 27
Semester ends at 5:00 p.m.	December 12	May 1
Residence halls close at 6:00 p.m.	December 12	May 1

SPECIAL SESSIONS

	May Term	Summer Session #1	Summer Session #2
Residence halls open noon - 3:00 p.m.	May 10	June 7	July 12
Classes begin	May 11	June 8	July 13
Last day for drop/add	May 12	June 10	July 15
Last day to elect audit and pass/fail grades	May 12	June 10	July 15
Last day to withdraw from courses	May 27	June 29	August 3
Term ends	June 5	July 10	August 14
Residence halls close at 4:00 p.m.	June 5	July 10	August 14

Special dates to remember:

Freshman First Weekend	August 22, 23, 24
New Student Convocation	August 22
Labor Day (classes in session).....	September 1
Family Weekend	September 19 - 21
Long Weekend (no classes)	October 17 - 19
Homecoming Weekend.....	October 24 - 26
Admissions Open House.....	October 11
Admissions Open House.....	November 8
Thanksgiving Recess	November 25 - 30
Admissions Open House.....	February 21
Spring Recess.....	March 9 - 13
Good Friday (no classes)	April 3
Accepted Students Day	April 12
Honors Convocation	April 19
Baccalaureate	May 8
Commencement	May 9
Admissions Open House.....	May 16
Memorial Day (no classes)	May 25
Summer Preview	June 26
Independence Day (no classes).....	July 4
Summer Preview.....	July 31

WELCOME TO LYCOMING COLLEGE

Lycoming College is a liberal arts and sciences institution dedicated to providing the type of learning that can be used for a lifetime in a supportive, residential environment that fosters individual growth and close interpersonal relationships.

Lycoming is ranked as a Tier 1 national liberal arts college by *U.S. News & World Report*. In addition, the College is listed as one of “The Best Northeastern Colleges” by *The Princeton Review* and one of “America’s Best College’s” by *Forbes.com*. Lycoming is one of only 90 colleges and universities nationwide to have earned an “A” rating from Standard & Poor’s – a testament to the College’s stable financial foundation from which the academic and extracurricular activities are created.

All of Lycoming’s resources and faculty are dedicated to the undergraduate education of just 1,400 students. With a 14 - 1 ratio of students to faculty, classes of five or 10 students are not uncommon, while even large introductory courses average about 30 students. This means abundant opportunities for individual attention by a faculty truly committed to teaching. The average graduation rate for first time freshmen is 63%. More information is available on the Registrar’s homepage under Student's Right to Know.

Lycoming students are superbly prepared to meet the challenges of life through an academic program that includes both breadth of study in the humanities, arts, social sciences and natural sciences and depth of study in at least one area of concentration. The College offers 36 academic majors and grants the Bachelor of Arts and Bachelor of Science degrees.

Those who intend to continue in health, law, medicine, the ministry or teaching will find excellent pre-professional preparation. Through a number of cooperative programs with other colleges and universities, Lycoming students can study forestry, podiatric medicine, optometry and medical technology while still enjoying the benefits of a small college experience. They can also study abroad at affiliate programs with Regent’s American College in London, England; the Westminster Business School of the University of Westminster, London, England; CUEF Université-Stendhal Grenoble 3 in Grenoble, France; Estudio Sampere in Alicante, Madrid, and Salamanca (Spain), Cuenca (Ecuador) and San José (Costa Rica); and the Otto-Friedrich-Universität in Bamberg, Germany. Lycoming also has a partnership with CAPA International Education, which has academic centers based in London, England; Florence, Italy; Beijing and Shanghai, China; Buenos Aires, Argentina; Dublin, Ireland; Istanbul, Turkey; and Sydney, Australia. Semester and summer programs in other countries and in Washington, D.C., or New York City are available through a number of other cooperative programs. Lycoming students may also study abroad through non-affiliate programs.

One of Lycoming’s most popular and successful ways of blending career planning with a liberal arts education is through its internship program. Close to one-third of Lycoming students gain real job experience as part of a semester course load. The Williamsport area is particularly rich in internship opportunities in business, communication, government, health and social services. The close relationship between the College and the community has given Lycoming students a chance to roll up their sleeves and gain resume-enhancing experience rather than mere observation.

Most students complete their program of study in four years, usually by taking four courses each fall and spring semester. However, students may take one course during Lycoming's May Term and from one to two courses in each Summer Term.

Perhaps one of the most important qualities of Lycoming is its feeling of community. Lycoming is a truly residential college where all students, with the exception of close commuters, live on campus in one of the College's residence halls or apartments.

The quality of campus life is enriched by a variety of extracurricular activities where Lycoming students gain valuable leadership training.

Students produce a newspaper, run the campus radio station, mount theatre productions, participate in a nationally acclaimed choir and concert band, as well as organize and manage their own social fraternities and sororities, special interest clubs and campus-wide social events.

Lycoming is proud to offer its students the opportunity to participate in 17 varsity athletic programs (9 for men, 8 for women). The Warriors compete at the NCAA Division III level and are a member of the Middle Atlantic Conferences. Students may also take part in the College's competitive intramurals program.

Students are often admitted free to productions at the Community Arts Center. Student-run programs have brought in national touring bands and comedians.

Lycoming's campus lies near historic downtown Williamsport, a city best-known as the birthplace of Little League Baseball and the site of its annual international championship. The greater metro area has a population of approximately 75,000.

The rolling hills and forestlands of north central Pennsylvania provide some of the state's best scenery, as well as hiking, camping, kayaking and other outdoor recreation. Yet Lycoming is less than a four-hour drive from New York City, Philadelphia, Washington, D.C., Baltimore and Pittsburgh.

The College enjoys a relationship with the United Methodist Church and supports its tradition of providing an education to persons of all faiths. The College is firmly committed to a policy of cultural diversity and expects its students to work together in an atmosphere of respect and tolerance.

HISTORY

The history of Lycoming College has been one of continual evolution. The institution has been, at one time or another, an elementary and secondary school, a seminary, a junior college and at present a four-year liberal arts college — going through four names in the process. Sold by an independent board to the Methodists (who bought it as a source of revenue), it is today an independent nonprofit, private college, affiliated with the United Methodist Church. Its beginning dates back to 1812 — making Lycoming one of the 50 oldest colleges in America — when it was founded as the Williamsport Academy, that city's first elementary and

secondary school. The school was administered by a Board of Trustees made up primarily of staunch Presbyterians.

By 1848, Williamsport had its own public school system well in place, and the private school was becoming a financial burden. A visionary circuit preacher, Rev. Benjamin H. Crever, persuaded the Methodists to buy the school. They named the institution Dickinson Seminary and offered college preparatory courses. Rev. Crever is considered the school's true founder.

The seminary operated as a private boarding school until 1929 when a college curriculum was added and it became the Williamsport Dickinson Junior College, the first private junior college in Pennsylvania.

In 1947, the junior college became a four-year degree-granting college of liberal arts and sciences. It adopted the name Lycoming, derived from the American Indian word "lacomic," meaning "Great Stream," a name that enjoys local popularity as the name of the county, a township and a creek.

In its evolutionary tradition, Lycoming College continues to expand its programs and improve its academic excellence with each decade, seeking to provide a truly distinguished baccalaureate education to every student entering its doors.

THE CAMPUS

Twenty-two buildings sit on Lycoming's 42-acre campus. Most buildings have been constructed since 1950. All are easy to reach from anywhere on campus. A 12-acre athletic field and football stadium lie a few blocks north of the main campus.

Modern buildings include the nine residence halls, which contain clean and comfortable double rooms; the student union; and the physical education/recreation center. Up-to-date facilities include the library, the theatre, the planetarium, the computer center, an electronic music studio, a photography laboratory, and an art gallery. The computer center opened in 1969; the art gallery and the physical education center opened in 1980. An arts center was renovated and opened in 1983. The Heim Biology and Chemistry Building opened in 1990.

Residence Halls

Asbury Hall (1962) — Named in honor of Bishop Francis Asbury, the father of The United Methodist Church in the United States, who made the circuit through the upper Susquehanna District in 1812, the year Lycoming (then the Williamsport Academy) opened its doors. Asbury Hall houses freshman students in a co-educational environment.

Crever Hall (1962) — Honors Lycoming's founder and first financial agent, the Rev. Benjamin H. Crever, who helped persuade the Baltimore Conference to purchase the school from the Williamsport Town Council in 1848.

East Hall (1962) — Houses five chapters of Lycoming's fraternities and sororities. The self-contained units contain student rooms and a chapter room.

Forrest Hall (1968) — Honors Dr. and Mrs. Fletcher Bliss Forrest and Anna Forrest Burfeindt '30, the parents and sister of Katherine Forrest Mathers '28, whose generosity established the memorial.

Rich Hall (1948) — Honors the Rich family of Woolrich, Pennsylvania. It houses health services, dining services office, security, residential life, and buildings and grounds. Rich is an all female hall.

Skeath Hall (1965) — The largest residence hall honors the late J. Milton Skeath, professor of psychology and four-time Dean of the College from 1921 to 1967. It houses freshmen in a co-educational environment.

Wesley Hall (1956) — Honors John Wesley, the founder of Methodism. This building houses a number of Greek organizations, as well as independent students.

Williams Hall (1965) — Honors Mary Ellen Whitehead Williams, mother of Joseph A. Williams, of St. Marys, Pennsylvania, whose bequest established the memorial.

The Commons (2007) — This apartment-style living building has 22 units and currently houses 85 residents. The building is fully air conditioned and has a beautifully landscaped commons area. This building is named in honor of six individuals.

Academic Buildings

Academic Center (1968) — The most architecturally impressive complex on campus, the Center is composed of four buildings: the John G. Snowden Memorial Library, Wendle Hall, the Mary L. Welch Theatre and Laboratories, and the faculty office building.

John G. Snowden Memorial Library (1968) www.lycoming.edu/library Named after the late state senator John G. Snowden, the library supports the classroom and research needs of the college community. An active information literacy program promotes the use of print materials, Web-accessed academic information resources, and other information technologies. The collection includes access to more than 300,000 items with over 40,000 periodical titles, and a strong reference collection suitable to an undergraduate education. The Snowden Memorial Library also houses the Lycoming College Archives.

Academic Resource Center — Located on the third floor of the John G. Snowden Library, the ARC is operated by a professional staff and peer tutors during the academic year. The Center offers study skills workshops, tutoring, disability support, and academic counseling.

Art Gallery (1980) — Located in the northwest corner of the first floor of the John G. Snowden Memorial Library, the gallery features exhibits by 4-6 nationally recognized artists and the Student Senior Capstone show every academic year.

Wendle Hall and Laboratories (1968) — Named after the George Wendle family, a College benefactor, this building contains 21 classrooms, the psychology laboratories, four computer laboratories with 75 terminals available for use, and spacious Pennington Lounge, an informal meeting place for students and faculty. The language, business, mathematics and physics laboratories are situated on the upper floors.

Digital Art and Graphics Lab (1993) — The Digital Art and Graphics Lab features state-of-the-art computers on both Macintosh and Windows platforms that are equipped with 2-D animation, digital imaging, illustration, professional layout and graphics, video and sound editing, and web design software. The lab also features film and flatbed scanners, color and b/w laser printers and large format archival digital art printers. Hardware and software are updated regularly to keep up with changes in the graphics industry and innovations in fine art digital imaging.

Detwiler Planetarium (1967) — Named after the Detwiler family, it is located in the lower level of the Academic Center. In addition to serving as an instructional tool to astronomy students, the planetarium has become a community resource, hosting close to 2,000 youngsters in Boy Scout, Girl Scout, school and church groups each year.

Mary L. Welch Theatre (1968) — The 204-seat thrust-stage theatre is one of the finest in the region. Theatre facilities include: the college box office, state-of-the-art lighting and sound systems, costume and scene shops, a make-up room, and an additional black-box performance space known as the Dragon's Lair Theatre.

Faculty Office Building (1968) — Contains faculty offices, seminar rooms, and a 735-seat lecture hall.

Fine Arts Center (1923, renovated 2005) — This building, originally a gym, ideally suits our studios for sculpture, photography, printmaking, and painting. Our art faculty office and lecture hall are located here.

Photography Laboratories (1984, 2004) — Located in the lower level of the Fine Arts Center, it is fully equipped for both black and white photography and alternative processes.

Communication Center (1987) — The focal point of the facility is a fully equipped state of the art digital media laboratory. The building also houses an editing room, classrooms, faculty offices, the FM radio station and the student newspaper office.

Heim Biology and Chemistry Building (1990) — The \$10 million Heim Building is one of the finest undergraduate science facilities in the East. The three-level structure totals more than 63,000 square feet and contains state-of-the-art biology and chemistry laboratories, lecture halls, seminar rooms, a science reading area and a greenhouse as well as classrooms and faculty offices.

Clarke Building & Chapel (1939) — Lycoming's landmark honors Martha B. Clarke, a benefactor. The building contains Clarke Chapel, St. John Neumann Chapel, music classrooms, practice studios, an electronic music studio and faculty offices.

Mary Lindsay Welch Honors Hall (2005) — Lycoming has refurbished a 19th century landmark into an Honors Hall that includes the Shangraw Performance Hall (a 125-seat recital hall), The Lindsay Memorial Chapel and offices for the United Campus Ministry Center, and Community Services Center and Honors Program.

Administration Buildings

Drum House — Built in 1857 the Admissions House is the oldest building on the campus. It was first occupied by a Presbyterian parson.

The Admissions House was bought by the College in 1931, along with 28 other dwellings, and in 1940 became the President's home. John W. Long occupied it for the remainder of his tenure and D. Frederick Wertz lived in the house from 1955 until 1965 when the College made the property at 325 Grampian Boulevard the President's home. The building was then converted for use by the Fine Arts Department. In 1983, when a new Fine Arts facility was completed, the department was relocated and the house was vacant until 1987 when it was restored by college craftsmen to its original Federalist design under the supervision of Carol Baker '60, who kindly volunteered her services during the year-long reconstruction. The Admissions House was a gift of the W.F. Rich family.

John W. Long Hall (1951) — Named after President Long (1921-1955), it houses the administrative offices, including those of the President, Provost, Treasurer, Dean of Student Affairs, Registrar, Alumni Relations, College Relations, Institutional Advancement, Publications, and Financial Aid, and the business office.

Recreation Facilities

Physical Education and Recreation Center (1980) — Includes the George R. Lamade Gymnasium, which contains basketball and other courts; a six-lane swimming pool; all-purpose room; sauna and steam room; weight room; offices; classrooms, and the Alumni lounge.

Recreation Center (2004) — Is a two-story 54,000 square foot space with four basketball courts. It has a suspended indoor running track, an expanded weight room, and a new exercise and fitness area.

Robert L. Shangraw Athletic Complex (1998) — Located at David Person Field, the 17,700 square foot complex contains locker facilities for football, lacrosse, soccer, and softball in addition to a fully-equipped athletic training room. The press box can accommodate radio and television coverage and includes a hospitality suite for guests of the president. There is bleacher sitting for 2,000 fans.

Wertz Student Center (1959) — Named after D. Frederick Wertz, President (1955-1968), it contains the Main Dining Commons, Jane Schultz Dining Room, the Jonas Room, Burchfield Lounge, a recreation area, game rooms, Jack's Corner, bookstore, post office, student activities office, Career Services, Counseling Center, and student organization offices.

Handicapped Accessibility

Most facilities at Lycoming College are accessible to those with limited mobility. In addition, the College will make special accommodations whenever necessary to meet the needs of any of its students.

INFORMATION TECHNOLOGY SERVICES - www.lycoming.edu/its

Lycoming College provides at least one computer network access point in each classroom, office, and for each student on campus. In addition, all residence halls, the Snowden Library and most key areas have wireless network access. Students have access to a variety of on-campus and worldwide resources through the network.

The College maintains six public use computer labs; four labs populated with Windows-based computers, one lab with a mix of Windows and Macintosh computers, and one lab with Macintosh computers. The Windows labs utilize several popular software packages, such as Office 2010 (Word, Excel, PowerPoint, Access) Internet Explorer, Mathematica, and SPSS. The Graphics Lab utilizes Microsoft Office and the Adobe Creative Suite. The Macintosh lab that specializes in digital media includes video editing software. Laser printing, copying, scanning, and DVD/RW drives are available in most labs.

Lycoming College maintains a website where our URL is www.lycoming.edu. Any student who is enrolled at Lycoming receives an e-mail account as well as a network account with disk space for personal file storage, which is backed up daily. Academic departments maintain home pages and resources under the Lycoming College home page(s). Faculty communicate with their students by the college Outlook e-mail or through our course management system Moodle.

ResNet (1995) — ResNet is the Residential Networking program for any student living in a residence hall, where they have direct access to the Lycoming network and Internet from their computer. A laptop computer with wireless is recommended and discounts are available through our Dell initiative or software discount program. Students need properly configured computers to pass through the Campus Manager security system, with an updated operating system, and the campus standard anti-virus and anti-spyware program. Any additional devices using wireless, such as smartphones, game consoles, etc., must also be registered. ResNet is part of a single consolidated Technology Fee of \$220 per semester for resident students and \$120 per semester for commuter students that will cover your access to ResNet, wireless, cable TV, computer labs, and networked multifunction printers.

ADMISSION TO LYCOMING

Lycoming College welcomes applications from prospective students regardless of age, sex, race, religion, financial resources, color, national or ethnic background. Visit us at www.lycoming.edu.

Admission Decision Criteria

Admission to Lycoming College is competitive. Applicants are evaluated on the basis of their academic preparation, talents, and interests, as well as the College's capacity to help them achieve their educational objectives and career goals.

Successful candidates for admission have typically completed a college preparatory program in high school which includes four years of English, three years of math, two years of modern language, two years of natural or physical science, three years of social science, and two years of academic electives.

In addition, successful admission candidates generally place in the top two-fifths of their high school graduating class, and have better than average SAT1 or ACT scores.

From time to time supplemental materials, as well as a personal interview, may be required prior to the determination of admissibility.

Admission Application Filing Period

Applications for the fall semester will be accepted from June 1st of the preceding year through May 1st of the year in which studies are to begin. Applications for the spring semester are accepted from the preceding May 1st through December 1st.

Applications, when complete, are reviewed and evaluated on a rolling basis. Generally, applicants are notified in writing regarding the outcome of their applications within three weeks following the receipt of all required materials.

Freshman Applicants

Freshman applicants must complete the following steps:

- 1) Submit a completed Lycoming College Admission Application or the Common Application.
- 2) Provide official transcripts of all high school and post-secondary school studies (whether or not completed).
- 3) Submit official results of the SAT1 or ACT.
- 4) Submit two personal letters of recommendation.

Transfer Applicants

Lycoming College considers applications from students who have attended other post-secondary educational institutions. These applicants must have earned a cumulative grade point average of at least 2.00 (on a 4-point scale) in transferable courses at the post-secondary institution(s) attended.

Credit will be granted only for courses which have a grade of “C-” or higher. Courses with a non-grade such as “P” or “S” will not transfer. Lycoming College will determine which courses are appropriate for transfer and is under no obligation to accept any course. Lycoming College does not have a statute of limitations but it reserves the right to refuse to accept some courses for transfer in which the content is outmoded. The Registrar will consult the academic department(s) involved. Final determination of transfer credit will be made by the Lycoming College Registrar based on official transcripts only. Transfer courses will be shown on the Lycoming transcript with the symbol “T.”

Applicants may transfer up to 64 semester credits at the Lycoming College 100 and 200 level and up to 32 semester credits at the Lycoming College 300 and 400 level for a total of 96 credits. No more

than 16 credits from approved online courses will be accepted as part of the above maximums. Students must complete the final 32 credits of the degree program at Lycoming College. At least 16 credits in the major area must be taken at Lycoming College.

Additional information regarding the transfer of college credit appears under Alternative Credit Sources.

Transfer applicants must complete each of the following steps:

- 1) Submit the Lycoming College Admission Application or the Common Application.
- 2) Provide official transcripts and course descriptions or catalogs from each post-secondary school attended. Students who have accumulated less than 24 semester hours or 36 quarter hours must also submit high school transcripts. (Official results of the SAT1 or ACT may also be required.)
- 3) Submit the Transfer Student Admission Report.
(www.lycoming.edu/pdfs/transferringstudentsadmissionreport.pdf)

International Applicants

Prospective students who are neither citizens nor permanent residents of the United States are welcome to apply for admission.

International applicants must complete each of the following steps:

- 1) Submit the Common Application.
- 2) Provide certified true copies of all secondary (and when applicable, post-secondary) transcripts, mark sheets, diplomas, and certificates in the original languages, as well as in English (when the originals are not in English). Translations of non-English materials must be certified as true and correct.
- 3) Submit two letters of recommendation.
- 4) Provide proof of the ability to read, write, and speak English at the college level as evidenced by a TOEFL score of at least 525, 190 for computer assessment test, or 70 for the Internet-based test or a 6.0 IELTS test.
- 5) Submit bank statements showing your families ability to fund your Lycoming education.
- 6) International students who are currently studying in the United States must be “in-status” with the United States Department of Justice, Immigration and Naturalization Service. They must also be eligible to transfer to Lycoming College.

Please note that the minimum amount required for each academic year of study (September through April) at Lycoming College is U.S. \$44,392. Summer living expenses (May through August) average an additional U.S. \$4,500, and are not included in the \$44,392 amount.

Readmission to the College

Students who leave the College for one or more semesters, including those who leave mid-term, must apply for readmission. To apply for readmission, one must:

- a. Complete the Application for Readmission form;
- b. Return the completed form to the Office of the Registrar; and
- c. If applicable, have official transcripts for all course work completed elsewhere sent to the Registrar.

The College reserves the right to deny readmission to former students. Reasons for denial of readmission requests include, but are not limited to: lack of residence hall space, unresolved financial obligations, academic deficiencies, unresolved disciplinary action, charges or convictions related to criminal activity.

Students will be informed in writing about the decision regarding readmission. To confirm readmission, students must send a non-refundable deposit of \$200 to the Office of the Registrar. Students who intend to live in the residence halls must send an additional \$100 room reservation deposit and complete the appropriate forms in the Office of Residence Life.

Lycoming College does not have a statute of limitations but it reserves the right to refuse to accept some courses in which the content is outmoded. The Registrar will consult the academic department(s) involved.

Confirmation of Intent to Enroll at Lycoming

Admitted applicants are asked to confirm their intent to enroll for the fall semester no later than the preceding May 1st, or by December 1st for the following spring semester by submitting the appropriate deposit. New commuting students are required to submit a \$200 Confirmation Deposit. New resident students are required to submit the \$200 Confirmation Deposit, as well as a \$100 Room Reservation Deposit. Admitted international applicants are required to submit all applicable deposits prior to the issuance of the I-20 form. Deposits are non-refundable.

Student Orientation

All new students are required to attend one of three summer orientation sessions with at least one parent before they enroll in the fall. The purpose of the program is to acquaint new students and their parent(s) more fully with the College so that they can begin their Lycoming experience under the most favorable circumstances. Students will take placement tests, meet their academic advisor, and register for fall classes. Information on orientation is mailed to new students after they confirm their intention to enroll.

Withdrawal of Admission Offers

Lycoming College reserves the right to withdraw offers of admission when:

- 1) information requested as part of the admission application process is not provided by applicants;
- 2) misrepresentation of fact to the College by applicants occurs during the application process;
- 3) the conduct of applicants is not in keeping with the ethical or moral standards as set forth in the *Lycoming College Catalog* or the *Lycoming College Student Handbook*.

Admissions Office Location and Hours

Prospective students and their families are encouraged to visit the campus for a student-conducted tour and an interview with an admissions counselor, who will provide additional information about the College and answer questions.

The Office of Admissions is located on Washington Boulevard and College Place. For an appointment, telephone 1-800-345-3920, ext. 4026 or (570) 321-4026, write the Office of Admissions, Lycoming College, 700 College Place, Williamsport, PA 17701, or visit www.lycoming.edu/admissions/Forms/InfoRequest.html.

Office hours are:

Weekdays

September through April: 8:00 a.m. to 4:30 p.m.

May through August: 8:00 a.m. to 4:00 p.m.

Saturdays

September through April:

9:00 a.m. to 12:00 noon

May through August: appointments by request.

FINANCIAL MATTERS

Expenses for the Academic Year 2014-2015

The following expenses are effective for the regular fall and spring semesters. The College reserves the right to adjust fees at any time. The fees for each semester are payable approximately three weeks prior to the start of classes for the semester as indicated on the semester bill.

Fees	Per Semester	Per Year
Tuition	\$17,008.00	\$34,016.00
Room Rent	\$ 2,647.00	\$ 5,294.00
Board	<u>\$ 2,541.00</u>	<u>\$ 5,082.00</u>
Total	\$22,196.00	\$44,392.00

One-Time Student Fees

Confirmation/Contingency Deposit	\$200
Room Reservation Deposit	\$100
Freshman Fee	\$225

Part-Time Student Fees

Each Unit Course	\$4,252
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Additional Charges

Non-refundable Enrollment Deposit for Returning Students	\$100
Activity Fee per semester.....	\$85
Technology Fee (resident students) (per semester)	\$220
Technology Fee (commuter students) (per semester).....	\$120

Laundry Fee (resident students) (per semester)	\$40
Applied Music Fee (half-hour per week per semester).....	\$300
Cap and Gown.....	prevailing cost
Laboratory Fee per Unit Course.....	\$10 to \$425
Parking Permit	\$120
Practice Teaching Fee	\$400
R.O.T.C. Uniform Deposit (payable at Bucknell University)	\$75
Transcript Fee	\$5*
Single Room Charge.....	\$3,042
College Apartment.....	\$3,443
Student Health Insurance (under age 26 – 2013-2014 cost \$1,235).....	TBD**
Student Health Insurance (over age 26 – 2013-2014 cost \$1,842).....	TBD**

The tuition covers the regular course load of twelve to sixteen credits each semester excluding band, choir, theater practica and all scholars' seminars. Any credits over 16 will be charged at a rate of \$1,063 per credit. Resident students must board at the College. If a double room is used as a single room, there is an additional charge of \$395 per semester. The estimated cost for books and supplies is up to \$1,000 per year, depending on the course of study. Special session (May Term and Summer Session) charges for tuition, room, and board are established during the fall semester.

**\$5 for first copy; \$1 for each additional copy requested at the same time. No charge for currently enrolled full-time students. No transcripts will be issued for a student or alumnus whose financial obligation to the college has not been satisfied.*

** - To Be Determined

Online Statements and Payment Processing

Lycoming College does not mail paper statements to the student's home address. A student and their authorized payer(s) can access the statements online. Students can access their online statements by logging into WebAdvisor. Authorized payers can access their student's online statements by going to the Business Office's webpage. Bills can also be paid electronically using, checking, saving, VISA, Mastercard, Discover and American Express. Authorized payers will only be able to view their own payment and bank information. Each authorized payer is assigned a separate password for added security and privacy.

Student Health Insurance

This insurance is mandatory for all full-time students if they have no other medical insurance coverage, or if they fail to verify that they have other medical insurance. In order to waive the cost of this coverage, each Fall students or guardians must complete the online health insurance waiver by September 30.

Non-Payment of Fees

Lycoming College has the right to withhold future registrations, final grades, transcripts, Diploma and certifications of withdrawals in good standing if their accounts for previous attendance have not been settled. Unpaid student accounts will be charged interest at the rate of

1% per month on the month-end balance until accounts are paid in full. Should legal collection become necessary, the fees of any collection agency, which may be based on a percentage at a maximum of 33% of the debt, and all costs and expenses, including reasonable attorney's fees, will be added to the balance due.

Entry Fees and Deposits

Confirmation/Contingency Deposit — All full-time students who have been notified of their admission to Lycoming College are required to make a \$200 Confirmation Deposit to confirm their intention to matriculate. The Deposit is held until Graduation or upon notification submitted to the Registrar's office at least two weeks prior to the start of each semester that the student is not returning. Any remaining deposit balance will be refunded after all financial obligations to the College have been satisfied.

Resident students must remit an additional \$100 Room Reservation Deposit. The room deposit is applied against the comprehensive fees billed for the first semester of attendance.

Both the Confirmation and Room Reservation Deposits are refundable prior to the start of the first semester of attendance if the official withdrawal date is not later than May 1.

Enrollment Deposit — A non-refundable enrollment deposit of \$100 is required of all current full and part-time degree-seeking students each spring in order to pre-register for the subsequent fall semester courses and/or to participate in the annual room selection process. This deposit is applied against the fall semester bill.

Partial Payments

For the convenience of those who find it impossible to follow the regular College schedule of payments, arrangements may be made to make monthly payments using our third party payment provider. Additional information may be obtained from the Business Office website or by calling the Business or Admissions Office.

Lycoming College Withdrawal Refund Policy

Students wishing to withdraw from the College during the semester should meet with the Assistant Dean for Freshmen or the Assistant Dean for Sophomores to ensure that student financial and academic records are properly closed. The effective date of calculating refunds shall be: the date that the student begins the withdrawal process or provides official notification to the institution of his or her intent to withdraw; the midpoint of enrollment if the student drops out without notification to the institution; or the date, as determined by the institution, that the student withdraws due to illness or accident.

Students withdrawing will receive a prorated refund for tuition, fees, room and board, less an administrative fee of \$100 and any unpaid charges, according to the following schedule:

	Refund	Charge
During Week 1	90%	10%
During Week 2	80%	20%
During Week 3	70%	30%
During Week 4	60%	40%
During Week 5	50%	50%
During Week 6	40%	60%
After 6th Week	0%	100%

Please note that there is no refund after the sixth week of the semester. For Freshmen, the refund period will be extended into the week that early assessment grades are distributed to students and parents.

Comparative schedules apply to the May and Summer terms.

The calculated refund will be reduced by any unpaid charges. Any balance remaining will be billed to the student. Unpaid student account balances will be charged interest at the rate of 1% per month on the month end balance until the account is paid in full.

Should legal collection become necessary, all costs of collection will be added to the balance due.

Lycoming College's institutional refund policy is distinct and different from the Federal Return of Title IV Funds policy. The adjustment of institutional financial aid will follow the Withdrawal Refund Policy stated above. The College is required to perform a Return of Title IV Funds calculation for all federal financial aid recipients who withdraw (officially or unofficially) from all classes on or before the 60% attendance point of the semester. Students who are subject to the return of any Title IV funds may result in a balance due to the College, Federal Government or both. See Federal Return of Title IV Funds Policy for further explanation on the return of federal funds.

Students who drop individual course(s) during the add/drop period will receive 100% adjustment to tuition and fees. Students who drop individual courses(s) after the add/drop period will not receive any adjustment to tuition and fees.

Federal Return of Title IV Funds Policy

The 1998 Reauthorization of the Higher Education Act requires the college to calculate a Return of Title IV Funds on all federal financial aid students who withdraw (officially or unofficially) from all classes on or before the 60% attendance point of the semester. A prorata schedule is used to determine the percentage of the semester the student attended based on the withdrawal date/last date of attendance.

The student's withdrawal date is the date the student began the withdrawal process; the date the student otherwise provided the school with official notification of the intent to withdraw; or for

the student who does not begin the school's withdrawal process or notifies the school of intent to withdraw, the mid-point of the payment period of enrollment for which the Title IV assistance was disbursed (unless the institution can document an actual date in an academically-related activity). For any student who withdraws from the College, the College does have the option of using a student's documented last day of attendance at an academically-related activity as the withdrawal date, if the College believes this better reflects when the student stopped attending and truly withdrew from school.

The percentage of the semester the student attended is calculated as follows:

$$\frac{\text{Number of days in attendance}}{\text{Number of days in semester}}$$

The number of days counted includes all calendar days in the semester including weekends and holidays, but excludes college breaks of five or more days.

The percentage of the semester the student attended is used to calculate the amount of the student's earned versus unearned federal aid funds. The unearned portion of federal aid funds must be returned to the appropriate aid program in accordance with the Order of Return as mandated by law. The Order of Return is: Federal Unsubsidized Loan, Federal Subsidized Loan, Perkins Loan, Federal PLUS Loan, Federal Pell Grant, Federal SEOG Grant.

The college is responsible for returning the lesser of Unearned Title IV Aid or Unearned Institutional Charges. Unearned Institutional Charges are based on the determined percentage of the semester the student did not attend. The College is responsible for its return of funds first, followed by the student's return of funds.

The student is responsible for returning:

$$\begin{array}{r} \text{Amount of Unearned Title IV Aid} \\ - \text{Amount of Aid School Returns} \\ \hline \text{Amount Student Returns} \end{array}$$

The College must return its portion of Unearned Title IV aid (loan and grant) to the appropriate federal program within 45 days from the student's withdrawal date as determined by the Office of Financial Aid. If the amount the student returns includes a federal loan, the student is responsible for repayment of the loan in accordance with the terms of the loan program. If the amount the student returns includes grant aid, the student must repay 50% of the grant money received, rather than 100%. Students do not have to repay grant overpayments of \$50 or less per program.

The student must return unearned grant aid to the college within 45 days from the date of notification. Failure by the student to return or make arrangements to return unearned grant aid to the College within 45 days will result in the student being reported to the U.S. Department of Education (USDOE). The student will be considered in an Overpayment Status, and will not be eligible for additional aid at any post-secondary institution participating in Title IV Aid programs. Students who are reported to USDOE in an Overpayment Status should contact the USDOE to make payment arrangements to repay the necessary grant funds.

Examples of Federal Title IV Return of Funds calculation are available in the Office of Financial Aid. Students who stop attending Lycoming College may not receive further financial aid disbursements, may lose some or all of the aid that has already been disbursed to their account, may be responsible for repayment of unpaid charges, and may be considered in Overpayment status with USDOE.

Students who wish to rescind their official withdrawal submitted to the college must do so within one week of the original withdrawal and notification must be provided in writing to the Office of Financial Aid.

Students who stop attending all classes without officially withdrawing from the college will be subject to a Return of Funds calculation at the end of the semester, based on their last date of attendance as determined by the Office of Financial Aid.

State Grant programs have varying regulations concerning refunds, but most will require at least a partial refund of the State Grant. If the student has received a Lycoming Grant, a portion of the student's refund also will be repaid to the Lycoming Grant program. This will reduce, or in many cases eliminate, the amount of the refund the student otherwise would receive.

Non-Payment of Fees Penalty

Students will not be registered for courses in a new semester if their accounts for previous attendance have not been settled. Diplomas, transcripts, and certifications of withdrawals in good standing are issued only when a satisfactory settlement of all financial obligations has been made in the Business Office. Final grades may also be held in some cases. Unpaid student accounts will be charged interest at the rate of 1% per month on the month-end balance until accounts are paid in full. Should legal collection become necessary, all costs of collection will be added to the balance due.

FINANCIAL AID

Lycoming College is committed to helping students and families meet college costs. While some assistance is available to students regardless of need (merit scholarships), the primary purpose of the College's financial aid program is to help qualified students of limited financial resources attend Lycoming College. Scholarships may be awarded on the basis of merit and/or need, while grants are provided solely on the basis of financial need. Long-term educational loans with favorable interest rates and repayment terms are available, as are part-time employment opportunities.

Please Note: If a student receives a **Tuition Remission Fee Waiver**, a **Tuition Exchange Scholarship**, or **Post 9/11 Yellow Ribbon Benefits**, all Lycoming funded scholarships and awards become honorary. That is, the monetary value of the Lycoming scholarships and awards become zero.

Students receiving **Veteran's Benefits** other than Yellow Ribbon please note: The combination of Veteran's Benefits plus any Lycoming College scholarship and/or grant will not exceed the

cost of tuition and fees. Your Lycoming scholarship or grant will be reduced to meet this requirement.

Students receiving a **Faculty, Trustee, Departmental or other Lycoming Scholarship** may add only *one* additional Lycoming-funded scholarship to their financial package. Examples of funded Lycoming scholarships include the Pennsylvania Free Enterprise Week (PFEW) scholarship, the Community Service Award, and talent awards in music, theatre, art, creative writing and digital media communication.

It is important to submit financial aid applications after January 1st, as appropriate income information becomes available, but by May 1. Although applications may be filed later, applicants can only receive consideration for remaining available funds.

To be considered for financial aid, students and families must complete the following steps for each year the student seeks assistance:

1. Fully complete and submit the Free Application For Federal Student Aid (FAFSA). Returning students should submit the Renewal FAFSA. Go to www.fafsa.ed.gov
2. The College may request federal income tax transcripts and W-2's from the student and parent(s) to be submitted to the Financial Aid Office. Transcripts can be obtained by calling the IRS at 1-800-908-9946. The tax transcripts required are for the year preceding the academic year in which the student seeks assistance.
3. PA residents can apply for state grant assistance using the FAFSA as well. Non-PA residents should contact the State Grant Agency in their home state to see if additional forms must be filed.

Basic eligibility requirements for all federal programs are available from the Department of Education at www.studentaid.ed.gov. Students are responsible for understanding the basic eligibility requirements.

Enrollment Status for Financial Aid Eligibility

Financial aid eligibility is substantially reduced for students who are charged less than full-time tuition. Credit is earned for some courses which are offered at no charge, including choir, band, theatre practica and all scholar seminars. Therefore, these credits would not be counted in the full-time tuition calculation. For financial aid purposes, a full-time student is enrolled in 12-16 billable semester hours. A student's financial aid eligibility is finalized after the end of the college's published add/drop period.

Satisfactory Academic Progress Requirements for Financial Aid Recipients (Effective July 1, 2011)

NOTE: Financial aid programs subject to the following Satisfactory Academic Progress (SAP) Requirements include all Federal Title IV aid (Pell, FSEOG, Work-Study, Perkins Loan, Stafford Loans, PLUS Loans, TEACH Grant) and all Lycoming College grants, scholarships and loans.

Financial aid recipients are required to be in good academic standing and maintain satisfactory academic progress toward their degree requirements. Satisfactory academic progress, as described below, is evaluated annually (end of the spring semester) and cumulatively by the Financial Aid Office. Failure to maintain satisfactory progress may result in the suspension of financial aid eligibility. The Financial Aid Office will notify students who do not meet the satisfactory academic progress by mail and/or by email to their Lycoming email account.

Satisfactory Academic Progress for financial aid eligibility should not be confused with the College's academic progress policy. These are two distinct and totally separate policies that students must be aware of.

Undergraduate students receiving financial aid must maintain a minimum cumulative grade point average and make steady progress toward the completion of their degree as described below. The maximum time frame for program completion is defined as 150% of the credits required to complete the degree program as defined by Lycoming College. For example, a typical Bachelor's degree requires 128 credits: $128 \times 150\% = 192$ credits. Students who attempt more than 192 credits are ineligible for financial aid.

Attempted Credits	Minimum Cumulative Grade Point Average	Credit Completion Requirements
0 - 32	1.20	67% of attempted credits
33 - 48	1.40	67% of attempted credits
49 - 64	1.60	67% of attempted credits
65 - 80	1.80	67% of attempted credits
81 or more	2.00	67% of attempted credits

Transfer and/or AP credits accepted by Lycoming College will be included in the progress completion requirement and minimum GPA requirement (if the college transferred in the grade). Students who have not completed their undergraduate degree after 192 attempted hours (including transfer credits) will no longer be eligible for financial aid. The student will be automatically placed on Financial Aid Suspension. Students must graduate with a cumulative 2.0 grade point average.

Examples of Credit Completion Requirements

1. A student who has attempted a total of 24 credits must have successfully completed at least 16* credits ($24 \times .67 = 16.08$).
2. A student who has attempted a total of 56 credits must have successfully completed at least 38* credits ($56 \times .67 = 37.52$).

3. A student's Lycoming transcript reflects 24 transfer and/or AP credits. If the student has attempted a total of 80 credits of Lycoming coursework, the student must have successfully completed at least 70* credits, including transfer and AP credits $((80 + 24) \times 0.67 = 69.68)$.

* Calculations not resulting in whole numbers are rounded to the nearest whole credit.

Treatment of W, I, X, P & F Grades and Repeated Coursework

1. Course withdrawals (W) after the drop/add period are not included in the GPA calculation, but are considered a non-completion of attempted coursework.
2. Incomplete (I) grades are not included in the GPA calculation but are considered a non-completion of attempted coursework until the incomplete grade is replaced with a permanent grade and academic progress can be reevaluated.
3. An audit (X) grade is not considered attempted coursework. It is not included in the GPA calculation or completion rate determination.
4. A satisfactory (P) grade is treated as attempted credits earned, but it is not included in the GPA calculation unless the student has designated a minimum acceptance letter grade.
5. A failing grade (F) is treated as attempted credits not earned; it will be included in the calculation of the GPA and the minimum completion rate.
6. The most recent course grade for a repeated course will be included in the calculation of the GPA and every repeated attempt will be included in the completion rate determination.

Financial Aid Suspension

Important - Please Note: A successful appeal of academic suspension is unrelated to financial aid suspension and does not result in reinstatement of a student's financial aid eligibility. Appealing one's financial aid suspension status is a separate process.

Students who fail to successfully complete the minimum credit completion rate, or fail to complete their program within the maximum time frame, or fail to meet the minimum cumulative GPA requirement will have their financial aid eligibility suspended.

Reinstatement of aid after Financial Aid Suspension

Reinstatement of financial aid after a student is placed on Suspension is achieved as follows:

1. The student submits a written letter of appeal (see Appeal Process below) in accordance with the appeals process and the Financial Aid Appeals Committee grants the appeal. The student is then placed on financial aid probation, allowing an additional semester in order to bring the academic

requirements up to minimum standards set forth in the appeal response letter sent to the student.

2. The student attends Lycoming College during the Suspension semester, pays for tuition and fees without the help of student aid, and does well enough in the coursework to satisfy all the satisfactory academic progress standards. The student must notify the Financial Aid Office if they plan to attend Lycoming College without the assistance of financial aid; or
3. The student attends summer school to eliminate the deficiency in credits and/or GPA. The student must notify the Financial Aid Office if they are planning to take classes during the summer to eliminate the deficiency.

Students who have been placed on Suspension cannot merely skip a semester to regain eligibility. No financial aid will be disbursed during subsequent semesters for students on suspension. If an appeal is granted and the student subsequently fails to attain the minimum standards after one semester, or fails to meet the individualized requirements that were specified by the appeals committee in their written response to the student appeal, eligibility for financial assistance will be cancelled automatically for future semesters. No further appeals will be accepted and students will have to pay full charges on their own, bringing their academic requirements up to minimum standards, before regaining financial aid eligibility.

Appeal Process

The appeal letter must address:

1. The extenuating circumstance(s) as to why satisfactory academic progress was not made.
2. What has changed in the student's situation that would allow the student to demonstrate satisfactory academic progress at the next evaluation (i.e. after the probationary semester if an appeal is granted)?

Extenuating circumstances can include, but are not limited to, illness or injury; death of a family member; family difficulties; financial difficulties, etc.

Appeals of Financial Aid Suspension must be made in writing by the date specified in the Suspension notification letter. The Financial Aid Appeals Committee will review the appeal and notify the student in writing to the student's Lycoming College email account within 5 working days of their decision. All decisions made by the Financial Aid Appeals Committee are final and not subject to further review.

Appeals may be emailed to Finaid@lycoming.edu, or mailed to:

Lycoming College
Office of Financial Aid
Attn: Financial Aid Appeal Committee
700 College Place
Williamsport, PA 17701

Federal Grants

Pell Grants are made available by the federal government. Eligibility is based upon a federal formula. These grants may be available for up to the equivalent of 12 fulltime semesters.

Supplemental Educational Opportunity Grants may be awarded to students with exceptional financial need. Priority must be given to Pell Grant recipients. Funds are provided by the federal government. Funds are limited.

State Grants

Pennsylvania Higher Education Assistance Agency (PHEAA) Grants are available for PA residents meeting domicile and financial requirements of the program. Eligibility is determined by PHEAA. These grants are available for a maximum of 8 semesters. Non-PA residents should contact the State Grant Agency in their home state for availability of funds to students attending out-of-state colleges.

Loan Programs

Federal Direct Stafford Loan allows eligible Freshmen to borrow a maximum of \$3,500 annually. Eligible Sophomores may borrow up to a maximum of \$4,500 annually. Eligible juniors and seniors may borrow up to a maximum of \$5,500 annually. The federal government pays the interest while the student is enrolled on at least a half-time basis. Go to www.studentaid.ed.gov to find the prevailing interest rate. Eligibility is based on financial need. Go to www.studentloans.gov to complete entrance counseling and to electronically sign a Master Promissory Note.

Federal Direct Unsubsidized Stafford Loan provides an opportunity for students to borrow under the Stafford Program who do not qualify for the maximum amount of subsidized Stafford loan. Maximum grade level amount minus subsidized eligibility equals unsubsidized eligibility. Interest must be paid by the borrower on a quarterly basis while enrolled (check with your lender to see if interest payments may be deferred). Other aspects of the loan are similar to those under the Subsidized program. Independent students may be eligible for higher loan limits; contact the Financial Aid Office for more information. Go to www.studentaid.ed.gov to find the prevailing interest rate.

Federal Perkins Loan (formerly the National Direct Student Loan) may be offered to students with exceptional need. Borrowers must repay the loan, plus 5% per annum simple interest on the unpaid balance, over a period beginning nine months after the date on which the borrower ceases to be enrolled at least half-time. Funds are limited.

Federal Direct PLUS Loan is a loan parents may take out on behalf of their dependent student. The amount a parent may borrow for one year is equal to the cost of education for one year minus any financial aid the student is eligible for in that year. Go to www.studentloans.gov to apply. The prevailing interest rate can be found at www.studentaid.ed.gov.

Employment Opportunities

Federal College Work-Study Program Awards provide work opportunities on campus for qualified students. Students get paid for work performed in the previous pay period. Based on documented need and awarded by the Financial Aid Office. Funding is limited. The student assumes full responsibility in locating a job. Returning students who wish to work the following year must have their name submitted to the Financial Aid Office by their supervisor before the end of the Spring semester.

Students also have the opportunity to seek work-study employment off-campus in the Community Service program. Interested students can get additional information in the Financial Aid Office.

Lycoming Campus Employment Program is similar to Federal Work-Study except that students are paid with institutional funds only and is not based on financial need. A limited number of jobs are available. Funding is limited.

Other Job Opportunities are frequently available with local business firms or persons. Contact the Career Development Office of the College for information on these opportunities.

Other Aid Sources

Veterans and Dependents Benefits are available for qualified veterans and children of deceased or disabled veterans. Contact the Veteran's Officer in the Registrar's Office.

Reserved Officers Training Corps (ROTC) Stipends and Scholarships are available for qualified students. Contact the Financial Aid Office for more information.

United Methodist Scholarships may be available to full-time degree-seeking applicants who have a cumulative GPA of 3.00 or better, are active in Christian activities, and who are active, full members of a United Methodist church. Demonstrated financial need is also required. Annual application is required. Recipients are selected by the Director of Financial Aid and will be awarded to the neediest students. The funds are provided by the United Methodist Church. Applications are available in the Financial Aid Office. Renewal requires a cumulative GPA of at least 3.00.

United Methodist Student Loans are available on a very limited basis to students who are members of the United Methodist Church. Contact The Board of Higher Education and Ministry, P.O. Box 871, Nashville, TN 37202 for more information.

Non-college Aid Opportunities are often available through family employers or labor unions, business firms, fraternal and religious organizations, and secondary schools. Your parents should contact their employer or organizations of which they are members for information on financial aid resources.

STUDENT AFFAIRS

The Division of Student Affairs coordinates a variety of programs, services, and activities designed to enhance students' personal, social, and educational growth and development. This is accomplished through a variety of programs, offices, and staff including:

- Campus Ministry
- Campus Recreation
- Career Services
- Community Service
- Commuter Student Affairs
- Counseling Services
- Greek Life
- Health Services
- International Student Advising
- Judicial Affairs
- Residential Life
- Safety and Security
- Student Programs and Leadership Development

The Student Affairs staff view students as partners in the educational process and, therefore, expect that students will share responsibility for managing our educational community.

Campus Ministry

The United Campus Ministry, located in Mary Lindsay Welch Honors Hall, is staffed by a Protestant and Roman Catholic campus minister. The Campus Ministry provides a wide range of activities in support of the spiritual development and religious life of students. Ecumenical and inclusive in nature, Campus Ministry at Lycoming provides worship services, service projects, social occasions, retreats, and study opportunities. The campus ministers are an integral part of campus life and are available to students who may need support and spiritual direction.

Campus Recreation

The Campus Recreation Department provides opportunities for students, faculty and staff to enjoy a recreational sports atmosphere. The 54,000 square foot Recreation Center houses a suspended indoor track overlooking 4 large court areas for basketball, volleyball and tennis. The center also includes a weight room and cardiovascular area, both with state of the art equipment. The swimming pool is accessible at different times throughout the week for open swim. The Intramural program is also available to students, faculty and staff and offers several different team sports including: flag football, basketball, volleyball, wiffleball and indoor soccer.

Career Services

Career Services provides services which are designed to help individuals make effective career decisions beginning with identification of their skills, interests, personality, and career related values. For individuals unsure of what to major in, resources and support are available to research and assess their options and determine what they may wish to do after graduation. For individuals sure of their major but not sure what to do after they graduate, in addition to one-on-one counseling, a variety of resources are also available including a library of career resources, online material, alumni, workshops, experiential learning, and networking opportunities.

Career Services teaches individuals how they can learn about different career fields and present themselves to potential employers in a positive and effective manner. Helping individuals make appropriate and meaningful connections between college and career is a goal of Career Services. Career Services is located on the third Floor of Wertz Student Center. See www.lycoming.edu/cdc for more information.

Community Service

Community Service is a learning opportunity for students accomplished in conjunction with various agencies in the Williamsport area and college departments. This activity allows students to expand their knowledge about diverse individuals and communities. The outcome of such service promotes students' personal and social development as well as giving them an enhanced perspective of civic responsibility and social justice.

The Community Service Center located in Honors Hall coordinates many service opportunities available to students, faculty, and staff in the greater Williamsport area. Projects include, but are not limited to, working with Big Brothers/Big Sisters, Habitat for Humanity, local school tutoring programs, Best Buddies, Adopt-A-Highway, Bloodmobile, Shepherd of the Streets, Colleges Against Cancer (including an annual on-campus Relay for Life), and the CROP Walk.

Counseling Services

The college experience provides an unparalleled opportunity for intellectual, emotional, social, and spiritual development. Sometimes this experience becomes difficult and stressful. Counseling Services strives to support and assist students who are in distress. Professional counselors provide individual counseling, crisis intervention, consultation with students, faculty and staff and outreach programming on psychological, mental health, and substance abuse issues. All services are confidential and free of charge to all Lycoming College students. Counseling services also provides referrals to area mental health providers for those students who wish to meet with someone outside the college or whose needs cannot be met with services available on campus.

Health Services

Lycoming College Health Services focuses on the holistic care of the individual, health maintenance, and wellness through health education and prevention of illness. Educational materials and instructional programs are available through the Student Health Services.

Routine medical care is provided on a daily basis Monday-Friday 8:30 a.m.- 4:00 p.m. during the fall and Spring semesters. The office is staffed by a full-time registered nurse and a part-time registered nurse with a physician available on a limited daily basis.

Health Services' policies reflect the recommendations of the American College Health Association (ACHA), the Pennsylvania Department of Health, and the Centers for Disease Control (CDC).

Residential Life

As a residential college, Lycoming College offers students the opportunity to integrate academic and residential experiences and to and grow as individuals and members of a community. Lycoming requires all full-time students to live in college housing and participate in the college board plan each semester of the academic year that they are enrolled. Married students, students residing with their parents within a 40 mile radius, students living with their dependents, and students 23 years or older may request to be exempted from this policy. Such requests should be submitted in writing to the Dean of Student Affairs at least three weeks prior to the beginning of the semester that students are requesting permission to live off campus. We do not provide housing for students who have dependent children living with them, or married students wanting to live together.

Campus housing puts put students at the heart of College activity. Through programs, leadership opportunities, and peer interactions, residents gain a sense of belonging to the campus community, acquire new knowledge and skills, have easy access to College services, make informed choices, and assume responsibility for themselves and their community.

The residence halls are staffed with upperclass students who serve as Resident Advisors (RAs). RAs provide information, refer students to campus resources, help enforce College standards, use skills for helping students and facilitate educational and social programs. Most importantly, RAs assist residents in the development and maintenance of strong, positive residence hall communities. With the guidance and support of Residential Life staff, each resident is expected to become involved in promoting a positive living/learning environment in his or her community.

Several different living options are available for students in our eight residence halls. Freshmen are housed together in a co-educational environment encouraging students to make a successful transition and develop class identity. The upperclass halls offer opportunities for co-educational housing, an all female hall, fraternity and sorority chapter housing, and a cluster living option. College apartments and the Commons are available to upperclass students who meet specific grade and credit requirements and who are in good disciplinary standing with the College.

Additional information about housing is sent to students following their acceptance by the College.

Safety and Security

The Department of Safety & Security strives to maintain an environment that is free of unnecessary hazards and disruptions. This responsibility includes the enforcement of Lycoming College rules, regulations, and policies. Security personnel are scheduled on an around-the-clock basis. An emergency telephone line is always monitored. Twenty-four hour a day telephone extensions are used to handle general security concerns. The department solicits the cooperation of the entire college community in reporting unsafe conditions and suspicious activity on the Lycoming College campus.

Other services provided by the department are: First aid and ambulatory medical transportation, emergency maintenance referral, an escort service, guest and parking registration, and the dissemination of telephone numbers and general information to the public when the College switchboard is closed.

Student Programs

The Office of Student Programs and Leadership Development promotes the personal growth and intellectual development of students through co-curricular programs. Just as the classroom experience provides a forum for new thoughts, ideas, and opinions, so does co-curricular programming. The office collaborates with students, faculty, and staff to foster innovative programs, encourage student learning, and prepare students for life beyond the College. This is accomplished in the context of supplementing the educational mission of the College. Through the efforts of the student administered Campus Activities Board (CAB), co-curricular programming is offered to the entire college community and is designed to enhance the overall educational experience of students through the exposure to social, cultural and recreational programs. Professionals on staff in Student Programs plan and implement leadership development training programs for all students including the student government, the Interfraternity and Panhellenic Councils and all registered student organizations.

Standards of Conduct

Lycoming College is committed to the creation and maintenance of a living/learning environment which fosters the intellectual, personal, social and ethical development of its students. Respect for the rights of others and self-discipline are essential to the fulfillment of these goals. Students are expected to adhere to the policies contained in the Student Handbook and other College publications. These policies, rules and regulations apply to all students at Lycoming College

Students are encouraged to review the Student Policies Manual and Housing Agreement in order to familiarize themselves with the policies governing student conduct.

ATHLETICS

Athletics is an important part of the Lycoming experience. As a member of the NCAA, Lycoming sponsors seventeen intercollegiate sports for both men and women student-athletes.

Men can choose from football, soccer, cross country, wrestling, golf, basketball, lacrosse, swimming, and tennis. Women can compete in soccer, cross country, lacrosse, volleyball, basketball, swimming, softball, and tennis.

Lycoming is a member of the Middle Atlantic Conference, which is a Division III athletic conference. As a Division III school, Lycoming does not offer athletic scholarships.

ACADEMIC POLICIES AND REGULATIONS

Students are expected to familiarize themselves with the academic policies contained in this Catalog. Failure to do so does not excuse students from the requirements and regulations described herein.

THE UNIT COURSE SYSTEM

Instruction at Lycoming College is organized, with few exceptions, on a departmental basis. Most courses are unit courses, meaning that each course taken is considered to be equivalent to four semester hours of credit. Exceptions occur in applied music and theatre practicum courses, which are offered for either one-half or one semester hour of credit; in departments that have elected to offer certain courses for the equivalent of one, two or three semester hours of credit; and in physical activities courses which are zero credits. Furthermore, independent studies and internships carrying two semester hours of credit may be designed.

The normal student course load is four unit courses (16 semester hours) during the fall and spring semesters. Students who elect to attend the special sessions may enroll in one unit course (four semester hours) during the May term and one or two unit courses (four - eight semester hours) in each of the summer terms. A student is considered full time when enrolled for a minimum of three unit courses, or the equivalent, during the fall or spring semesters, one unit course, or the equivalent, for the May term, and two unit courses for each of the summer terms.

Students may enroll in five unit courses (20 semester hours) during the fall and spring semesters if they are Lycoming scholars or were admitted to the Dean's List at the end of the previous semester. Exceptions may be granted by the Dean of the College. There will be an additional charge, see Financial Matters.

Overloads are not permitted during the May and summer terms.

ALTERNATIVE CREDIT SOURCES

Transfer Credit

Matriculated students who wish to study at other campuses must obtain prior written approval to do so from their advisor, the chair of the department in which the credit will be awarded, and the Lycoming College Registrar. Course work counting toward a major or minor must also be approved in advance by the chairperson of the department in which the major or minor is offered. Once a course is approved, the credit and grades for the course will be transferred to Lycoming and calculated in the student's grade point average as if the courses were taken here. This means that "D" and "F" grades will be transferred as well as all other grades. Unapproved courses will not transfer. A maximum of 6 credits of online courses from a regionally accredited school will be considered for transfer. Students who transferred into Lycoming College with online courses are not eligible to take additional online courses through this process if doing so increases their online course total to more than 6 credits. As with all courses, requests for transfer of online courses are subject to individual departmental review. Final determination of transfer credit will be made by the Registrar based on official transcripts only.

Lycoming College does not have a statute of limitations but it reserves the right to refuse to accept some courses for transfer in which the content is outmoded. The Registrar will consult the academic department(s) involved.

Students are expected to complete their last eight unit courses (32 semester hours) and 16 semester hours in their major at Lycoming. Requests for waivers of this regulation must be sent to the Committee on Academic Standards.

Credit By Examination

Students may earn credit or advanced placement through the standardized examinations listed below. A maximum of 50 percent of the course requirements for the Baccalaureate degree may be earned through these examinations. The appropriate academic department will determine which tests they will accept and the course equivalencies. A list of approved examinations is available in the Office of the Registrar. Although these examinations may be taken after matriculation, new students who are competent in a given area are encouraged to take the examination of their choice before entering Lycoming so that the college will have the test scores available for registration advising for the first semester of enrollment. Students applying to the college for the first time should inform the Admissions Office that they have completed these tests and provide the official scores as part of their application packet. Continuing students must send official test scores to the Office of the Registrar and inform their academic advisors when examinations have been taken.

The College Entrance Examination Board Advanced Placement (CEEB AP) - In most cases, a score of four is required for credit.

The International Baccalaureate - Students who have completed the full diploma and have scores of five or above on all of the higher level examinations will be granted 32 credit hours; specific courses will be based on the examinations taken. Students who complete the full diploma but earn less than a score of five on all of the higher level examinations will be granted eight credits for each higher level examination completed with a grade of five or higher and four credits for a satisfactory or higher completion of the Theory of Knowledge requirement. Students who have completed the certificate will be granted credit based on the examinations taken.

Standard level examinations will not be considered.

The American College Testing Proficiency Examination Program (ACT PEP) - A score equivalent to a grade of “B” or above is required.

College Level Examination Program (CLEP) - A score equivalent to a grade of “B” or above is required.

Defense Activity for Non-Traditional Education Support (DANTES) - A score equivalent to a grade of “B” or above is required.

STUDENT RECORDS

The policy regarding student educational records is designed to protect the privacy of students against unwarranted intrusions and is consistent with Section 43B of the General Education Provision Act (commonly known as the Family Educational Rights and Privacy Act of 1974, as amended). The details of the College policy on student records and the procedures for gaining access to student records are contained in the current issue of the Student Handbook which is available in the library, online, and in the Office of the Dean of Student Affairs.

REGISTRATION

During the registration period, students select their courses for the next semester and register their course selections in the Office of the Registrar. Course selection is made in consultation with the student’s faculty advisor in order to insure that the course schedule is consistent with College requirements and student goals. After the registration period, any change in the student’s course schedule must be approved by both the faculty advisor and Office of the Registrar. Students may not receive credit for courses in which they are not formally registered.

During the first five days of classes, students may drop any course without any record of such enrollment appearing on their permanent record, and they may add any course that is not closed. The permanent record will reflect the student’s registration as of the conclusion of the drop/add period. Students wishing to withdraw from a course between the fifth day and the 9th week of classes must process a course withdrawal form in the Office of the Registrar. Withdrawal grades are not computed in the grade point average. Students may not withdraw from courses after the 9th week of a semester and the comparable period during the May and summer terms. Students who stop attending a course (or courses) but do not withdraw will receive a grade(s) of “F.”

In zero semester hour and two semester hour (1/2 unit) courses meeting only during the last half of any semester, students may drop/add for a period of five days, effective with the mid-term date shown on the academic calendar. Withdrawal from zero-credit and half-semester courses with a withdrawal grade may occur within 4-1/2 weeks of the beginning of the course. It is understood that the period of time at the beginning of the semester will be identical, for example, a period of five days as indicated above.

Cross Registration

A special opportunity exists in the Williamsport area for students to take courses at the Pennsylvania College of Technology. Students may enroll for less than a full-time course load at the Pennsylvania College of Technology while remaining enrolled in courses at Lycoming.

Students must be enrolled full-time in a degree program and have earned no more than 93 semester hours. Cross registration is available for the Fall and Spring Semesters, and Summer I and II. It is not available for May Term.

NON-DEGREE STUDENTS

Students who do not wish to pursue a degree at Lycoming College may, if space permits, register for credit or audit courses on either a part-time or full-time basis. Students who register for less than 12 semester hours are considered to be enrolled part-time; students who register for 12 or more semester hours are considered to be enrolled full-time and must pay the \$200 contingency fee.

Anyone wishing to register as a non-degree student must fill out an application form in the Admissions Office, pay a one-time application fee, and pay the tuition rate in effect at the time of each enrollment. After a non-degree student has attempted four unit courses (16 semester hours), the student must either matriculate or obtain permission from the Dean of the College to continue study on a non-degree basis.

All non-degree students are subject to the general laws and regulations of the College as stated in the College Catalog and the Student Handbook. The College reserves the right to deny permission to register for individuals who do not meet the standards of the College.

Students who wish to change from a non-degree to a degree status must apply for admission as a degree candidate and satisfy all conditions for admission and registration in effect at that time.

AUDITORS

Any person may audit courses at Lycoming at one-fourth tuition per course. Members of the Lycoming College Scholar Program may audit a fifth unit course per semester at no additional charge. Laboratory and other special fees must be paid in full. Examinations, papers, and other evaluation devices are not required of auditors, but individual arrangements may be made to complete such exercises with consent of the instructor. The option to audit a course must be declared by the end of the drop/add period. Forms are available in the Registrar's Office.

ATTENDANCE

The academic program at Lycoming is based upon the assumption that there is value in class attendance for all students. Individual instructors have the prerogative of establishing reasonable absence regulations in any course. The student is responsible for learning and

observing these regulations.

WITHDRAWAL FROM THE COLLEGE

A student who wishes to withdraw from the College during the semester should contact the Assistant Dean for Freshmen or the Assistant Dean for Sophomores. College personnel will explain the procedure to ensure that the student's financial and academic records are properly closed.

A student who decides to discontinue study at the College as of the conclusion of the current semester must provide the Registrar with written notification of such plans in order to receive a refund of the contingency deposit. See Lycoming College Withdrawal Refund Policy for details.

GRADING SYSTEM

The evaluation of student performance in courses is indicated by the use of traditional letter symbols. These symbols and their definitions are as follows:

A EXCELLENT - Signifies superior achievement through mastery of content or skills and demonstration of creative and independent thinking.

B GOOD - Signifies better-than-average achievement wherein the student reveals insight and understanding.

C SATISFACTORY - Signifies satisfactory achievement wherein the student's work has been of average quality and quantity. The student has demonstrated basic competence in the subject area and may enroll in additional course work.

D PASSING - Signifies unsatisfactory achievement wherein the student met only the minimum requirements for passing the course and should not continue in the subject area without departmental advice.

F FAILING — Signifies that the student has not met the minimum requirements for passing the course.

I INCOMPLETE WORK — Assigned in accordance with the restrictions of established academic policy.

R A REPEATED COURSE — Students shall have the option of repeating courses for which they already have received a passing grade in addition to those which they have failed. Credit is received only once for the course. The most recent course grade will count toward the GPA.

P PASSING WORK, NO GRADE ASSIGNED — Converted from traditional grade of A through D-.

X AUDIT — Work as an auditor for which no credit is earned.

W WITHDRAWAL — Signifies withdrawal from the course from the sixth day through the ninth week of the semester. Students may not exceed 24 semester hours of unsuccessful course attempts (grade of F and W) except in the case of withdrawal for documented medical or psychological reasons.

Pluses and minuses may be awarded (except for A+, F+, or F-) at the discretion of the instructor. The cumulative grade point average (GPA) is calculated by multiplying quality points by credits and dividing the total quality points by the total credits. A quality point is the unit of measurement of work done by the student. The cumulative GPA is not determined by averaging semester GPA's.

The grade point average for the major and minor is calculated in the same way as the cumulative grade point average. A minimum of 2.00 is required for the cumulative grade point average in the major and minor to meet the requirements for graduation.

Grade	Quality Points Earned for Each Semester Hour
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	0.67
F	0.00

Pass/Fail

Use of the pass/fail grading option is limited as follows:

- Students may enroll on a P/F basis in no more than one unit course per semester and in no more than four unit courses during their undergraduate careers.
- P/F courses completed after declaration of a major or minor may not be used to satisfy a requirement of that major or minor, including courses required by the major or minor department which are offered by other departments. (Instructor-designated courses are excepted from this limitation.)
- Courses for which a grade of P is recorded may not be used toward fulfillment of any distribution or "W" course requirement.
- Students may not enroll in ENGL 106 on a P/F basis.
- A course selected on a P/F basis from which a student subsequently withdraws will not count toward the four-course limit.

- Instructor-designated courses may be offered during the May term with the approval of the Dean of the College. Such courses are not counted toward the four-course limit.
- P grades are not computed in the grade point average.
- Students electing the P/F option may designate a minimum acceptance letter grade from A to B-. If a student earns the designated grade or better, the grade will be recorded in the permanent record and computed in the grade point average. If a student selects P/F and earns a grade of A to D-, a P will be recorded in the permanent record but not computed in the grade point average. In all cases, if a student earns a grade of F, this grade will be recorded in the permanent record and computed in the student's grade point average.
- Students must declare the P/F option before the drop/add deadline.
- Instructors are not notified which of their students are enrolled on an P/F basis.
- Students electing the P/F option are expected to perform the same work as those enrolled on a regular basis.

Incomplete Grades

Incomplete grades may be given if, for absolutely unavoidable reasons (usually medical in nature), the student has not been able to complete the work required in the course. An incomplete grade must be removed within six weeks of the next regular semester, otherwise the incomplete is converted to an "F."

Repetition of Course

Students shall have the option of repeating courses for which they already have received a passing grade in addition to those which they have failed. Recording of grades for all repeated courses shall be governed by the following conditions:

- A course may be repeated only one time. Both attempts will be recorded on the student's transcript.
- Credit for the course will be given only once.
- The most recent grade will count toward the GPA with this exception: A "W" grade cannot replace another grade.

Final Course Grade Appeal Process

Assigning final course grades is a responsibility that falls within the professional judgment and expertise of each faculty member. Grades assess as accurately as possible a student's performance according to clear criteria provided in the course such as academic performance, class attendance, and punctuality in submitting assignments. Student appeals of the final course grade must follow the three-step procedure outlined below.

(1) At any time after final grade reports are issued but no later than two weeks into the beginning of the semester following the conclusion of the course, the student must request an informal conference with the instructor to discuss the grade and attempt to resolve the concern.

(2) If the outcome of the informal conference is not satisfactory to the student, or the instructor is not available, the student may submit a written request to meet with the department chairperson (or another faculty member in the department in instances involving the chairperson) within two weeks of meeting with the instructor. The student's request must include a written statement outlining the basis for the appeal and documenting the date(s) when the student met with the course instructor. It is the function of the chairperson to determine the relevant facts and to attempt to resolve the disagreement. The decision regarding the course grade in question will be made by the instructor in consultation with the chairperson (or his/her stand-in). The student will receive from the department chairperson written notification of the decision within one week of the meeting with the chairperson.

(3) If resolution has not been achieved at step two, the student or the instructor may make a written appeal to the Dean of the College within two weeks of the department chairperson's written notification. In order to resolve the disagreement, the Dean will confer with the student and the instructor in private sessions. If the Dean is unable to accomplish a resolution, she/he will forward the case to the Committee on Academic Standards.

(4) Appeal to the Committee on Academic Standards is the most serious level which a final course grade appeal can reach. Both the student and the instructor must submit brief written statements (with accompanying documentation) to the Committee, describing the matter as they understand it. The Committee may decide not to hear the appeal on the basis of the written statements. If it does hear the appeal, the Committee will make a final decision in the matter, which could include changing the original grade. Cases involving grade appeals to the Committee on Academic Standards will be heard by the entire committee but will be voted on only by the four faculty members serving on the committee. The Dean will communicate in writing to the student and the instructor the final decision of the Committee within three weeks of receiving the appeal. This is the final step in the appeal process.

ACADEMIC LEVELS

The following table is used to determine the academic grade level of degree candidates. See Financial Aid for more information.

Year	Semester	Number of Semester Hours Earned
Freshman	1	Fewer than 12
	2	At least 12 but fewer than 24
Sophomore	1	At least 24 but fewer than 40
	2	At least 40 but fewer than 56
Junior	1	At least 56 but fewer than 76
	2	At least 76 but fewer than 96
Senior	1	At least 96 but fewer than 112
	2	More than 112

ACADEMIC STANDING

Good Academic Standing

Students will be considered in good academic standing if they meet the following standard:

Semester Hours Completed	Minimum Cumulative GPA
fewer than or equal to 16	1.85
more than 16, fewer than or equal to 32	1.95
more than 32	2.00

Probation

Students who do not meet the standards for good academic standing and/or who have earned two or more failing grades at the end of any given semester, will be placed on academic probation for the next semester.

Students on academic probation are required to pass ARC 100, Success Skills Workshop, if they have not already done so and are encouraged to attend programs developed by the Freshman and Sophomore deans.

Suspension

Students are eligible for suspension from the College when:

- their cumulative grade point average is below good standing for any two semesters, or
- they earn a grade point average of 1.50 or under in any one semester.

The period of suspension will be for a minimum of one full semester, not including May term or the summer sessions.

- After this time students may apply for readmission to the College. The decision for readmission will be made by the Committee on Academic Standards. Readmission is not guaranteed.
- Students readmitted after suspension will be on academic probation.
- Students readmitted after suspension who fail to meet the required standards may be dismissed.
- Students may request permission to take courses at another institution. Courses not receiving prior approval will not be accepted for transfer.

Dismissal

Students will be subject to dismissal from the College when:

- they exceed 24 semester hours of unsuccessful course attempts (grades of F and W) except in the case of withdrawal for documented medical or psychological reasons, or
- they cannot reasonably complete all requirements for a degree.

The standard length of dismissal will be for a period of two years.

- After this time students may apply for readmission to the College. The decision for readmission will be made by the Committee on Academic Standards. Readmission is not guaranteed.
- Students readmitted after dismissal will be on academic probation.
- Students may request permission to take courses at another institution. Courses not receiving prior approval will not be accepted for transfer.

Probation, suspension, and dismissal become effective at the end of the semester in which the student fails to meet the academic standards listed above. The student will be notified of such action via U.S. mail. Receipt of such notice is not a prerequisite to the student's being placed on probation, suspension, or dismissal.

ACADEMIC HONESTY

The integrity of the academic process of the College requires honesty in all phases of the instructional program. The College assumes that students are committed to the principle of academic honesty. Students who fail to honor this commitment are subject to dismissal. Procedural guidelines and rules for the adjudication of cases of academic dishonesty are printed in *The Student Handbook*.

ACADEMIC HONORS

Dean's List

Students are admitted to the Dean's List at the end of the fall and spring semesters if they meet all of the following conditions:

- complete at least 12 semester hours for the semester at Lycoming or an approved affiliate, cooperative, or exchange program (see section of catalog dealing with Study Abroad, Cooperative programs, The Philadelphia Center, Washington Semester, United Nations Semester and Capitol Semester)
- earn a minimum grade point average of 3.50 for the semester
- do not incur grades of F
- do not incur grades of P (except in choir, band and in those courses graded only as P/F)
- do not repeat any courses (except those which may be repeated for credit)

Graduation Honors

Students are awarded the Bachelor of Arts degree or the Bachelor of Science degree with honors when they have earned the following grade point averages based on all courses attempted at Lycoming, with a minimum of 64 semester hours (16 units) required for a student to be eligible for honor:

summa cum laude..... exactly 3.90-4.00
magna cum laude exactly 3.70-3.89
cum laudeexactly 3.50-3.69

Academic Honor Awards, Prizes, and Societies - Superior academic achievement is recognized through the conferring of awards and prizes at the annual Honors Convocation and Commencement and through election to membership in honor societies.

SOCIETIES

Biology.....	Beta Beta Beta
Business	Delta Mu Delta
Chemistry.....	Gamma Sigma Epsilon
Communication.....	Alpha Epsilon Rho
Criminal Justice	Alpha Phi Sigma
Economics.....	Omicron Delta Epsilon
Education	Kappa Delta Pi
English	Sigma Tau Delta
Foreign Language	Phi Sigma Iota
General Academic.....	Phi Kappa Phi
History.....	Phi Alpha Theta
Mathematics.....	Kappa Mu Epsilon
Philosophy.....	Phi Sigma Tau
Physics	Sigma Pi Sigma
Political Science.....	Pi Sigma Alpha
Psychology.....	Psi Chi
Religion.....	Theta Alpha Kappa
Social Science	Pi Gamma Mu
Theatre	Alpha Psi Omega

Lycoming College reserves the right to amend or change the policies and procedures stated in this handbook without prior notice to those who may be affected by them. The provisions of this publication are not to be regarded as an irrevocable contract between the applicant and/or the student and Lycoming College.

THE ACADEMIC PROGRAM

Lycoming College awards two different degrees: Bachelor of Arts (B.A.) and Bachelor of Science (B.S.). For students wishing to do so, multiple degrees are possible. Candidates for multiple degrees must satisfy all requirements for each degree and earn a minimum of 40 units (160 semester hours). Students who have completed fewer than 40 units but more than 32 units (128 semester hours), and who have completed all other requirements for two baccalaureate degrees from Lycoming College will receive only one baccalaureate degree. They must choose the degree to be conferred. Completed majors will be posted to the transcript.

Freshmen entering the College during the 2014-2015 academic year are subject to the requirements which appear on the following pages. Continuing students are subject to the Catalog in effect at the time of their entry unless they elect to complete the current curriculum. Students who transfer to the College with advanced standing will be subject to the requirements imposed upon other students at the College who have attained the same academic level.

Students already possessing a baccalaureate degree who are returning for a second degree will be reviewed on an individual basis by the Registrar and major department. Post-baccalaureate

students will be subject to the current catalog, must complete all major requirements and related prerequisites, and may be required to complete the distribution requirements. This does not apply to non-degree students in certificate-only programs.

Students must complete the final 32 semester hours of the degree program at Lycoming College. At least 16 semester hours in the major program must be taken at Lycoming.

If a student interrupts his or her education but returns to the College after no more than one academic year has passed, he/she will retain the same requirements in effect at the initial date of entrance. A student who withdraws from the College for more than one year will, upon return, be required to complete the requirements currently imposed upon other students of the same academic level.

Lycoming College certifies five official graduation dates per calendar year. Diplomas are awarded when all materials confirming the completion of the graduation requirements have been received and approved by the Registrar's Office at least five days prior to the date of graduation. Degrees are awarded at the following times: **January 1** for those who complete requirements between September 1 and the end of the Fall semester; **May Commencement date** for those who complete requirements between January 1 and the end of the Spring semester; **May term** for those who complete requirements during May term; **Summer I** for those who complete requirements during Summer I; **Summer II** for those who complete requirements during Summer II.

Lycoming's Commencement ceremony occurs in May. Students will be permitted to participate in the ceremony when (a) they have finished all degree requirements as of the preceding January 1, have finished all requirements as of the May date, or have a plan approved by the Registrar for finishing during May term or the Summer sessions; and (b) they are in good academic standing at the conclusion of their last semester prior to the ceremony.

The College will graduate any student who has completed the distribution program, fulfilled the requirements for one major, earned a minimum of 32 units (128 semester hours) and met all other requirements for graduation.

Exceptions to or waivers of any requirements and/or policies listed in this Catalog must be made by the Committee on Academic Standards.

THE BACCALAUREATE DEGREE

Lycoming College is committed to the principle that a liberal arts education is the ideal foundation for an informed and productive life. The liberal arts — including the fine arts, the humanities, mathematics, the natural and social sciences — have created the social, political, economic and intellectual systems which help define contemporary existence. Therefore, it is essential that students grasp the modes of inquiry and knowledge associated with these disciplines.

Consequently, the Baccalaureate degree (Bachelor of Arts or Bachelor of Science) is conferred upon the student who has completed an educational program incorporating the two principles of

the liberal arts known as distribution and concentration. The objective of the distribution principle is to insure that the student achieves breadth in learning through the study of the major dimensions of human inquiry: the humanities, the social sciences, and the natural sciences. The objective of the concentration principle is to provide depth of learning through completion of a program of study in a given discipline or subject area known as the major. The effect of both principles is to impart knowledge, inspire inquiry, and encourage creative thought.

THE BACHELOR OF ARTS DEGREE

Requirements for Graduation

Every B.A. degree candidate is expected to meet the following requirements in order to qualify for graduation:

- Complete the distribution program.
- Complete the Writing Across the Curriculum Program requirements.
- Complete one year of Physical Activities, Wellness, or Community Service. Military Science 101, 201, 301, or 401 may satisfy this requirement.
- Complete a major consisting of at least eight unit courses (32 semester hours). Students must pass every course required for the major and have a minimum major grade point average of 2.00.
- Pass a minimum of 32 units (128 semester hours) with a minimum cumulative grade point average of 2.00. Additional credits beyond 128 semester hours may be completed provided that the minimum 2.00 cumulative average is maintained.
- Complete in residence the final eight courses (32 semester hours) offered for the degree at Lycoming.
- Satisfy all financial obligations incurred at the College.
- Complete the Intent to Graduate Form and file the form in the Registrar's Office during the final semester before graduation.

THE BACHELOR OF SCIENCE DEGREE

The Bachelor of Science degree is available to students majoring in Biology, Chemistry, Physics or Psychology. Students may elect either the B.A. or the B.S. degree in these majors. The B.S. degree is appropriate for students planning further education in a graduate or professional school.

Requirements For Graduation

Every B.S. degree candidate is expected to meet the following requirements in order to qualify for graduation:

- Complete the B.S. major in either Biology, Chemistry, Physics or Psychology. Students must pass every course required for the major and have a minimum major grade point average of 2.00.
- Complete the distribution program.
- Complete the Writing Across the Curriculum Program requirements.
- Complete one year of Physical Activities Wellness, or Community Service. Military Science 101, 201, 301 or 401 may satisfy this requirement.

- Pass a minimum of 32 units (128 semester hours) with a minimum grade point average of 2.00. Additional credits beyond 128 semester hours may be completed provided that the minimum 2.00 cumulative average is maintained.
- Complete in residence the final eight courses (32 semester hours) offered for the degree at Lycoming.
- Satisfy all financial obligations incurred at the College.
- Complete the Intent to Graduate Form and file the form in the Registrar's Office during the final semester before graduation.

THE DISTRIBUTION PROGRAM

The Distribution Program for the B.A. and B.S. Degrees

A course can be used to satisfy only one distribution requirement (except in the Cultural Diversity area). Courses for which a grade of "P" is recorded may not be used toward the fulfillment of the distribution requirements. (For an explanation refer to the Grading System.) No more than two courses used to satisfy the distribution requirements may be selected from the same department, except for ENGL 106 or 107 and Modern Language courses numbered below 222. This means that in English, Modern Languages literatures, and Theatre care must be taken to comply with this rule.

A course in any of the following distribution requirements refers to a full-unit course (four semester hours) taken at Lycoming, any appropriate combination of fractional unit courses taken at Lycoming which accumulate to four semester hours, any appropriate course which is taken by cross-registration, any appropriate course which is part of an approved off-campus program (such as those listed in the catalog sections titled COOPERATIVE PROGRAMS, SPECIAL ACADEMIC OPPORTUNITIES, and STUDY ABROAD PROGRAMS), or any approved course transferred from another institution.

Special distribution requirements which apply to students in the Lycoming Scholar Program appear under the Honors Program. For information regarding CLEP and AP credit, see Alternative Credit Sources.

A. English - Students are required to pass ENGL 106 or 107 during their freshman year.

B. Fine Arts - Students are required to pass two courses (or the equivalent) from Art, Creative Writing, Digital Media Communication, Film, Literature, Music, and/or Theatre.

C. Modern and Ancient Language Studies – Students are required to pass a course in French, German, Greek, Hebrew, Latin, or Spanish numbered 101, unless exempted on the basis of placement, and a course numbered above 101 in the same language. Placement in a modern language at the appropriate course level will be determined by the faculty of the Department of Modern Languages and Literatures. Placement in an ancient language at the appropriate course level will be determined by the Department of Religion.

D. Humanities - Students are required to pass four courses from History, Literature (English, Modern Languages and THEA 335), Philosophy, and/or Religion. At least one course must be successfully completed in 3 of the 4 disciplines.

E. Mathematics - Students are required to demonstrate competence in basic algebra and to pass one course selected from MATH 106, 109, 112, 115, 123, 128, 129, 130, 214, or 216. The requirement of competence in basic algebra must be met before the end of the fourth semester or within one year of entry, whichever is later. Students that have not met this competency requirement before the final semester of the applicable time period must register for MATH 100 in that semester.

New students take the mathematics placement examination determined by the Department of Mathematical Sciences at a new-student orientation session. Those who do not pass this exam may take home a computerized study guide and take another exam at a specified time.

After beginning classes at Lycoming College, a student may satisfy the basic algebra competence requirement by successful completion of MATH 100 at Lycoming, or of an approved course transferred from another college, or by passing a competence examination administered by the Department of Mathematical Sciences. Enrolled students may take this examination only once during a semester and may be subject to a testing fee. No student will be permitted to take this examination while enrolled in MATH 100.

F. Natural Sciences - Students are required to pass two laboratory courses chosen from Astronomy/Physics, Biology, and/or Chemistry.

G. Social Sciences - Students are required to pass two courses from Archaeology, Criminal Justice and Criminology, Economics, Political Science, Psychology, or Sociology-Anthropology.

H. Cultural Diversity - Students are required to pass one designated course which introduces students to Cultural Diversity which are distinct from the predominant Anglo-American culture. The course selected to fulfill this requirement may also be used to satisfy one of the other general education requirements in the liberal arts. Students also may fulfill the cultural diversity requirement by successfully completing at least one full-time semester (12 semester hours) in a college-accepted study abroad program.

The following courses have been approved to be offered as cultural diversity courses and will be offered as such. Students must check semester class schedules to determine which courses are offered as “D” (cultural diversity) courses for that semester.

ANTHROPOLOGY	ANTH 114, 229, 230, 232, 234, 310, 320, 344
ART	ART 222, 339
BUSINESS	BUS 244, 319
CRIMINAL JUSTICE	CJCR 334
EDUCATION	ECED 243, EDUC 338, SPED 243, 338
ENGLISH	ENGL 229, 332, 334
FRENCH	FRN 221, 222, 311
GERMAN	GERM 221, 222

HISTORY	HIST 120, 140, 230, 232, 238, 240, 246, 325, 338, 342
MUSIC	MUS 116, 128, 234, 238
POLITICAL SCIENCE	PSCI 140, 241, 331, 367
PSYCHOLOGY	PSY 341
RELIGION	REL 110, 210, 211, 212, 225, 226, 320, 323 328, 333
SOCIOLOGY	SOC 240, 334
SPANISH	SPAN 221, 222, 311
THEATRE	THEA 114, 212, 332, 333, 335, 410
WOMEN'S AND GENDER STUDIES	WGST 200, 300

Writing Across the Curriculum Program

I. Purpose

The Lycoming College Writing Across the Curriculum Program has been developed in response to the conviction that writing skills promote intellectual growth and are a hallmark of the educated person. The program has therefore been designed to achieve two major, interrelated objectives:

- 1) to enhance student learning in general and subject mastery in particular, and
- 2) to develop students' abilities to communicate clearly.

In this program, students are given opportunities to write in a variety of contexts and in a substantial number of courses in which they receive faculty guidance and reinforcement.

II. Program Requirements

Students must successfully complete the following writing requirements:

- 1) ENGL 106 (Composition) or ENGL 107 (Honors Composition)
- 2) A writing component in all distribution courses completed at Lycoming
- 3) Three courses designated as writing intensive, or "W" courses.

The following policies apply:

- Successful completion of ENGL 106 or 107 is a prerequisite for enrollment in writing-intensives.
- All courses designated "W" are numbered 200 or above.
- One of the student's "W" courses must be in his/her major (or one of the majors) or with departmental approval from a related department. All three cannot carry the same course-number prefix (e.g. PHIL, ENGL, ACCT, etc.).

Physical Activities, Wellness, and Community Service Program

I. Purpose

This program is designed to promote students' physical welfare, health awareness, and to encourage a sense of civic responsibility.

II. Program Requirements

Students must pass any combination of two semesters of zero credit course work selected from the following:

1. Designated physical activities courses,
2. Designated varsity athletics,
3. Designated wellness courses,
4. Designated community service projects,
5. Designated military science courses.

Research and Information Competencies

The need to support and instruct students on how to evaluate, access and understand the information-based environment that surrounds them is critical. A distinguished liberal arts education relies on a breadth of competencies as well as the ability to access knowledge. At Lycoming College, students are encouraged to formulate and refine questions; to acquire basic knowledge of where to begin the discovery process; to know how, when and what kind of information defines effective research; to synthesize, format, cite and reconcile diverse information; to evaluate the quality and sustainability of information; and to differentiate between types of literary sources and the relevance of each.

CONCENTRATION

The Major

Students are required to complete a series of courses in one departmental or interdisciplinary (established or individual) major. Specific course requirements for each major offered by the College are listed in the curriculum section of this catalog. Students must earn a 2.00 or higher cumulative grade point average in the major. Students must declare a major by the beginning of their junior year. Departmental and established interdisciplinary majors are declared in the Office of the Registrar, whereas individual interdisciplinary majors must be approved by the Committee on Curriculum Development. Students may complete more than one major, each of which will be recorded on the transcript. Students may be removed from major status if they are not making satisfactory progress in their major. This action is taken by the Dean of the College upon the recommendation of the department, coordinating committee (for established interdisciplinary majors), or Curriculum Development Committee (for individual interdisciplinary majors). The decision of the Dean of the College may be appealed to the Committee on Academic Standards by the student involved or by the recommending department or committee. Students pursuing majors in two different degrees are subject to the policy for dual degrees listed under the Academic Program.

Departmental Majors — The following Departmental majors are available:

Bachelor of Arts Degree:

Accounting
Art History
Art Studio
Astronomy

Biology
Business Administration
Chemistry
Corporate Communication
Criminal Justice
Criminology
Digital Media Communication
Economics
English
French
German
History
Mathematics
Music
Philosophy
Physics
Political Science
Psychology
Religion
Sociology-Anthropology
Spanish
Theatre

Bachelor of Science Degree:

Astrophysics
Biology
Chemistry
Physics
Psychology

Established Interdisciplinary Majors — The following established Bachelor of Arts degree interdisciplinary majors include course work in two or more departments:

Actuarial Mathematics
American Studies
Archaeology and Culture of the Ancient Near East and Mediterranean
International Studies
Literature

Individual Interdisciplinary Majors — Students may design majors which are unique to their needs and objectives and which combine course work in more than one department. These majors are developed in consultation with students' faculty advisors and with a panel of faculty members from each of the sponsoring departments. The applications are acted upon by the Curriculum Development Committee. The major normally consists of at least 10 courses, at least six of which are at the 300 or 400 level. No more than two courses used to satisfy distribution requirements may be included in the major. Examples of individual interdisciplinary majors are:

Legal Studies, Women and the Legal System, and Religion and Marketing. Applications are available in the Office of the Registrar.

The Minor

The College awards two kinds of minors, departmental and interdisciplinary, in recognition of concentrated course work in an area other than the student's major. All minors are subject to the following limitations:

- A minor must include at least two unit courses which are not counted in the student's major.
- A student may receive at most two minors.
- Students with two majors may receive only one minor; students with three majors may not receive a minor.
- Students may not receive a minor in their major discipline unless their major discipline is Actuarial Mathematics and the minor is Mathematics (three courses must be taken outside of the major); their major is Art and the minor is Art History; their major is Art and the minor is Web Design and Technologies; their major is Biology and the minor is Environmental Science; their major is Corporate Communication and the minor is Digital Media Communication, Film Studies, or Media Writing; their major is Digital Media Communication and their minor is Film Studies or Media Writing; or their major is Religion and the minor is Biblical Languages.

A discipline is any course of study in which a student can major. Tracks within majors are not separate disciplines.

- A student may not receive a minor unless his/her average in the courses which count for his/her minor is a minimum of 2.00.
- Courses taken P/F may not be counted toward a minor. Students must declare their intention to minor by completing a form available in the Office of the Registrar.

When students complete a minor, the title will be indicated on their official transcript. Minor requirements must be completed at the time of graduation.

Departmental Minors — Requirements for a departmental minor vary from department to department. Students interested in pursuing a departmental minor should consult that department for its policy regarding minors.

Departmental minors are available in the following areas:

ACCOUNTING

ART

Art History

Commercial Design

Painting

Photography

Sculpture

ASTRONOMY

BIOLOGY

Biology

Environmental Science
BUSINESS ADMINISTRATION
CHEMISTRY
COMMUNICATION
 Digital Media Communication
 Film Studies
 Media Writing
CRIMINAL JUSTICE
ECONOMICS
 General
 Quantitative
ENGLISH
 Literature
 Writing
MODERN LANGUAGES AND LITERATURES
 French
 German
 Spanish
HISTORY
 American History
 European History
 History
MATHEMATICAL SCIENCES
 Computational
 Computer Science
 Mathematics
MUSIC
PHILOSOPHY
 Philosophy
 Philosophy and Law
 Philosophy and Science
 Ethics
PHYSICS
POLITICAL SCIENCE
 Political Science
 American Politics
 World Politics
 Legal Studies
PSYCHOLOGY
RELIGION
SOCIOLOGY-ANTHROPOLOGY
THEATRE
 Performance
 Technical Theatre
 Theatre History and Literature

Interdisciplinary Minors — Interdisciplinary minors include course work in two or more departments. Students interested in interdisciplinary minors should consult the faculty coordinator of that minor. Interdisciplinary minors are available in the following areas:

AMERICAN STUDIES
ARCHAEOLOGY AND CULTURE OF THE ANCIENT NEAR EAST AND
MEDITERRANEAN
BIBLICAL LANGUAGES
CLASSICAL STUDIES
ENVIRONMENTAL SUSTAINABILITY
FINANCIAL ECONOMICS AND ANALYSIS
HEALTH CARE ADMINISTRATION
MEDIEVAL STUDIES
MULTICULTURALISM
PUBLIC POLICY- DOMESTIC PUBLIC POLICY, INTERNATIONAL PUBLIC POLICY
WEB DESIGN AND TECHNOLOGIES
WOMEN'S AND GENDER STUDIES

PRE-PROFESSIONAL PROGRAMS (also see “Pre-Professional Advising” in The Advising Program section) Preparation for Educational Professions — Lycoming College believes that the liberal arts provide the best preparation for future teachers. Thus, all education students complete a liberal arts major in addition to the Lycoming College Teacher Education Certificate requirements. Students can be certified in early childhood, secondary (biology, chemistry, citizenship, English, general science, mathematics, physics, social sciences, social studies), K-12 (art, modern languages, music), and dual certification special education.

All teacher education programs are approved by the Pennsylvania Department of Education. Pennsylvania certificates are recognized in most other states either through reciprocal agreements or by transcript evaluation. For more detailed information, see the Education Department listing.

Preparation for Health Professions — The program of pre-professional education for the health professions (allopathic, dental, osteopathic, podiatric and veterinary medicine; optometry, and pharmacy) is organized around a sound foundation in biology, chemistry, mathematics, and physics and a wide range of subject matter from the humanities, social sciences, and fine arts. At least three years of undergraduate study is recommended before entry into a professional school; the normal procedure is to complete the Bachelor of Arts degree.

Students interested in one of the health professions or in an allied health career should make their intentions known to the Admissions Office when applying and to the Health Professions Advisory Committee (HPAC), Dr. Edward Gabriel, Chair, during their first semester (see Pre-Professional Advising).

Preparation for Legal Professions — Lycoming offers a strong preparation for students interested in law as a profession. Admission to law school is not predicated upon a particular major or area of study; rather, a student is encouraged to design a course of study (traditional or interdisciplinary major) which is of personal interest and significance. While no specific major is

recommended, there are certain skills of particular relevance to the pre-law student: clear writing, analytical thinking, and reading comprehension. These skills should be developed during the undergraduate years.

Pre-law students should register with the Legal Professions Advisory Committee (LPAC), Dr. John Whelan, Chair, during their first semester (see Pre-Professional Advising).

Preparation for Theological Professions — Students preparing to attend a theological seminary should examine the suggestions set down by the Association of Theological Schools. It is recommended that students pursue a broad program in the liberal arts with a major in one of the humanities (English, history, languages, literature, philosophy, religion) or one of the social sciences (American studies, criminal justice, economics, international studies, political science, psychology, sociology-anthropology). Students preparing for a career in religious education should major in religion and elect five or six courses in psychology, education and sociology. This program of study will qualify students to work as educational assistants or directors of religious education after graduate study in a theological seminary.

Students should register with Theological Pursuits and Callings (TPAC), Dr. Steven Johnson, Chair, during their first semester. TPAC acts as a “center” for students, faculty, and clergy to discuss the needs of students who want to prepare themselves for the ministry, religious education, advanced training in religion, or related vocations (see Pre-Professional Advising).

COOPERATIVE PROGRAMS

Lycoming has developed several cooperative programs to provide students with opportunities to extend their knowledge, abilities, and talents in selected areas through access to the specialized academic programs and facilities of other colleges, universities, academies and hospitals. Although thorough advising and curricular planning are provided for each of the cooperative programs, admission to Lycoming and registration in the program of choice do not guarantee admission to the cooperating institution. The prerogative of admitting students to the cooperative aspect of the program rests with the cooperating institution. Students who are interested in a cooperative program should contact the coordinator during the first week of the first semester of their enrollment at Lycoming. This is necessary to plan their course programs in a manner that will ensure completion of required courses according to the schedule stipulated for the program. All cooperative programs require special coordination of course scheduling at Lycoming.

Engineering Physics – This program is intended for students who are interested in pursuing careers in engineering. The program consists of two options.

Option 1: The 3/2 Pre-engineering Program

Option 1 is a 3/2 program partnership between Lycoming College and the Thomas J. Watson School of Engineering and Applied Science at the State University of New York at Binghamton (SUNY Binghamton). The student will spend three years at Lycoming College taking the necessary distribution, physics, mathematics, and other engineering-oriented courses. Following his/her third year, the student will then transfer to the Watson School of Engineering and

complete engineering courses in either Electrical Engineering or in Industrial and Systems Engineering. At the completion of the 3/2 program, the student will have earned a Bachelor of Science in Physics with an Engineering Physics Concentration and either a Bachelor of Science in Electrical Engineering or a Bachelor of Science in Industrial and Systems Engineering.

Note that for Option 1, a strict adherence to the curriculum guides is essential in order for a student to be able to complete the program in five years.

Option 2: The Physics Major with an Engineering Physics Concentration

Option 2 is a four-year degree at Lycoming College where the student majors physics with a concentration in Engineering Physics. The concentration in engineering physics consists of courses in physics, mathematics, and computer science. The Engineering Physics concentration provides an emphasis on skills useful to students seeking a career in applied physics or engineering. The student can choose to pursue either a BA or BS degree in physics.

Forestry or Environmental Studies — Lycoming College offers a cooperative program with Duke University in environmental management and forestry. Qualified students can earn the baccalaureate and master degrees in five years, spending three years at Lycoming and two years at Duke. All Lycoming distribution and major requirements must be completed by the end of the junior year. At the end of the first year at Duke, a baccalaureate degree will be awarded by Lycoming. Duke will award the professional degree of Master of Forestry or Master of Environmental Management to qualified candidates at the end of the second year.

The major program emphases at Duke are Forest Resource Management, Resource Economics and Policy, and Resource Ecology.

The program is flexible enough, however, to accommodate a variety of individual designs. An undergraduate major in one of the natural sciences, social sciences, or business may provide good preparation for the programs at Duke, but a student with any undergraduate concentration will be considered for admission. All students need at least two courses each in biology, mathematics, and economics.

Students begin the program at Duke in July after their junior year at Lycoming with a one-month session of field work in natural resource management. They must complete a total of 48 units which generally takes four semesters.

Some students prefer to complete the baccalaureate degree before undertaking graduate study at Duke. The master degree requirements for these students are the same as for those students entering after the junior year, but the 48-unit requirement may be reduced for completed relevant undergraduate work of satisfactory quality. All credit reductions are determined individually and consider the students' educational background and objectives. Faculty advisor: Dr. Melvin Zimmerman.

Medical Technology - Students desiring a career in medical technology may either complete a Bachelor of Arts or a Bachelor of Science program followed by a clinical internship at any hospital accredited by the American Medical Association, or they may complete the cooperative program. Students electing the cooperative program normally study for three years at Lycoming,

during which time they complete 24 unit courses, including the College distribution requirements, a major, and requirements of the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). The current requirements of the NAACLS are: four courses in chemistry (one of which must be either organic or biochemistry); four courses in biology (including courses in microbiology and immunology), and one course in mathematics.

Students in the cooperative program usually major in biology, following a modified major of six unit courses that exempts them from Ecology (BIO 224) and Plant Sciences (BIO 225). Students must take either Microbiology (BIO 321) or Microbiology for the Health Sciences (BIO 226), and either Human Physiology (BIO 323) or Cell Biology (BIO 435). The cooperative program requires successful completion of a one-year internship at a hospital accredited by the American Medical Association. Lycoming is affiliated with the following accredited hospitals: Williamsport, Robert Packer, Lancaster, Graduate, and Abington. Students in the cooperative program receive credit at Lycoming for each of eight courses in biology and chemistry successfully completed during the clinical internship. Successful completion of the Registry Examination is not considered a graduation requirement at Lycoming College.

Students entering a clinical internship for one year after graduation from Lycoming must complete all of the requirements of the cooperative program, but are not eligible for the biology major exemptions indicated above. Upon graduation, such students may apply for admission to a clinical program at any hospital.

Optometry — Through the Accelerated Optometry Education Curriculum Program, students interested in a career in optometry may qualify for admission to the Pennsylvania College of Optometry after only three years at Lycoming College.

After four years at the Pennsylvania College of Optometry, a student will earn a Doctor of Optometry degree. Selection of candidates for the professional segment of the program is completed by the admissions committee of the Pennsylvania College of Optometry during the student's third year at Lycoming. (This is one of two routes that students may choose. Any student, of course, may follow the regular application procedures for admission to the Pennsylvania College of Optometry or another college of optometry to matriculate following completion of his or her baccalaureate program.) During the three years at Lycoming College, the student will complete 24 unit courses, including all distribution requirements, and will prepare for his or her professional training by obtaining a solid foundation in biology, chemistry, physics, and mathematics. During the first year of study at the Pennsylvania College of Optometry, the student will take 39 semester hours of basic science courses in addition to introductions to optometry and health care. Successful completion of the first year of professional training will complete the course requirements for the B.A. degree at Lycoming College.

Most students will find it convenient to major in biology in order to satisfy the requirements of Lycoming College and the Pennsylvania College of Optometry. Such students are allowed to complete a modified biology major which will exempt them from two biology courses: Ecology (BIO 224) and Plant Sciences (BIO 225). (This modified major requires the successful

completion of the initial year at the Pennsylvania College of Optometry.) Students desiring other majors must coordinate their plans with the Health Professions Advisory Committee in order to ensure that they have satisfied all requirements. Faculty Advisor: Dr. Edward Gabriel.

Podiatry — Students interested in podiatry may either seek admission to a college of podiatric medicine upon completion of the Bachelor of Arts degree or through the Accelerated Podiatric Medical Education Curriculum Program (APMEC). The latter program provides an opportunity for students to qualify for admission to the Pennsylvania College of Podiatric Medicine (PCPM) or the Ohio College of Podiatric Medicine (OCPM) after three years of study at Lycoming. At Lycoming, students in the APMEC program must successfully complete 24 unit courses, including the distribution requirements and a basic foundation in biology, chemistry, physics, and mathematics. During the first year of study at PCPM or OCPM, students must successfully complete a program of basic science courses and an introduction to podiatry. Successful completion of the first year of professional training will contribute toward the fulfillment of the course requirements for a Bachelor of Arts degree at Lycoming.

Students in the cooperative program who major in biology will be allowed to complete a modified major which will exempt them from two biology courses: Ecology (BIO 224) and Plant Sciences (BIO 225). This modified major requires the successful completion of the initial year at PCPM or OCPM.

Students interested in a career in podiatric medicine should indicate their intentions to the Health Professions Advisory Committee. Faculty Advisor: Dr. Edward Gabriel.

U.S. Army Reserve Officers Training Corps Program (R.O.T.C.) — The program provides an opportunity for Lycoming students to enroll in the Army Reserve Officers' Training Corps (ROTC). Lycoming notes enrollment in and successful completion of the program on student transcripts. Military Science is a four-year program divided into a basic course given during the freshman and sophomore years and an advanced course given during the junior and senior years. The Army ROTC Basic Course comprises four courses and requires no commitment to the military. The Army ROTC Advanced Course comprises four courses and requires a military commitment. The content and methods of the Advanced Course comprise the minimum curriculum that an individual must complete in order to be commissioned.

The U.S. Army Reserve Officers' Training Corps (ROTC) program is offered to Lycoming College students in cooperation with Bucknell University. For more information, call 570-577-1013 or visit <http://www.bucknell.edu/ROTC.xml>.

THE HONORS PROGRAM

The Scholar Program

The Lycoming College Scholar Program is a special program designed to meet the needs and aspirations of highly motivated students of superior intellectual ability. Lycoming Scholars satisfy the College's distribution requirements with more challenging courses than students not in the Scholar Program are required to complete. (Substitutions to the Scholar Distribution Requirements can be made only by successful application to the Scholar's Council.) Lycoming

Scholars also participate in special interdisciplinary seminars and in an independent study culminating in a senior presentation. Scholars may audit a fifth course each semester at no additional cost. In addition, Scholars may be exempted from the usual limitations on independent studies by the Individual Studies Committee.

Students are admitted to the program by invitation of the Scholar Council, the group which oversees the program. The council consists of a director and four other faculty selected by the Dean of the College, and four students elected by current scholars. The guidelines governing selection of new scholars are flexible; academic excellence, intellectual curiosity, and creativity are all taken into account. Students who desire to participate in the Scholar Program but are not invited may petition the Scholar Council for consideration. Petitioning students should provide the Scholar Council with letters of recommendation from Lycoming faculty and a transcript to be sent to the director of the Scholar Program.

To remain in the program, students must maintain a cumulative average of 3.00 or better. Students who drop below this average will be placed on Scholar probation for one semester. After one semester, they will be asked to leave the program if their GPA has not returned to 3.00 or higher. To graduate as a Scholar, a student must have at least a 3.00 cumulative average. Scholars must successfully complete five Lycoming Scholars Seminars, as well as the non-credit Senior Scholar Seminar in which they present the results of their required independent study project. In addition, the following distribution requirements must be met.

Scholar Distribution Requirements for Students in B.A. and B.S. Programs

A. English — Scholars must complete ENGL 106 or ENGL 107 (by invitation only). The Scholar Council strongly recommends that qualified scholars enroll in ENGL 107 if scheduling permits. ENGL 106 or 107 must be taken during the freshman year.

B. Fine Arts — Scholars are required to pass two courses (or the equivalent) from the following: Art: ART 111, 116, 220 or higher; Music: MUS 117, 128, 160 or higher; Theatre: Any course except 135-138, 145, 148, and 149. NOTE: Scholars must earn a course grade of A- or better in THEA 100; Creative Writing: ENGL 240, 322, 341, 342, 411, 412, 441 or 442; Literature: Any English Literature course (except ENGL 215) and the literature courses of the Department of Modern Languages and Literatures (French, German, or Spanish).

C. Modern and Ancient Language Studies — Scholars are required to pass a course in French, German, or Spanish numbered 111 or higher, or a course in Greek, Hebrew or Latin numbered 221 or higher. Placement in a modern language at the appropriate course level will be determined by the faculty of the Department of Modern Languages and Literatures. Placement in an ancient language at the appropriate course level will be determined by the Dept. of Religion. Scholars who have completed two or more years of a given language in high school are not admitted for credit to the elementary course in the same modern language except by written permission of the chairman of the department.

D. Humanities — Scholars are required to pass four courses from three of the following disciplines: History: any course numbered 200 or higher; Literature: any English literature course

(except ENGL 215) and the literature courses of the Department of Modern Languages and Literatures (French, German, or Spanish); Philosophy: any course numbered 219 or higher; Religion: any course numbered 200 or higher.

E. Mathematics — Scholars must earn at least a grade of B (3.00) in one of MATH 106, 109, 112, 115, or 123; or successfully complete one of MATH 128, 129, 130, 214 or 216.

F. Natural Sciences — Scholars are required to pass two laboratory courses from the following: Astronomy/Physics: any course numbered 111 or higher; Biology: any course numbered 110 or higher; Chemistry: any course numbered 110 or higher.

G. Social Sciences — Scholars are required to pass two courses from the following: Archaeology: any course numbered 200 or higher, except 348/448, 402; Criminal Justice and Criminology: any course numbered 200 or higher, except 230, 340, 448/449; Economics: any course numbered 110 or higher; Political Science: any course numbered 110 or higher*; Psychology: PSY 110 or any other PSY course numbered 200 or higher; Sociology-Anthropology: any course numbered 200 or higher, except SOC 448.

*NOTE: Scholars must earn a course grade of B or better in 100 level PSCI courses.

H. Cultural Diversity — Scholars are required to pass one designated course which introduces students to Cultural Diversity which is distinct from the dominant western culture. Approaches to study may be artistic, historical, sociological, anthropological, international, psychological, or issues oriented. The course selected to fulfill this requirement may also be used to satisfy one of the other general education requirements in the liberal arts.

I. Writing Across the Curriculum — This requirement is the same as that stipulated by the College for all students.

J. Physical Activities, Wellness and Community Service — This requirement is the same as that stipulated by the College for all students.

K. Lycoming Scholar Seminars — Team-taught interdisciplinary seminars are held every semester under the direction of the Lycoming Scholar Council. They meet for one hour each week (Tuesdays at noon) and carry one hour of credit. Grades are “A/F” and are based on students’ performance. Lycoming Scholars are required to successfully complete five seminars and they are permitted to register for as many as eight. Topics for each academic year will be selected by the Scholar Council and announced before spring registration of the previous year. Students must be accepted into the Scholar Program before they enroll in a Scholar Seminar. Scholars are strongly urged to register for a least one seminar during the freshman year.

L. Senior Project — In their junior or senior year, scholars must successfully complete an independent studies or departmental honors project which has been approved in advance by the Independent Studies Committee and the Scholar Council. This project must be presented orally as part of the Senior Scholar Seminar and be accepted by the Scholar Council.

M. Major — Scholars must complete a major and 32 units (128 semester hours), exclusive of the Senior Scholar Seminar.

Note to Transfer Students — In the case of transfer students and those who seek to enter the program after their freshman year and in other cases deemed by the Scholar Council to involve special or extraordinary circumstances, the Council shall make adjustments to the scholar distribution requirements provided that in all cases such exceptions and adjustments would still satisfy the regular College distribution requirements.

Management Scholars Program of the Institute for Management Studies

The IMS sponsors a Management Scholars Program for academically talented students in the three IMS departments. To join the Management Scholars Program, a student must satisfy the following criteria:

- a) Have a declared major or minor in one or more of the IMS departments. However, the IMS Director may invite or permit other students to join the Management Scholars Program who do not meet this criteria, such as freshmen who have not yet declared a major or minor.
- b) Have an overall GPA of 3.25 or higher, or exhibit strong academic potential if the student is a first-semester freshman.

To graduate as a Management Scholar, a student must meet the following criteria:

- a) Successfully complete two semester-hours of Management Scholar Seminars.
- b) Successfully complete a major or minor in one of the three IMS departments.
- c) Graduate with a GPA of 3.25 or higher in both overall college work, and within an IMS major and/or minor.
- d) Successfully complete an appropriate internship, practicum or independent study, or complete a special project approved by the IMS Director.

At least one Management Scholar Seminar is taught per academic year on an interdisciplinary topic of relevance to students in all three IMS departments. The seminars are offered as one semester-hour courses and do not result in overload charges for full-time students.

Students who are currently Lycoming College Scholars may also become Management Scholars and participate in both programs.

Departmental Honors

Honors projects are normally undertaken only in a student's major, and are available only to exceptionally well-qualified students who have a solid background in the area of the project and are capable of considerable self-direction and have a GPA of at least 3.00. The prerequisites for registration in an honors program are as follows:

- A faculty member from the department(s) in which the honors project is to be undertaken must agree to be the director and must secure departmental approval of the project.
- The director, in consultation with the student, must convene a committee consisting of two faculty members from the department in which the project is to be undertaken, one of whom

is the director of the project, and one faculty member from each of two other departments related to the subject matter of the study.

- The Honors Committee must then certify by their signatures on the application that the project in question is academically legitimate and worthy of pursuit as an honors project, and that the student in question is qualified to pursue the project.
- The project must be approved by the Committee on Individual Studies.

Students successfully complete honors projects by satisfying the following conditions in accordance with guidelines established by the Committee on Individual Studies:

- The student must produce a substantial research paper, critical study, or creative project. If the end product is a creative project, a critical paper analyzing the techniques and principles employed and the nature of the achievement represented in the project shall be also submitted.
- The student must successfully explain and defend the work in a final oral examination given by the honors committee.
- The Honors Committee must certify that the student has successfully defended the project, and that the student's achievement is clearly superior to that which would ordinarily be required to earn a grade of "A" in a regular independent studies course.
- The Committee on Individual Studies must certify that the student has satisfied all of the conditions mentioned above.

Except in unusual circumstances, honors projects are expected to involve independent study in two consecutive unit courses. Successful completion of the honors project will cause the designation of honors in that department to be placed upon the permanent record. Acceptable theses are deposited in the College library. In the event that the study is not completed successfully or is not deemed worthy of honors, the student shall be reregistered in independent studies and given a final grade for the course.

THE ADVISING PROGRAM

Academic Advising

One advantage of a small college is the direct, personal contact between a student and the College faculty who care about that student's personal, academic, and professional aspirations. The student can draw upon their years of experience to resolve questions about social adjustment, workload, study skills, tutoring, and more. Perhaps the member of the faculty with the most impact on a student is the academic advisor.

The freshman advisor, whom the student meets at summer orientation, assists with course selection by providing accurate information about requirements, programs, and career options. Advisors help students to identify other campus resources, such as counseling and Health Services, Career Development, Campus Activities, and more.

During the sophomore year, the student must choose a major and select an advisor from the major department. The new advisor, while serving as a resource, can best advise that student about course selection and graduate school and career opportunities.

Advisors at Lycoming endeavor to contribute to students' development in yet another way. They insist that students assume full responsibility for their decisions and academic progress. By doing so, they help to prepare them for the harder choices and responsibilities of the professional world.

Also, Lycoming provides special advising programs for careers in medicine, law, and religion. Interested students should register with the appropriate advisory committee immediately after deciding to enter one of these professions.

Pre-Professional Advising (also see “Pre-Professional Programs” in the Concentration section)

Preparation for Educational Professions — Students interested in obtaining teacher certification should consult with a member of the Education Department as early as possible. See the Education Department listing.

Preparation for Health Professions — Students interested in one of the health professions or in an allied health career should make their intentions known to the Admissions Office when applying and to the Health Professions Advisory Committee (HPAC) during their first semester. This committee advises students concerning preparation for and application to health-professions schools. All pre-health professions students are invited to join the student Pre-Health Professions Association. Also see descriptions of the cooperative programs in podiatric medicine, optometry, and medical technology.

Preparation for Legal Professions — Students interested in pre-law should register with the Legal Professions Advisory Committee (LPAC) during their first semester and should join the Pre-Law Society on campus. LPAC assists the pre-law student through advising, compilation of recommendations, and dissemination of information and materials about law and the legal profession. The Pre-Law Society sponsors films, speakers, and field trips including visits to law school campuses.

Preparation for Theological Professions — Students who plan to investigate the religious vocations should register with Theological Pursuits and Callings (TPAC) during their first semester. TPAC acts as a “center” for students, faculty, and clergy to discuss the needs of students who want to prepare themselves for the ministry, religious education, advanced training in religion, or related vocations. Also, it may help coordinate internships for students who desire practical experience in the parish ministry or related areas.

ACADEMIC SUPPORT SERVICES

Academic Resource Center (ARC)

Daniel Hartsock, Director
Shanna Wheeler, Assistant Director
www.lycoming.edu/arc

The Academic Resource Center, located on the third floor of the Snowden Library, provides a variety of free services to the campus community.

Tutoring in Writing — Working one-on-one, Writing Consultants use questioning techniques to help writers improve papers while developing confidence and independence as writers. Writing Consultants discuss development, organization, grammar, documentation, and any other writing concern. Writing Consultants offer more than 35 hours of scheduled tutoring weekly.

Tutoring in the Content Areas—The ARC offers one-on-one tutoring support in most courses. Tutors assist students with homework assignments and test preparation. A list of tutors is available on the ARC website or by contacting the ARC directly.

Study Groups — Conducted for selected classes, study groups offer students an opportunity to draw on the experiences of a successful upper class student to navigate the academic challenges of courses. Study group facilitators attend class and organize review and study sessions outside of class.

Study Skills Support—The ARC provides support through individualized instruction and through small group workshops upon request. Topics vary depending on the needs of students. Also, the ARC offers a more formal option for study skills support: ARC 100, Success Skills Workshop.

ARC 100, Success Skills Workshop

A seven-week course, the workshop introduces students to a variety of topics important to student success. Among these are time management, learning styles, motivation, highlighting text, and note-taking. Topics will be selected to meet students' needs. ARC 100 is highly recommended for students who, in consultation with their academic advisors, choose to improve their academic skills. *This non-credit course will be graded on a pass/fail basis.*

Disability Support—The Coordinator of Services for Students with Disabilities assists students in arranging for classroom accommodations, meeting requirements, and developing appropriate study practices.

Office of the Assistant Dean for Freshmen

Lycoming College believes a student's freshman year needs structure and support. This office serves as a focal point for the freshman and his or her family.

Freshman Orientation — The purpose of this required program is to acquaint new students and their families more fully with the College so that they can begin their Lycoming experience

under the most favorable circumstances. Students sit for placement tests, confer with their academic advisors, preregister for fall classes, and become acquainted with their classmates.

1st Weekend — Begins the day freshmen arrive with New Student Convocation. The weekend activities include academic success, career and library workshops along with social events.

Information and Support — Students and their families find the Office of the Assistant Dean for Freshmen an accessible resource to resolving problems, developing solutions, coordinating services and enabling student success. Student and family newsletters are provided during the year.

Office of the Assistant Dean for Sophomores

The College continues to provide academic counseling and support as students move into the sophomore year. The Assistant Dean for Sophomores meets individually with upperclassmen and, in cooperation with the Assistant Dean for Freshmen, conducts small group retreats and other meetings. These efforts are designed to alert students to their circumstances, to help them explore options, to motivate them to achieve their academic aspirations, and to provide them with useful strategies and resources for success.

In addition, the Sophomore Dean consults with students on a variety of personal, social, residential, financial, and other concerns.

Early Assessment

During the sixth week of the semester classroom instructors prepare Early Assessment Progress Reports for freshmen, new transfer students, students on academic probation, and students with cumulative GPAs less than 2.10. In week seven, academic advisors, students, parents, deans, and coaches receive these progress reports and can counsel students having difficulty regarding adjustment strategies. Progress grades are not recorded on the student's permanent record.

SPECIAL ACADEMIC OPPORTUNITIES

First-Year Seminar — Every fall, Lycoming College offers a number of first-year seminars, small classes that investigate topics in various disciplines. Students receive a letter from the Director of the First Year Seminar in the spring before their freshman year telling them what seminars will be available.

May Term — This four-week voluntary session is designed to provide students with courses listed in the catalog and experimental and special courses that are not normally available during the fall and spring semesters and summer sessions. Some courses are offered on campus, others involve travel. In addition to the courses themselves, attractions include less formal classes and reduced tuition rates. On campus courses have included Field Geology, Energy Economics, Writer's Seminar, American Detective Fiction, and The American Hard-Boiled Mystery. Travel courses have included Painting at the Outer Banks, Art History and Photography, Cross-Cultural Psychology, and Tropical Marine Biology in Jamaica. Students may take a maximum of 4 semester hours.

Summer Sessions I and II — These two successive five-week academic terms offer the opportunity for students to complete internships, independent studies and semester courses. Students may take a maximum of 8 semester hours.

Independent Studies — Independent studies are available to any qualified student who wishes to engage in and receive academic credit for any academically legitimate course of study for which he or she could not otherwise receive credit. It may be pursued at any level (introductory, intermediate, or advanced) and in any department, whether or not the student is a major in that department. An independent studies project may either duplicate a catalogue course or be completely different from any catalog course. In order for a student to be registered in any independent study course, the following conditions must be satisfied:

- 1) An appropriate member of the faculty must agree to supervise the project and must certify by signing the application form that the project involves an amount of legitimate academic work appropriate for the amount of academic credit requested and that the student in question is qualified to pursue the project.
- 2) The studies project must be approved by the chair of the department in which the studies project is to be undertaken. In the case of catalog courses, all department members must approve offering the catalog course as an independent studies course.
- 3) After the project is approved by the instructor and the chair of the appropriate department, the studies project must be approved by the Committee on Individual Studies.

Participation in independent studies projects which do not duplicate catalog courses is subject to the following:

- Students undertaking independent studies projects must have a GPA of at least 2.50.
- Students may not engage in more than one independent studies project during any given semester.
- Students may not engage in more than two independent studies projects during their academic careers at Lycoming College.
- The Individual Studies Committee may exempt members of the Lycoming College Scholar Program from these two limitations.

As with other academic policies, any other exceptions to these two rules must be approved by the Committee on Academic Standards.

Internship Program — An internship is a course jointly sponsored by the College and a public or private agency or subdivision of the College in which a student is able to earn college credit by participating in some active capacity as an assistant, aide, or apprentice.

For a one unit (4 semester hour) internship, at least ten hours per week must be spent in agency duties. Academic requirements include a daily log or journal, a research paper of approximately ten pages or its equivalent, and a reading list of approximately five books or the equivalent. The student and academic supervisor meet weekly during the term of the internship.

The objectives of the internship program are:

- 1) to further the development of a central core of values, awarenesses, strategies, skills, and information through experiences outside the classroom or other campus situations, and
- 2) to facilitate the integration of theory and practice by encouraging students to relate their on-campus academic experiences more directly to society in general and to possible career and other post-baccalaureate objectives in particular.

Any junior or senior student in good academic standing may petition the Committee on Individual Studies for approval to serve as an intern. A maximum of 16 credits can be earned through internships, practica, and/or student teaching. Guidelines for program development, assignment of tasks and academic requirements, such as exams, papers, reports, grades, etc., are established in consultation with a faculty director at Lycoming and an agency supervisor at the place of internship.

Students with diverse majors have participated in a wide variety of internships, including ones with NBC Television in New York City, the Allenwood Federal Prison Camp, Pennsylvania State Department of Environmental Resources, Lycoming County Historical Society, the American Cancer Society, business and accounting firms, law offices, hospitals, social service agencies, banks and Congressional offices.

Practica — Practica are offered in Accounting, Art, Biology, Business, Communication, Criminal Justice, Economics, Education, IMS, Psychology, and Sociology. These courses require 10 to 12 hours of work per week in a business, agency, or organization in addition to classroom time. A maximum of 16 credits can be earned through practica, internships, and/or student teaching.

Teacher Intern Program — The purpose of the Teacher Intern Program is to provide individuals who have completed a baccalaureate degree with the opportunity to become certified teachers through on-the-job training. Interns can earn a Lycoming College Teacher Education Certificate and be certified by the Commonwealth of Pennsylvania in elementary, secondary (biology, chemistry, citizenship, English, general science, mathematics, physics, social sciences, social studies), K-12 (art, modern languages, music), and special education (cognitive, behavior and physical/health disabilities).

Interested individuals should file a formal application with the Education Department for admission to the Intern Program. Upon completion of the application process, interns receive a letter of Intern Candidacy from the Pennsylvania Department of Education which the candidate then uses to apply for a teaching position. Necessary professional coursework can be completed prior to the teaching experience when individuals obtain teaching position. See Education Department listing for more information.

The Philadelphia Center — A full semester liberal arts program for professional development and field study is available to Lycoming students. The program is open to juniors majoring in any discipline or program. The Philadelphia Center is sponsored and administered by the Great Lakes Colleges Association.

Washington Semester — With the consent of the Department of Political Science and the Registrar, selected students are permitted to study in Washington, D.C., at The American University for one semester. They may choose from seven different programs: Washington Semester, Urban Semester, Foreign Policy Semester, International Development Semester, Economic Policy Semester, Science and Technology Semester, or American Studies Semester.

United Nations Semester — With the consent of either the Department of History or Political Science and the Registrar, selected students may enroll at Drew University in Madison, New Jersey, in the United Nations Semester, which is designed to provide a first-hand acquaintance with the world organization. Students with special interests in world history, international relations, law, and politics are eligible to participate.

Capitol Semester Internship Program — This program is available to eligible students on a competitive basis. The program is cosponsored by Pennsylvania's Office of Administration and Department of Education. Paid internships are available to students in most majors. Interested students should contact the Career Services for additional information.

STUDY ABROAD PROGRAMS

Students are encouraged to participate in a variety of study abroad programs sponsored by affiliates or other institutions. Students who intend to study abroad must have a cumulative grade point average of 2.50 or higher. Study abroad opportunities range from summer sessions to a full semester or academic year overseas. All overseas programs require prior approval from the students' major departments, the Director of International Education, the Dean of Students and the Registrar. Applications may be obtained from the Director of International Education.

A limited number of competitive grants for study abroad at our affiliate institutions are available. Application forms are posted on the College's home page under Academic Programs, Study Abroad. For more details, contact the Director of International Education. Lycoming aid transfers only to the Westminster Business School and Otto-Friedrich-Universität.

Affiliate Programs – Lycoming has cooperative arrangements with five institutions overseas: CUEF Université-Stendhal Grenoble 3 (Grenoble, France), Estudio Sampere (Costa Rica, Ecuador, and Spain), the Otto-Friedrich-Universität (Bamberg, Germany), Regent's American College (London, England), and the Westminster Business School, University of Westminster (London, England). Course offerings vary at each institution; contact the Director of International Education for details. Students interested in programs in Costa Rica, Ecuador, France, Germany and Spain should also contact the Department of Modern Language Studies.

Programs Sponsored by Other Institutions

Lycoming students have taken advantage of opportunities offered by other institutions in countries such as Cyprus, Egypt, Ireland, Israel, Italy, and Turkey. Information regarding these and other programs is available through the Director of International Education and Career Services.

NOTE: Lycoming College cannot assume responsibility for the health, safety, or welfare of students engaged in or en route to or from any off-campus studies or activities which are not under its exclusive jurisdiction.

CURRICULUM

Numbers 100-149 Introductory courses and Freshman level courses

Numbers 200-249 Intermediate courses and Sophomore level courses

Numbers 300-349 Intermediate courses and Junior level courses

Numbers 400-449 Advanced courses and Senior level courses

Numbers N50-N59* Non-catalog courses offered on a limited basis

Numbers 160-169 Applied Music, Theatre Practicums and other fractional credit courses

Numbers 470-479 Internships

Numbers N80-N89* Independent Study

Numbers 490-491 Independent Study for Departmental Honors

*N = course level 1, 2, 3 or 4 as determined by department

Except for academic reasons, all students have the right of access to all courses.

ACCOUNTING (ACCT)

Associate Professor: Kuhns

Assistant Professor: Kremer (Chairperson), Demshock

Part-time Instructor: Williams

The purpose of the accounting major is to help prepare the student for a career within the accounting profession. In order to satisfy the needs of an extremely diverse profession, the major in accounting consists of two separate tracks. Track I is a 150 semester hour program designed to meet the 150 hour requirement of the American Institute of Certified Public Accounts for those students whose goal is to become a member of the AICPA in Pennsylvania or any other state. Track II is a 128 semester hour program designed for students who are not interested in pursuing the CPA exam without further study.

Students planning to sit for the Uniform Certified Public Accounting Examination are advised to check with their State Board of Accounting to assure that they have completed all courses required for C.P.A. licensure.

The Department of Accounting is a member of the Institute for Management Studies. For more information, please see the Institute for Management Studies listing.

Core courses required of all majors:

ACCT 110, 223, 225, 235, 236, 320, 344, 345, 436, 440, 441, 443; BUS 228, 238, 244; ECON 110 and 111; MATH 123.

Track requirements:

1. Accounting–150 hours:

ACCT 442, 447, and one course from 438, 439 or 470-479; BUS 441; and one course from SOC or PSY.

2. Accounting–128 hours:

One course from ACCT 438, 439, 470-479, or BUS 441.

Comprehensive Senior Exams:

- 1. All accounting majors are required to pass a standardized departmental accounting achievement exam during their final semester. Students who fail will be required to retake the exam. The Accounting Department may also require a student to complete a comprehensive project for those areas in which they tested unsatisfactorily.**
- 2. All accounting majors are required to take and pass an outcome assessment exam administered by the Business Department. Students who fail must retake and pass the assessment.**

The following courses, when scheduled as W courses, count toward the writing intensive requirement: ACCT 440 and 442.

Minor

A minor in the Department of Accounting consists of ACCT 110, 130 or 223, and three higher numbered accounting courses selected from the following: ACCT 225, 320, 344, 345, 441.

100

PERSONAL FINANCIAL PLANNING

This course prepares students to make better informed financial decisions in a complicated world. A practical, relatively nontechnical course designed to help the student identify and plan to meet their financial goals.

110

FINANCIAL ACCOUNTING

An introductory course in recording, classifying, summarizing, and interpreting the basic business transaction. Problems of classification and interpretation of accounts and preparation of financial statements are studied.

130

ACCOUNTING FOR MANAGERIAL DECISION-MAKING

An introduction to the various components of managerial accounting. Emphasis is placed on managerial problem-solving techniques and the analysis of the results. Accounting systems, costing procedures, cost-volume profit relationships, managerial control processes and the use of computers as aids to decision-making are studied. Students will gain hands-on experience with various computer applications of managerial accounting. *Prerequisite: ACCT 110.*

223

COST AND BUDGETARY ACCOUNTING THEORY

Methods of accounting for material, labor and factory overhead expenses consumed in manufacturing using job order, process, and standard costing techniques. *Prerequisite: ACCT 110.*

225

BUDGETING AND FINANCIAL STATEMENT ANALYSIS

A study of the preparation and use of budgets. A study of financial data as a means of analyzing, interpreting, and using financial statements is included. *Prerequisite: ACCT 110.*

235

LEGAL PRINCIPLES

A study of the sources and principles of law in general. The application of these principles to the law of contracts, agency, negotiable instruments and legal associations is covered.

236

LEGAL AND ETHICAL ISSUES FOR ACCOUNTANTS

A study of the fundamentals of law related to the forms of business, real property, wills and estates. The accountant's legal liability and the American Institute of Certified Public Accountants Code of Professional Conduct is studied.

320**ACCOUNTING INFORMATION SYSTEMS/FUND ACCOUNTING**

An introduction to design and use of accounting information systems (AIS) and design and implementation of control systems in AIS. An introduction to the theory and practice of fund accounting. *Prerequisite: ACCT 110.*

344**INTERMEDIATE ACCOUNTING THEORY I**

An in-depth examination of the environment within which financial accounting theory exists. An examination of the basic postulates that underlie financial statements and a critique of what financial reporting means. *Prerequisite: ACCT 223 or consent of instructor.*

345**INTERMEDIATE ACCOUNTING THEORY II**

An examination of the various accounting and reporting issues affecting assets. *Prerequisite: ACCT 344 with a minimum grade of C, or consent of instructor.*

436**INTERMEDIATE ACCOUNTING THEORY III**

An examination of the various accounting and reporting issues affecting liabilities, stockholder equity, earnings per share, cash flows and accounting changes. *Prerequisite: ACCT 345 with a minimum grade of C, or consent of instructor.*

438-439**PRACTICUM IN ACCOUNTING I-II**

An introduction to the real world of accounting. Students are placed in Managerial and Public Accounting positions in order to effect a synthesis of the students' academic course work and its practical applications. Specifics of the course work to be worked out in conjunction with department, student and sponsor. *May be repeated for credit with consent of instructor.*

440**AUDITING THEORY**

A study of the science or art of verifying, analyzing, and interpreting accounts and reports. The goal of the course is to emphasize concepts which will enable students to understand the philosophy and environment of auditing. Special attention is given to the public accounting profession, studying auditing standards, professional ethics, the legal liability inherent in the attest function, the study and evaluation of internal control, the nature of evidence, the growing use of statistical sampling, the impact of electronic data processing, and the basic approach to planning an audit. Finally, various audit reports expressing independent expert opinions on the fairness of financial statements are studied. *Prerequisites: ACCT 344 and MATH 123; or consent of instructor.*

441**FEDERAL INCOME TAX I**

An analysis of the provisions of federal income tax law as applied to individuals. Gross income, inclusions, exclusion, deductions, losses, business expenses, depreciation, cost recovery,

amortization, depletion, employee and self employed expenses, itemized deductions, at risk rules and passive activities are studied. *Prerequisite: ACCT 344.*

442

FEDERAL INCOME TAX II

An analysis of federal tax law. Tax credits, property transactions, accounting periods and methods, taxation of corporations, partnerships, and S corporations are studied. *Prerequisite: ACCT 441.*

443

ACCOUNTING FOR BUSINESS COMBINATIONS

Certain areas of advanced accounting theory, including business combinations and consolidated financial statements. *Prerequisite: ACCT 345. One-half unit of credit.*

447

ADVANCED ACCOUNTING

An intensive study of partnerships, installment and consignment sales, branch accounting, foreign currency transactions, and segment interim reporting. *Prerequisite: ACCT 345. One-half unit of credit.*

470-479

INTERNSHIP (See index)

Interns in accounting typically work off campus under the supervision of a public or private accountant.

N80-N89

INDEPENDENT STUDY (See index)

Typical examples of recent studies in accounting are: computer program to generate financial statements, educational core for public accountants, inventory control, and church taxation.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

ACTUARIAL MATHEMATICS

Associate Professor: Sprechini (Coordinator)

The Actuarial Mathematics major is designed to offer, within a liberal arts framework, coursework to prepare for an actuarial career. Students obtain the necessary mathematical background for the first actuarial exam and two or three exams beyond the first one. Students also obtain some background in accounting, economics, and business which is needed for an actuarial career. At the time of completion of all major requirements, or shortly thereafter, a student should be prepared to sit for up to four of the examinations of the Society of Actuaries.

The Actuarial Mathematics major consists of 14 unit courses and two semesters of non-credit colloquia. In Mathematical Sciences, required courses are CPTR 125, MATH 128 (or exemption by examination from 128), 129, 130, 234, 238, 332, 333, and two courses from MATH 321, 325, 338, and 400. Also required are ACCT 110; one of ECON 110 or 111; one of MATH 214 or ECON 340; one of ACCT 130, ACCT 441, BUS 238, ECON 330, 331 or 441; two semesters of MATH 449.

The Society of Actuaries gives VEE (Validation by Educational Experience) credit for a grade of at least B- in coursework in the areas of Economics, Applied Statistical Methods, and Corporate Finance. A grade of at least B- in both ECON 110 and 111 is necessary for credit in the area of Economics. Information about credit in the areas of Applied Statistical Methods and Corporate Finance can be obtained from the coordinator for the actuarial mathematics major.

Other recommended courses include: ACCT 223, 224, 226, 344; BUS 242, 339; ECON 220, 229, 332, 337; MATH 106, 115, 231, 432, 434. It is also strongly recommended that the student complete as many of the actuarial examinations as possible prior to graduation.

AMERICAN STUDIES (AMST)

Associate Professor: Leiter (Coordinator)

Assistant Professor: Williamson (Coordinator)

The American Studies major offers a comprehensive program in American civilization which introduces students to the complexities underlying the development of America and its contemporary life. The program develops the skills of research, writing, and critical thinking that are central to a well-rounded, liberal arts education. The major requires eleven courses relevant to the interdisciplinary study of American civilization and the completion of the American Studies colloquium. Two minor tracks are also available in the American Studies program. The American Studies minor requires five courses in similar areas as the major. The Multiculturalism minor requires five courses that concentrate on the issues of ethnic and racial diversity that define American society, art, and history.

Students should design their American Studies major in consultation with a program coordinator, and they must maintain at least a 2.5 GPA in order to complete the independent study requirement. With the appropriate faculty approval, some special topics courses (freshman seminars, ENGL 215, SOC 320, and so on) may fulfill American Studies requirements. Students pursuing another major or minor in addition to their American Studies major may count no more than three courses for credit toward both concentrations. Students may count no more than one course for credit toward both an American Studies minor and another major or minor.

1. Three Core Courses:

The primary integrating units of the major, these courses teach students to consider ideas from different points of view and help them to correlate information and methods from various disciplines:

AMST 200 Perspectives on America (freshman or sophomore year)

HIST 449, PSCI 300, or SOC 330— Research and Methodology (junior or senior year; must be completed before or concurrently with AMST 489)

AMST 489 Independent Study (junior or senior year)

2. One course in the American arts:

MUS 128	American Music
MUS 234	History of Jazz
MUS N 80	Studies in American Music
THEA 212	Multicultural America on Screen
THEA 335	Modern Drama
THEA N 80	Studies in American Theatre

3. Three courses in American humanities, with at least one from history and one from English:

ENGL 222	American Literature I
ENGL 223	American Literature II
ENGL 229	African American Literature
HIST 125	United States History 1601-1877
HIST 126	United States History 1877-Present
HIST 226	Colonial America and the Revolutionary Era
HIST 230	African American History
HIST 233	Civil War and Reconstruction
HIST 238	Civil Rights Revolution
HIST 242	Vietnam War at Home and Abroad
HIST 338	Rights, Reform, and Protest
HIST 342	Women and Reform
HIST 402	Age of Jefferson and Jackson
HIST 404	U.S. Since 1945
PHIL 334	Contemporary Political Philosophy

4. Three courses in American social sciences, with at least one from Political Science and one from Sociology:

ECON 224	Urban Problems
ECON 236	American Economic History
ECON 332	Government and the Economy
ECON 335	Labor Economics
PSCI 110	U.S. Government and Politics
PSCI 130	The American Legal System
PSCI 211	State and Local Government
PSCI 212	Political Parties
PSCI 213	Congressional Politics
PSCI 214	The Presidency
PSCI 220	Public Policy in America
PSCI 231	Law in America
PSCI 316	Public Opinion and Polling
PSCI 330	Constitutional Law
PSCI 331	Civil Rights and Liberties
PSCI 339	Judicial Politics and Behavior
PSCI 369	American Foreign Policy
SOC 220	Sociology of Family
SOC 231	Sociology of War and the Military
SOC 310	Medical Sociology
SOC 334	American Immigration

5. An additional course numbered 300 or higher from those listed above or an internship

6. American Studies Colloquium: Juniors and seniors are required to complete AMST 348 & 448 each semester they are a declared major for a maximum of four semesters.

Minors

The minor in American Studies requires five courses: AMST 200; one course from MUS 128, 234, THEA 212; one course from ENGL 222, 223, 229, HIST 125, 126, 226, 230, 233, 238, 242, 338, 342, 402, 404, one course from ECON 224, 236, 332, 335, PSCI 110, 130, 211, 212, 213, 214, 220, 231, 316, 330, 331, SOC 220, 334; and one additional course numbered 200 or higher from any listed above.

The minor in the Multiculturalism track of American Studies consists of five courses: AMST 200; SOC 334; and three courses from ECON 224, ENGL 229, HIST 230, HIST 338, MUS 234, PSCI 331, THEA 212.

200

PERSPECTIVES ON AMERICA

An analysis of the fundamental nature of American culture, society, and politics and the interdisciplinary means for studying it. The course explores what is distinctively American and introduces students to the range of approaches taken to better understand topics covered in American studies. *Alternate years.*

348 & 448

AMERICAN STUDIES COLLOQUIUM

A non-credit seminar featuring guest, faculty, and student presentations on research, methodology, and related topics. *Required of all junior and senior American Studies majors. Meets 2-4 times each semester. Pass/Fail.*

470-479

INTERNSHIP (See Index)

N80-N89

INDEPENDENT STUDY

489

INDEPENDENT STUDY

An intensive interdisciplinary research project designed by the student in consultation with a faculty advisor.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

ARCHAEOLOGY AND CULTURE OF THE ANCIENT NEAR EAST AND MEDITERRANEAN (ARCH)

Assistant Professor: Knauth (Coordinator)
Instructors: Gaber, Dever

The interdisciplinary major in Archaeology and Culture of the Ancient Near East and Mediterranean (ARCH) is designed to acquaint students with the “cradle of Western civilization.”

The major requires completion of ten courses relevant to the study of the ancient Mediterranean and Near Eastern worlds plus colloquium and a capstone experience:

1. Six core courses:

REL 226 Biblical Archaeology
ANTH 229 Cultural Anthropology or ANTH 344 Anthropological Theory
HIST 210 Ancient History or REL 323 Hellenistic-Roman Cultural World
ART 222 Survey of Art I: Ancient, Medieval, and Non-Western
REL 328 History and Culture of the Ancient Near East
ARCH 449 Archaeological Theory and Method

2. Two courses in ancient language study (at least one of which must be at the 102 level or above) from:

GRK 101-102, 221, 222 Biblical Greek Grammar and Readings
HEBR 101-102, 221, 222 Biblical Hebrew Grammar and Readings
LAT 101, 102, 221, 222 Latin Grammar and Readings
(Akkadian, Arabic, Classical Greek, Coptic, or Modern Hebrew may be substituted.)
Although not included in the major, the study of German and/or French is strongly recommended for those planning to pursue graduate studies in the field.

3. Two additional courses from Archaeology and related disciplines, at least one of which must be numbered 200 or above, chosen from the following:

ARCH/ANTH/REL 401 (Field Archaeology);
Other ARCH courses excluding 348/448 (colloquium) and 402*;
HIST 210 or REL 323 (not counting as a core course);
Anthropology (ANTH 114, 229, 230, 232, 234, 310, 320, 344);
Biblical literature (REL 113, 114, 333, 337, 433);
Ceramics (ART 119 or 229);
Classical literature and rhetoric (ENGL 218, 225);
Geology (ASTR 102 or 112, 104);
Ancient Greek philosophy (PHIL 301);
Judaism and Islam (HIST 232; REL 210, 211, 212);
Middle Eastern politics /political conflict (PSCI 342, 361, 362, 367).

Other courses from the fields of art, economics, history, literature, philosophy, political science, and religion (or other related fields), including independent study projects, may be substituted subject to approval by the supervisory committee.

*ARCH 402 may be applied to the major as an extra course, but may not take the place of a full-unit course.

4. Archaeology Colloquium:

When declared majors studying on campus, juniors and seniors are required to complete ARCH 348/448 every semester that it is offered for a maximum of four semesters. Students considering study abroad in their junior year should take ARCH 348 in their sophomore year.

5. The capstone experience consists of the following components:

1) Practical Experience:

All students must either:

- a) participate in an approved archaeological field school (students must keep and submit a journal documenting all aspects of the experience); or
- b) complete a relevant internship (students must keep and submit a journal documenting the experience).

2) Colloquium Presentation:

Majors are required to give a colloquium presentation in their senior year. The presentation will normally be based on the student's ARCH 449 seminar research project and/or practical experience, and must present significant independent research relating to archaeology.

3) Portfolio:

Senior majors must submit a portfolio of their best work from contributing courses, representing their level of mastery in the related disciplines. The portfolio will also include a short essay briefly reflecting on the student's experience in the major. The portfolio and dig/internship journal will be submitted for approval at the time of the senior colloquium presentation or within one week thereafter, along with a hard copy of the colloquium presentation and write-up of underlying research. The final seminar paper and subsequently completed major papers will be added during the final semester as they are completed.

The following courses satisfy the cultural diversity requirement: ANTH 114, 229, 230, 232, 234, 310, 320, 344, ART 222, PSCI 367, REL 210, 211, 212, 226, 323, 328, 333.

The following courses, when scheduled as W courses, count toward the writing intensive requirement: ARCH 449, ART 222, ENGL 225, REL 323, 333, 337, 433.

Minor

An interdisciplinary minor in Archaeology and Culture of the Ancient Near East and Mediterranean requires completion of one archaeology course from REL 226 or ANTH/ARCH/REL 401, and four additional full-unit courses – at least three of which must be numbered 200 or higher – from:

ANTH/ARCH/ REL 401 Field Archaeology

Other ARCH courses at the discretion of the supervisory committee

ANTH 114, 229, 230, 232, 234, 310, or 320 Anthropology (only one allowed)

ANTH 344 Anthropological Theory

ART 222 Survey of Art I: Ancient, Medieval, and Non-Western
ASTR 102 or 112 Geology
HIST 210 Ancient History
HIST 232 or REL 212 Islam
REL 226 Biblical Archaeology
REL 323 Hellenistic-Roman Cultural World
REL 328 History and Culture of the Ancient Near East
REL 113, 114, 210, 333, 337, or 433 Biblical or Judaic studies (only one allowed)
At least two of these courses must be from outside the Religion Department.

201

INTRODUCTION TO AMERICAN FIELD ARCHAEOLOGY METHOD AND THEORY

Archaeology is the study of past cultures and societies through their material remains. This course utilizes actual field experience along with laboratory exercises, text-based instruction and discussion to introduce archaeological field methods as applied in the context of modern American archaeological investigation, along with the theory underlying them. A variety of techniques for investigating, reconstructing, interpreting, preserving, and ultimately learning from the past are also examined and utilized. A basic human cultural chronology for Native American civilization is established as a context for understanding important ideological and socio-economic factors. The fieldwork component of the course includes site testing and preliminary assessment, development of research design, establishment of an excavation grid, and excavation by both arbitrary and natural strata. Students also identify, label and catalog artifacts, complete site records, provide top plans and balk drawings, and contribute to a final site report. *Additional lab fee and lab times required for excavation. Alternate years.*

348 & 448

ARCHAEOLOGY COLLOQUIUM

A forum for senior presentations, faculty and outside speakers relating to archaeology, plus occasional outside workshops and events. A letter grade is assigned when the student gives a presentation, otherwise the grade will be P/F. *Required when offered of all junior and senior declared majors studying on campus. One hour per week. Non-credit seminar.*

401

FIELD ARCHAEOLOGY

Participation in an approved archaeological dig or field school program, usually in the Near East or Mediterranean region. Includes instruction in excavation techniques, recording and processing of artifacts. A survey of excavation and research and the use of archaeology as a tool for elucidating historical and cultural changes. *Special fees apply. May Term or Summer Sessions only. Cross-listed as ANTH 401 and as REL 401 for Mediterranean & Near Eastern Digs only. Students desiring credit toward the Religion major or humanities distribution requirement should register for REL 401.*

401**FIELD ARCHAEOLOGY**

Participation in an approved archaeological dig or field school program, usually in the Near East or Mediterranean region. Includes instruction in excavation techniques, recording and processing of artifacts. A survey of excavation and research and the use of archaeology as a tool for elucidating historical and cultural changes. Under certain circumstances, participation in an archaeological field school in North, Central, or South America, or elsewhere may be accepted. *Special fees apply. May Term or Summer Sessions only. Cross-listed as ANTH 401, and as REL 401 for Mediterranean and Near Eastern digs only. Students desiring credit toward the Religion major or humanities distribution requirement should register for REL 401.*

402**TOPICS IN ARCHAEOLOGICAL RESEARCH**

Directed research in archaeology, normally conducted in conjunction with an archaeological excavation project. A substantial research paper is required, making significant use of archaeological data and highlighting the relationship between field archaeology and history, art history, or related archaeological sciences. Possible topics for work in Cyprus could include ancient trade, city-state development in Cyprus, relations between Cyprus and the Levant, and Cyprus in an ancient Near Eastern context. Other topics are possible with approval of the instructor. Research in Cyprus is conducted at the Cyprus American Archaeological Research Institute and the library of the Department of Antiquities of Cyprus. *One-half unit of credit. May be repeated for credit with departmental consent. Co-requisite ARCH/REL 401 or consent of instructor.*

421**ARCHAEOLOGICAL FIELD SUPERVISION**

Participation in an archaeological excavation or field school program at the level of assistant supervisor or above. Includes instruction in on-site supervision of daily digging, record-keeping, and interpretation of finds, and/or specialized training in excavation project coordination, data processing, or analysis of specific types of material culture. Research project required. *Prerequisite: ARCH/REL 401 or equivalent experience. Special fees apply. May Term or Summer Sessions only.*

449**ARCHAEOLOGICAL THEORY AND METHOD**

This seminar acquaints the student with the evolution of archaeological thinking over the past century. Current archaeological theory is covered in some detail; students will learn to identify, examine, and evaluate specific theories. Each student also prepares and presents a substantial research project. *Prerequisite: ANTH 229 or 344, plus two courses from ART 222I, REL 226, 323 and 328, plus an excavation or internship experience, or consent of instructor.*

470-479**INTERNSHIP (See index)**

Interns in archaeology usually work in historical museums or art museums under the supervision of a museum director/curator/archaeologist and a member of the faculty. Course can also be designated as ART, HIST, or REL and taken through the relevant department.

N80-89**INDEPENDENT STUDY (See index)**

This course represents an opportunity to pursue specific research interests not usually covered in regular courses. Course can also be designated as ART, HIST, or REL and taken through the relevant department.

ART (ART)

Professors: Estomin, Golahny

Associate Professor: Tran (Chairperson)

Assistant Professors: Goodman, Darough

Part-time Instructors: Burke, Crook-Perez, Gaber, Johnson, Kaufman, Sterngold

The Art Department offers two majors in the B.A. Degree—Studio Art and Art History.

THE B.A. DEGREE STUDIO ART

For the Bachelor of Arts Degree in studio art, students must complete the seven-course foundation program and the requirements for an area of specialization, successfully complete each semester's colloquium (while a declared major), and successfully complete the senior exhibition. The senior exhibition, which is the capstone achievement, serves to assess students' expertise in their chosen specialty. Work produced in specialized courses may be included in the exhibition. *Exception to participation in the colloquium may be made by the art faculty.*

Placement in Photography will be based on the experience of the student and determined by the faculty of the Art Department. Students who place out of ART 227 Photography I will take ART 337 Photography II to fulfill the foundation requirement in photography. In addition, students placed directly into ART 337 who are specializing in Track IV, Commercial Design, will be required to take ART 431 Advanced Digital Imaging. Students specializing in Track VI, Photography/Digital Art, will be required to take ART 344 Time-Based Digital Media, or ART 430 Interactive Multi-Media and Web Design, or an approved independent study.

Foundation Program

ART 111 — Drawing I

ART 116 — Three-Dimensional Design or Art 226 – The Figure

ART 212 — Color and Design

ART 222 — Survey of Art I: Ancient, Medieval and Non-Western

ART 223 — Survey of Art II: Renaissance to the Present in Western Culture

*Studio Majors in the Commercial Design track may choose to substitute a 300-level Art History course for Art 222 or Art 223, or two 300-level art history courses for both Art 222 and Art 223.

ART 227 — Photography I

ART 343 — Introduction to Digital Art

ART 148, 248, 348, 448 — Art Colloquium

Art majors are encouraged to take DCOM 200: Introduction to Video

Areas of Specialization

I. Painting

ART 220 — Painting I

ART 221 — Drawing II

ART 330 — Painting II

ART 446 — Studio Research and two art history courses numbered 300 or above.

II. Printmaking

ART 221 — Drawing II

ART 228 — Printmaking I

ART 338 — Printmaking II

ART 446 — Studio Research and two art history courses numbered 300 or above.

III. Sculpture

ART 225 — Sculpture I

ART 226 — The Figure

ART 335 — Sculpture II

ART 446 — Studio Research and two art history courses numbered 300 or above.

IV. Commercial Design

ART 221 — Drawing II

ART 337 — Photography II

ART 344 — Time-Based Digital Media

ART 430 — Interactive Multi-Media and Web Design

ART 442 — Special Projects in Commercial Design

ART 470 — Internship OR

ART 449 — Art Practicum

Students are encouraged to take the following courses: ART 431, Advanced Digital Imaging; DCOM 200, Introductory Digital Media.

V. Generalist Art Major

To be taken by those students who are seeking teaching certification in Art. In addition, this area of specialization is recommended for those students also majoring or minoring in Psychology with a possible future career in art therapy.

ART 119 — Ceramics I

ART 220 — Painting

ART 225 — Sculpture I

ART 228 — Printmaking I

One second-level studio course (such as Painting II, Photography II, Sculpture II) and one art history course numbered 300 or above.

Along with other education requirements, students planning to complete the K-12 art certification program must also complete ART 310 – History and Practice of Art Education. This course counts as a 300 level art history course. State requirements for certification to teach change regularly. Please check with the Education Department for most current PA state requirements.

VI. Photography/Digital Art

ART 337 — Photography II

ART 342 — Photography III

ART 431 — Advanced Digital Imaging

ART 446 — Studio research
and two art history courses numbered 300 or above.
Students are also encouraged to take ART 344, Time-Based Digital Media, and ART 430,
Interactive Multi-Media and Web Design.

The following courses satisfy the cultural diversity requirement: ART 222 and 339. The
following courses, when scheduled as W courses, count toward the writing intensive
requirement: ART 222, 223, 320, 331, 334, 336, 339, 347 and 349.

THE B.A. DEGREE ART - HISTORY

To complete a Bachelor of Arts degree with a major in art history, a student must take courses in
art history, studio art, and related disciplines. A student majoring in art history is advised to take
a foreign language at an advanced level.

Art History majors (once declared) are required to participate in each semester's art colloquium.

Required of all students:

ART 222 — Survey of Art I: Ancient, Medieval, and Non-Western
ART 223 — Survey of Art II: Renaissance to the Present in Western Culture
ART 447 — Art History Research
ART 148, 248, 348, 448 — Art Colloquium

Choose four of the following:

ART 310 — History/Practice Art Education
ART 320 — Visual Media in the Digital Age
ART 331 — Recent Developments in Art
ART 334 — Art of the Renaissance
ART 336 — Art of the Baroque
ART 339 — Gender and Identity in Art
ART 347 — History of Photography
ART 349 — Narrative in Art

Choose two of the following:

ART 111 — Drawing I
ART 116 — Three-Dimensional Design
ART 212 — Color and Design
ART 227 — Photography I

Two Additional Courses Outside the Art Department:

Students must take at least two additional courses in the areas of History, Literature, Philosophy,
Theater or Religion, to be selected with their advisors.

All Art History courses have been approved to be offered as writing intensive courses; students
must check class schedules to determine which courses are offered as “W” for each semester.

Minors

Six minors are offered by the Art Department. Requirements for each follow:

Commercial Design: Art 111, 212, 227, and 343; one from 344, 430, or 442; and one art history course;

Painting: Art 111, 212, 220, 221, and 330, and one art history course;

Photography: ART 111, 212, 227, 337 and either 342 or 431, and one art history course;

Sculpture: Art 111, 116, 225, 226, 335, or 119, and one art history course;

Art History: Art 222, 223 and three advanced art history courses and one studio art course (Studio Art majors, except those in the Commercial Design track, who minor in Art History must take one additional upper level course beyond the three required for the minor intended for students who major in other disciplines, i.e., Art 222, 223 and four upper level courses);

Web Design and Technologies: CPTR 125, 322, 339, ART 343, 344 and 430. This minor will appeal to students with an interest in both design and computer science who are interested in the expanding fields of web design and web development.

111

DRAWING I

An introduction to the fundamentals of the two-dimensional arts, the materials and techniques of drawing, and current concepts and practices.

116

THREE-DIMENSIONAL DESIGN

An introduction to the broad range of techniques, materials and processes of three-dimensional art. Investigation of formal, theoretical and conceptual issues.

119

CERAMICS I

Emphasis placed on pottery design as it relates to function of vessels and the design parameters imposed by the characteristics of clay. The techniques of ceramics are taught to encourage expression rather than to dispense merely a technical body of information.

212

COLOR AND DESIGN

The creative process, elements, and principles of two-dimensional design and color theory through a variety of handmade and digital processes.

220

PAINTING I

Fundamentals of painting through lecture, demonstration and studio experience, and study of historical and current art movements. *Prerequisite: ART 212 or consent of instructor.*

221**DRAWING II**

Exploration of a range of materials and concepts, with an emphasis on current approaches to drawing. *Prerequisite: ART 111.*

222**SURVEY OF ART I: ANCIENT, MEDIEVAL, AND NON-WESTERN**

A survey of the major developments in the visual arts of the Ancient, Medieval, and Nonwestern fields, with emphasis on visual literacy and the meaning of art within society.

223**SURVEY OF ART II: RENAISSANCE TO THE PRESENT IN WESTERN CULTURE**

A survey of the major artistic developments of western art, with emphasis on their cultural contexts.

225**SCULPTURE I**

Exploration of traditional and contemporary approaches to sculpture through a variety of processes, materials, and theory. Emphasis on personal creativity. *Prerequisite: ART 116 or ART 226 or consent of the instructor.*

226**THE FIGURE**

Study of the structures of the figure, use of the figure as a vehicle for personal expression, and discussion of historical and contemporary theory. Exploration of various materials, including clay and plaster.

227**PHOTOGRAPHY I**

Objectives of the course are to develop technical skills in the use of photographic equipment (cameras, films, darkroom, printmaker) and to develop sensitivity in the areas of composition, form, light, picture quality, etc. Each student must own (or have access to) a 35mm camera capable of full-manual operation.

228**PRINTMAKING I**

Introduction to the techniques of silkscreen, intaglio, monotype and lithography printing. One edition of at least six prints must be completed in each area. *Prerequisite: ART 111 and 212; or consent of instructor.*

229**CERAMICS II**

Continuation of Ceramics I. Emphasis on use of the wheel and technical aspects such as glaze making and kiln firing. *Prerequisite: ART 119.*

310**HISTORY AND PRACTICE OF ART EDUCATION**

This course concerns the teaching of art, from the distant past to the present. Topics include Discipline-Based Art Education: its philosophy, history, and context; lesson planning; and teaching methods. Course work includes observation of art classes in elementary and secondary schools in the greater Williamsport area. *Required of art majors in the K-12 certification program.*

320**VISUAL MEDIA IN THE DIGITAL AGE**

The historical study of new media, with emphasis on video and interactive art forms, in relationship to the development of television, the World Wide Web, and social networks. *Cross-listed as DCOM 322. Alternate years.*

330**PAINTING II**

Experimentation with various media, subject matter and techniques, with reference to historical and current artistic movements. *Prerequisite: ART 220.*

331**RECENT DEVELOPMENTS IN ART**

The roots of current trends in art, taking into account trans-national and global issues, historical references, news media, and identities of gender, ethnicity and region.

334**ART OF THE RENAISSANCE**

The art of Italy and Northern Europe from 1300 to 1530, with emphasis on the painters Giotto, Masaccio, Leonardo da Vinci, Raphael, Titian, Van Eyck, and Dürer; the sculptors Ghiberti, Donatello and Michelangelo; and the architects Brunelleschi and Alberti.

335**SCULPTURE II**

Advanced study of materials, technical processes, and concepts in sculpture, using a variety of materials, including casting, metal, foundry and mixed-media installation. Additional discussion of historical and contemporary theory. *Prerequisites: Art 116 or 226 and 225.*

336**ART OF THE BAROQUE**

Seventeenth-century painting and sculpture in Italy and The Netherlands with emphasis on Bernini, Poussin, Rubens, and Rembrandt, with special attention given to the expressive, narrative, and painterly styles present in their art.

337**PHOTOGRAPHY II**

To extend the skills developed in Photography I (ART 227) by continued growth in technical expertise including instruction in photo art processes such as collage, multiple images, hand-coloring and/or toning. Emphasis is placed on conceptual and aesthetic aspects of photography. *Prerequisite: ART 227 or permission of instructor.*

338**PRINTMAKING II**

Continuation of Printmaking I (ART 228). Emphasis on multi-plate and viscosity printing. *Prerequisite: ART 228.*

339**GENDER AND IDENTITY IN ART**

A survey of identities in art from a variety of viewpoints (gender, creative, ethnic, multicultural, historical, social, political and economic) which integrates the portrayal of often marginalized personae into the mainstream.

342**PHOTOGRAPHY III**

Study of aesthetics and compositional strategies using medium and large format cameras and advanced printing techniques for black and white photography. Emphasis is placed on developing a comprehensive and conceptual portfolio. *Prerequisites: ART 337, and either ART 111 or 212; or consent of instructor.*

343**INTRODUCTION TO DIGITAL ART**

Introduction to digital art including design, photography, illustration and video. Course covers fundamentals of vector and raster imaging, typography, color, image compositing and integration of traditional and digital media. *Prerequisites: ART 227 and either ART 111 or 212; or consent of instructor.*

344**TIME-BASED DIGITAL MEDIA**

Studio course using industry-standard software to create time-based media for artistic and commercial purposes. Content includes 2-D digital animation; interactive art with animation, audio and video; web-design; and interactive DVD authoring. *Prerequisite: ART 343 or consent of instructor.*

347**HISTORY OF PHOTOGRAPHY**

A historical survey of photography from its beginning as a commercial and scientific medium, emphasizing its emergence as a fine art, and including current practices within multimedia contexts. *Alternate years.*

349**NARRATIVE IN ART**

This course examines the reciprocity of the sister arts of making images and writing prose and poetry. On the one hand, we study how visual artists respond to the written word, and on the other, how writers respond to art. This course draws on material from antiquity to the present in western culture.

430**INTERACTIVE MULTI-MEDIA AND WEB DESIGN**

Studio course focusing on creation of interactive media and web design for multiple platforms, utilizing industry-standard software. *Prerequisite: ART 343 or consent of instructor.*

431**ADVANCED DIGITAL IMAGING**

Advanced study of the concepts and aesthetics of color photography, digital photography and archival fine art digital printing. *Prerequisites: ART 337 and 343; or consent of instructor.*

440**PAINTING III**

Continued studio experience for advanced students with emphasis on personal direction, and with reference to individual artists and art movements. *Prerequisite: Art 330.*

441**DRAWING III**

Advanced drawing techniques and materials, with emphasis on a thesis presentation. *Prerequisite: Art 221.*

442**SPECIAL PROJECT IN COMMERCIAL DESIGN**

Concentrated research, and creation of a series of projects in commercial design involving typography, illustration, photography, branding, and graphic design, using industry-standard software. The capstone course for art majors in the Commercial Design track. *Prerequisite: ART 343 or consent of instructor.*

446**STUDIO RESEARCH**

Artistic research based on student-designed conceptual and formal interest in any studio art discipline. This is the capstone course for art majors in Painting, Printmaking, Sculpture, and Photography/Digital Art tracks. Students produce a coherent body of artwork to be entered in the Annual Juried Senior Exhibition. Although this course is not required for art majors in the Commercial Design and Art Generalist tracks, these students are very strongly encouraged to take this course to prepare their submissions for the Annual Juried Senior Exhibition. *Fall Semester only.*

447**ART HISTORY RESEARCH**

Seminar in art history methods and research. Students write an extensive research essay, to be presented to a committee of Art Department faculty. *This course may be repeated for credit.*

148, 248, 348, 448**ART COLLOQUIUM**

A non-credit seminar in which faculty, students and invited professionals discuss and critique specific art and media exhibitions. Required of all students majoring in Studio Art and Art History. Meets 4-6 times each semester. Pass/Fail. Non-credit seminar.

449**ART PRACTICUM**

Seminar course offering students 150 hours of professional internship experience in commercial design, web design, photography, museum studies, audio or video with companies, non-profit organizations and museums. Students must apply directly to the Art Department to arrange job placement before pre-registration to be eligible for this course. *Prerequisite: At least one of the following: ART 342, 344, 430, 431, 442, DCOM 300 or consent of instructor.*

470-479**INTERNSHIP (See index)**

This course offers students internship experience in commercial design or commercial photography with companies and organizations. *Prerequisite: ART 430 or 442, or consent of instructor. Students must apply directly to the Art Department to arrange job placement before pre-registration to be eligible for this course.*

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

ASTRONOMY AND PHYSICS

Astronomy and Physics

Professor: Fisher (Chairperson)

Associate Professor: Erickson, Kulp

Part-time Instructor: Doersam

The department offers three majors, astronomy, astrophysics, and physics. The major in astronomy consists of three possible concentrations, general astronomy, astrochemistry, and astrobiology. The major in physics consists of four concentrations: general physics, engineering physics, physics education, and biophysics.

ASTRONOMY (ASTR)

The B. A. Degree

The major in astronomy requires courses in astronomy, physics, chemistry and mathematics. A student majoring in astronomy needs to complete the core courses and one concentration. A student may not earn more than one concentration in astronomy. The astronomy concentrations are:

General Astronomy – The General Astronomy concentration consists of courses which cover a wide range of topics in astronomy. The General Astronomy concentration prepares the student for planetarium work and/or museum education and may serve as a basis for earning state certification as a secondary school teacher of general science. Students who wish to pursue graduate study in astronomy are strongly recommended to either double-major with physics or pursue the astrophysics major.

Astrobiology – The Astrobiology Concentration consists of courses which cover a wide range of topics in both astronomy and biology. The Astrobiology Concentration provides the student an alternate route for certification as a secondary school teacher of general science. The student would have more experience with biology than a general astronomy student, which could prove advantageous for attaining secondary school science positions. Students who wish to pursue graduate study in astrobiology are strongly recommended to double-major in Biology with the General Astronomy concentration.

Astrochemistry – The Astrochemistry Concentration consists of courses which cover a wide range of topics in both astronomy and chemistry. The Astrochemistry Concentration provides the student an alternate route for certification as a secondary school teacher of general science. The student would have more experience with chemistry than a general astronomy student, which could prove advantageous for attaining secondary school science positions. Students who wish to pursue graduate study in astrochemistry are strongly recommended to double-major in Chemistry with the General Astronomy concentration.

Astronomy Major Requirements

Core Courses: ASTR 111, 448; PHYS 225-226; two courses in chemistry to be selected from CHEM 110, 111, 330, 331, or 439; and MATH 128-129. Astronomy majors are also required to register for four semesters of ASTR 349 and 449 (noncredit colloquia).

General Astronomy Concentration: Complete five additional astronomy courses numbered ASTR 112 or higher, four of which must be ASTR 230 or higher.

Astrobiology Concentration: ASTR 243, and 445; BIO 110, 111, 321, and 436

Note: A student may not double major in Biology and Astronomy with the Astrobiology Concentration, nor may a student major in Astronomy with the Astrobiology Concentration and minor in Biology. However, a student may double major in Biology and Astronomy with the General Astronomy Concentration. The W course requirement may be satisfied in either astronomy or biology.

Astrochemistry Concentration: ASTR 243, and 445; CHEM 220, 221, 232, 333

Note: A student may not double major in Chemistry and Astronomy with the Astrochemistry Concentration nor may a student major in Astronomy with an Astrochemistry concentration and minor in Chemistry. However, a student may double major in Chemistry and Astronomy with the General Astronomy Concentration. The W course requirement may be satisfied in either astronomy or chemistry.

The requirement for taking ASTR 448 may be satisfied by doing an individual studies or honors project where the results would be presented at a departmental colloquium. A double major in astronomy and physics need only take the course once. The project pursued for ASTR 448 must be relevant to the student's concentration. Students who have successfully completed a summer REU, RUG, or equivalent research experience may request departmental approval to substitute off-campus experience plus an additional advanced astronomy or physics course not already required by the major in place of ASTR 448.

The following courses are recommended: PHIL 333 and PHYS 333.

The Department of Astronomy and Physics does not offer a B. S. degree in astronomy, but we do offer a B. S. Degree in astrophysics. Students interested in a B. S. degree in astronomy should consider pursuing the astrophysics major.

Students interested in teacher certification should refer to the Department of Education listing.

The following course, when scheduled as a W course, counts toward the writing intensive requirement: ASTR 230

Minor

A minor in astronomy consists of a grade of C or better in both ASTR 111 and PHYS 225 plus any three additional courses selected from PHYS 226 or ASTR courses numbered 200 or higher.

000

LABORATORY TEACHING METHODS

This course provides students with practical experience in laboratory teaching. Students in this course are paired with a faculty mentor and help supervise labs, deliver pre-lab lectures and assist in ordering chemicals, supplies, and equipment, and in preparing laboratory experiments. Students complete a project that integrates the physical science education literature, classroom instruction materials, laboratory safety and proper storage and disposal of materials and equipment used. In the appropriate situation, a student may substitute planetarium show preparation and presentation for laboratory exercises. *Open to junior physics and/or astronomy majors pursuing certification in education, with consent of the instructor. Non-credit course. Cross-listed as PHYS 000.*

101

PRINCIPLES OF ASTRONOMY

A broad summary of our current view of the universe, from our solar system to distant galaxies. Describes the instruments and techniques used by astronomers, today and in the past, to develop our concepts about the nature of the universe and its contents. Four hours of lecture and one two-hour laboratory per week. *Credit may not be earned for both ASTR 101 and 111.*

102

PRINCIPLES OF GEOLOGY

A broad summary of the physical nature of the Earth, including its internal structure and surface processes. Shows how past events can be reconstructed from preserved evidence to reveal the geologic history of our planet from its origin to the present. Four hours of lecture and one two-hour laboratory per week. *Alternate years. Credit may not be earned for both ASTR 102 and 112.*

104

FIELD GEOLOGY

A methods course introducing the field techniques needed to study the geology of an area. *May or summer term only.*

107

OBSERVATIONAL ASTRONOMY

A methods course providing the opportunity to make a variety of astronomical observations, both visually and photographically, with and without telescopes. The planetarium is used to familiarize the student with the sky at various times during the year and from different locations on earth. *May or summer term only.*

111**FUNDAMENTALS OF ASTRONOMY**

An introduction to the nature of the physical universe – its contents (from our solar system to distant galaxies), its history, and the physical processes occurring in it. The course is quantitative, utilizing algebra, as well as trigonometric, logarithmic, and exponential functions. This course is designed for students considering majoring in one of the natural sciences or mathematics. Four hours of lecture and one three-hour laboratory per week. *Corequisite: MATH 127 or consent of instructor. Credit may not be earned for both ASTR 101 and 111.*

112**FUNDAMENTALS OF GEOLOGY**

An introduction to the study of the Earth – its composition, structure, history, and the processes occurring on its surface and in its interior. The course includes some elementary geophysics and geochemistry, and thus utilizes algebra, as well as trigonometric, logarithmic, and exponential functions. This course is designed for students considering majoring in one of the natural sciences, mathematics, or archaeology. Four hours of lecture and one three-hour laboratory per week. *Corequisite: MATH 127 or consent of instructor. Credit may not be earned for both ASTR 102 and 112.*

120**MANNED SPACE FLIGHT**

Traces the development of space flight capability from Sputnik (1957) through the early Space Race to achieve a manned landing upon the surface of the Moon, the era of space stations, development of the Space Transportation System (space shuttle), to current U.S. and Russian space efforts. Examination of scientific, engineering, and political motivations. Extensive use of NASA video. May incorporate travel to NASA facilities. *Offered only when possible in May Term. Not for distribution.*

230**PLANETARIUM TECHNIQUES**

A methods course covering major aspects of planetarium programming, operation and maintenance. Students are required to prepare and present a planetarium show. Upon successfully completing the course, students are eligible to become planetarium assistants. Three hours of lecture and demonstration and three hours of practical training per week. *Prerequisite: a grade of C or better in ASTR 101 or 111. Alternate years.*

243**PLANETARY SCIENCE**

A comparative survey of the various classes of natural objects that orbit the sun, including the major planets, their satellites, the minor planets, and comets. Topics include meteorological processes in atmospheres, geological processes that shape surface features, internal structures, the role of spacecraft in the exploration of the solar system, and clues to the origin and dynamic evolution of the solar system. *Four hours of lecture per week. Prerequisites: a grade of C or better in ASTR 111 or 112, or PHYS 225. Alternate years.*

340**THE INVISIBLE UNIVERSE**

The astrophysics of celestial objects that emit thermal and non-thermal radiation outside the visible portion of the electromagnetic spectrum. Traces the development of observational techniques at radio, infrared, ultraviolet, x-ray, and gamma-ray wavelengths. Includes cosmic microwave background radiation, pulsars, quasars, gamma-ray bursters, magnetars, and active galactic nuclei. *Four hours of lecture and three hours of laboratory per week. Prerequisites: ASTR 111 and PHYS 226. Cross-listed as PHYS 340.*

344**RELATIVITY AND COSMOLOGY**

A detailed presentation of the special theory of relativity and an introduction to the general theory. Topics include: observational and experimental tests of relativity, four-vectors, tensors, space-time curvature, alternative cosmological models, and the origin and future of the universe. *Four hours of lecture per week. Prerequisites: ASTR 111 and PHYS 225. Alternate years. Cross-listed as PHYS 344.*

445**STELLAR EVOLUTION**

The physical principles governing the internal structure and external appearance of stars. Mechanisms of energy generation and transport within stars. The evolution of stars from initial formation to final stages. The creation of chemical elements by nucleosynthesis. *Four hours of lecture per week. Prerequisites: ASTR 111 and PHYS 226. Alternate years.*

446**STELLAR DYNAMICS AND GALACTIC STRUCTURE**

The motion of objects in gravitational fields. Introduction to the n-body problem. The relation between stellar motions and the galactic potential. The large-scale structure of galaxies in general and of the Milky Way Galaxy in particular. *Four hours of lecture per week. Prerequisites: ASTR 111 and PHYS 225. Alternate years.*

448**RESEARCH TOPICS**

Students participate in a research project under the guidance of a faculty member in the department. In weekly meetings, they share reports from the literature and report on their own work. Topics range from abstract theoretical to selected practical experimental investigations. *Prerequisite: Permission of the instructor. Cross-listed as PHYS 448. May be taken a second time with departmental approval.*

349 & 449

ASTRONOMY AND PHYSICS COLLOQUIA

This non-credit but required course for juniors and seniors majoring in astronomy and physics offers students a chance to meet and hear active scientists in astronomy, physics, and related scientific areas talk about their own research or professional activities. In addition, majors in astronomy and physics must present two lectures, one given during the junior year and one given during the senior year, on the results of a literature survey or their individual research. Students majoring in this department are required to attend four semesters during the junior and senior years. A letter grade will be given when the student gives a lecture. Otherwise the grade will be P/F. Non-credit course. *One hour per week. Cross-listed as PHYS 349 & 449.*

470-479

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

Independent studies may be undertaken in most areas of astronomy.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

ASTROPHYSICS

The B.S. degree in astrophysics requires courses in astronomy, physics, chemistry, and mathematics. The required courses are ASTR 111, 340, 344 (cross listed as PHYS 344), 445, and 446; PHYS 225, 226, 331, 332, 336, 338, 439 (cross listed as CHEM 449) and 448; MATH 128-129, 231, and 238; and CHEM 110. Astrophysics majors are also required to register for four semesters of ASTR/PHYS 349 and 449 (noncredit colloquia).

The requirement for taking ASTR/PHYS 448 may be satisfied by completing an individual studies or honors project and presenting the results at a departmental colloquium. Students who have successfully completed a summer NSF-sponsored Research Experience for Undergraduates, or equivalent research experience may request departmental approval to substitute off-campus experience plus an additional advanced astronomy or physics course not already required by the astrophysics major in place of ASTR/PHYS 448.

PHYSICS (PHYS)

The major in physics requires courses in physics, chemistry and mathematics. A student majoring in physics needs to complete the core courses and one concentration. A student may not earn more than one concentration in physics. The physics concentrations are:

General Physics – The General Physics concentration consists of courses that cover a wide range of topics in physics. The General Physics concentration prepares the student for a variety of careers in physics, including graduate study.

Engineering Physics – The Engineering Physics concentration consists of courses in physics, mathematics, and computer science. The Engineering Physics concentration provides an emphasis on skills useful to students seeking a career in applied physics or engineering.

Biophysics – The Biophysics concentration consists of courses in physics and biology. The Biophysics concentration can be used as an alternative route for certification as a secondary school teacher of physics. Many high school physics teachers are expected to teach courses in sciences other than physics. The Biophysics Concentration can also be used as an avenue for students who are interested in biological applications of physics but, for some reason, cannot double major with biology (e.g. the student's interest in biology develops late in their college career). Students who wish to pursue graduate study in biophysics are strongly recommended to double-major in Biology with the General Physics concentration.

Physics Education – The Physics Education concentration consists of courses that cover a wide variety of topics in physics. The Physics Education concentration prepares the student interested in pursuing secondary teaching certification in physics.

The B.A. Degree

Core Courses: PHYS 225, 226, 331, 332, and 448, two chemistry courses from CHEM 110, 111, 330, 331, or 439; and MATH 128, 129, and 238. Physics majors are also required to register for four semesters of PHYS 349 and 449 (non-credit colloquia).

General Physics Concentration: Student must complete four additional courses numbers PHYS 333 or higher.

Engineering Physics Concentration: PHYS 229, 337, one physics courses from PHYS 335, 336, 338, 447; and CPTR 125.

Note: It is recommended that a student pursuing the Engineering Physics Concentration use an internship with an engineering company as their PHYS 448 Research Topics experience.

Biophysics Concentration: BIO 110, 111; two courses numbered BIO 222 or higher. The W course requirement may be satisfied in either physics or biology.

Note: A student may not double major in Biology and physics with the Biophysics Concentration, nor may a student major in Physics with a Biophysics Concentration and minor in Biology. However a student may double major with Biology and the General Physics Concentration.

Physics Education Concentration: Student must complete three additional courses numbered PHYS 227 or higher

The B.S. Degree

To complete a B. S. Degree in Physics, a student must complete the requirements for the B. A. degree and additional courses in his or her concentration. Students interested in pursuing graduate studies or work in a technical position in government or industry should consider pursuing the B. S. degree in their concentration. Note that there is no B. S. degree available for the Physics Education concentration.

Additional General Physics Concentration Courses: PHYS 337, one additional course numbered PHYS 333 or higher; CHEM/PHYS 439; and one additional course from MATH 130, 214, 231, 233, 321, 332, 333, CPTR 125, 246, CHEM 330, 331, 333, or 443.

Additional Engineering Physics Concentration Courses: one additional physics course numbered PHYS 333 or higher (other than those required for the B. A. Engineering Concentration), CPTR 246, and MATH 231.

Additional Biophysics Concentration Courses: one additional physics course numbered PHYS 333 or higher; two additional biology courses numbered BIO 222 or higher.

The requirement of PHYS 448 may be satisfied by doing an individual studies or honors project where the results would be presented at a departmental colloquium. A double major in astronomy and physics need only take the course once. The project pursued in PHYS 448 must be relevant to the student's concentration. Students who have successfully completed a summer REU, RUG, or equivalent research experience may request departmental approval to substitute that experience plus an additional advanced astronomy or physics course not already required by the major in place of PHYS 448. Note that if the student has already counted two astronomy courses towards a physics major, then the extra course in place of PHYS 448 must be a physics course.

Up to two courses chosen from ASTR 111, 112, 243, 445 and 446 may substitute for two physics electives in the **general physics concentration only**. The following courses are recommended for any concentration: MATH 231, 238; CPTR 125 (these are required or useful by many internships and graduate schools), and PHIL 333.

Students interested in teacher certification should refer to the Department of Education listing. The following course, when scheduled as W course, counts toward the writing intensive requirement: PHYS 338.

Minor

A minor in physics requires completion of the following courses with a C grade or better: PHYS 225-226, 331, 332, and one additional course selected from PHYS courses numbered 300 or higher.

000**LABORATORY TEACHING METHODS**

This course provides students with practical experience in laboratory teaching. Students in this course are paired with a faculty mentor and help supervise labs, deliver pre-lab lectures and assist in ordering chemicals, supplies, and equipment, and in preparing laboratory experiments. Students complete a project that integrates the physical science education literature, classroom instruction materials, laboratory safety and proper storage and disposal of materials and equipment used. *Open to junior physics and/or astronomy majors pursuing certification in education, with consent of the instructor. Non-credit course. Cross-listed as ASTR 000.*

106**ENERGY ALTERNATIVES**

A physicist's definition of work, energy, and power. The various energy sources available for use, such as fossil fuels, nuclear fission and fusion, hydro, solar, wind, and geothermal. The advantages and disadvantages of each energy-conversion method, including availability, efficiency, and environmental effects. Present areas of energy research and possible future developments. Projections of possible future energy demands. Exercises and experiments in energy collection, conversion, and utilization.

108**GREAT IDEAS OF THE PHYSICAL UNIVERSE**

An introduction to several major concepts of physics which have developed over the past several centuries, relating them to their broad implications. The emphasis is on a descriptive rather than a mathematical discussion of topics which range from early Greek concepts of science to present day methods and techniques used to describe the physical universe. Many distinctions and similarities between science and other areas of human endeavor are studied to demonstrate the beauty, simplicity, harmony, and grandeur of some of the basic laws which govern the universe. *Three hours of lecture and two hours of laboratory per week. Alternate years.*

225**FUNDAMENTALS OF PHYSICS I**

A mathematically rigorous introduction to physics designed for majors in the natural sciences and mathematics. Topics include classical mechanics, thermodynamics, and mechanical waves. *Five hours of lecture and recitation and one three-hour laboratory per week. Prerequisite or co-requisite: MATH 128.*

226**FUNDAMENTALS OF PHYSICS II**

A mathematically rigorous introduction to physics designed for majors in the natural sciences and mathematics. Topics include electromagnetism, optics, and quantum physics. *Five hours of lecture and recitation and one three-hour laboratory per week. Prerequisite: PHYS 225. Prerequisite or co-requisite: MATH 129.*

331**CLASSICAL MECHANICS**

An analytical approach to classical mechanics. Topics include: kinematics and dynamics of single particles and systems of particles, gravitation and other central forces, moving reference frames, and Lagrangian and Hamiltonian formulations of mechanics. *Four hours of lecture and three hours of laboratory per week. Prerequisites: MATH 129 and a grade of C or better in PHYS 225.*

332**ELECTROMAGNETISM**

A theoretical treatment of classical electromagnetism. Topics include: electrostatics, magnetostatics, electric and magnetic potentials, electric and magnetic properties of matter, Maxwell's equations, the electromagnetic field, and the propagation of electromagnetic radiation. *Four hours of lecture and three hours of laboratory per week. Prerequisites: MATH 129 and a grade of C or better in PHYS 226.*

333**OPTICS**

Geometrical optics, optical systems, physical optics, interference, Fraunhofer and Fresnel diffraction, and coherence and lasers are covered. *Four hours of lecture and one three-hour laboratory per week. Prerequisites: PHYS 226 and MATH 128; or consent of instructor. Alternate years.*

335**NONLINEAR DYNAMICS**

Students learn how to apply mathematical techniques from the field of nonlinear dynamics to problems from the physical, biological, and social sciences. Possible topics include one, two, and three dimensional systems; bifurcation theory, limit cycles, chaos, fractals, and one and two dimensional maps. The lab component of this course stresses numerical analysis. *Four hours of lecture and three hours of laboratory per week. Prerequisites: PHYS 225 and MATH 129 or consent of instructor.*

336**MATHEMATICAL METHODS OF PHYSICS**

Solution of ordinary linear differential equations using power series and Laplace transforms, nonlinear differential and coupled differential equations, Fourier analysis using both trigonometric and complex exponential functions, complex variables, eigenvalue problems, infinite dimensional vector spaces, partial differential equations, boundary value problem solutions to the wave equation, heat flow equation and Laplace's equation. *Four hours of lecture and one three-hour laboratory per week. Prerequisites: MATH 231 and 238. Alternate years.*

337**THERMODYNAMICS AND STATISTICAL MECHANICS**

Classical thermodynamics will be presented, showing that the macroscopic properties of a system can be specified without knowledge of the microscopic properties of the constituents of the system. Then statistical mechanics will be developed, showing that these same macroscopic properties are determined by the microscopic properties. *Four hours of lecture and one three-hour laboratory per week. Prerequisites: PHYS 226 and MATH 129. Alternate years.*

338**MODERN PHYSICS**

Thorough investigation of changes in the classical understanding of space and time together with those of energy and matter that led to the time development of relativistic and quantum mechanical theories. Topics include: introduction to special relativity, blackbody radiation, the postulation of the photon and quantization, atomic spectra, interactions of matter and energy, Bohr model of the atom, concepts of symmetry, and development and applications of the Schrödinger equation. *Four hours of lecture and one-three hour laboratory per week. Prerequisites: MATH 129 and a grade of C or better in PHYS 226.*

339**CONDENSED MATTER PHYSICS**

Structural topics include ordinary crystalline structures, liquid crystals, quasi-crystals, and nanostructures. Property-related topics include periodic potentials, band structure, electromagnetic and thermal properties, superconductivity, superfluidity, aspects of surface physics, and aspects of polymer physics. *Four hours of lecture and three hours of laboratory per week. Prerequisites: PHYS 332 and MATH 129, or consent of instructor. Alternate years.*

340**THE INVISIBLE UNIVERSE**

The astrophysics of celestial objects that emit thermal and non-thermal radiation outside the visible portion of the electromagnetic spectrum. Traces the development of observational techniques at radio, infrared, ultraviolet, x-ray, and gamma-ray wavelengths. Includes cosmic microwave background radiation, pulsars, quasars, gamma-ray bursters, magnetars, and active galactic nuclei. *Four hours of lecture and three hours of laboratory per week. Prerequisites: ASTR 111 and PHYS 226. Cross-listed as ASTR 340.*

341**ELECTRONICS**

DC and AC circuit analysis, semiconductor physics, active devices such as PN junctions, transistors, operational amplifiers, and integrated circuits. Basics of digital electronics and vacuum tube technologies. *Three lectures and three hours of laboratory per week. Prerequisites: PHYS 225 and MATH 128.*

344**RELATIVITY AND COSMOLOGY**

A detailed presentation of the special theory of relativity and an introduction to the general theory. Topics include: observational and experimental tests of relativity, four vectors, tensors, space-time curvature, alternative cosmological models, and the origin and future of the universe. *Four hours of lecture per week. Prerequisites: ASTR 111 and PHYS 225. Alternate years. Cross-listed as ASTR 344.*

439**INTRODUCTION TO QUANTUM MECHANICS**

Introduction to the basic concepts and principles of quantum theory. Solutions to the free particle, the simple harmonic oscillator, the hydrogen atom, and other central force problems are presented using the Schrodinger wave equation approach. Topics also include operator formalism, eigenstates, eigenvalues, the uncertainty principles, stationary states, representation of wave functions by eigenstate expansions, and the Heisenberg matrix approach. *Four hours of lecture. Prerequisites: Either PHYS 226 or CHEM 331, and MATH 231. Cross-listed as CHEM 439.*

447**NUCLEAR AND PARTICLE PHYSICS**

The course considers properties of nuclei, nuclear models, radioactivity, nuclear reactions (including fission and fusion), and properties of elementary particles. The interactions of nuclear particles with matter and the detection of nuclear particles are covered. It will be shown how observed phenomena lead to theories on the nature of fundamental interactions, how these forces act at the smallest measurable distances, and what is expected to occur at even smaller distances. *Four hours of lecture and recitation and three hours of laboratory per week. Prerequisites: PHYS 226, MATH 129, and either PHYS 338 or CHEM 110. Alternate years.*

448**RESEARCH TOPICS**

Students participate in a research project under the guidance of a faculty member in the department. In weekly meetings, they share reports from the literature and report on their own work. Topics range from abstract theoretical to selected practical experimental investigations. *Prerequisite: Permission of the instructor. Cross-listed as ASTR 448. May be taken a second time with departmental approval.*

349 & 449**ASTRONOMY AND PHYSICS COLLOQUIA**

This non-credit but required course for juniors and seniors majoring in astronomy and physics offers students a chance to meet and hear active scientists in astronomy, physics and related scientific areas talk about their own research or professional activities. In addition, majors in astronomy and physics must present two lectures, one given during the junior year and one given during the senior year, on the results of a literature survey or their individual research. Students majoring in this department are required to attend four semesters during the junior and senior years. A letter grade will be given when the student gives a lecture. Otherwise the grade will be P/F. Non-credit course. *One hour per week. Cross-listed as ASTR 349 & 449.*

470-479**INTERNSHIP (See index)**

Interns in physics work off campus under the supervision of professional physicists employed by local industries or hospitals.

N80-N89**INDEPENDENT STUDY (See index)**

Independent studies may be undertaken in most areas of physics.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

BIOLOGY (BIO)

Professor: Zimmerman

Associate Professor: Gabriel, Newman

Assistant Professors: Briggs, Broussard, Morrison (Chairperson), Zhao

The Department of Biology offers a Biology major that can be applied to either the Bachelor of Arts or Bachelor of Sciences degrees. The Biology major can be completed by following one of four tracks, Anatomy and Physiology, Ecology, Cell and Molecular Biology or Comprehensive. The Department also offers minors in Biology and Environmental Science.

The Biology Major

To complete the major, students must complete BIO 110, 111, and one of the four tracks listed below. In addition, students must successfully complete CHEM 110, 111 and 220; and two units of mathematical sciences chosen from CPTR 125 or above, MATH 109, 115, 123, 127, 128 or above. Juniors and seniors are required to successfully complete four semesters of BIO 349/449 (non-credit colloquium) and complete the capstone experiences described below. Enrollment in student teaching and/or other similar off-campus academic experiences will be accepted by the department in lieu of that semester's colloquium requirement. Only two Biology courses numbered below 221 may count toward the major. Declared Biology majors may substitute BIO 106 for BIO 110, and BIO 107 for BIO 111 with written consent of the department chair.

Comprehensive Biology Track: students must complete BIO 222, 224, 225, 321, 323 and one additional biology course from any of the three groups listed below.

Cell and Molecular Biology Track: students must complete BIO 222, 435, either 432 or 437 and one additional course from each of the three groups listed below.

Ecology Track: students must complete BIO 224, 225, either 334 or 336, two additional courses from Group 3 and one course from Group 1 below.

Anatomy and Physiology Track: students must complete BIO 222, 323, 338, one course from Group 3 (BIO 333 is recommended), and two courses chosen from among BIO 321, 347, BIO/CHEM 444.

Group 1 - Cell & Molecular Biology

BIO 222 Genetics

BIO 337 Neurobiology

BIO 347 Immunology

BIO 348 Endocrinology

BIO 432 Genome Analysis

BIO 435 Cell Biology

BIO 437 Molecular Biology

BIO 439 Medical Genetics

BIO 444 or CHEM 444 Biochemistry

BIO 447 Cell & Molecular Biology Research Methods

Group 2 – Organismal Biology

BIO 225 Plant Science
BIO 321 Microbiology
BIO 323 Human Physiology
BIO 334 Invertebrate Zoology
BIO 336 Vertebrate Biology
BIO 338 Human Anatomy
BIO 341 Developmental Biology
BIO 346 Virology
BIO 431 Histology
BIO 440 Parasitology and Medical Entomology

Group 3 - Ecology & Evolution

BIO 224 Ecology
BIO 328 Aquatic Biology
BIO 329 Tropical Marine Biology
BIO 333 Medicinal & Poisonous Plants
BIO 340 Plant Animal Interactions
BIO 342 Animal Behavior
BIO 430 Comparative Anatomy of Vertebrates
BIO 436 Evolution
BIO 446 Plant Physiological Ecology

Writing Intensive Courses

The following courses, when scheduled as W courses, count toward the writing intensive requirement: BIO 200, 222, 224, 321, 333 and 435.

Capstone Experiences for Biology Majors

In order to graduate, all biology majors must demonstrate to the Department their command of biology by meeting the following three criteria.

1. **Practical Experience:** All students must complete at least one of the experiences in the following list: Internship, Practicum, BIO 447, Relevant Summer Experience, Independent Studies, Honors, Medical Technology Internship, Teaching Semester, Biology Laboratory Assistant, Biology-related volunteer work. (Summer experiences, Biology-related volunteer work, or working as a lab assistant must be approved by the Department in order to be used to meet this requirement.)

2. **Research & Presentation Component:** All junior and senior majors are required to successfully complete Biology Colloquia (BIO 349 and 449) during all their semesters on campus. During their final year, students will research a biological topic and make an oral presentation at the Biology Colloquium. This will provide the student with the basic level of information literacy in the biological science.

3. **Assessment:** All majors are required to pass a Biology Department Exit Exam.

Certification in Secondary Education

A Biology major interested in becoming certified at the secondary level to teach Biology and/or General Science must select the Comprehensive Track. The student should, as early as possible, consult the current Department of Education Teacher Education Handbook and should make their plans known to their advisor and the Chair of the Education Department so the required courses can be scheduled before the Professional Semester. Please check with the Education Department for the most current PA State requirements.

The B.S. Degree

To qualify for the B.S. degree, Biology majors must complete the major described above and pass three additional courses chosen in any combination from the following: BIO 328 or above (including BIO 400, 401 and/or 470), CHEM 221 or above, PHYS 225 or above, or MATH 127 or above.

Cooperative Programs

Certain specific exceptions to the Biology major will be made for students in accelerated programs. The requirements for accelerated programs in Optometry, Forestry or Environmental Studies, Medical Technology, and Podiatry can be found in the Academic Program section of the catalog.

Students interested in these programs should contact the program director before finalizing their individual programs.

Minors

The Department of Biology offers two minors: Biology and Environmental Science.

A minor in biology requires the completion of four courses numbered 200 or higher, with their appropriate prerequisites (i.e., two introductory biology courses). At least two of these must be from the series of courses BIO 222, 224, 225, 321, or 323.

A minor in Environmental Science consists of two introductory biology courses (one of which must be BIO 220), BIO 224, two additional courses numbered 200 or higher, one course in economics (recommended ECON 225), and ASTR 102.

Biology majors who minor in Environmental Science must complete all requirements of the biology major. In addition, they need to complete BIO 220, BIO 401, ECON 225, ASTR 112, and one course selected from either ANTH 229, or an advanced biology course (328 or higher).

Clean Water Institute

This institute is designed to provide a forum for the natural resource heritage of North Central Pennsylvania, the Susquehanna River and its major tributaries (Pine, Loyalsock, Lycoming, and Muncy Creeks). The institute provides a service not only to Lycoming College students, through coordination of Environmental internships, practica (BIO 401) and independent study/honors

projects, but also the community. This may include seminars or workshops on environmental issues as well as monitoring assistance to watershed groups.

000

SEMINAR IN BIOLOGICAL EDUCATION

Each student planning to teach Biology in secondary schools attends a series of seven seminars, conducted prior to student teaching, during the spring semester of the junior year. These seminars are conducted by members of the biology faculty. In addition to pertinent teaching issues, students are also exposed to procedures for laboratory set up and maintenance, and safety procedures for students and materials in a laboratory. Special arrangements will be made for non-degree students. *Non-credit course.*

106

CELLS, GENES AND SOCIETY

This course investigates the roles cellular phenomena, genes and biotechnology play in everyday life. The primary goal of this course is to improve recognition and understanding of the implications of biology in health care, agriculture, law, bioethics, and business. *Credit may not be earned for both BIO 106 and 110. BIO 106 is not a prerequisite for BIO 107. Three hours of lecture and one-three hour lab per week.*

107

ANATOMY FOR HEALTH CARE CONSUMERS

This course is a brief survey of human anatomy and physiology, which includes study of the complementary nature of form and function, as well as study of the levels of biological organization within the body. The objective is to provide students with a background which will allow them to read, comprehend, and appreciate current articles on this subject in the popular press. Students learn the names, structure, and general functions of the major organs of the body. Animal dissection is optional. *Credit may not be earned for both BIO 107 and 111. BIO 106 is not a pre-requisite for BIO 107. Three hours of lecture and one-three hour laboratory per week.*

109

NATURAL HISTORY OF DINOSAURS

This course explores the origin, evolution, and extinction of dinosaurs with emphasis on paleobiology and paleoecology of the Mesozoic Era. This course covers fundamental paleontological and evolutionary principles, dinosaur anatomy and behavior, physiology, dinosaur-bird relationships, diversity, and the history of dinosaur paleontology. *Three hours of lecture and one three-hour laboratory per week.*

110

INTRODUCTION TO BIOLOGY I

An introduction to the study of biology designed for students planning to major in the sciences. Major topics considered include a survey of biochemistry, cell biology, genetics, development, and evolution. *Credit may not be earned for both BIO 106 and 110. Three hours of lecture and one three-hour laboratory per week.*

111**INTRODUCTION TO BIOLOGY II**

An introduction to the study of biology designed for students planning to major in the sciences. Major topics considered include a survey of eukaryotic diversity mammalian anatomy and physiology, animal behavior, ecology, and evolution. *Prior completion of BIO 110 is recommended, but not required. Credit may not be earned for both BIO 107 and 111. Three hours of lecture and one three-hour laboratory per week.*

200**THE 4TH AND 5TH KINGDOMS**

While food, oxygen and medicines are all necessary for human existence, the importance of plants and fungi are often ignored by our society. Plants and fungi play an essential role in our planet's ecology and are central in human cultural evolution. Topics covered by this course include the ways plants and fungi work, how humans have used plant and fungal products for their benefit and pleasure through out history, and how different phytochemicals can influence human health. We also examine human impacts on plant and fungal biodiversity, how we have altered the environment in our quest for food and the perfect American lawn, and the impacts of genetic engineering. *Three hours of lecture and one three-hour laboratory per week. This course does not count towards the biology major.*

220**ENVIRONMENTAL BIOLOGY**

This course provides an introduction to ecological principles and concepts with an examination of the biological basis of contemporary environmental problems. The effects of human population on earth's resources are studied against a background of biological and health sciences as they relate to Environmental Sustainability. The course includes such topics as recycling, availability of food, processing of solid waste, alternative energy, clean air, and clean water. *Three hours of lecture and one three-hour laboratory per week. This course is not a substitute for BIO 110 or 111 for Biology majors.*

222**GENETICS**

A general consideration of the principles governing inheritance, including treatment of classical, molecular, cytological, physiology, microbial, human, and population genetics. *Three hours of lecture and two two-hour laboratory periods per week. Prerequisites: BIO 110-111.*

224**ECOLOGY**

The study of the principles of ecology with emphasis on the role of chemical, physical, and biological factors affecting the distribution and succession of plant and animal populations and communities. Included are field studies of local habitats as well as laboratory experimentation. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110-111.*

225**PLANT SCIENCES**

A survey of the structure, development, function, ecology, taxonomic divisions and human uses of plants. The course includes four general topic areas: form, including plant cellular structure, plant morphology and plant anatomy; function, concentrating on photosynthesis and plant nutrition; distinguishing among different plant divisions and plant identification techniques; and human uses of plants and historical implications of several different plants and fungi. Three hours of lecture and one three hour laboratory per week. *Prerequisites: BIO 110 and 111.*

321**MICROBIOLOGY**

A study of microorganisms. Emphasis is given to the identification and physiology of microorganisms as well as to their role in disease, their environmental roles, and industrial applications. *Three hours of lecture and two two-hour laboratory periods per week. Prerequisites: BIO 110 and 111.*

323**HUMAN PHYSIOLOGY**

The mechanisms and functions of systems, including the autonomic, endocrine, digestive, cardiovascular, respiratory, renal, nervous, and reproductive systems. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110-111.*

328**AQUATIC BIOLOGY**

A field-oriented course dealing with freshwater ecosystems. Studies include a survey of the plankton, benthos, and fish—as well as the physical and chemical characteristics of water that influence their distribution. Several local field trips and an extended field trip to a field station familiarize students with the diversity of habitats and techniques of limnologists. *Alternate years. Prerequisites: BIO 110-111.*

329**TROPICAL MARINE BIOLOGY**

A field-oriented course where students study the creatures of the fringing reefs, barrier reefs, lagoons, turtlegrass beds and mangrove swamps at a tropical marine laboratory. Studies include survey of plankton, invertebrates, and fish as well as the physical and chemical characteristics that influence their distribution. *Prerequisites: BIO 110-111. Alternate May terms.*

333**MEDICINAL AND POISONOUS PLANTS**

An overview of plants, fungi and bacteria that produce physiologically active substances important to humans and animals because of their toxic and/or medicinal qualities. Major themes include: basic nutritional requirements of humans, types of phytochemicals and their generalized actions, and a survey of organisms known to make chemicals. The organismal survey includes toxicity symptoms, and known mechanisms of how toxic/medicinal chemicals interfere with physiological functions of organisms consuming them. The course utilizes a problem-solving approach. Laboratory topics include plant classification and identification of plants with potential activity on other organisms. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110 and 111, or consent of instructor.*

334**INVERTEBRATE ZOOLOGY**

Comparative study of the invertebrate phyla with emphasis on phylogeny, physiology, morphology, and ecology. *Two three-hour lecture/laboratory periods per week. Prerequisites: BIO 110-111. Alternate years.*

336**VERTEBRATE BIOLOGY**

A biological survey of the vertebrates including aspects of morphology, physiology, behavior, ecology, and evolution. Issues of conservation and biodiversity are also addressed. Laboratories will focus on the field biology of Pennsylvania vertebrates and on dissections to emphasize comparative anatomy. *Three hours of lecture and one four-hour laboratory per week. Prerequisites: BIO 110 and 111. Alternate years.*

337**NEUROBIOLOGY**

A survey of fundamental principles in neurobiology, including the cell biology of the neuron, action potentials, synaptic transmission, organization of sensory and motor systems, neuronal development and pathfinding, and plasticity in the nervous system. Students also explore neurological disorders such as Alzheimer's and Parkinson's diseases, depression, addiction, and problems with learning and memory. Includes student discussion and presentation of original scientific literature. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110 and 111. Alternate years.*

338**HUMAN ANATOMY**

The objective of this course is to provide, through lectures and dissection studies, a comprehensive overview of the structural, functional and developmental anatomy of the human body. Particular consideration is given to the bony structures, vasculature, innervation, musculature and the relationships of the various structures to one another. Students learn the general form, location, and relationships of these features and acquire a vocabulary essential for future studies. This course provides a detailed knowledge of the body regions and integrates a basic understanding of embryology and surface anatomy with the study of the human cadaver. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110 and 111.*

340**PLANT ANIMAL INTERACTIONS**

An investigation of different herbivorous animals, plant defenses, how plants influence animals and animal evolution, and how herbivores influence plants and plant evolution. Topics include the evolution of plants and problems associated with an herbivorous lifestyle, effects of herbivory on individual plants and communities, how animals deal with plant defenses and potentially use them for their benefit, the advantages and disadvantages of monophagous and polyphagous lifestyles, strategies of carnivorous plants, and mutualisms such as pollination and seed dispersal. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110 and 111, or consent of instructor. Alternate years.*

341**DEVELOPMENTAL BIOLOGY**

A study of the development of vertebrates from fertilization to the fully formed fetus with an emphasis on the role of gene expression in embryo and organ development. Laboratory includes such topics as chick embryo and zebrafish development and micro-injection techniques. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110 and 111. Alternate years.*

342**ANIMAL BEHAVIOR**

A study of causation, function, evolution, and biological significance of animal behaviors in their normal environment and social contexts. *Three hours of lecture and one four-hour laboratory each week. Prerequisites: BIO 110-111. Alternate years.*

346**VIROLOGY**

An introduction to the study of viruses. The course covers virus anatomy and reproduction, diseases caused by viruses, modern treatments of viral infections and viral vaccines produced by recombinant DNA and other technologies. Course content also includes a description of how viruses are used as tools for genetic engineering and for studying cellular processes like membrane signal transduction, regulation of genetic expression and oncogenesis (cancer). *Four hours of lecture per week. Prerequisites: BIO 110-111 or consent of instructor. Alternate years.*

347**IMMUNOLOGY**

The course introduces concepts concerning how pathogens cause disease and how host organisms defend against infectious diseases. Characterization of and relationships between antigens, haptens, and antibodies are presented. Other topics include: immediate and delayed hypersensitivities (i.e. allergies such as hay fever and poison ivy), immunological renal diseases, immunohaematology (blood groups, etc.), hybridoma technology, the chemistry and function of complement, autoimmunity, and organ transplant rejection phenomena. Laboratory experiments include: agglutination, immunoprecipitations, ELISA assays, immunofluorescence, immunoelectrophoresis, complement fixation, and Western blotting. *Three hours of lecture, one three-hour laboratory per week. Prerequisites: BIO 110-111. Alternate years.*

348**ENDOCRINOLOGY**

This course begins with a survey of the role of the endocrine hormones in the integration of body functions. This is followed by a study of the control of hormone synthesis and release, and a consideration of the mechanisms by which hormones accomplish their effects on target organs. *Two three-hour lecture/laboratory periods per week. Prerequisites: BIO 110-111. Alternate years.*

400**BIOLOGY PRACTICUM**

A work-oriented experience for junior or senior biology majors jointly sponsored by the Department and a public or private agency. The practicum is designed to integrate classroom theory with field or laboratory practice. In addition to attendance at a weekly seminar, students spend 10-12 hours per week at the sponsoring agency. Academic work includes, but is not limited to: a log, readings, recitation and an assigned research paper related to the specific agency's activities. *May be repeated once for credit with consent of instructor.*

401**ENVIRONMENTAL PRACTICUM**

A work-oriented experience for junior or senior students interested in environmental science. Students work on projects jointly sponsored by the Clean Water Institute and a public or private agency. The practicum is designed to integrate classroom theory with field and/or laboratory practice. In addition to attendance at a weekly seminar, students spend 10-12 hours per week at the sponsoring agency or project. Academic work includes, but is not limited to a log, readings, recitation and an assigned research paper related to the specific agency or project activity. *May be repeated once for credit with consent of instructor.*

430**COMPARATIVE ANATOMY OF VERTEBRATES**

Detailed examination of the origins, structure, and functions of the principal organs of the vertebrates. Special attention is given to the progressive modification of organs from lower to higher vertebrates. *Three hours of lecture and one four-hour laboratory per week. Prerequisites: BIO 110-111. Alternate years.*

431**HISTOLOGY**

A study of the basic body tissues and the microscopic anatomy of the organs and structures of the body which are formed from them. Focus is on normal human histology. *Three hours of lecture and one four-hour laboratory per week. Prerequisites: BIO 110-111. Alternate years.*

432**GENOME ANALYSIS**

This course examines the genomes of humans, other animals, plants, and microbes to identify characteristics unique to specific groups as well as genomic features shared by multiple groups. The application of this information in the fields of medicine, environmental biology, and evolution is emphasized. The laboratory integrates experiments at the lab bench with a substantial bioinformatics component. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110, 111 and 222. Alternate years.*

435**CELL BIOLOGY**

An intensive study of the cell as the basic unit of life. Topics include: origins of cellular life, biochemistry of the cell, enzymatic reactions, cellular membranes, intracellular communication, the cell cycle, the cytoskeleton and cell motility, protein sorting, distribution and secretion. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110-111 and one semester of organic chemistry. Alternate years.*

436**EVOLUTION**

The study of the origin and modification of life on earth. Topics discussed include molecular evolution, population genetics, gene flow, natural selection, sexual selection, kin selection, neutral theory, extinction, coevolution, and the evolution of man. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110, 111, or consent of instructor. Alternate years.*

437**MOLECULAR BIOLOGY**

An in-depth analysis of fundamental cellular information flow processes with particular emphasis on how these processes have been applied in the laboratory, resulting in technologies such as DNA cloning and sequencing, the Polymerase Chain Reaction (PCR), genetic testing, gene therapy, and synthetic biology. *Three hours of lecture, and one-hour laboratory per week.. Prerequisites: BIO 110, 111 and 222. Alternate years.*

439**MEDICAL GENETICS**

This course is concerned with the relationships of heredity to disease. Discussions will focus on topics such as chromosomal abnormalities, metabolic variation and disease, somatic cell genetics, genetic screening, and immunogenetics. Laboratory exercises offer practical experiences in genetic diagnostic techniques. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110-111. Alternate years.*

440**PARASITOLOGY AND MEDICAL ENTOMOLOGY**

The biology of parasites and parasitism. Studies on the major groups of animal parasites and arthropod vectors of disease involve taxonomy and life cycles. Emphasis will be made on parasites of medical and veterinary importance. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110-111. Alternate years.*

444**BIOCHEMISTRY**

Emphasis is given to protein structure, function and regulation; the structure and metabolism of carbohydrates, lipids, and amino acids; integration of metabolism; and biochemical control mechanisms, including allosteric control, and signal transduction. *Three hours of lecture and one three-hour laboratory per week. Prerequisite: CHEM 221, or consent of instructor. Cross-listed as CHEM 444.*

446**PLANT PHYSIOLOGICAL ECOLOGY**

A study of plant resource acquisition in the face of competing neighbors and the quickly changing global environment. The course focuses on how differences in the environment affect plant water use, carbon dioxide acquisition, light capture and nutrient uptake. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: BIO 110-111 and 225. Alternate years.*

447**CELL AND MOLECULAR BIOLOGY RESEARCH METHODS**

This course focuses on the culture and methods of biology research. Students meet twice per week to learn experimental design, good record keeping, ordering/preparation of materials, equipment maintenance, and analyses of primary biology literature. Each student designs and conducts a lab project that can be supervised by any member of the biology faculty. Each student prepares an oral presentation, poster presentation, and a research journal-style paper. *Two one-hour seminars and six to eight hours of laboratory work per week. Prerequisites: BIO 110, 111, at least two other biology courses and consent of instructor.*

349 & 449**BIOLOGY COLLOQUIUM**

This course offers the student a chance to become familiar with research in the biological sciences using techniques such as meeting and talking with active researchers, reading and critically analyzing the current literature, and discussing the ideas and methods shaping biology. Students are required to read and analyze specific papers, actively participate in discussions. Biology majors with junior and senior standing are required to successfully complete colloquium during all semesters on campus except for semesters when student teaching. *The grade will be P/F. Non-credit course. One hour per week. Prerequisite: Biology majors with junior or senior class standing.*

470-479**INTERNSHIP (See index)**

Recent samples of internships in the department include ones with the Department of Environmental Resources, nuclear medicine or rehabilitative therapies at a local hospital.

N80-N89**INDEPENDENT STUDY (See index)**

Departmental studies are experimentally oriented and may entail either lab or field work.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

Examples of recent honors projects have involved stream analysis, gypsy moth research, drug synthesis and testing.

BUSINESS ADMINISTRATION (BUS)

Associate Professors: Grassmueck (Chairperson), Kolb, Sterngold

Instructor: Josephson

This major is designed to educate students about business and management functions in for-profit, non-profit, and public organizations. The program provides a well balanced preparation for a wide variety of professions and careers, including banking, financial services, small business management, marketing, sales, advertising, retailing, management, supervision, investments, human resources management, organization development, entrepreneurship, and management information systems. The major is also appropriate for students who plan to attend graduate school in business or related fields, such as law or public administration.

The Department of Business Administration is a member of the Institute for Management Studies. For more information, see the Institute for Management Studies listing.

All students majoring in Business Administration must complete the core courses and at least one of the four tracks listed below:

Core Course Requirements:

ACCT 110; ACCT 130 or 223; BUS 228, 238, 244, and 441; ECON 110 and 111. Students complete the core business courses before taking courses to satisfy track requirements. BUS 441 must be taken during the senior year after completing the other core business courses.

Track Requirements:

Finance: Bus 339, 410, and two courses from BUS 349, ACCT 225, and ECON 220, 331, 332, 337, 340 and 343.

Health Care Administration: BUS 306; three courses from BUS 439, BUS 470-479, BIO 107, ECON 349, PHIL 219, SOC 222, SOC 310. Only one of these three courses may be selected from BUS 439, BUS 470-479 and ECON 349, and the practicum or internship must be in the area of Healthcare Administration or a related field.

Management: BUS 310; One course from BUS 313, 348 and 420; Two additional courses chosen from ACCT 225, 235, BUS 306, 313, 334, 348, 420, ECON 335 and PSY 424.

Marketing: BUS 342, 429, and two from BUS 332, 334, 347 and CCOM 324.

A course may be used to satisfy the elective course requirements in only one business track.

Assessment Exam:

To earn a degree in business administration, students must pass an outcomes assessment exam during their senior year as determined by the Department. Students who fail must re-take and pass the assessment.

Minor

A minor in Business Administration consists of ACCT 110; BUS 228, 238, 244; and one business course numbered above 200 excluding the core business courses.

Internships

Through BUS 439, Business Practicum, the department facilitates a wide variety of internships with businesses, government agencies and nonprofit organizations. In addition, the department is a member of the Institute for Management Studies, which also facilitates internships, including full-time internships during the summer.

Diversity and Writing Intensive Courses

The following course satisfies the cultural diversity requirement: BUS 244. The following courses, when scheduled as W courses, count toward the writing intensive requirement: BUS 347, 348, 410, 420, 429 and 441.

228

MARKETING PRINCIPLES

A study of the methods used by business and nonprofit organizations to design, price, promote and distribute their products and services. Topics include new product development, advertising, retailing, consumer behavior, marketing strategy, ethical issues in marketing and others.

238

FUNDAMENTALS OF FINANCIAL MANAGEMENT

A study of the fundamental theory, tools, and methods of financial management. Topics include the time value of money, bond valuation, capital budgeting, stock valuation, and analysis of financial statements. Prerequisite: ACCT 110 and one Math course beyond MATH 100.

244

MANAGEMENT AND ORGANIZATIONAL BEHAVIOR

A study of the complex character of organizational life and the discipline and process of management. Topics include the evolution and scope of organizations and management, planning, organizing, leading, and controlling. Emphasis is placed on the importance of managing in a global environment, understanding the ethical implications of managerial decisions, and appreciating work place diversity

306

HEALTH CARE ADMINISTRATION

This class presents key issues impacting the administration of today's healthcare organizations and explores how those issues impact the delivery of care. Issues of accounting, finance, marketing, human resource management, and management information systems are explored. The goals of the course are to provide a solid foundation of applying managerial knowledge within the healthcare industry. This course introduces students to the practices and theories of health care policy and current issues facing the healthcare industry. *Prerequisites: BUS 228, 238, and 244, or consent of instructor.*

310**HUMAN RESOURCES MANAGEMENT**

A study of the human resources function in organizations. The course introduces the roles and functions of the human resources department and how managers engage in human resource activities at work. The functions of selection, training and development, compensation, retention, performance appraisal, promotion, employment law, and the modern-day importance of strategic human resource management are explored. *Prerequisites: BUS 228, 238, and 244, or consent of instructor.*

332**INTEGRATED MARKETING COMMUNICATIONS**

Integrated marketing communications combines the promotional tools of advertising, direct marketing, sales incentives, public relations and personal selling. This class focuses on how to plan, develop and execute integrated marketing communications programs for a coordinated strategic program of total communications for an organization. IMC is a concept in use in business, government and social service sectors. *Prerequisites: BUS 228, 238, and 244, or consent of instructor.*

333**GLOBAL BUSINESS STRATEGIES**

Students study the basic concepts and theories pertaining to today's global economy, business environment, and markets. Topics include international business environment, foreign political systems, world cultures, global economic integration, operation of the international monetary system, and ethical issues involving global business. In addition multinational corporations, national trade policies, foreign direct investment, and regional trading areas are covered. *Prerequisites: BUS 228, 238, and 244, or consent of instructor.*

334**THE BUSINESS OF ENERGY**

This course examines the development, management and marketing of conventional and unconventional energy resources, such as coal, oil, natural gas, solar and wind. The course explores public and private sector efforts to develop new energy technologies and to promote more efficient energy practices, and it examines public policy debates about a range of energy-related issues. *Prerequisites: BUS 228, 238, 244, or consent of instructor.*

339**FINANCIAL STRATEGY**

An intensive study of issues and applications of financial management. Topics covered include advanced capital budgeting, cash flow estimation and risk analysis, real options, capital structure and leverage, dividend policy, derivatives, international finance and special topics in financial management. Extensive use of Excel in directed and non-directed cases. *Prerequisites: BUS 228, 238, and 244, or consent of instructor.*

342**MARKETING RESEARCH**

This is a study of the principles and practices of marketing research. The focus is on the development and application of marketing research methods. Topics covered include selection of a research design, data collection, analysis and report writing. Both quantitative and qualitative methods will be covered. The class will focus on an applied project. *Prerequisites: BUS 228, 238, and 244, or consent of instructor*

347**CONTEMPORARY ISSUES IN MARKETING**

Students examine social controversies involving marketing as portrayed in books, popular writings, political debates and films (e.g., marketing of junk-foods, prescription drugs or violent video games), or the students study specialized marketing practices, such as financial services marketing, nonprofit marketing, Internet marketing or sports and recreational marketing. *Prerequisites: BUS 228, 238, and 244, or consent of instructor. May be taken twice for credit if the classes cover significantly different topics and the department approves.*

348**CONTEMPORARY ISSUES IN MANAGEMENT**

Students examine social controversies involving management as portrayed in books, popular writings, political writings and films (e.g., the effects of plant closings and global competition on local communities), or the students study specialized management practices, such as social entrepreneurship, environmentally sustainable business practices or public administration. *Prerequisites: BUS 228, 238, and 244, or consent of instructor. May be taken twice for credit if the classes cover significantly different topics and the department approves.*

349**CONTEMPORARY ISSUES IN FINANCE**

Students examine social controversies involving finance as portrayed in books, popular writings, political debates and films (e.g., Enron and other corporate financial scandals, the destabilizing effects of hedge funds and programmed trading), or the students study specialized financial practices, such as public finance or investment banking. *Prerequisites: BUS 228, 238, and 244, or consent of instructor. May be taken twice for credit if the classes cover significantly different topics and the department approves.*

410**INVESTMENTS**

An introduction to key concepts in investments. Students learn about security types, mutual funds, returns and risks, portfolio theory, portfolio selection, asset pricing models, market efficiency, behavioral finance, security analysis, option valuation and special topics in investments. In addition, this course introduces students to different concepts, theories, and philosophies in the literature on how to invest profitably and how to adjust portfolio strategies. *Prerequisites: BUS 228, 238, and 244, or consent of instructor*

420**ORGANIZATION DEVELOPMENT**

An overview of the concepts, models, and theories in the field of organization development. Students will learn how to design and manage organizational change through diagnosis, intervention, and institutionalization of change events. Students are given the opportunity to apply what they have learned by acting as change agents with a local organization. *Prerequisites: BUS 228, 238, and 244, or consent of instructor*

429**MARKETING STRATEGY**

A study of the methods used by business and nonprofit organizations to analyze and select target markets, and then to develop strategies for gaining and maintaining these customers. Topics include competitive strategy, market segmentation, product positioning, promotional design and marketing-related financial analysis. Case studies, and the development of a detailed marketing plan are covered. *Prerequisites: BUS 228, 238, and 244, or consent of instructor*

439**BUSINESS PRACTICUM**

This course provides students with practical work experience with local companies and organizations. Students work 10-12 hours per week for their sponsor organizations, in addition to attending a weekly seminar on management topics relevant to their work assignments. Since enrollment is limited by the available number of positions, students must apply directly to the business department before preregistration to be eligible for the course. *May be repeated once for credit with consent of instructor.*

441**BUSINESS STRATEGY AND ENTREPRENEURSHIP**

An intensive study of the entrepreneurial function of business enterprises designed to build students' skills in conducting strategic analysis and strategic development in a variety of industries and competitive situations. Students examine industry structure, functional strategies, competitive challenges of a global marketplace, and sources of sustainable competitive advantage. This course is designed to integrate the knowledge and skills gained from previous coursework in business and related fields. *Prerequisites: All core courses or consent of instructor. Seniors only.*

470-479**INTERNSHIP (See index)**

Prerequisites: BUS 228, 238, and 244, or consent of instructor

N80-N89**INDEPENDENT STUDY (See index)**

Prerequisites: BUS 228, 238, and 244, or consent of instructor

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

Prerequisites: BUS 228, 238, and 244, or consent of instructor

CHEMISTRY (CHEM)

Professor: McDonald

Associate Professor: Bendorf

Assistant Professors: Mahler (Chairperson), Ramsey

The Department of Chemistry offers both B.A. and B.S. degree programs, and is approved by the American Chemical Society (ACS) to certify those students whose programs meet or exceed requirements established by the ACS. Students who complete the ACS certified degree are also eligible for admission to the American Chemical Society following graduation.

For students planning on graduate study in chemistry, German is the preferred foreign language option, and additional courses in advanced mathematics and computer science are also recommended.

The following courses, when scheduled as W courses, count toward the writing intensive requirement: CHEM 232, 330, 331, and 449.

The B.A. degree

To earn the B.A. degree a student must complete CHEM 110-111, 220-221, 232, 330-331, 333; PHYS 225-226; MATH 128-129; and, the Capstone experience. The Capstone experience for Chemistry majors: In order to graduate, all chemistry majors must demonstrate to the Department their command of chemistry by: 1) passing a Chemistry Department proficiency exam; and 2) completing one of the following: CHEM 449, 470, 490 or the Professional Semester (EDUC 446, 447, 449).

The B.S. degree

To earn the B.S. degree a student must complete the thirteen course major described above as well as three unit courses in chemistry at the 400-level. One unit course from the following list may be substituted for one 400-level chemistry course: PHYS 331 or above; BIO 222 or above; MATH 123, 130, 214, 216, 231, 238, 332; or CPTR 125.

ACS Certification

To earn ACS certification, a student must complete the requirements described above under the B.A. degree as well as CHEM 443, 444, and one additional course from CHEM 440, 442 or 446. Students completing this program of study may elect to receive either the B.A. or the B.S. degree.

Certification in Secondary Education

A Chemistry major interested in becoming certified in secondary education in Chemistry and/or General Science/Chemistry should, as early as possible, consult the current Department of Education Teacher Education Handbook and make their plans known to their advisor and the

Chair of the Education Department so the required courses can be scheduled for the Professional Semester. A Chemistry major who successfully completes the Professional Semester (EDUC 446, 447, 449) has also satisfied the Chemistry Capstone experience. Please check with the Education Department for the most current PA State requirements.

Minor

A minor in chemistry requires completion of CHEM 110-111, 220-221, and two CHEM courses numbered 300 or higher. Chemistry 232 may be substituted for one 300-level course.

000

LABORATORY TEACHING METHODS

This course provides students with practical experience in laboratory teaching. Students in this course are paired with a faculty mentor and help supervise labs, deliver prelab lectures and assist in ordering chemicals and prepping laboratory experiments. Students complete a project that integrates the chemical education literature, classroom instruction materials, laboratory safety and chemical procurement, storage and disposal. *Open to junior chemistry majors pursuing certification in education, with consent of the instructor. Non-credit course.*

100

CHEMISTRY IN CONTEXT

A science distribution course for the non-science major. The course explores real-world societal issues that have important chemical components. Topics covered may include air and water quality, the ozone layer, global warming, energy, acid rain, nuclear power, pharmaceuticals and nutrition. The chemistry knowledge associated with the issues is built on a need-to-know basis. *Three hours of lecture and one two-hour laboratory period each week. Not open for credit to students who have received credit for CHEM 110.*

101

INVESTIGATING CHEMISTRY

Intended for the non-major, this course will introduce the fundamental concepts of chemistry through the perspective of forensic science. Case studies based upon actual crimes and an investigative laboratory experience will be used to illustrate the importance of chemistry to forensics as well as everyday life. *Three hours lecture and one two-hour laboratory period each week. Not open to students that have received credit for CHEM 110.*

102

CHEMISTRY OF FOOD AND COOKING

Intended for the non-major, this course introduces students to chemical principles, with an emphasis on organic chemistry. Topics covered include: the chemical composition of food, the chemistry of nutrition, and the physical and chemical changes that occur during cooking. *Three hours lecture and one two-hour laboratory period each week. Not open to students that have received credit for CHEM 110.*

110**GENERAL CHEMISTRY I**

A quantitative introduction to the concepts and models of chemistry. Topics include stoichiometry, atomic and molecular structure, nomenclature, bonding, thermochemistry, gases, solutions, and chemical reactions. The laboratory introduces the student to methods of separation, purification, and identification of compounds according to their physical properties. This course is designed for students who plan to major in one of the sciences. *Three hours lecture, one hour of discussion and one three-hour laboratory period each week. Prerequisite: MATH 100 or consent of department.*

111**GENERAL CHEMISTRY II**

A continuation of CHEM 110, with emphasis placed on the foundations of analytical, inorganic, and physical chemistry. Topics include kinetics, equilibria, acid-base theory, electrochemistry, thermodynamics, nuclear chemistry, coordination chemistry, and descriptive inorganic chemistry of selected elements. The laboratory treats aspects of quantitative and qualitative inorganic analysis. *Three hours of lecture, one hour of discussion, and one three-hour laboratory period each week. Prerequisite: A grade of C- or better in CHEM 110 or consent of instructor.*

215**ORGANIC AND BIOLOGICAL CHEMISTRY**

A descriptive study of the compounds of carbon. This course illustrates the principles of organic chemistry with material relevant to students in biology. Topics include nomenclature, mechanism, alkanes, arenes, amino acids, proteins, carbohydrates and other naturally occurring compounds. This course is designed for students who require only one semester of organic chemistry, and is not intended for students planning to enroll in chemistry courses numbered 220 or above. *Three hours of lecture, one hour of discussion, and one three-hour laboratory period each week. Prerequisite: CHEM 111. Not open for credit to students who have received credit for CHEM 220.*

220**ORGANIC CHEMISTRY I**

An introduction to the chemistry of the compounds of carbon. Topics include structure and bonding, nomenclature, conformational analysis, stereochemistry, substitution and elimination chemistry, alkenes, alkynes, IR spectroscopy and organic synthesis. Techniques for the synthesis, purification and characterization of organic compounds are introduced in the laboratory. *Three hours of lecture and one four-hour laboratory period each week. Prerequisite: CHEM 111.*

221**ORGANIC CHEMISTRY II**

A continuation of CHEM 220 with emphasis on the synthesis and characterization of organic compounds. Topics include the chemistry of alcohols, dienes, arenes, and carbonyl compounds, NMR spectroscopy, mass spectrometry and radical chemistry. The laboratory work includes multi-step syntheses, mechanistic studies and characterization of organic compounds using a variety of spectroscopic techniques. *Three hours of lecture and one four-hour laboratory period each week. Prerequisite: A grade of C- or better in CHEM 220.*

232**QUANTITATIVE CHEMICAL ANALYSIS**

A quantitative introduction to chemical analysis by chemical and instrumental methods. Topics include statistics, data analysis, titration, gravimetric analysis, and equilibrium, as well as an introduction to the fundamentals of spectroscopy, separation science, and electrochemistry. An emphasis is placed on oral methods for reporting of experimental results *Three hours of lecture and two three-hour laboratory periods each week. Prerequisite: CHEM 111 or consent of instructor.*

330**PHYSICAL CHEMISTRY I**

A study of energy in chemistry and its reactions, including in-depth gas laws, thermodynamics, phases and physical transformations of pure substances and mixtures, equilibrium, electrochemistry, and statistical mechanics. The laboratory involves physicochemical measurements of thermodynamic properties. *Three hours of lecture and one four-hour laboratory period each week. Prerequisites: CHEM 111, MATH 129, PHYS 225-226; or consent of instructor.*

331**PHYSICAL CHEMISTRY II**

A continuation of CHEM 330 with emphasis on time and structure in chemistry and its reactions. Topics include molecular motion, rates of reactions and kinetics, molecular reaction dynamics, quantum mechanics, atomic and molecular structure and their relation to spectroscopy. The laboratory introduces kinetics and quantum mechanics experiments, as well as student projects. *Three hours of lecture and one four-hour laboratory period each week. Prerequisite: CHEM 330.*

333**ADVANCED INORGANIC CHEMISTRY**

A study of modern theories of atomic and molecular structure and their relationship to the chemistry of selected elements and their compounds. *Three hours of lecture and one four-hour laboratory period each week. Prerequisites: CHEM 221 (CHEM 330 preferred, but not required); or consent of instructor.*

439**INTRODUCTION TO QUANTUM MECHANICS**

Introduction to the basic concepts and principles of quantum theory. Solutions to the free particle, the simple harmonic oscillator, the hydrogen atom, and other central force problems are presented using the Schrodinger wave equation approach. Topics also include operator formalism, eigenstates, eigenvalues, the uncertainty principles, stationary states, representation of wave functions by eigenstate expansions, and the Heisenberg matrix approach. *Four hours of lecture. Prerequisites: Either PHYS 226 or CHEM 331, and MATH 231. Cross-listed as PHYS 439.*

440**ADVANCED ORGANIC CHEMISTRY**

Theory and application of modern synthetic organic chemistry. Topics may include oxidation-reduction processes, carbon-carbon bond forming reactions, functional group transformations, and multi-step syntheses of natural products (antibiotics, antitumor agents, and antiviral agents). *Three hours of lecture and one four-hour laboratory period. Prerequisite: CHEM 221.*

442**SPECTROSCOPY AND MOLECULAR STRUCTURE**

Theory and application of the identification of organic compounds. With special emphasis on the utilization of spectroscopic techniques (H-NMR, C-NMR, IR, UV-VIS, and MS). *Three of hours lecture and one four-hour laboratory period each week. Prerequisite: CHEM 221.*

443**INSTRUMENTAL ANALYSIS**

An introduction to the operation and function of modern chemical instrumentation. Topics include instrumentation for molecular, vibrational, and atomic spectroscopy; pressure- and electrically-driven separation science; as well as potentiometric and voltammetric electrochemical techniques. *Three hours lecture and one four-hour laboratory period each week. Prerequisites: CHEM 232 and 331 or consent of instructor.*

444**BIOCHEMISTRY**

Emphasis is given to protein structure, function and regulation; the structure and metabolism of carbohydrates, lipids, and amino acids; integration of metabolism; and biochemical control mechanisms, including allosteric control, and signal transduction. *Three hours of lecture and one three-hour laboratory per week. Prerequisite: CHEM 221, or consent of instructor. Cross-listed as CHEM 444.*

446**ORGANOMETALLIC CHEMISTRY**

An introduction to the chemistry of compounds containing metal-carbon bonds. Topics include structure and bonding, reactions and mechanisms, spectroscopy, and applications to organic synthesis. The use of organometallic compounds as catalysts in industrial processes is emphasized. *Three hours of lecture and one four-hour laboratory period each week. Prerequisite: CHEM 221.*

448**CHEMISTRY COLLOQUIUM**

A seminar in which faculty, students and invited professional chemists discuss their research activities. *Non-credit course.* Please note that attendance at Chemistry Colloquium is voluntary. Colloquium presentations by students are part of the course requirements for Chemistry Research Methods, Internship, and Honors.

449**CHEMISTRY RESEARCH METHODS**

This course focuses on the nature and practice of chemistry. Students conduct research into a particular chemical problem with a faculty research advisor, and explore different aspects of chemistry and discuss their research in a weekly seminar. A report on the research is written. Majors are strongly encouraged to enroll in this course in either their junior or senior year. *Eight to ten hours of laboratory work and one hour seminar each week. Prerequisites: CHEM 221 and consent of instructor; Corequisite: CHEM 330.*

470-479**INTERNSHIP (See index)**

The student ordinarily works under supervision in an industrial laboratory and submits a written report on the project. To satisfy the Chemistry Capstone requirement, participation in the seminar portion of CHEM 449 is required.

N80-N89**INDEPENDENT STUDY (See index)**

The student ordinarily works on a laboratory research project and writes a thesis on the work.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

The student ordinarily works on a laboratory research project with emphasis on showing initiative and making a scholarly contribution. A thesis is written. To satisfy the Chemistry Capstone requirement, participation in the seminar portion of CHEM 449 is required.

CLASSICAL STUDIES

Professors: Johnson, (Coordinator)
Assistant Professor: Young (Coordinator)

The interdisciplinary minor in Classical Studies allows students to pursue an in-depth study of the history, art, literature, and thought of the ancient Greek and Roman world.

The minor requires 3 core courses –

ENGL 225 - Classical Literature
HIST 210 - Ancient History
PHIL 301 - Ancient Greek Philosophy

Plus 2 electives chosen from the following:

GRK 221 or GRK 222 - Readings in New Testament Greek
LAT 221 or LAT 222 - Latin Readings and Culture
ART 222: Survey of Art - Ancient, Medieval and Non-Western Art
or ART 349: Narrative in Art
ENGL 218 - Ancient and Modern Rhetoric
REL 323 - The Hellenistic-Roman Cultural World
THEA 332 - History of Theater I

COMMUNICATION

Associate Professors: Peterson (Chairperson)
Assistant Professors: Donati, Perez
Part-time Instructors: Fausey, Van Auken

A major in communication with a liberal arts base is the perfect choice for students interested in digital video, digital filmmaking, video editing, film and video production and post-production, corporate communication, advertising, public relations, management, event planning, sales, marketing, and radio broadcasting.

The department offers majors in Corporate Communication and Digital Media Communication and minors in Digital Media Communication, Film Studies, and Media Writing. Students balance theory and practice as they study the way media interacts with society and are introduced to a variety of media in their courses, extracurricular activities, independent projects, and internships.

The following courses, when scheduled as W courses, count toward the writing intensive requirement: ART 320, 327; CCOM 210, 324, 400; FILM 220, 315, 320, 326.

MAJORS

CORPORATE COMMUNICATION (CCOM) Corporate Communication is an inter-disciplinary major designed to prepare students for a variety of careers in business, government, non-profit, political, policy, international or non-governmental organizations. The program leads to professional opportunities in corporate communication, public relations, advertising, marketing communication, public affairs, advocacy, media relations, human resources, change management, investor relations, science and environmental communication, international communication, and related fields.

All students majoring in Corporate Communication must complete a total of 12 units, distributed as follows:

I. Required Core Communication courses (five courses), plus colloquia:

CCOM 200 – Introduction to Corporate Communication
CCOM 210 – Writing for Corporate Communication
CCOM 324 – Public Relations
CCOM 332 – Advertising & Integrated Marketing Communication
DCOM 100 – Introduction to Visual Media
COMM 146, 246, 346, 446 – A total of four semesters of non-credit colloquium

II. Core business-related courses (three courses):

ACCT 110 – Financial Accounting
BUS 228 – Marketing Principles
And one of either
ECON 110 – Principles of Macroeconomics
ECON 111 – Principles of Microeconomic

- III. Communication capstone (one course):
CCOM 400 – Corporate Communication Strategy
CCOM 440 – Capstone Research Project

IV. Elective Courses (select three courses) Other related courses may be substituted with departmental approval:

ANTH 229 – Cultural Anthropology
BUS 238 – Fundamentals of Financial Management
BUS 244 – Management and Organizational Behavior
BUS 313 – Sustainable Business Management
BUS 333 – Global Business Strategies
BUS 429 – Marketing Strategies
CCOM 211 – Informative and Persuasive Speaking
CCOM 330 -- Topics in Corporate Communication
CCOM 333 – Financial Communication
CCOM 400 – Corporate Communication Strategy
CCOM 440 – Capstone Research Project
CCOM 470 – Internship
ECON 220 – Money and Banking
MWTG 219 – Convergent Social Media
MWTG 324 – Digital Publishing
MWTG 325 -- Web Communication
PHIL 216 – Business Ethics
PSCI 220 – Public Policy in America
PSCI 261 – International Organizations
PSCI 228 – Environmental Law and Politics
PSCI 316 – Public Opinion and Polling

200

INTRODUCTION TO CORPORATE COMMUNICATION

This course introduces: 1) The functional disciplines within corporate communication, including media relations, investor relations, employee relations and community relations, 2) Stakeholder management and issues management as core competencies of corporate communication, 3) The purposes and organization of a corporation, and 4) The relations among corporate and personal reputation, responsibility and ethics. Information and insights from this course are applicable equally to non-profit, for-profit or public sector organizations.

210

WRITING FOR CORPORATE COMMUNICATION

Instruction and practice in tactical writing skills, to attain the entry-level competence expected for professionals in public relations and corporate communication. These skill sets include messaging, document formats and document distribution, writing for aural, oral, digital and

traditional communication, speechwriting, writing news releases and media relations.
Prerequisite: ENGL 106 or 107 or permission of the instructor.

211

INFORMATIVE AND PERSUASIVE SPEAKING

Students train in methods of informative and persuasive speaking, including formal speeches, impromptu situations, presentations, and persuasion in critical situations. This course emphasizes the basic elements of effective public discourse: audience analysis, organization, content, and presentation skills. *Prerequisite: ENGL 106 or 107.*

324

PUBLIC RELATIONS

This course considers the practice, theory, philosophy, ethics and history of public relations. It appraises the capacity of public relations 1) to inform, 2) to persuade, 3) to cause, maintain or change events and perceptions, and 4) to foster strategic business choices and decisions, through rhetorical means. *Prerequisite: ENGL 106 or 107.*

330

TOPICS IN CORPORATE COMMUNICATION

Study of communication theory as applied to a special area of corporate communication through readings, discussion, and applications. *Prerequisite: Sophomore standing or above, or CCOM 200, or permission of instructor. May be repeated for credit with change of topic.*

332

ADVERTISING & INTEGRATED MARKETING COMMUNICATION

As an introduction to advertising and integrated marketing communication (IMC), this course links communication theory to practice fundamentals, such as branding, segmentation, targeting, message development, creative execution and media planning. It details the growth of advertising into the broader field of IMC due to the dominance of brand, media fragmentation and increased customer empowerment, among other forces.

333

FINANCIAL COMMUNICATION

Financial communication combines its core discipline – communication -- with elements from corporate finance, law, accounting, information technology, management and marketing. Its primary purpose is to sustain a company's reputation, financial standing and optimum valuation. This course covers the role of information in the capital markets, formal and informal disclosure of material information, relevant U.S securities law and regulations, corporate governance, and working with investors, potential investors, financial analysts and the financial media. This course requires no mathematics. *Prerequisite: CCOM 200, or an ACCT, BUS or ECON course, or permission of the instructor. Alternate years.*

400

CORPORATE COMMUNICATION STRATEGY

An integrative course in issues management, crisis management, planning and evaluation, students learn organized and conscientious approaches for using

communication to support business strategy, to manage reputation, and to solve business problems. *Prerequisites: CCOM 200, 210 and 324. Alternate years.*

440

CAPSTONE RESEARCH PROJECT

Students about to enter careers in advertising, marketing communication, public relations or corporate communication go deep into one final single, semester-long, individual assignment of the student's choice, with the instructor's guidance and permission. Most often the assignment takes the form of a thesis of original research using literature reviews and qualitative or quantitative methods. *Prerequisites: CCOM 200 and 324. Alternate years.*

470

INTERNSHIP

Interns usually work off-campus in fields related to their areas of study. Students must apply for departmental and College approval prior to registration to be eligible for this course. One to eight credits. *Prerequisite: junior or senior standing.*

146, 246, 346 and 446

CORPORATE COMMUNICATION COLLOQUIUM

Students are required to complete successfully the non-credit Colloquium for a total of four semesters through academic experiences such as WRLC, The Lycourier, and Crossing The Frame Productions. Enrollment in other similar on and off-campus academic experiences will be accepted with departmental approval. *Non-credit and Pass/Fail.*

DIGITAL MEDIA COMMUNICATION (DCOM)

Digital Media Communication is an innovative, interdisciplinary major with a strong relationship to other disciplines at the college including art, theater, creative writing, electronic music, business, sociology, political science, and history. The boundaries between video, film, multi-media production, web design, digital sound, photography, graphic design and performance are collapsing as quickly as digital technology is expanding. The Digital Media curriculum at Lycoming College is grounded in the tradition of liberal arts and teaches the theory, skills and grammar of the visual language necessary to work within this rapidly changing technology. Upper level studio and theory courses and the opportunity to do a professional internship provide the conceptual, technical and theoretical knowledge necessary to create compelling digital media and compete in the field.

All students majoring in Digital Media Communication must complete the core courses and at least one of the two concentrations listed below:

CORE COURSES:

ART 212 Color and Design
ART 227 Photography 1
BUS 228 Marketing Principles
CCOM 200 Introduction to Corporate Communication
DCOM 200 Digital Film and Video Production I
DCOM 300 Digital Film and Video Production II
DCOM 400 Digital Film and Video III/Senior Project
Either MWTG 219 Convergent Social Media *or*
MWTG 325 Web Communication
THEA 114 Film Art: Motion Picture Masterpieces
Participation in the Senior Film and Video festival is required.

DIGITAL MEDIA COMMUNICATION COLLOQUIUM

DCOM 148, 248, 348, 448 (*Non-credit and Pass/Fail*)

CONCENTRATION REQUIREMENTS:

Visual Media:

ART 343; ART 344 or 430; ART 320/DCOM322 or ART 347; and one of the following three classes, ART 431, DCOM 320, or DCOM 330. *ART 343 is recommended but not required*

Digital Filmmaking:

DCOM 320 or 330; FILM 221; FILM 214 or 220; any one FILM course numbered 300 or higher. *Art 343 is recommended but not required.*

100**INTRODUCTION TO VISUAL MEDIA**

Through a combination of lectures, screenings, and hands-on demonstrations, this course is an introduction to the history and methodology behind the digital processes of a broad range of visual media as it is used in advertising, filmmaking, digital video, and photography. *Not open to students who have received credit for DCOM 200; does not count toward the DCOM major.*

200**DIGITAL FILM and VIDEO PRODUCTION I**

This course introduces students to the basics of digital image making as it applies to the moving image. Topics include the principles, techniques, and fundamentals of digital photography and digital video.

300**DIGITAL FILM and VIDEO PRODUCTION II**

This course is a continuation of the skills developed in DCOM 200, including film and video project research, title sequences, and storyboards. Students are introduced to digital image manipulation and motion graphics as they apply to film and video. *Prerequisite: DCOM 200 or consent of instructor. ART 343 is strongly recommended but not required.*

310**THE MOVING IMAGE IN SERIES**

This production course prepares students to work with the moving image as a series of video shorts that stem from one concept or idea. The course is strongly encouraged for the DCOM major; it aids in preparation for the senior project. *Pre-requisite: DCOM 300 or consent of the instructor.*

320**NARRATIVE FILMMAKING**

This course is an introduction to fiction filmmaking through lecture, screenings and hands-on demonstrations. Principles of cinematography, technical processes, and continuity editing are covered. Students also discuss storytelling techniques and analyze the techniques used by established filmmakers. *Alternate years. Prerequisite: DCOM 300 and FILM 221 or consent of the instructor.*

322**VISUAL MEDIA IN THE DIGITAL AGE**

The historical study of new media, with emphasis on video and interactive art forms, in relationship to the development of television, the World Wide Web, and social networks. *Cross-listed as ART 320. Alternate years.*

330**DOCUMENTARY FILMMAKING**

Through a combination of lecture, screening and hands-on demonstrations, this course familiarizes students with planning, writing, developing, and shooting non-fiction films. Students also discuss storytelling techniques and analyze the techniques used by established

filmmakers. *Alternate years. Prerequisite: DCOM 300.*

400

DIGITAL FILM and VIDEO III/ SENIOR PROJECT

Advanced production of documentary, narrative, or experimental video, multi-media or interactive media incorporating advanced directing, shooting, lighting, sound, effects, and editing. This course is the capstone course for the Digital Media Communication major.

Prerequisite: DCOM 300 and senior status, or consent of instructor.

148, 248, 348, 448

DIGITAL MEDIA COMMUNICATION COLLOQUIUM

Students are required to complete successfully the non-credit Colloquium for a total of four semesters through academic experiences such as WRLC and Crossing the Frame Productions. Enrollment in other similar academic experiences on or off campus can be accepted with departmental approval. *Non-credit, Pass/Fail.*

MINORS

CORPORATE COMMUNICATION

The Corporate Communication minor will enhance the content of any major area of study with an additional set of marketable skills in communication and public relations for business, non-profits and political, policy or public interest groups. Five courses are required: CCOM 200, CCOM 210, two other four-credit CCOM courses, and one from ACCT 110, BUS 244 or PSCI 220.

DIGITAL MEDIA COMMUNICATION

The Digital Media Communication minor will be of interest to students who want to learn digital media as a form to communicate the content of their majors. Students of various majors might want to create a documentary video or educational website on the subject of their senior research. Minors in Digital Media Communication may pursue graduate studies and/or employment in a variety of fields including digital media production, advertising, cultural analysis, and documentary video production. Six courses are required: ART 227, 343, DCOM 200, 300, FILM 214, and one of the following three courses, ART 344, DCOM 320 or 330.

FILM STUDIES (FILM)

The Film Studies program develops skills in media writing and the critical analysis of film, television, and video as an art form. All minors develop skills in researching film history and thinking creatively about contemporary attitudes, values, and beliefs associated with film. Minors in Film Studies have the ability to pursue graduate studies and/or employment in a variety of fields including digital media production and administration, creative advertising, arts administration, journalism, cultural analysis, film preservation, and writing for the media. Six courses are required. Required Foundation Courses: THEA 212 and FILM 326. Film History and Culture: two from FILM 220, 320, and THEA 114. Film Theory and Practice: two from FILM

221, 300, and 315.

214

SURVEY OF LANDMARKS IN FILM HISTORY

Close reading of selected films from around the world in an historical context using basic film theory to guide the reading with a major emphasis on cinematography, editing, and *mise-en-scene*. *Prerequisite: ENGL 106 or 107.*

220

TOPICS IN GENRES, ACTORS, AND DIRECTORS.

Comparative study of film genres, directors, and/or performers from an historical perspective. *May be repeated with change in content. Prerequisite: ENGL 106 or 107.*

221

INTRODUCTION TO SCREENWRITING

Training in methods of creating the original screenplay for film and/or television. Major emphasis is placed on scene and plot construction, character development, and using the language of film to tell a story. *Prerequisites: ENGL 106 or 107.*

300

FILM AND SOCIAL CHANGE

Close analysis of selected documentary, propaganda, and social problem films that seek to influence our perceptions of reality. *Prerequisites: ENGL 106 or 107.*

315

CREATIVITY IN FILM

Study of ground-breaking artists who developed new ways of relating form to content in independent, experimental, animated, and digital films. *Prerequisites: ENGL 106 or 107.*

320

TOPICS IN FILM AND CULTURE

Exploration of film and related media texts in a particular historical context. A study of the art, music, literature, political and social framework of the period and culture under consideration is included. *May be repeated with change in content. Prerequisites: ENGL 106 or 107.*

326

MEDIA CRITICISM

Practice of analyzing print, auditory, visual, and digital texts from a cultural studies point of view. Major emphasis is placed on basic methods of semiotic theory and application of structuralist analysis and frame theory. *Prerequisites: ENGL 106 or 107 and sophomore standing.*

MEDIA WRITING (MWTG)

The minor in Media Writing provides students in any academic discipline with significant practice in writing to diverse audiences. Students completing this minor learn how to connect messages with audience needs, values, and interests and how to make choices among the possible ways of conveying information in a mediated world.

Each student minoring in Media Writing completes five of the courses listed below as well as a minimum of two non-credit colloquium courses involved with campus media (one of which must include a full semester's work on the campus newspaper). Writing, Rhetoric, and Audiences: one from ENGL 218 and FILM 326. Applied Media Writing: three from ENGL 217, 240, FILM 300, MWTG 219, 324, 325. Special Areas of Media Writing: one from ART 430, ENGL 322, and FILM 221. Colloquium: two from CCOM 246, 346, and 446.

219

CONVERGENT SOCIAL MEDIA

Practical experience in news gathering for print, electronic, and digital media by learning how to create share-worthy content. In this course students will learn how to write, photograph, broadcast, podcast, and live-stream, with an emphasis on social media applications and the latest technology. Emphasis is on researching, and structuring stories for different kinds of media.

Prerequisite: ENGL 106 or 107.

324

DIGITAL PUBLISHING

From desktop publishing for print newspapers, journals, newsletters and brochures, to ePublishing, to web and mobile publishing, today's communication specialists are expected to know how to write effectively for various media. This course covers various publishing software and how to format content for various media applications and how to write feature articles for digital publishing. *Prerequisite: ENG 106 or 107.*

325

WEB COMMUNICATION

This course introduces students to the complicated evolution of the Internet and how to effectively communicate and design for various media. Students learn how to utilize Search engines, and create wikis, and content management systems. *Prerequisite: ENG 106 or 107.*

CRIMINAL JUSTICE AND CRIMINOLOGY (CJCR)

Professor: Ross (Chairperson)

Assistant Professors: Richmond, Hutzell

Part-time Instructors: Martin, Ritter, Robbins, Thompson

The Criminal Justice and Criminology majors are interdisciplinary social science majors. Course work leading to the baccalaureate degree in criminal justice emphasizes critical and in-depth interdisciplinary analysis of the causes of crime, of formal and informal efforts at preventing and controlling crime, and of treatment of the field of criminal justice as an applied social science where students are taught to integrate theory construction with practical application. The Criminal Justice major offers opportunities for internship and practicum experiences in the field, and prepares students for careers in law enforcement, court services, institutional and community-based corrections, treatment and counseling services, and for further education at the graduate level. The Criminal Justice major also prepares students for activist and leadership roles in their communities. Course work leading to the baccalaureate degree in Criminology is designed to critically examine the etiology of crime and to provide strong theoretical and methodological foundations for graduate-level work. Students may not double major in criminal justice and criminology.

Criminal Justice

The major in Criminal Justice consists of 11 courses, distributed as follows:

A. Required Core Courses (seven courses):

CJCR 100 — Introduction to Criminal Justice

PSY 110 — Introduction to Psychology

SOC 110 — Introduction to Sociology

PHIL 318 — Philosophical Issues in Criminal Justice

CJCR 300 — Criminology

CJCR 343 — Research Methods in Criminal Justice

CJCR 441 – Crime Prevention and Policy

B. Administration of Justice (select one course):

CJCR 201 — Policing and Society

CJCR 203 — Correctional Policy

CJCR 240 — Community-Based Corrections

CJCR 243 — Courts and Sentencing Policy

C. Crime and Delinquency (select one course):

CJCR 204 — Youth, Deviance, and Social Control

CJCR 242 — Organizational Crime

CJCR 345 – Special Topics in Criminal Justice

PSCI 342 — Civil Conflict

PSCI 362 — Terrorism

PSY 116 — Abnormal Psychology

PSY 216 — Abnormal Child Psychology

PSY 242 — Drugs, Behavior, and Society
PSY 310 — Forensic Psychology
PSY 410 — Dysfunctional Families and Child Development

D. Legal Studies (select one course):

PSCI 231 — Law in America
PSCI 242 — Human Rights
PSCI 330 — Constitutional Law
PSCI 331 — Civil Rights and Liberties
PSCI 334 — Legal Research and Writing
SOC 305 — Sociology of Law

E. Diverse Communities (select one course):

CJCR 334 — Race, Class, Gender, and Crime
CJCR 346 — Comparative Criminal Justice
SOC 240 — Race, Class, Gender, and Sexuality
SOC 334 — American Immigration

Criminology

The major in Criminology consists of 11 courses, distributed as follows:

A. Required Core Courses (five courses):

CJCR 100 — Introduction to Criminal Justice
SOC 110 — Introduction to Sociology
CJCR 300 — Criminology
CJCR 334 — Race, Class, Gender, and Crime
CJCR 441 — Crime Prevention and Policy

B. Critical Analysis Electives (select two courses):

CJCR 346 — Comparative Criminal Justice
PHIL 318 — Philosophical Issues in Criminal Justice
SOC 305 — Sociology of Law

C. Research Methodology (two courses):

Select either CJCR 343 Research Methods in Criminal Justice or SOC 330 Research Methods I; and SOC 430 Research Methods II. Although not required, MATH 214 Multivariable Statistics is strongly recommended.

D. Elective Courses (select two courses):

CJCR 201 — Policing and Society
CJCR 203 — Correctional Policy
CJCR 204 — Youth, Deviance, and Social Control
CJCR 240 — Community-Based Corrections
CJCR 242 — Organizational Crime
CJCR 243 — Courts and Sentencing Policy

CJCR 345 — Special Topics
ECON 224 — Urban Problems
PSCI 231 — Law in America
PSCI 242 — Human Rights
PSCI 330 — Constitutional Law
PSCI 331 — Civil Rights and Liberties
PSCI 334 — Legal Research and Writing
PSCI 342 — Civil Conflict
PSCI 362 — Terrorism
PSY 242 — Drugs, Behavior, and Society
PSY 310 — Forensic Psychology
PSY 410 — Dysfunctional Families and Child Development

Minor in Criminal Justice

A minor in criminal justice consists of five courses: CJCR 100, CJCR 300, and three electives selected from CJCR 201, 203, 204, 240, 242, 243, 334, 341, or 346.

Diversity and Writing Intensive Courses

The following course satisfies the cultural diversity requirement: CJCR 334.

The following courses, when scheduled as W courses, count towards the writing intensive requirement: CJCR 300, and PHIL 318.

100

INTRODUCTION TO CRIMINAL JUSTICE

This course explores the role of law enforcement, courts and corrections in the administration of justice; the development of police, courts and corrections; the scope and nature of crime in America; introduction to the studies, literature and research in criminal justice; basic criminological theories; and careers in criminal justice.

147

INTRODUCTION TO CRIMINAL JUSTICE FORENSICS

This course is an exploration of the history and application of forensic sciences that provides a wide overview of the many subfields within this discipline. Specifically, this course provides the student with an understanding of key definitions, theoretical frameworks, and forensic science's role within the contemporary law enforcement environment. In addition, the course addresses the impact that this developing field has had on society as a whole. *Prerequisite: CJCR100.*

201

POLICING AND SOCIETY

Who are the police and what is policing? Exploration of these questions provides a context for critical inquiry of contemporary law enforcement in the United States. Attention is given to law enforcement purposes and strategies, the work force and work environment, and why sworn officers do what they do. Emphasis is also placed on being policed and policing the police. Treatment of these issues enables exploration of basic and applied questions about the projection of state power in community relations, including those related to homeland security. *Prerequisite: CJCR 100.*

203**CORRECTIONAL POLICY**

This course presents an overview of offenders, punishment, correctional ideologies, and societal reaction to crime. The historical and philosophical development of the correctional system is examined. The primary emphasis is on critical analysis of contemporary correctional programming for adult and juvenile offenders in the United States. Other social issues and structures directly related to corrections are explored. *Prerequisite: CJCR 100.*

204**YOUTH, DEVIANCE, AND SOCIAL CONTROL**

This course is designed to provide the student with a general understanding of juvenile deviance and state processes intended to interrupt youth deviance and juvenile delinquency, particularly in the juvenile justice system. Students explore historical perspectives, deviant juvenile subculture, underlying philosophies, the formal processes and organization of juvenile justice systems, promising prevention/treatment approaches and juvenile probation practices. Students are asked to think critically and offer solutions or strategies to a range of dilemmas confronting the juvenile justice system, including the transfer of juveniles to adult status and the movement to privatize juvenile justice services. *Prerequisite: CJCR 100.*

240**COMMUNITY-BASED CORRECTIONS**

This course is designed to provide students with an in-depth study of community-based correction programs, with emphasis on the role of probation and parole and their impact on the offender, the criminal justice system, and society. Particular attention is given to advancements in technologies used to monitor and track offenders within the community, prison overcrowding, re-entry programs, officer discretion and ethics, and the role of specialized treatment courts. *Prerequisite: CJCR 100.*

242**ORGANIZATIONAL CRIME**

Three major areas of organizational crimes are covered, including traditional organized crime, crimes of the corporate world, and crimes committed under auspices of the government. Examples of topics include international organized crime cabals, drug trafficking and money laundering by the CIA, political bribe taking, government brutality and physical/economic coercion, civil rights violations, and crimes situated in the manufacturing, pharmaceutical, and service trades. *Prerequisite: CJCR 100.*

243**COURTS AND SENTENCING POLICY**

This course examines the role of municipal, state, and federal courts in the American criminal justice system. Many important steps in the processing of criminal cases involve the courts or courtroom actors, including arrest, booking, charging, arraignment, trial, sentencing, and appeal. This course considers the responsibilities and constraints of the courts and courtroom actors in each of these steps. The ideal American criminal court is a site where society's desire for punishment is tempered by its obligation to protect the rights of those accused of crime. This course examines the historical evolution of this ideal and considers the degree to which modern

American courts have been able to achieve it. Additional topics that may be considered include the use of courts to affect change in other components of the criminal justice system (e.g., police, prisons) and the emerging trend of “specialized” courts (e.g., drug courts). *Prerequisite: CJCR 100, alternate years.*

300

CRIMINOLOGY

Analysis of the sociology of law; conditions under which criminal laws develop; etiology of crime; epidemiology of crime, including explanation of statistical distribution of criminal behavior in terms of time, space, and social location. *Prerequisite: CJCR 100 or SOC 110.*

334

RACE, CLASS, GENDER, AND CRIME

This course provides a theoretical and practical exploration of the link between gender, race, class and criminal justice practices. First, this class focuses on the link between masculinity and violent behavior, exploring factors influencing aggressive behavior among men. Second, a portion of the class focuses on women in the criminal justice system, exploring the nature and extent of criminal offending among women, including interactions of women as offenders and workers within the criminal justice system. Finally, this course utilizes a critical stance while exploring aspect of race and class pertaining to victimology, criminology, and justice processing. *Prerequisites: CJCR 100 and 300.*

343

RESEARCH METHODS IN CRIMINAL JUSTICE

Students learn social science methods, research design and implementation, and evaluation of contemporary research in criminal justice. Topics covered include the logic of causal order, sampling theory, qualitative and quantitative design, data collection, proper analysis of data, and basic statistical selection and calculation. Emphasis is placed on understanding social science research and on communicating research in writing. *Prerequisites: CJCR 100. Prerequisite or corequisite: CJCR 300 and statistics. Prerequisite or corequisite: CJCR 300.*

345

SPECIAL TOPICS IN CRIMINAL JUSTICE

This is a seminar for advanced students offered in response to student request and faculty interest. *This course may be repeated for additional credit with approval of the criminal justice coordinator, but only when course content differs. Sample topics include the death penalty, hate crimes, civil liability in criminal justice, justice in the media, environmental crime, etc.* *Prerequisite: CJCR 100 and one other CJCR course.*

346

COMPARATIVE CRIMINAL JUSTICE

National criminal justice systems are rooted in each country's particular legal system and traditions. After reviewing the major legal systems, this course examines criminal justice systems representative of each legal system. The elements of criminal justice systems (policing, prosecution, the judiciary, and corrections) are compared across several countries, but with

special emphasis placed on comparisons to the United States. *Prerequisites: CJCR 100 and one other CJCR course.*

441

CRIME PREVENTION

Crime prevention measures may reduce crime through altering offenders' motivations to commit crime or restricting offenders' opportunities to commit crime. Evaluations of crime prevention policies and programs are reviewed to determine what works, what does not, and why. In addition to the criminal justice system's ability to prevent crime, the impact of families, schools, communities, and broader economic and social policies on offending is critically examined.

Prerequisites: CJCR 300 and either CJCR 343 or SOC 330.

448-449

CRIMINAL JUSTICE PRACTICUM

Students are placed with criminal justice agencies, providing opportunities to apply classroom knowledge in an organizational setting, encouraging development of professional skills, helping students identify and clarify career interests, and providing opportunities to conduct hands-on field research. *Prerequisite: Junior or senior status and successful completion of the CJCR Department's practicum application.*

470

INTERNSHIP (See index)

N80

INDEPENDENT STUDY (See index)

This course represents an opportunity to pursue specific interests and topics not usually covered in regular courses. Through a program of readings and tutorials, the student has the opportunity to pursue these interests and topics in greater depth than is usually possible in a regular course.

Prerequisite: CJCR 100 and consent of criminal justice coordinator.

N90

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

ECONOMICS (ECON)

Professor: Madresehee

Associate Professor: Moorhouse (Chairperson), Sprunger

Assistant Professor: Yilmaz

The Department of Economics offers three tracks. Track I (General Economics) is designed to provide a broad understanding of economic, social, and business problems. In addition to preparing students for a career in business or government, this track provides an excellent background for graduate or professional studies. Track II (Managerial Economics) develops students' capacity to analyze the economic environment in which an organization operates and to apply economic reasoning to an organization's internal decision making. These courses have more of a managerial emphasis than traditional economics courses. Track III (Quantitative

Economics) focuses study on the more quantitative and analytical courses in the department. In addition to a broad coverage of economic theory and applications, these courses especially prepare students for statistical analysis and research of economics issues. This is also an excellent track for students interested in graduate school.

Track I - General Economics requires ECON 110, 111, 331, 440, and 441, and three other courses in economics. Depending on their academic and career interests, students are encouraged to select a minor in another department such as political science, philosophy, or history.

Track II - Managerial Economics requires Econ 110, 111, 220, 332 and 441; ACCT 110; BUS 238; either an accounting course numbered 130 or higher or a second business course (excluding BUS 439); and two other economics courses numbered 200 or above (excluding ECON 349).

Track III - Quantitative Economics requires ECON 110, 111, 340, 441; either 227 or 331; MATH 128 or 109; MATH 214 or 332 and either three other economics courses or two other economics courses and one extra math course numbered 129 or higher.

In addition, the department recommends that majors in Track I and Track II take MATH 123. Track I and Track III majors are encouraged to take ACCT 110. Students interested in graduate school should consult with members of the economics department faculty for recommendations on additional coursework.

The following courses, when scheduled as W courses, count toward the writing intensive requirement: ECON 236, 337, 343 and 440.

Students interested in teacher certification should refer to the Department of Education listing.

Minor

The department offers two minors in economics. The General Economics minor requires the completion of ECON 110, 111 and three other economics courses numbered 200 or above, or any four economics courses numbered 200 or above. The Quantitative Economics minor requires five courses including ECON 110 and 111; and three courses from MATH 214 or 332 (not both), ECON 227, 331, 340 or 441.

The Department of Economics is a member of the Institute for Management Studies. For more information, see the Institute for Management Studies listing.

102

CONSUMER ECONOMICS

A course in “family” or “practical” economics, designed to teach students how they and their families can be intelligent consumers; that is, how they can spend, save, and borrow so as to maximize the value they receive for the income they have. Treats subjects such as intelligent shopping; the uses and abuses of credit; investing, savings, buying insurance, automobiles and houses; medical care costs; estates and wills, etc.

110**PRINCIPLES OF MACROECONOMICS**

Macroeconomics deals with problems of the economic system as a whole. What influences the level of national income and employment? What is inflation and why do we have it? What is the role of government in a modern capitalistic system? How does business organize to produce the goods and services we demand? How are the American financial and banking systems organized? What is the nature of American unionism? What are the elements of government finance and fiscal policy?

111**PRINCIPLES OF MICROECONOMICS**

This course focuses upon microeconomics and selected current economic problems. It deals with the relatively small units of the economy such as the firm and the family. Analyzes demand and supply. Discusses how business firms decide what and how much to produce and how goods and services are priced in different types of markets. Also considers such problems as economic growth, international trade, poverty, discrimination, ecology, and alternative economic systems.

220**MONEY AND BANKING**

Covers business fluctuations and monetary and fiscal policy; the financial organization of society; the banking system; credit institutions; capital markets, and international financial relations. *Prerequisite: ECON 110.*

224**URBAN PROBLEMS**

The application of economic theory to the study of significant social, political, and economic problems associated with urbanization, including poverty, employment, education, crime, health, housing, land use and the environment, transportation, and public finance. Analysis of solutions offered. *Prerequisite: ECON 110 or 111, or consent of instructor. Alternate years.*

225**ENVIRONMENTAL ECONOMICS**

A study of the relationship between environmental decay and economic growth, with particular reference to failures of the price and property-rights systems; application of cost/benefit analysis, measures aimed at the creation of an ecologically viable economy.

227**GAME THEORY**

An introduction to the field of game theory. The focus of study is on how people behave in strategic situations. Applications include pricing, bargaining, negotiating, and voting. *Prerequisite: ECON 111 or consent of the instructor. Alternate years.*

236**AMERICAN ECONOMIC HISTORY**

This course examines topics in American Economic History from the post-Civil War era through World War II. Topics covered include the causes of the rise of big business as the dominant

means of production, the emergence of the union movement, the growth of the U.S. economy to the largest in the world, and the changing role of government in the economic system.

327

PUBLIC CHOICE

This course focuses on the application of economics to the political processes of voting and bureaucratic behavior. A major theme is the study of problems that can occur within the democratic process because the incentives given to public servants do not always match society's best interests. Policies and institutions that can improve such problems are explored. U.S. elections and campaigns provide many of the applications for the class. *Prerequisite: ECON 110 or 111, or consent of instructor. Alternate years.*

330

INTERMEDIATE MICROECONOMICS

An advanced analysis of contemporary theory regarding consumer demand, production costs and theory, profit maximization, market structures, and the determinants of returns to the factors of production. *Prerequisite: ECON 110. Alternate years.*

331

INTERMEDIATE MACROECONOMICS

An advanced analysis of contemporary theory and practice with regard to business fluctuation, national income accounting, the determination of income and employment levels, and the use of monetary and fiscal policy. *Prerequisite: ECON 110. Alternate years.*

332

GOVERNMENT AND THE ECONOMY

An analytical survey of government's efforts to maintain competition through antitrust legislation to supervise acceptable cases of private monopoly, through public utility regulation via means of regulatory commissions, and to encourage or restrain various types of private economic activities. *Prerequisites: ECON 110 and 111, or consent of instructor. *

335

LABOR ECONOMICS

This course introduces students to the economic analysis of the market for human resources. Students learn economic theory of labor demand and labor supply as well as marginal productivity theory, bargaining theories of wages, and human capital theory. Unions, immigration, and discrimination are also examined. *Prerequisites: ECON 110 or 111; or consent of the instructor. Alternate years.*

337

PUBLIC FINANCE

An analysis of the fiscal economics of the public sector, including the development, concepts, and theories of public expenditures, taxation, and debt at all levels of American government. Also includes the use of fiscal policy as an economic control device. *Prerequisites: ECON 110 and 111, or consent of instructor. Alternate years.*

340**ECONOMETRICS**

Econometric models provide one of the most useful and necessary tools for decision-making. By using a variety of modern statistical methods, econometrics helps us estimate economic relationships, test different economic behaviors, and forecast different economic variables. This course prepares students for basic empirical work in economics and focuses on linear regression using both cross-sectional and time-series data. *Prerequisites: MATH 123, ECON 110 and 111; or consent of the instructor. Alternate years.*

343**INTERNATIONAL TRADE**

A study of the principles, theories, development, and policies concerning international economic relations, with particular reference to the United States. Subjects covered include: U.S. commercial policy and its development, international trade theory, tariffs and other protectionist devices, international monetary system and its problems, balance of payments issues. *Alternate years. Prerequisites: ECON 110 and 111.*

349**MANAGEMENT PRACTICUM**

An apprentice-level work experience for junior or senior economics majors jointly sponsored by the department and a public or private agency (or a subdivision of the college itself) designed to better integrate classroom theory and workplace practice. In addition to attendance at a weekly seminar, students spend 10-12 hours per week at the sponsoring agency per unit of credit. At least one-half of the effort expended will consist of academic work related to agency activities.

440**HISTORY OF ECONOMIC THOUGHT**

A discussion of the origins, development, and significance of the economic ideas embodied in the works of Smith, Marx, Schumpeter, Keynes, and others. *Prerequisite: ECON 110 or consent of instructor. Alternate years.*

441**MANAGERIAL ECONOMICS**

The application of economic theory and methodology to the solution of business problems. Subjects include: optimizing techniques, risk analysis, demand theory, production theory, cost theory, linear programming, capital budgeting, market structures, and the theory of pricing. *Prerequisites: ECON 110 and 111.*

470-479**INTERNSHIP (See index)**

Typically off-campus in business, banking, or government, supervised by assigned employee of sponsoring organization.

N80-N89**INDEPENDENT STUDY (See index)**

Superior students may select independent study in various courses, particularly in preparation for graduate school.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

EDUCATION (EDUC)

Assistant Professors: Hickoff-Cresko (Chairperson), Macy, Rogers

Part-time Instructors: Cauley, Datres, Fuller, Watkins, Wentzel

Early Childhood Certification

Students seeking early childhood certification must complete PSY 110, 115, 211, EDUC 000, 210, 220, 348, 410, 420, 447, 465, ECED 200, 340, 341, 342, 344, ECED/SPED 243, and SPED 230, as well as the necessary subject area courses.

The Early Childhood Professional Semester

The following courses compose the Early Childhood Professional Semester:

- EDUC 410 Methods of Classroom Management (2 credits)
- EDUC 420 Instructional Methods for Teaching the English Language Learner (2 credits)
- EDUC 447 Professional Development in Contemporary American Education (4 credits)
- EDUC 465 Professional Semester of Student Teaching (8 credits)

Secondary Teacher Certification

Students seeking secondary teacher certification must complete PSY 110, 118, 211, EDUC 210, 220, 338, 339, 348, 410, 420, 447, 465, SPED 230, as well as the necessary subject area courses. (See exception below for students seeking K-12 certifications.) Students may earn one or more of the following certifications:

Biology

Chemistry

English

General science (astronomy, physics, biology, chemistry)

Mathematics

Physics

Social sciences (psychology, sociology-anthropology)

Social studies (economics, history, philosophy, political science, psychology, sociology-anthropology)

Students seeking certification in secondary math must also complete EDUC 345 instead of EDUC 339 before acceptance into the professional semester. Students seeking certification in any of the secondary science areas (biology, chemistry, physics) and general science (astronomy, physics, biology, chemistry) must also complete the required safety and maintenance workshop in their content area. These workshops will address safety issues (laboratory instruction, regulations for use of chemicals, materials and specialized equipment) and general lab behavior. Students will also be taught how to actually set up and maintain a laboratory (in their particular science field) in a middle/secondary school. Students seeking certification in English 7-12 must complete THEA 100.

The Secondary Professional Semester

The following courses compose the Secondary Professional Semester:

- EDUC 410 Methods of Classroom Management (2 credits)
- EDUC 420 Instructional Methods for Teaching the English Language Learner (2 credits)
- EDUC 447 Professional Development in Contemporary American Education (4credits)
- EDUC 465 Professional Semester of Student Teaching (8 credits)

K-12 Teacher Certification

Students seeking K-12 certification must complete PSY 110, 118, 211, EDUC 000, 210, 220, 338, 339, 348, 410, 420, 447, SPED 230, and the necessary subject area courses including the methods course appropriate to their discipline and offered by that department. Students may earn K– 12 certification in one or more of the following areas:

Art

Music

French

German

Spanish

The K-12 Professional Semester

The following courses compose the K-12 Professional Semester:

- EDUC 410 Methods of Classroom Management (2 credits)
- EDUC 420 Instructional Methods for Teaching the English Language Learner (2 credits)
- EDUC 447 Professional Development in Contemporary American Education (4 credits)
- EDUC 465 Professional Semester of Student Teaching (8 credits)

Special Education PreK – 8 Teacher Certification

Students seeking Special Education PreK – 8 certification must complete PSY 110, 115, 211, EDUC 000, 210, 220, 348, 410, 420, 447, 465, SPED 230, 330, 331, 333, and ECED/SPED 344, as well as the necessary subject area major courses and the PreK – 4 Early Childhood course requirements (ECED/SPED 243, ECED 200, 340, 341, 342).

The Special Education PreK – 8 Professional Semester

The following courses compose the Special Education PreK – 8 Professional Semester:

- EDUC 410 Methods of Classroom Management (2 credits)
- EDUC 420 Instructional Methods for Teaching the English Language Learner (2 credits)
- EDUC 447 Professional Development in Contemporary American Education (4 credits)
- EDUC 465 Professional Semester of Student Teaching (8 credits)

Special Education 7– 12 Teacher Certification

Students seeking Special Education 7 – 12 certification must complete PSY 110, 118, 211, EDUC 210, 220, 338, 339, 348, 410, 420, 465, SPED 230, 330, 331, 333, as well as the necessary subject area major courses.

The Special Education 7 – 12 Professional Semester

The following courses compose the Special Education 7 – 12 Professional Semester:

- EDUC 410 Methods of Classroom Management (2 credits)
- EDUC 420 Instructional Methods for Teaching the English Language Learner (2 credits)
- EDUC 447 Professional Development in Contemporary American Education (4 credits)
- EDUC 465 Professional Semester of Student Teaching (8 credits)

The Professional Semester

Students are considered full time when enrolled in the Professional Semester. Those students needing an additional course must comply with the standards stated in the College catalog. The Department of Education admits applicants to the professional semester applicants when they have (a) completed the participation requirements, (b) paid the student teaching fee, (c) obtained a recommendation from the student's major department, (d) passed a screening and interview conducted by the Education Department, (e) taken the PAPA, first part of the state mandated teaching tests, and (f) achieved an overall grade point average of 3.00 or better. Major departments have different criteria for their recommendations; therefore, the student should consult with the chairperson of the major department about those requirements. The Pennsylvania state requirements override an contractual agreement the teacher candidate has with the college via the catalog under which they were admitted.

The following courses will satisfy the cultural diversity requirement: ECED 243, EDUC 338, and SPED 243.

The following courses, when scheduled as W courses, counts towards the writing intensive requirement: ECED 344, EDUC 338, EDUC 339, SPED 243, and SPED 344.

EARLY CHILDHOOD EDUCATION (ECED)

200

TEACHING THE YOUNG CHILD

This course is designed to introduce early childhood students to social, emotional, physical, and aesthetic development in young children from birth through age 9 and the ways in which development affects children's learning and teachers' instructional decisions. Through observations and participation in practicum, seminars, workshops, and lectures, students construct an understanding of how children, including children with special needs, English Language Learners and children with diverse perspectives, construct knowledge about the world in which they live and how teachers use their understanding of children to create environments that support learning. 20 hours of observation/exploration in a PreK setting are required.

243**EARLY LITERACY DEVELOPMENT**

This course provides pre-service teachers an understanding of the foundations of early literacy development and instructional strategies and assessment techniques that support the acquisition of literacy. Through observations and participation in practicum, seminars, workshops, and lectures, students construct an understanding of how children, including children with special needs, English Language Learners and children with diverse perspectives, construct knowledge. 20 hours of observation and participation in preschools, kindergartens, or first grades are required. *Cross-listed as SPED 243.*

340**CHILDREN AND MATH**

This course provides students with knowledge, skills and understanding to design and implement effective, developmentally appropriate mathematics instruction for grades PreK-4. Emphasis is on children's (including children with special needs, English Language Learners and children with diverse perspectives) mathematical learning and pre-numerical stages through the acquisition of advanced numerical processes and operations and connections to geometric and algebraic reasoning. 20 hours of field experience in grades PreK – 4 are required. *Prerequisite or co-requisite: EDUC 210 or consent of instructor.*

341**CHILDREN AND SOCIAL STUDIES**

This course focuses on the content, processes, pedagogy and materials for teaching social studies in the PreK-4 classroom. Knowledge of cognitive development as applied to the selection of content, methods, and materials and strategies for organizing the learning environment for the young learner, including children with special needs, English Language Learners and children with diverse perspectives, are examined. 20 hours of field experience in grades PreK – 4 are required. *Prerequisite or co-requisite: EDUC 210 or consent of instructor.*

342**CHILDREN AND SCIENCE**

Study of content, processes, and constructivist teaching methods and materials for teaching science in the early childhood classroom. Knowledge of cognitive development as applied to the selection of content in method is examined. Through observations and participation in practicum, seminars, workshops, and lectures, students construct an understanding of how children, including children with special needs, English Language Learners and children with diverse perspectives, construct knowledge about the world in which they live and how teachers use their understanding of children to create environments that support learning. 20 hours of field experience in grades PreK – 4 are required. *Prerequisite or co-requisite: EDUC 210 or consent of instructor.*

344**LITERACY LEARNING IN EARLY ELEMENTARY GRADES**

This course will provide pre-service teachers with an understanding of developmentally appropriate instructional strategies and assessment techniques to help all students, including children with special needs, English Language Learners and children with diverse perspectives,

in kindergarten through grade four become literate using reading, writing, listening and speaking in strategic and authentic ways. 20 hours of observation and participation in elementary classrooms (grade 1– 4) are required. *Prerequisite: PSY 211 or consent of instructor. Cross-listed as SPED 344.*

EDUCATION (EDUC)

000

SEMINAR IN ART, MUSIC, PHYSICAL EDUCATION, AND COMPUTER ACTIVITIES

Each elementary student teacher attends a series of seminars conducted prior to student teaching. These seminars, conducted by certified public school personnel, emphasize activities and knowledge which are helpful in the self-contained elementary classroom. *Non-credit course.*

210

ORIENTATION TO THE TEACHER EDUCATION PROFESSION: PART I

This required non-credit course taken during the sophomore year offers education certification students the opportunity to meet with professors and invited guest speakers to discuss the historical, economic, political and theoretical foundations of American education. *Non-credit course. Students will receive a letter grade for the course*

220

ORIENTATION TO THE TEACHER EDUCATION PROFESSION: PART II

This required non-credit course taken during the sophomore year offers education certification students the opportunity to meet with professors and invited guest speakers to discuss contemporary issues such as race, gender, ethnic and linguistic diversity in American education. Behavior modification and instructional strategies are discussed. *Students will receive a letter grade for the course. Non-credit course.*

338

LITERACY FOR MIDDLE/SECONDARY SCHOOLS

This course is designed to teach the strategies necessary to implementing literacy skills in the middle/secondary content areas. Reading, writing, speaking, listening and media interpretation in content areas is the focus. Developmental stages for adolescents, including children with special needs, English Language Learners and children with diverse perspectives, and critical reading strategies are addressed in addition to strategies for using young adult literature in the content areas. 20 hours of field experience in middle and secondary classrooms are required.

Prerequisite or co-requisite: EDUC 210 or consent of instructor.

339

MIDDLE AND SECONDARY SCHOOL CURRICULUM AND INSTRUCTION

An examination of the various curricula of the public schools and their relationship to current practices. Special attention is given to development of the curriculum, state and national curriculum standards, and criteria for the evaluation of curricula and student progress. A particular emphasis is placed upon emerging issues and technology as they relate to curriculum. Emphasis is placed upon the curriculum work within the teaching field of each individual.

Through observations and participation in practicum, seminars, workshops, and lectures, students

construct an understanding of how children, including children with special needs, English Language Learners and children with diverse perspectives, construct knowledge about the world in which they live and how teachers use their understanding of children to create environments that support learning. 20 hours of field experience in middle and secondary classrooms are required. *Prerequisite: EDUC 210 and 220, or consent of instructor.*

345

CURRICULUM AND INSTRUCTION IN MIDDLE/SECONDARY MATHEMATICS

This is a basic course in the theory and pedagogy needed for the instruction of mathematics in the Middle/Secondary Schools. It is designed to examine and implement curriculum, teaching strategies, and required standards in math in the middle and secondary schools. The needs and developmental stages of middle/secondary adolescents are also addressed. Alternate fall semesters. 20 hours of field experience in middle and secondary classrooms are required.

Prerequisites or co-requisites: EDUC 210 and two courses in mathematics; or consent of instructor.

348

CLASSROOM MANAGEMENT IN THE FIELD PRACTICUM

This required non-credit course for teacher candidates allows students to spend 30 hours of field experience in assigned student teaching/cooperating teacher classrooms. Teacher candidates have the opportunity to bridge course content with what they are learning in the schools. Activities are designed to facilitate reflection on personal growth and classroom management strategies.

Students discover best practices of effective classroom management, how to increase student motivation, and time management techniques for such things as managing paperwork, planning, and classroom organization. Students meet with college supervisors a minimum of three times during the semester for one hour each session. *The grade will be a pass - fail. Non-credit course.*

410

METHODS OF CLASSROOM MANAGEMENT

This required two credit course offered as part of the professional semester allows students to continue learning classroom management strategies and practice what they have learned in their methods courses out in the schools. Activities are designed to facilitate reflection on personal growth and classroom management strategies. Students discover best practices of effective classroom management, how to increase student motivation, and time management techniques for such things as managing paperwork, planning, and classroom organization. *Full admission to professional semester. One-half unit of credit.*

420

INSTRUCTIONAL METHODS FOR TEACHING THE ENGLISH LANGUAGE LEARNER.

This two credit course provides students seeking certification in Education with techniques for meeting the needs of diverse learners, including English Language Learners, and children with behavioral disabilities. *Prerequisite: EDUC 338 or ECED/SPED 344, or consent of instructor. One-half unit of credit. Students will receive a pass/fail grade for this class.*

447

PROFESSIONAL DEVELOPMENT IN CONTEMPORARY AMERICAN EDUCATION

Seminar on the issues, problems, and challenges encountered by teachers in the American schools, especially those related to the student teaching experience. Particular attention is given to assessing teacher candidate impact on learners, as well as family and community collaboration, and professionalism.

465

PROFESSIONAL SEMESTER OF STUDENT TEACHING

Professional experience under the supervision of a selected cooperating teacher appropriate to certification areas and grade level ranges. Student teachers are required to follow the calendar of the school district to which they are assigned. This course includes 14 weeks of student teaching, weekly seminars, and completion of weekly assignments (ie., lesson plans, journals, and lesson analysis). *Two units maximum.*

SPECIAL EDUCATION

230

INTRODUCTION TO SPECIAL EDUCATION

This course covers historical, philosophical, and legal perspectives related to exceptional students. All major areas of exceptionality are covered (e.g., learning disabilities, health impairment, gifted, etc.) A study of typical and atypical development of children provides the basis for an in-depth study of the characteristics and classifications of exceptional students. An emphasis is placed upon the ethical and professional behaviors of teachers of students with disabilities in special education and/or regular classroom settings including multicultural and multilingual situations. This course is designed for all students seeking teacher certification. Field experiences in inclusive placements are required.

243

EARLY LITERACY DEVELOPMENT

This course provides pre-service teachers an understanding of the foundations of early literacy development and instructional strategies and assessment techniques that support the acquisition of literacy. Through observations and participation in practicum, seminars, workshops, and lectures, students construct an understanding of how children, including children with special needs, English Language Learners and children with diverse perspectives, construct knowledge. 20 hours of observation and participation in preschools, kindergartens, or first grades are required. *Cross-listed as ECED 243.*

330

READING FOR SPECIAL POPULATIONS: ASSESSMENT AND INSTRUCTION

Course content addresses the assessment tools and the teaching strategies for evaluating reading needs, skills, and strengths and with specific teaching strategies to help special needs students accomplish reading success. This course is designed for students seeking dual certification in Special Education with Early Childhood (PreK – 4) or Secondary (7– 12) Education 20 hours of field experience in an inclusive placement is required. *Prerequisite: SPED 230 or consent of instructor.*

331**CURRICULUM AND ASSESSMENT FOR STUDENTS WITH DISABILITIES**

This course provides information and experiences in assessment strategies, curriculum requirements, and planning for students with disabilities. Legal and ethical issues are covered. Curriculum for early intervention, elementary and secondary education, and transition planning for adult life are included. This course is designed for students seeking dual certification in Special Education with Early Childhood Education (PreK – 4) or Secondary (7 – 12) Education. 20 hours of field experience in an inclusive placement is required. *Prerequisite: SPED 230 or consent of instructor.*

333**PROGRAMS AND SERVICES FOR INDIVIDUALS WITH DISABILITIES**

This course investigates community based-services, professional organizations, support programs for parents and students, assistive technologies, and related services such as occupational therapy and counseling. Theoretical perspectives of emotional and behavioral disorders and educational approaches to behavioral issues are discussed. Group processes and communication are studied. This course is designed for students seeking dual certification in Special Education with Early Childhood Education (PreK – 4) or Secondary (7 – 12) Education. 20 hours of field experience in an inclusive placement is required. *Prerequisite: SPED 230 or consent of instructor.*

344**LITERACY LEARNING IN EARLY ELEMENTARY GRADES**

This course provides pre-service teachers with an understanding of developmentally appropriate instructional strategies and assessment techniques to help all students, including children with special needs, English Language Learners and children with diverse perspectives, in kindergarten through grade four become literate using reading, writing, listening and speaking in strategic and authentic ways. 20 hours of observation and participation in elementary classrooms (grade 1-4) are required. *Prerequisite: PSY 211 or consent of instructor. Cross-listed as ECED 344.*

ENGLISH (ENGL)

Professors: Feinstein, Hawkes, Lewes

Associate Professors: Hafer, Leiter (Chairperson), Preston

Assistant Professor: Hebert-Leiter

Part-time Instructor: Wheeler

The department offers two programs leading to the major in English:

Track I English - Major in Literature

This track is designed for students who choose English as a liberal arts major that prepares them for a wide range of career options; for students who choose English as their subject area for early childhood certification or who wish to earn secondary certification in English; for students who wish to improve their verbal and analytic ability in preparation for a specific career, such as technical writing, business, or law; and for students who intend to pursue graduate study in British or American literature.

A minimum of ten courses is required for Track I. Required courses are ENGL 217, 220, 221, two courses selected from 222, 223, and 229; two from 311, 312, 313, 314, 315, 331, 332, 333, 334, and 421; one from 335 and 336; two electives beyond composition; and the Capstone Experience.

Students who wish to earn secondary teacher certification must complete a minimum of twelve courses in English. Required courses are ENGL 217; 220; 221; 335; 336; one course from 219, 338; two courses from 222, 223, 229; three courses from 311, 312, 313, 314, 315, 331, 332, 333, 334, and 421; one elective beyond composition; and the Capstone Experience.

Students who intend to pursue graduate study in British or American literature should complete the twelve English courses specified for secondary certification and, as part of that sequence, take ENGL 449, Advanced Criticism, as their English elective.

Track II English - Major in Creative Writing

This track is designed for students who aspire to careers as professional writers, as editors, and as publishers; for students who plan to continue studies in an M.F.A. or M.A. program; or for students who would like to discover their creative potential while pursuing a fundamental liberal arts education.

A minimum of ten courses is required for Track II. Required courses are ENGL 240; two courses selected from 220, 221, 222, 223, 225, and 229; two from 311, 312, 313, 314, 315, 333, 334 and 421; one from 331 and 332; one from 335 and 336; two from 341, 342, 441, and 442 (note prerequisites); and one from 411 or 412.

Students who wish to earn secondary teacher certification must complete a minimum of twelve courses in English. Required courses are ENGL 220, 240, 335, 336; one course from 219, 338; one course selected from 221, 222, 223, 225, and 229; two from 311, 312, 313, 314, 315, 333,

334, and 421; one from 331 and 332; two from 341, 342, 441, 442 (note prerequisites); and one from 411 and 412; ENGL 217 recommended.

The following courses satisfy the cultural diversity requirement: ENGL 229, 332, and 334. The following courses, when scheduled as W courses, count toward the writing intensive requirement: ENGL 218, 225, 229, 331, 334, 335, 336 and 338.

Capstone Experience

Seniors in the literature track must hand in a portfolio of writing during the first week of their final semester. The portfolio must include four major papers from English courses and a self-assessment essay. Seniors in the creative writing track must successfully complete either ENGL 411 or ENGL 412.

Minors

The department offers two minors in English:

Literature: Five courses in literature, at least three of which must be numbered 300 or above.

Writing: Five courses, four of which are chosen from ENGL 217, 218, 219, 240, 322, and 338; plus one writing intensive course in literature at the 300 level.

106

COMPOSITION

Extensive practice in analytical writing. Special emphasis on developing the composing skills needed to articulate and defend a position in various situations requiring the use of written English. *Credit may not be earned for both 106 and 107.*

107

HONORS COMPOSITION

Extensive practice in analytical writing. Special emphasis on developing the writing skills of students who have the potential to benefit from advanced work. Placement by examination only. *Credit may not be earned for both 106 and 107.*

115

INTRODUCTION TO LITERATURE: SELECTED TOPICS

An introduction to the study of literature organized topically according to each instructor. *Prerequisite: ENGL 106 or 107, or consent of the instructor, May be repeated for credit with change of topic.*

217

CRITICAL WRITING SEMINAR

An introduction to writing critically about literary texts. Workshop setting offers intensive practice in the writing and critiquing of papers. Designed for beginning students of literature. *Prerequisite: ENGL 106 or 107, or consent of instructor. Not open to juniors or seniors except for newly declared majors or with consent of instructor.*

218**CLASSICAL AND MODERN RHETORIC**

An exploration of the province, content, strategies, and techniques comprising ancient and modern discourse, with particular emphasis on written lines of argument. This course may fulfill a humanities course distribution requirement. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

219**HISTORY OF THE ENGLISH LANGUAGE**

A study of the origins and development of the English language. It examines how linguistic change and historical forces have shaped our common tongue, using representative readings in Old, Middle, Early Modern, and Present Day English. *Prerequisite: ENGL 106 or 107, or consent of the instructor. Alternate years.*

220**BRITISH LITERATURE I**

A survey of literary forms, dominant ideas, and major authors from the Anglo-Saxon period through the 18th century. The course includes a brief study of language development to Chaucer and emphasizes writers such as Chaucer, Shakespeare, Donne, Milton, Swift, Pope, and Johnson. *Prerequisite: ENGL 106 or 107, or consent of the instructor.*

221**BRITISH LITERATURE II**

Literary movements and authors from the beginnings of Romanticism to the end of the 19th century. Particular emphasis on such writers as Wordsworth, Shelley, Keats, Tennyson, Browning, Carlyle, Arnold, Hardy, and Yeats. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

222**AMERICAN LITERATURE I**

Survey of American literature from the beginning to 1865, with major emphasis on the writers of the Romantic period: Poe, Emerson, Thoreau, Hawthorne, Melville, Dickinson, and Whitman. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

223**AMERICAN LITERATURE II**

Survey of American literature from 1865 to 1945, emphasizing such authors as Twain, James, Crane, Hemingway, Faulkner, Frost, Eliot, Stevens, O'Neill, and Williams. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

225**CLASSICAL LITERATURE**

A study, in translation, of Greek and Roman works that have influenced Western writers. Literary forms studied include epic, drama, satire, and love poetry. Writers studied include Homer, Aeschylus, Sophocles, Euripides, Virgil, Juvenal, Horace, Lucretius, and Ovid. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

229**AFRICAN AMERICAN LITERATURE**

A survey of major works and authors of African American literary history from slavery to the present, focusing on such authors as Douglass, J. W. Johnson, Hurston, Hughes, Wright, Ellison, and Morrison. *Prerequisite: ENGL 106 or 107, or consent of the instructor.*

240**INTRODUCTION TO CREATIVE WRITING**

The gateway course for students intending to major in the Creative Writing track. An appropriate course for distribution if the student has demonstrated proficiency in writing. Workshop discussions, structured exercises, and readings in literature provide practice and instruction in the writing and evaluation of poetry and fiction. *Prerequisite: ENGL 106 or 107, or consent of the instructor.*

311**MEDIEVAL LITERATURE**

Readings in Old and Middle English poetry and prose from Bede's Ecclesiastical History to Malory's Arthurian romance. Study of lyric, narrative, drama, and romance with emphasis on the cultural context from which these forms emerge. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

312**RENAISSANCE LITERATURE**

An examination of themes and literary forms of the Renaissance. Authors studied include Donne, Marlowe, More, Shakespeare, Sidney, Spenser, and Surrey. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

313**RESTORATION AND 18TH-CENTURY LITERATURE**

Consideration of selected themes, writers, or modes of Restoration and 18th-century literature (1660-1800) with emphasis on the social, political, and intellectual life of that era. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

314**ROMANTIC LITERATURE**

Concentrated study in the writers, texts, and themes of the Romantic period (1789-1832) with emphasis on the social, political, and intellectual life of that era. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

315**VICTORIAN LITERATURE**

Concentrated study in the writers, texts, and themes of the Victorian period (1832-1901) with emphasis on the social, political, and intellectual life of that era. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

322**ADVANCED WRITING: THE CREATIVE ESSAY**

A course in which students from all disciplines learn to explore and define themselves through the essay, a form used to express the universal through the particular and the personal. Readings include essayists from Montaigne to Gould. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

331**MODERN AND CONTEMPORARY FICTION**

Examination of the novels and short fiction of such major writers as Conrad, Woolf, Joyce, Faulkner, Fowles, and Nabokov, with special emphasis on the relationship of their works to concepts of modernism. *Prerequisite: ENGL 106 or 107, or consent of instructor.*

332**MODERN AND CONTEMPORARY POETRY**

Studies in the themes and visions of modern and contemporary poets, beginning with Yeats and the American Modernists, covering a variety of central movements (such as the Harlem Renaissance), and concluding with a range of multi-cultural authors. *Prerequisite: ENGL 106 or 107 or consent of instructor.*

333**THE NOVEL**

An examination primarily of British and American works from the 18th century to the present, focusing on the novel's ability—since its explosive inception—to redefine its own boundaries. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

334**WOMEN AND LITERATURE**

An examination—literary, social, and historical—of literature by women representing diverse cultures. Each course examines a particular theme significant to women writers from more than one cultural background. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

335**CHAUCER**

A study of representative work in the context of Chaucer's life and times. *Prerequisite: ENGL 106 or 107, or consent of the instructor. Alternate years.*

336**SHAKESPEARE**

A study of representative plays in the context of Shakespeare's life and times. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

338**LINGUISTICS**

An intensive look at the English language, focusing on three grammatical systems (traditional, structural, transformational) to identify their strengths and weaknesses. Attention is also given to larger issues, including language change, the politics of language, the creation of meaning, language acquisition, and dialects. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

341**POETRY WORKSHOP I**

An intermediate workshop focusing on the writing of poetry and methods of analysis. *Prerequisite: Grade of B or better in ENGL 240, or consent of instructor.*

342**FICTION WORKSHOP I**

An intermediate course in the writing of short fiction in a workshop environment, where the student is trained to *hear* language at work. Emphasis on characterization and story. *Prerequisite: Grade of B or better in ENGL 240, or consent of instructor.*

411**FORM AND THEORY: POETRY**

An advanced workshop in which students are asked to write in various poetic forms, such as the sonnet, villanelle, sestina, and pantoum. *Prerequisite: ENGL 341 or consent of instructor. Alternate years.*

412**FORM AND THEORY: FICTION**

A course that examines philosophical and aesthetic theories of fiction, and the resulting fiction based on those theories. Authors will most likely include Aristotle, Calvino, Gardner, Gass, and Nabokov. *Prerequisite: ENGL 342 or consent of instructor. Alternate years.*

421**ADVANCED TOPICS IN LITERATURE**

An upper-level literature course governed either by concept (such as a theme or movement) or author (one to three figures). Topics vary according to each instructor. *Prerequisite: At least one English course numbered 218 and above, or consent of the instructor. Alternate years. May be taken a second time for credit with departmental approval.*

441**POETRY WORKSHOP II**

An advanced workshop in the writing of poetry. Students receive intensive analysis of their own work and acquire experience in evaluating the work of their peers. *Prerequisite: ENGL 341.*

442**FICTION WORKSHOP II**

An advanced course in the writing of short fiction. Emphasis on the complexities of voice and tone. The student is encouraged to develop and control his or her individual style and produce publishable fiction. *Prerequisite: ENGL 342.*

449**ADVANCED CRITICISM**

Reading and discussion in the theory and history of criticism. Examination of both traditional and contemporary ideas about the value and nature of literary expression and its place in human culture generally. Work in the course includes practical as well as theoretical use of the ideas and methods of critical inquiry. *Prerequisite: ENGL 106 or 107, or consent of instructor. Alternate years.*

470-479**INTERNSHIP (See index)**

The department provides internships in editing, legal work, publishing, and technical writing.

N80-N89**INDEPENDENT STUDY (See index)**

Recent studies include the role of Pennsylvania in the fiction of John O'Hara; the changing image of women in American art and literature (1890-1945); the hard-boiled detective novel; contemporary women writers; and Milton's use of the Bible in *Paradise Lost*.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

Recent projects include "The Function of the Past in the Fiction of William Faulkner" and "Illusion, Order, and Art in the Novels of Virginia Woolf."

ENVIRONMENTAL SUSTAINABILITY

Professor: Zimmerman (Coordinator)

Associate Professor: Adams (Coordinator)

The minor requires five courses: BIO 220, ECON 225, and three from ANTH 232, 310, BIO 200, BUS 313, 334, ECON 224, PHIL 228, PSCI 338 or PSY 221, one of which may be replaced by a practicum or internship with approval of coordinator.

Practicum or Internship in Environmental Sustainability: A practicum or internship in environmental sustainability is strongly recommended. This will give students an opportunity to work independently under the supervision of a professional in the field.

One of the following practicum or internship experiences is recommended.

ANTH 470-479 – Anthropology Internship

BIO 400 — Biology Practicum

BIO 401 — Environmental Practicum

BIO 470-479 — Biology Internship

BUS 439 — Business Practicum

BUS 470-479 — Business Internship

ECON 349 — Management Practicum

ECON 470-479 — Economics Internship

PHIL 470-479 — Philosophy Internship

PSCI 470-479 — Political Science Internship

PSY 470-479 — Psychology Internship

SOC 448 – Practicum in Sociology-Anthropology

FINANCIAL ECONOMICS AND ANALYSIS

Associate Professor: Grassmueck (Coordinator)

A minor in financial economics and analysis requires the completion of BUS 339 (Financial Strategies), BUS 410 (Investments), and ECON 220 (Money and Banking). In addition to these three core courses, students are also required to take three electives from the following list. No elective may count toward any other major or minor program of study.

Financial Economics Electives:

ACCT 225	Budgeting and Financial Statement Analysis
BUS 333	Global Business Strategies
ECON 331	Intermediate Macroeconomics
ECON 332	Government and the Economy
ECON 335	Labor Problems
ECON 337	Public Finance
ECON 343	International Trade

HISTORY (HIST)

Associate Professors: Chandler (Chairperson), Silkey

Assistant Professors: Pearl

Instructor: Seddelmeyer

A major consists of 10 courses, including HIST 115, 116, 449 and at least one from 401, 402, 403, or 404. At least seven courses must be taken in the department, three of which must be numbered 300 or above. In addition, majors are required to successfully complete at least three semesters of History Colloquium from HIST 248, 348 and 448. The following courses may be counted toward fulfilling the major requirements: AMST 200, ECON 236, PSCI 140 and 369, REL 226 and 328. Other appropriate courses outside the department may be counted upon departmental approval. For history majors who student teach in history, the major consists of nine courses. In addition to the courses listed below, special courses, independent study, and honors are available. History majors are also encouraged to participate in the internship program.

Students interested in teacher certification should refer to the Department of Education listing.

The following courses satisfy the cultural diversity requirement: HIST 120, 140, 230, 232, 238, 240, 246, 325, 338, and 342. The following courses, when scheduled as W courses, count toward the writing intensive requirement: HIST 215, 218, 230, 233, 338, 401, 402, 403, 404 and 449.

Minor

Three minors are offered by the Department of History. The following courses are required to complete a minor in American history: HIST 125, 126, and three courses in American history numbered 200 and above (HIST 120 and/or 325 may be substituted.) A minor in European history requires the completion of HIST 115, 116 and three courses in European history numbered 200 and above. To obtain a minor in History (without national or geographical designation), a student must complete six courses in history, of which three must be chosen from HIST 115, 116, 125, and 126 and three must be history courses numbered 200 and above.

115

WESTERN CIVILIZATION I

A survey of the major developments in the history of Western Civilization from its roots in the Ancient Near East to the era of the Renaissance. The course considers the political, social and cultural aspects of Mesopotamia, Egypt, the ancient Hebrews, Greece, Rome, and Western Europe. Byzantine and Islamic civilizations are studied to provide a wider scope for comparison.

116

WESTERN CIVILIZATION II

A survey of the major developments in the history of Western Civilization from the era of the Renaissance to the present. The course focuses on the political, economic, social, intellectual, and cultural aspects of European history and how Europe interacted with the rest of the world.

120**LATIN AMERICAN HISTORY**

An examination of the native civilization, the age of discovery and conquest, Spanish colonial policy, the independence movements, and the development of modern institutions and governments in Latin America. *Alternate years.*

125**UNITED STATES HISTORY 1601-1877**

A study of the people, measures, and movements which have been significant in the development of the United States between 1607 and 1877. Attention is paid to the problems of minority groups as well as to majority and national influences.

126**UNITED STATES HISTORY 1877- PRESENT**

A study of people, measures, and movements which have been significant in the development of the United States since 1877. Attention is paid to the problems of minority groups as well as to majority and national influences.

140**SURVEY OF ASIAN HISTORY**

A comprehensive overview of Asian history with emphasis on those Pacific Rim countries which have greatest current impact on political and economic development in the United States. *Alternate Years.*

210**ANCIENT HISTORY**

A study of the ancient western world, including the foundations of the western tradition in Greece, the emergence and expansion of the Roman state, its experience as a republic, and its transformation into the Empire. The course focuses on the social and intellectual life of Greece and Rome as well as political and economic changes.

212**MEDIEVAL EUROPE AND ITS NEIGHBORS**

The history of Europe from the dissolution of the Roman Empire to the mid-15th century. The course deals with the growing estrangement of western Catholic Europe from Byzantium and Islam, culminating in the Crusades; the rise of the Islamic Empire and its later fragmentation; the development and growth of feudalism; the conflict of empire and papacy, and the rise of the towns. *Alternate years.*

215**CONFLICT IN WESTERN CIVILIZATION**

An in-depth study of the changing nature of war and its relationship to the development of Western Civilization since the end of the Middle Ages. Particular emphasis is placed on the role of war in the development of the modern nation state and the origins and nature of total war. *Alternate years.*

218**EUROPE IN THE ERA OF THE WORLD WARS**

An intensive study of the political, economic, social, and cultural history of Europe from 1900-1945. Topics include the rise of irrationalism, the origins of the First World War, the Communist and Fascist Revolutions, and the attempts to preserve peace before 1939. *Prerequisite: HIST 116 or consent of instructor. Alternate years.*

219**CONTEMPORARY EUROPE**

An intensive study of the political, economic, social, and cultural history of Europe since 1945. Topics include the post-war economic recovery of Europe, the Sovietization of Eastern Europe, the origins of the Cold War, decolonization, the flowering of the welfare state, the steps leading to the formation of the European Union, and the collapse of the Soviet Empire. *Prerequisite: HIST 116 or consent of instructor.*

226**COLONIAL AMERICA AND THE REVOLUTIONARY ERA**

The establishment of British settlements on the American continent, their history as colonies, the causes and events of the American Revolution, the critical period following independence, and proposal and adoption of the United States Constitution. *Alternate years.*

230**AFRICAN AMERICAN HISTORY**

A study of the experiences and participation of African Americans in the United States. The course includes historical experiences such as slavery, abolition, reconstruction, and urbanization. It also raises the issue of the development and growth of white racism, and the effect of this racism on contemporary Afro-American social, intellectual, and political life. *Alternate years.*

232**THE RISE OF ISLAM**

A survey of the history of Islam in the Middle East, illuminating the foundation of the religion and its spread in the seventh and eighth centuries, the development of a high civilization thereafter, and the subsequent changes in political and social structures over time. Muslim interactions with Christian and Jews are included, but the emphasis of the course is to understand the history of Islamic civilization in its own right. The course ends with a consideration of recent crises in the Middle East and their roots in modern history.

233**CIVIL WAR AND RECONSTRUCTION**

An intensive study of the political, economic, social, cultural as well as military history of the United States in the Civil War era. Topics include the rise of sectional tensions leading up to the secession crisis in 1860, the extent to which the war can be considered the first modern war, the mobilization of the home fronts to support the war effort, the impact of the war on specific groups such as women and African-Americans, and the failed effort to “reconstruct” the South.

238**CIVIL RIGHTS REVOLUTION**

This course explores the African American struggle for equality and the overthrow of American segregation. Although focusing primarily on the battle over legal segregation in the South, the course also examines topics such as northern race relations, Martin Luther King and his critics, the rise of the Black Power movement, and white backlash politics. *Alternate years.*

240**MODERN CHINA**

This course explores the social, political and cultural changes in China since the early 19th Century. Particular attention is given to the Communist Revolution and the developments in China since Mao's death. *Alternate years.*

242**VIETNAM WAR AT HOME AND ABROAD**

An examination of the impact of the Vietnam War on American society. Rather than focusing on traditional military history, this course investigates the diversity of perspectives and individual experiences among soldiers, civilians, families, and protestors during the war. Topics such as the impact of combat experiences on American soldiers, the anti-war movement, and the social and political legacy of the Vietnam War are explored. *Alternate years.*

246**AFRICA AND THE WORLD**

An examination of major themes and developments in African history centered on relations between African nations and the rest of the world. *Alternate years.*

320**DIPLOMATIC HISTORY OF EUROPE SINCE 1789**

A survey of the development of the European-states system and the relations between the European states since the beginning of the French Revolution. *Prerequisite: HIST 116 or consent of instructor. Alternate years.*

322**THE CRISIS OF LIBERALISM AND NATIONALISM: EUROPE 1848-1870**

An in-depth investigation of the crucial "Middle Years" of 19th century Europe from the revolutions of 1848 through the unification of Germany. The course centers on the struggles for power within the major states of Europe at this time, and how the vehicle of nationalism was used to bring about one type of solution. *Alternate years.*

325**WOMEN IN HISTORY**

An examination of the social, political, economic and intellectual experience of women in the Western World from ancient times to the present.

334**ORIGINS OF EUROPE**

This course takes an in-depth look at the formative period of European civilization from the decline and fall of the Roman Empire to the formation, around the year 1000, of monarchies that resemble modern states. Important issues covered include the development and spread of early Christianity, the assumption of rule over Roman territory by barbarians, and the blending of Roman, Christian, and Germanic barbarian traditions into one European civilization.

336**CRUSADES: CONFLICT AND ACCOMMODATION**

An intensive consideration of interactions between Muslims and Christians in the Middle Ages. Hostile and fruitful relations in Spain, warfare in the Holy Land, and the status of religious minorities are studied. In addition to the often violent relations between these major religious groups, this course addresses their intellectual, artistic, and literary developments as well as reciprocal influences.

338**RIGHTS, REFORM, AND PROTEST**

An exploration of the evolution of social justice movements in American society. This seminar examines interconnections between late-nineteenth- and twentieth-century protest movements such as suffrage, civil rights, women's liberation, disabled rights, and gay liberation. *Alternate years.*

342**WOMEN AND REFORM**

A study of the development and evolution of transnational women's reform networks, exploring the particular challenges faced by women reformers and the role they played in shaping American society. The seminar examines topics such as antislavery, temperance, woman's suffrage, anti-lynching, club and urban reform movements. *Alternate years.*

401**THE MIDDLE AGES IN MODERN EYES**

An in-depth study of medieval history by way of modern understandings of the period. The course focuses on academic interpretations, but also considers the Middle Ages in the popular imagination such as in film. Examination of the documents, literature, and art of the period constitutes the second major area of course assignments. Student work culminates in a major research project based on the study of translated primary sources. *Prerequisite: HIST 115 or 212, or consent of instructor.*

402**AGE OF JEFFERSON AND JACKSON**

The theme of the course is the emergence of the political and social characteristics that shaped modern America. The personalities of Thomas Jefferson, John Marshall, John Randolph, Aaron Burr, and Andrew Jackson receive special attention. Special consideration is given to the first and second party systems, the decline in community cohesiveness, the westward movement, and

the growing importance of the family as a unit of social organization. *Prerequisite: HIST 125 or consent of instructor. Alternate years.*

403

FRENCH REVOLUTION AND NAPOLEON

An analysis of the political, social, and intellectual background of the French Revolution, a survey of the course of revolutionary development, and an estimate of the results of the Napoleonic conquests and administration. *Prerequisite: HIST 115 or consent of instructor. Alternate years.*

404

U.S. SINCE 1945

An in-depth study of historical understandings of American political, social, and intellectual developments in the years following World War II. The course focuses primarily on academic interpretations, but also considers post-war America in the popular imagination, as represented by film, music, and literature. Student work culminates in a major independent research project incorporating both primary and secondary source analysis. *Prerequisite: HIST 126 or consent of instructor. Alternate years.*

248, 348 AND 448

HISTORY COLLOQUIUM

This non-credit but required course for students majoring in history offers students opportunities to meet for a series of occasional events, including methodology workshops and presentations by faculty, guest speakers, and departmental majors. Students taking HIST 449 concurrently deliver formal presentations; those who have not yet taken HIST 449 develop research topic ideas. A letter grade is assigned in a semester when a student gives a presentation. Otherwise the grade is P/F. *History majors are required to successfully complete a minimum of three semesters of colloquium. HIST 449 is a co-requisite for HIST 448.*

449

HISTORICAL METHODS

This course focuses on the nature and meaning of history. It opens to the student different historical approaches and provides the opportunity to explore these approaches in terms of particular topics and periods. Majors are required to enroll in this course in either their junior or senior year. *Prerequisite: HIST 248 or 348 and one course from HIST 401, 402, 403, and 404, or consent of the instructor. Co-requisite: HIST 448.*

470-479

INTERNSHIP (See index)

Typically, history interns work for local government agencies engaged in historical projects or for the Lycoming County Historical Museum.

N80-N89

INDEPENDENT STUDY (See index)

Recent topics include studies of the immigration of American blacks, political dissension in the Weimer republic, Indian relations before the American Revolution, and the history of Lycoming County.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

INSTITUTE FOR MANAGEMENT STUDIES (IMS) AND MANAGEMENT SCHOLARS PROGRAM

Professor: Madresehee (Director)

The purpose of the Institute for Management Studies is to enhance the educational opportunities for students majoring or minoring in accounting, business administration, or economics. It does this by offering an expanded internship program, special seminars on important management topics, student involvement in faculty research and professional projects, executive development seminars, and a Management Scholars program for academically talented students (described below). In addition, the IMS hosts guest speakers and conferences on current management issues.

The IMS also offers an exchange program for business, accounting and economics students with the Westminster Business School (WBS) which is part of the University of Westminster system located in London. WBS is located in the heart of London on Marylebone Road near Regents Park. Eligible students who participate in the program will spend one semester in London taking a full schedule of classes in such areas as international business, management, accounting and economics. The credits received will then be transferred back to Lycoming College. Eligible WBS students are also permitted to study at Lycoming College for one semester.

All students who have a declared major or minor in accounting, business administration, or economics and who are in good academic standing are automatically members of the IMS. However, the IMS Director may invite or permit other students to join the IMS who do not meet the first criterion, such as freshmen who have not yet declared a major or minor.

210

MANAGEMENT SCHOLAR SEMINAR

Team-taught interdisciplinary seminar under the direction of the IMS faculty. A different interdisciplinary topic relevant to students in all three IMS departments is offered at least once a year. Completion of two semesters required by the Management Scholars Program. *One-quarter unit of credit. Prerequisite: Membership in the Management Scholars Program or consent of IMS Director. May be repeated for credit.*

340

MANAGEMENT INTERNSHIP STUDY

A practicum in which students work as interns for businesses, government agencies and nonprofit organizations in the Williamsport area and locations in Pennsylvania, New Jersey, New York, Washington, D.C., and other places. Reading, writing and research assignments vary by the credit value of the experience. Enrollments are limited to the numbers of available placements. Internships can be full or part-time, paid or unpaid positions. Students may receive one to eight semester hours of credit based on arrangements made prior to taking this internship and the approval of the IMS Director. *Prerequisite: Membership in the Institute for Management Studies and consent of the Director. May be repeated for a maximum of 16 credits.*

349

EUROPEAN BUSINESS EXPERIENCE

An extensive international business experience that will studies how and why businesses go global, with special emphasis on financial, marketing and management issues. In addition, the course explores how local business culture affects the management of a company. The activities include site visits to businesses and organizations, lectures and assigned cultural activities.

Assignments include preparatory reading before the start of class, written reports while in Europe and final project that focuses on a particular topic of interest. The research paper is due after return. The course takes place in London with a side trip to another European city.

IMS Scholars Program

The IMS sponsors a Management Scholars Program for academically talented students in the three IMS departments. To join the Management Scholars Program, a student must satisfy the following criteria:

- a) Have a declared major or minor in one or more of the IMS departments. However, the IMS Director may invite or permit other students to join the Management Scholars Program who do not meet this criterion, such as freshmen who have not yet declared a major or minor.
- b) Have an overall GPA of 3.25 or higher, or exhibit strong academic potential if the student is a first-semester freshman.

To graduate as a Management Scholar, a student must meet the following criteria:

- a) Successfully complete two semester-hours of Management Scholar Seminars.
- b) Successfully complete a major or minor in one of the three IMS departments.
- c) Graduate with a GPA of 3.25 or higher in both overall college work, and within an IMS major and/or minor.
- d) Successfully complete an appropriate internship, practicum or independent study, or complete a special project approved by the IMS Director.

At least one Management Scholar Seminar is taught per academic year on an interdisciplinary topic of relevance to students in all three IMS departments. The seminars are normally offered as one semester-hour courses and do not result in overload charges for full-time students.

Students who are currently Lycoming College Scholars may also become Management Scholars and participate in both programs.

INTERNATIONAL STUDIES (INST)

Assistant Professor: Payne (Coordinator)

The International Studies major is a ten-course interdisciplinary major. It includes a core set of six courses which every student must take. The core courses draw from five different departments and provide students with a truly interdisciplinary experience. This core is combined with a flexible set of electives, which simultaneously prepares students to meet their individual future goals. Specifically, students can complete the final four courses of the major in one of three ways: (1) they may take a more general approach in which they take courses which focus on broad transnational and global issues, or they may choose to pursue either the (2) Developed Countries Area focus or the (3) Developing Countries Area focus.

The major is designed to integrate an understanding of the changing social, political, and historical environment of Europe today with study of Europe in its relations to the rest of the world, particularly the United States. It stresses the international relations of the North Atlantic community and offers the student opportunity to emphasize either European studies or international relations. The program provides multiple perspectives on the cultural traits that shape popular attitudes and institutions. Study of a single country is included as a data-base for comparisons, and study of its language as a basis for direct communication with its people.

The program is intended to prepare students either for graduate study or for careers which have an international component. International obligations are increasingly assumed by government agencies and a wide range of business, social, religious, and educational organizations. Opportunities are found in the fields of journalism, publishing, communications, trade, banking, advertising, management, and tourism. The program also offers flexible career preparation in a variety of essential skills, such as research, data analysis, report writing, language skills, and the awareness necessary for dealing with people and institutions of another culture. Preparation for related careers can be obtained through the guided selection of courses outside the major in the areas of business, economics, foreign languages and literatures, government, history, and international relations or through a second major. Students should design their programs in consultation with members of the Committee on International Studies.

The International Studies program also encourages participation in study abroad programs such as the affiliate programs in England, France, Germany and Spain, as well as the Washington and United Nations semesters.

The Major consists of ten courses, which comprise a core set of six required courses and four electives.

Core Courses: All students must complete ECON 343, HIST 116, PSCI 160, INST 449, and a Modern Language Studies sequence of 221 plus one course numbered 222 or above (excluding 311).

Electives: Students must complete the major by taking four electives in one of the following three areas: Transnational and Global Issues, Developed Countries, *or* Developing Countries.

Option 1: Transnational & Global Issues

Choose four courses from at least two departments.

ANTH 229 Cultural Anthropology
ANTH 234 Economic Anthropology
BUS 333 Global Business Strategies
HIST 215 Conflict in Western Civilization
PHIL 334 Contemporary Political
Philosophy

PSCI 242 Human Rights
PSCI 261 International Organizations
PSCI 361 International War
PSCI 362 Terrorism
REL 110 Introduction to World Religions

Option 2: Developed Countries

Choose four courses from at least two departments.

FRN 311 Francophone Cultures
GERM 311 Modern Germany
HIST 218 Europe in the Era of the World
Wars
HIST 219 Contemporary Europe

HIST 320 Diplomatic History of Europe
Since 1789
PHIL 303 Modern Philosophy
PSCI 140 Comparative Politics
SPAN 311 Hispanic Culture

Option 3: Developing Countries

Choose four courses from at least two departments.

ANTH 230 Anthropology of Latin America
FRN 311 Francophone Culture
HIST 120 Latin American History
HIST 232 The Rise of Islam
HIST 246 Africa and the World
PSCI 241 Politics of Developing Countries

PSCI 342 Civil Conflict
REL 211 Judaic Studies: Talmud to Today
REL 212 Islam
REL 225 Asian Religions
SPAN 311 Hispanic Culture

INST 449

SENIOR SEMINAR

A one-semester seminar, taken in the senior year, in which students and several faculty members pursue an integrative topic in the field of international studies. Students work to some extent independently. *Prerequisite: Consent of instructor.*

LITERATURE (LIT)

This major recognizes literature as a distinct discipline beyond national boundaries and combines the study of any two literatures in the areas of English, French, German, and Spanish. Students can thus explore two literatures widely and intensively at the upper levels of course offerings within each of the respective departments while developing and applying skills in foreign languages. The major prepares students for graduate study in either of the two literatures studied or in comparative literature.

The major requires at least six literature courses, equally divided between the two literatures concerned. The six must be at the advanced level as determined in consultation with advisors (normally courses numbered 200 and above in English and 400 and above in foreign languages). In general, two of the advanced courses in each literature should be period courses. The third course, taken either as a regular course or an independent study, may have as its subject another period, a particular author, genre, or literary theme, or some other unifying approach or idea. Beyond these six, the major must include at least two additional courses from among those counting toward a major in the departments involved. Any prerequisite courses in the respective departments (for example: ENGL 106, FRN 221-222 or 311, GERM 221-222, SPAN 221-222) should be taken during the freshman year. Students should design their programs in consultation with a faculty member from each of the literatures concerned. Programs for the major must be approved by the departments involved.

MATHEMATICAL SCIENCES

Associate Professors: Peluso, Sprechini (Chairperson)

Assistant Professors: deSilva, Smith

Instructors: Reed, Reigle

Part-time Instructors: Abercrombie, Collins

MATHEMATICAL SCIENCES

The Department of Mathematical Sciences offers a major program in mathematics and minor programs in computer science, computational science, and mathematics. Interested students may want to investigate the interdisciplinary actuarial mathematics major as well.

COMPUTER SCIENCE (CPTR)

Minor

The Department of Mathematical Sciences offers two computing minors: Computer Science and Computational Science.

A minor in computer science consists of either Math 115 or 216, CPTR 125, 246, 247, and two other computer science courses numbered 220 or above.

A minor in computational science consists of either Math 115 or 216, CPTR 125, 246, and 247; one of CPTR 321, 345, or 339; and an approved computational research project in the student's major discipline which can be fulfilled through ASTR/PHYS 448, BIO 447, CHEM 449, Independent Study, Honors Project, Research Experience for Undergraduates (REU), or other research experience. Computational science is the study of the application of computation to the sciences. The minor in computational science provides students with a core understanding of computer-based problem solving and prepares them to apply that computational power in their chosen discipline.

The following course, when scheduled as a W course, counts toward the writing intensive requirement: CPTR 247.

101

MICROCOMPUTER FILE MANAGEMENT

An introduction to a file-management system, i.e. a database system that uses a single file, in the Windows environment. *One-half unit of credit. This course may not be used to meet distribution requirements.*

102

INTRODUCTION TO VIRTUAL WORLDS

Using Carnegie Mellon's *Alice* software, students create 3-D animations for both storytelling and gaming applications. This is a project-based course where class time is roughly split with one-third demonstration/lecture and two-thirds hands-on project development. Topics include

storyboarding, object-oriented modular construction, decision and repetition control structures, and event handling. *One-half unit of credit.*

125

INTRODUCTION TO COMPUTER SCIENCE

Introduction to the discipline of computer science with emphasis on programming utilizing an object-oriented high-level programming language. Topics include algorithms, program structure, and problem solving techniques. Laboratory experience is included. *Prerequisite: Credit for or exemption from MATH 100.*

246

PRINCIPLES OF ADVANCED PROGRAMMING

Principles of effective programming, including structured and object oriented programming, stepwise refinement, debugging, recursion, inheritance, polymorphism, pointers, and linked data structures. Laboratory experience is included. *Prerequisite: A grade of C- or better in CPTR 125.*

247

DATA STRUCTURES

Representation of data and analysis of algorithms associated with data structures. Topics include representation of lists, trees, graphs, algorithms for searching and sorting. Efficiency of algorithms is emphasized. *Prerequisite: A grade of C- or better in CPTR 246, or consent of instructor.*

321

INTRODUCTION TO NUMERICAL ANALYSIS

Topics from the theory of interpolation; numerical approaches to approximation of roots and functions, integration, systems of differential equations, linear systems, matrix inversion, and the eigenvalue problem. Prerequisites: CPTR 125 and MATH 129; MATH 130 strongly recommended. *Cross-listed as MATH 321.*

322

INTRODUCTION TO WEB-BASED PROGRAMMING

Intermediate programming on the World Wide Web. Topics covered include client/server issues in Web publishing and current programming languages used in Web development. Laboratory experience is included. *Prerequisite: CPTR 125.*

324

AUTOMATA, FORMAL LANGUAGES, AND COMPUTABILITY

The study of finite state machines, pushdown stacks, and Turing machines along with their equivalent formal language counterparts. Topics covered include results on computability, including results regarding the limits of computers and specific problems that cannot be solved. *Prerequisite: MATH 216 or 234. Cross-listed as MATH 324. Alternate years.*

339

INTRODUCTION TO DATABASE SYSTEMS

An introduction to the relational database model and SQL. Topics include but are not limited to: relational model of data; ER diagrams; schema; SQL commands for

table construction, updating, and querying; transaction processing; and database integrity. Laboratory experience is included. *Prerequisite: CPTR 125.*

345

INTRODUCTION TO COMPUTER GRAPHICS

An introduction to graphics software with emphasis on the algorithms, data structures, and application programming interfaces that support the creation of two and three dimensional image generation and animation. *Alternate years.*

470

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

MATHEMATICS (MATH)

A major in mathematics consists of CPTR 125, MATH 128 (or exemption by examination from 128), 129, 130, 234, 238, 432, 434, and one of the following three options: MATH 332 and one other mathematics course numbered 216 or above; or MATH 214 and one other mathematics course numbered 220 or above; or MATH 123 and two other mathematics courses numbered 220 or above. In addition, four semesters of MATH 449 are required. All majors are advised to elect PHIL 225, 333 and PHYS 225, 226.

The following course, when scheduled as a W course, counts toward the writing intensive requirement: MATH 234.

Students interested in teacher certification should refer to the Department of Education listings.

Students who are interested in pursuing a career in actuarial science should consider the actuarial mathematics major.

Minor

A minor in mathematics consists of MATH 128 (or exemption by examination from 128), 129, and either 216 or 234; 238; one additional course selected from 130, 214, or any course numbered 200 or above; and two semesters of MATH 449. The two semesters of MATH 449 may be replaced by any course numbered 220 or above.

100

INDIVIDUALIZED LABORATORY INSTRUCTION IN BASIC ALGEBRA

A computer-based program of instruction in basic algebra including arithmetic and decimals, fractions, the real number line, factoring, solutions to linear and quadratic equations, graphs of

linear and quadratic functions, expressions with rational exponents, algebraic functions, exponential functions, and inequalities. This course is limited to students placed therein by the Mathematics Department. *One-half unit of credit.*

106

COMBINATORICS

An introduction to the analysis of counting problems. Topics include permutations, combinations, binomial coefficients, inclusion/exclusion principle, and partitions. The nature of the subject allows questions to be posed in everyday language while still developing sophisticated mathematical concepts. *Prerequisite: Credit for or exemption from MATH 100.*

115

APPLIED DISCRETE MATHEMATICS

Introduction to discrete structures and their applications in computer science. Topics include elementary logic, discrete number systems, elementary combinatorial theory, finite automata, formal language constructs, and general algebraic structures including Boolean algebras, graphs, and trees. Laboratory experience is included using current software. *Prerequisite: Credit for or exemption from MATH 100.*

109

APPLIED ELEMENTARY CALCULUS

An intuitive approach to the calculus concepts with applications to business, biology, and social-science problems. Not open to students who have completed MATH 128. *Prerequisite: Credit for or exemption from MATH 100.*

112

FINITE MATHEMATICS FOR DECISION-MAKING

An introduction to some of the principal mathematical models, not involving calculus, which are used in business administration, social sciences, and operations research. The course includes both deterministic models such as graphs, networks, linear programming and voting models, and probabilistic models such as Markov chains and games. *Prerequisite: Credit for or exemption from MATH 100.*

123

INTRODUCTION TO STATISTICS

Topics include tabular and graphical descriptive statistics, discrete and continuous probability distributions, Central Limit Theorem, one- and two-sample hypotheses tests, analysis of variance, chi-squared tests, nonparametric tests, linear regression and correlation. Other topics may include index numbers, time series, sampling design, and experimental design. Course also includes some use of a microcomputer. *Prerequisite: Credit for or exemption from MATH 100.*

127

PRECALCULUS MATHEMATICS

The study of polynomial, rational, exponential, logarithmic, and trigonometric functions, their graphs and elementary properties. This course is an intensive preparation for students planning to take Calculus (MATH 128-129) or Matrix Algebra (MATH 130), or those whose major specifically requires Precalculus. This course is taught solely as a review of topics which must

be mastered by students who intend to take MATH 128 or MATH 130. Prerequisite: *Credit for or exemption from MATH 100. Not for distribution.*

128-129

CALCULUS WITH ANALYTIC GEOMETRY I - II

Differentiation and integration of algebraic and trigonometric functions, conic sections and their applications, graphing plane curves, applications to related rate and external problems, areas of plane regions, volumes of solids of revolution, and other applications; differentiation and integration of transcendental functions, parametric equations, polar coordinates, infinite sequences and series, and series expansions of functions. *Prerequisite for 128: Exemption from or a grade of C- or better in MATH 127. Prerequisite for 129: exemption from or a grade of C- or better in MATH 128.*

130

INTRODUCTION TO MATRIX ALGEBRA

Systems of linear equations and matrix arithmetic. Points and hyperplanes, infinite dimensional geometries. Bases and linear independence. Matrix representations of linear mappings. The fixed point problem. Special classes of matrices. *Prerequisite: MATH 127 or its equivalent.*

214

MULTIVARIABLE STATISTICS

The study of statistical techniques involving several variables. Topics include confidence intervals and hypothesis tests about means and variances, confidence intervals and hypothesis tests with simple and multiple linear regression and correlation, assessing appropriateness of linear regression models, one-and two-way analysis of variance with post hoc tests, analysis of covariance, and analysis of contingency tables. Other topics may include discriminant analysis, cluster analysis, factor analysis and canonical correlations, repeated measure designs, time series analysis, and nonparametric methods. Course also includes extensive use of a statistical package (currently SPSS). *Prerequisite: A grade of C- or better in MATH 123, or a grade of C- or better in both MATH 128 and any mathematics course numbered 129 or above; or consent of instructor.*

216

DISCRETE MATHEMATICS

An introduction to discrete structures. Topics include equivalence relations, partitions and quotient sets, mathematical induction, recursive functions, elementary logic, discrete number systems, elementary combinatorial theory, and general algebraic structures emphasizing semi-groups, lattices, Boolean algebras, graphs, and trees. *Prerequisite: CPTR 125 or consent of instructor.*

231

DIFFERENTIAL EQUATIONS

A study of ordinary differential equations and linear systems. Solution techniques include: reduction of order, undetermined coefficients, variation of parameters, Laplace transforms, power series, and eigenvalues and eigenvectors. A brief discussion of numerical methods may also be included. *Prerequisite: A grade of C- or better in MATH 129; MATH 130 recommended.*

233**COMPLEX VARIABLES**

Complex numbers, analytic functions, complex integration, Cauchy's theorems and their applications. *Corequisite: MATH 238. Alternate years.*

234**FOUNDATIONS OF MATHEMATICS**

Topics regularly included are the nature of mathematical systems, essentials of logical reasoning, and axiomatic foundations of set theory. Other topics frequently included are approaches to the concepts of infinity and continuity, and the construction of the real number system. The course serves as a bridge from elementary calculus to advanced courses in algebra and analysis.

Prerequisite: A grade of C- or better in MATH 129 or 130; both courses recommended.
Corequisite: MATH 449.

238**MULTIVARIABLE CALCULUS**

Algebra, geometry, and calculus in multidimensional Euclidean space; n-tuples, matrices; lines, planes, curves, surfaces; vector functions of a single variable, acceleration, curvature; functions for several variables, gradient; line integrals, vector fields, multiple integrals, change of variable, areas, volumes; Green's theorem. *Prerequisites: A grade of C- or better in MATH 129, and either MATH 130 or 231.*

321**INTRODUCTION TO NUMERICAL ANALYSIS**

Topics from the theory of interpolation; numerical approaches to approximating roots and functions, integration, systems of differential equations, linear systems, matrix inversion, and the eigenvalue problem. *Prerequisites: CPTR 125 and MATH 129; MATH 130 strongly recommended. Cross-listed as CPTR 321.*

324**AUTOMATA, FORMAL LANGUAGES, AND COMPUTABILITY**

The study of finite state machines, pushdown stacks, and Turing machines along with their equivalent formal language counterparts. Topics covered include results on computability, including results regarding the limits of computers and specific problems that cannot be solved.

Prerequisite: MATH 216 or 234. Cross-listed as CPTR 324. Alternate years.

325**THEORY OF INTEREST WITH APPLICATIONS**

The mathematical theory of interest in both finite and continuous time is explored together with some applications to economics and finance; specifically, these concepts are applied in the use of the various annuity functions and in the calculation of present and accumulated value for various streams of cash flows as a basis for future use in reserving, valuation, pricing, duration, asset/liability management, investment income, capital budgeting, and contingencies.

Prerequisite: C or better in Math 129.

330**TOPICS IN GEOMETRY**

An axiomatic treatment of Euclidean geometry with an historical perspective.

Prerequisite: A grade of C or better in either MATH 129 or 130. Alternate years.

332-333**MATHEMATICAL STATISTICS I-II**

A study of probability, discrete and continuous random variables, expected values and moments, sampling, point estimation, sampling distributions, interval estimation, test of hypotheses, regression and linear hypotheses, experimental design models. *Corequisite: MATH 238.*

Alternate years.

338**OPERATIONS RESEARCH**

Queuing theory, including simulations techniques, optimization theory, including linear programming, integer programming, and dynamic programming; game theory, including two-person zero-sum games, cooperative games, and multiperson games. *Prerequisite: MATH 112 or 130. Alternate years.*

400**TOPICS IN ACTUARIAL MATHEMATICS**

Study of topics selected from those covered on the examinations administered by the Society of Actuaries, with the exception of the topics already covered in MATH 332-333. *Prerequisite: The prerequisite(s) for this course will depend on the particular topic being taught. With consent of the instructor, this course may be repeated for credit.*

432**REAL ANALYSIS**

An introduction to the rigorous analysis of the concepts of real variable calculus in the setting of normed spaces. Topics from: topology of the Euclidean plane, completeness, compactness, the Heine-Borel theorem; functions on Euclidean space, continuity, uniform continuity, differentiability; series and convergence; Riemann integral. *Prerequisites: MATH 238 and a grade of C- or better in MATH 234.*

434**ABSTRACT ALGEBRA**

An integrated approach to groups, rings, fields, and vector spaces and functions which preserve their structure. *Prerequisites: MATH 130 and a grade of C- or better in MATH 234.*

438**SEMINAR**

Topics in modern mathematics of current interest to the instructor. A different topic is selected each semester. This semester is designed to provide junior and senior mathematics majors and other qualified students with more than the usual opportunity for concentrated and cooperative inquiry. *Prerequisite: Consent of instructor. One-half unit of credit. This course may be repeated for credit.*

449**MATH COLLOQUIUM**

This required non-credit course for mathematics majors and minors and actuarial mathematics majors offers students a chance to hear, prepare, and give presentations on topics related to, but not directly covered in formal MATH courses. Each semester students are required to either prepare or present a lecture on some appropriate topic in mathematics. Mathematics majors present two lectures, typically one during the junior year and one during the senior year. Actuarial mathematics majors and mathematics minors present one lecture. A letter grade is given based on attendance and on either presentation preparation or the presentation given. *One hour per week.*

470-479

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

MEDIEVAL STUDIES

Associate Professors: Preston, Chandler (Coordinators)

The Medieval Studies minor provides a framework for coursework focusing on the Middle Ages. The core curriculum consists of ENGL 220, ENGL 311, HIST 212 and HIST 401. Students may then choose two electives from a range of courses that relate to the language, literature, history, art, religion and philosophy of the medieval period in Europe. However, students may count no more than three courses for credit towards both the minor and a major in either History or English.

Electives:

ART 222	Survey of Art: Ancient, Medieval, and Non-Western
ENGL 335	Chaucer
HIST 115	Western Civilization I
HIST 334	Origins of Europe
HIST 336	Crusades: Conflict and Accommodation
LAT 102 or above	Latin Grammar and Readings
MUS 335	History of Western Music I
PHIL 302	Medieval Philosophy
REL 113	Old Testament Faith and History
REL 114	New Testament Faith and History
THEA 332	History of Theatre I

MILITARY SCIENCE (MLSC)

The U.S. Army Reserve Officer Training Corps (ROTC) program is offered to Lycoming College students in cooperation with Bucknell University. Details of the ROTC program can be found under Cooperative Programs. For additional information go to:
<http://www.bucknell.edu/ROTC.xml>.

101

LEADERSHIP AND PERSONAL DEVELOPMENT

An introduction to the personal challenges and competencies that are critical for effective leadership. The student will learn how the personal development of life skills such as goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions while gaining a big picture understanding of the ROTC program, its purpose in the Army, and its advantages for the student. *No credit.*

102

INTRODUCTION TO TACTICAL LEADERSHIP

An overview of leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. The student will explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises. *No credit.*

201

INNOVATIVE TEAM LEADERSHIP

This course explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army leadership framework. Aspects of personal motivation and team building are practiced planning, executing and assessing team exercises and participating in leadership labs. The focus continues to build on developing knowledge of the leadership values and attributes through understanding Army rank, structure, and duties as well as broadening knowledge of land navigation and squad tactics. Case studies will provide a tangible context for learning the Soldier's Creed and Warrior Ethos as they apply in the contemporary operating environment. *No credit.*

202

FOUNDATIONS OF TACTICAL LEADERSHIP

This course examines the challenges of leading tactical teams in the complex contemporary operating environment (COE). The course highlights dimensions of terrain analysis, patrolling, and operation orders. Continued study of the theoretical basis of the Army leadership framework explores the dynamics of adaptive leadership in the context of military operations. Students develop greater self-awareness as they assess their own leadership styles and practice communication and team building skills. COE case studies give insight into the importance and practice of teamwork and tactics in real-world scenarios. *No credit.*

301

ADAPTIVE TEAM LEADERSHIP

Students are challenged to study, practice, and evaluate adaptive team leadership skills as they are presented with the demands of the ROTC Leader Development and Assessment Course (LDAC). Challenging scenarios related to small unit tactical operations are used to develop self-awareness and critical thinking skills. Students will receive systematic and specific feedback on their leadership abilities. *No credit.*

302

LEADERSHIP IN CHANGING ENVIRONMENTS

In this course students will be challenged to study, practice, and evaluate adaptive leadership skills as they are presented with the demands of the ROTC Leader Development Assessment Course (LDAC). Challenging scenarios related to small unit tactical operations are used to develop self-awareness and critical thinking skills. *No credit.*

401

DEVELOPING ADAPTIVE LEADERS

The course develops student proficiency in planning, executing, and assessing complex operations, functioning as a member of a staff, and providing performance feedback to subordinates. The student is given situational opportunities to assess risk, make ethical decisions, and lead fellow ROTC cadets. Lessons on military justice and personnel processes prepare the cadet to make the transition to becoming an Army officer. Both-classroom and battalion leadership experiences are designed to prepare the cadet for the first unit of assignment. The cadet will identify responsibilities of key staff, coordinate staff roles, and use battalion operations situations to teach, train, and develop subordinates. *No credit.*

402

LEADERSHIP IN A COMPLEX WORLD

This course explores the dynamics of leading in the complex situations of current military operations in the contemporary operating environment (COE). Differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism will be examined. Aspects of interacting with non-government organizations, civilians on the battlefield, and host nation support will also be explored. The course places significant emphasis on preparation for BOLC II and III, and the first unit of assignment. Using case studies, scenarios, and “What Now, Lieutenant?” exercises it prepares the cadet to face the complex ethical and practical demands of leading as a commissioned officer in the United States Army. *No credit.*

MODERN LANGUAGE STUDIES (MLS)

Professors: Buedel, Kingery
Associate Professor: Cartal-Falk
Assistant Professors: Cagle (Chairperson)
Visiting Assistant Professors: Burdette, Guss
Part-time Instructors: Meeder, Ribitsch

The study of modern languages and literatures offers opportunities to explore broadly the varieties of human experience and thought. It contributes both to personal and to international understanding by providing competence in a modern language and a critical acquaintance with the literature and culture of foreign peoples. A major can serve as a gateway to careers in business, government, publishing, education, journalism, social agencies, translating, and writing. It prepares for graduate work in literature or linguistics and the international fields of politics, business, law, health, and area studies.

MAJOR FIELDS OF STUDY

French, German, and Spanish are offered as major fields of study. The major consists of at least 36 semester hours of courses numbered 111 and above. Students who intend to pursue graduate study in a modern language should take additional 300- and 400-level courses. Majors seeking teacher certification are advised to begin the study of a second modern language. The department encourages students to consider allied courses from related fields, a second major, or an interdisciplinary major such as International Studies.

STUDY ABROAD AND INTERNSHIPS

The department recommends that all language majors study abroad in a Lycoming College affiliate program or in a department-approved program. Students seeking language teacher certification are required to study abroad for a minimum of one semester. Lycoming offers affiliate programs in Grenoble, France (Centre Universitaire d'Etudes Françaises); Cuenca, Ecuador (Estudio Sampere); Bamberg, Germany (Otto-Friedrich-Universität); Madrid, Salamanca, and Alicante, Spain (Estudio Sampere). Other department-approved programs are also available. Students who intend to study abroad should begin planning with their major advisor by the first week of the semester prior to departure. To qualify, students must have sophomore standing or higher, an overall GPA of 2.50, a GPA of 3.00 in language courses, and recommendation from faculty in the major. Overseas internships are offered through approved programs. They typically require substantial language skills and junior or senior standing.

CAPSTONE EXPERIENCE

All modern language majors are required to pass two semesters of MLS 449 (Junior-Senior Colloquium). In addition, all majors must complete at least two of the following six options: (1) appropriate study abroad for a minimum of 8 weeks; (2) an internship; (3) department-approved volunteer work in the modern language; (4) FRN 418, GERM 418, or SPAN 418 with a grade of C or better; (5) secondary teaching certification in French, German, or Spanish; (6) a total of 12 credit hours at the 400-level in French, German, or Spanish.

If the colloquia and other two requirements have not been met by the end of the first semester of the senior year, the student must submit to the chair of the department a plan signed by the advisor showing when and how these requirements will be completed.

TEACHER CERTIFICATION

Students interested in teacher certification should refer to the Department of Education listing.

MODERN LANGUAGES AND LITERATURES (MLS)

338

FOREIGN LANGUAGE PEDAGOGY

The theories and practice of contemporary foreign language pedagogy are explored in this course. Emphasis is placed on the Standards for Foreign Language Learning in the 21st Century. Students write classroom observations, create and teach mini-lessons, conduct research, and devise a unit plan. Designed for future teachers of one or more languages and normally taken in the junior year. *Prerequisite: Consent of instructor. Taught in English. Does not count toward majors in French, German, and Spanish.*

449

JUNIOR-SENIOR COLLOQUIUM

This colloquium offers French, German, and Spanish majors the opportunity to meet regularly with peers, professors, and invited guest speakers to discuss linguistic, literary, cultural, and pedagogical topics. Each student enrolled in 449 is required to deliver at least one oral presentation of approximately 20 minutes in a language other than English in their second semester. *Prerequisite: junior standing. The department recommends that, when possible, students take one semester of 449 during their junior year and another semester during their senior year. Taught in English. The Colloquium will meet a minimum of 6 times during the semester for 1 hour each session. After successful completion of two semesters of the Colloquium, a student may enroll for additional semesters on a pass-fail basis and no oral presentation will be required. Non-credit course.*

FRENCH (FRN)

Major

A major consists of a minimum of 36 semester hours of FRN courses numbered 111 and above or approved courses from a Study Abroad program, including at least eight semester hours from the 400 level, not including MLS 449. French majors must pass at least two semesters of MLS 449 and complete two of the additional requirements as explained under Capstone Experience. Students who wish to be certified for secondary teaching must complete the major with at least a 3.00 GPA and pass FRN 221-222, 311, 418, and MLS 338 (the latter two courses with a grade of B or better). The following courses satisfy the cultural diversity requirement: FRN 221, 222 and FRN 311. The following courses, when scheduled as a W course, count toward the writing intensive requirement: FRN 222, 412, 418, and 426.

Minor

A minor in French consists of at least 20 semester hours of courses numbered 221 and above. Eight of the credits must be numbered 300 or above. Courses 111 and 112 may be counted towards the minor, but then the minor must consist of at least 24 semester hours of courses, 8 hours of which must be numbered 300 or above.

101

ELEMENTARY FRENCH I

Students acquire novice-level French proficiency in listening, speaking, reading, and writing. Examination of French and Francophone cultures encourages students to view diverse peoples as different yet interrelated.

102

ELEMENTARY FRENCH II

Students continue to acquire novice-level French proficiency in listening, speaking, reading, and writing. Examination of French and Francophone cultures encourages students to view diverse peoples as different yet interrelated. *Prerequisite: FRN 101 or equivalent.*

111

INTERMEDIATE FRENCH I

Intensive review and development of intermediate proficiency in all language skills. Focus on the development of interpersonal, interpretive and presentational modes of communication. Cultural and short literary readings are broader in scope and the study of French and Francophone films is incorporated in the curriculum. *Prerequisite: FRN 102 or equivalent.*

112

INTERMEDIATE FRENCH II

Continued review and development of intermediate proficiency in all language skills. Focus on the development of interpersonal, interpretive and presentational modes of communication. Cultural and short literary readings are broader in scope and the study of French and Francophone films is incorporated in the curriculum. In addition a task-based component is featured in this course. *Prerequisite: FRN 111 or equivalent.*

221

FRENCH CONVERSATION AND REVIEW

Refinement and improvement in the development of interpersonal, interpretive and presentational modes of communication with a view to increasing proficiency toward the advanced level. Conversations and writing focus on contemporary cultural readings, literary texts, and film. Phonetics, pronunciation and grammar review. *Prerequisite: FRN 112 or equivalent.*

222

FRENCH COMPOSITION AND REVIEW

Students practice different genres of composition, while learning to differentiate between writing and editing. Readings enhance linguistic and cultural knowledge with a view to increasing proficiency toward the advanced level. Includes the study of French stylistics, semantics, syntax and grammar. *Prerequisite: FRN 221.*

311**FRANCOPHONE CULTURES**

This course introduces students to French-speaking peoples- their values, customs and institutions, with reference to the geographic and historical forces governing present-day France, the Maghreb, Sub-Saharan Africa, the Caribbean and Quebec. *Prerequisite: FRN 222 or consent of instructor. Alternate years.*

315**INTRODUCTION TO FRENCH AND FRANCOPHONE LITERATURES**

Diverse readings in this course draw from both French and Francophone literatures and represent significant literary movements from the Middle Ages to the present. The course is designed to acquaint the student with literary concepts and terms, genre study and the basic skills of literary analysis. *Prerequisite: FRN 222 or consent of instructor. Alternate years.*

321**SPECIAL TOPICS IN FRENCH AND FRANCOPHONE LITERATURE AND CULTURE**

Examination of significant cultural or literary topics concerning the French-speaking world. Possible topics include: Francophone short stories; French theatre; French-speaking women writers; French and Francophone poetry; Paris and the Avant-garde; Francophone cinema; Francophone Africa; In Search of Creoleness. *Prerequisites: FRN 222 or consent of instructor. May be repeated for credit with consent of instructor.*

412**FRENCH LITERATURE OF THE 19TH CENTURY**

The dimensions of the Romantic sensibility: Musset, Hugo, Madame de Staël, Vigny, Balzac, Stendhal, Sand; realism and naturalism in the novels of Flaubert and Zola; and the poetry of Baudelaire, Desbordes-Valmore, Rimbaud, Verlaine, and Mallarmé. *Prerequisite: At least one French course from the 300 level. Alternate years.*

418**ADVANCED LANGUAGE PRACTICE**

Intensive practice for advanced students who wish to improve further their spoken and written French. Includes work in oral comprehension, phonetics, pronunciation, composition, and textual analysis. *Prerequisites: Either two French 300 level courses or one French 400 level course; or consent of instructor.*

426**SPECIAL TOPICS IN FRENCH AND FRANCOPHONE LITERATURE AND CULTURE**

Readings of important works and movements in French and/or Francophone literature and culture. Reading selections may focus on a particular genre or they may be a combination of drama, poetry and prose. Cultural topics may be explored with an interdisciplinary approach. Possible topics include: Medieval literature; the Baroque period; the epistolary novel; Romanticism; 20th century poetry; French cinema; children's literature; surrealism and the avant-garde; the Francophone novel; French literature and art between the wars. *Prerequisites: one French 300 level course, or consent of instructor. May be repeated for credit with consent of instructor.*

427**FRENCH LITERATURE OF THE 20TH CENTURY**

This course explores the major movements of the 20th century, beginning with the poetry of the Surrealists, continuing with the Theatre of the Absurd, and culminating in the New Novel.

Representative writers include Proust, Breton, Céline, Camus, Duras, Saurraute and Le Clézio.

Prerequisite: At least one French course from the 300 level. Alternate years.

470-479

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

Examples of recent studies in French include translation, Existentialism, the classical period, enlightenment literature, and Saint-Exupery.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

GERMAN (GERM)**Major**

A major consists of a minimum of 36 semester hours of GERM courses numbered 111 and above or approved courses from a Study Abroad program. GERM 426 or 441 is required of all majors. German majors must pass at least two semesters of MLS 449 and complete two of the additional requirements as explained under Capstone Experience. Students who wish to be certified for secondary teaching must complete the major with at least a 3.00 GPA and pass GERM 221-222, 311, 418, and either 426 or 441. In addition to the 36 semester hours of courses for the major, they must also pass MLS 338 and GERM 418 with a grade of B or better. All majors are urged to enroll in MUS 336 and THEA 335. The following courses satisfy the cultural diversity requirement: GERM 221 and 222. The following courses, when scheduled as a W course, counts toward the writing intensive requirement: GERM 426.

Minor

A minor in German consists of at least 20 semester hours of courses numbered 221 and above. Eight of the credits must be numbered 300 or above.

101**ELEMENTARY GERMAN I**

Students acquire novice-level German proficiency in listening, speaking, reading, and writing. Examination of German cultural products encourages students to view diverse peoples as different yet interrelated.

102**ELEMENTARY GERMAN II**

Students continue to acquire novice-level German proficiency in listening, speaking, reading, and writing. Examination of German cultural products encourages students to view diverse peoples as different yet interrelated. *Prerequisite: GERM 101 or equivalent.*

111**INTERMEDIATE GERMAN I**

Intensive review and development of intermediate proficiency in all language skills. Focus on the development of interpersonal, interpretive and presentational modes of communication. Cultural and short literary readings are broader in scope and the study of German films is incorporated in the curriculum. *Prerequisite: GERM 102 or equivalent.*

112**INTERMEDIATE GERMAN II**

Continued review and development of intermediate proficiency in all language skills. Focus on the development of interpersonal, interpretive and presentational modes of communication. Cultural and short literary readings are broader in scope and the study of German films is incorporated in the curriculum. In addition a task-based component is featured in this course. *Prerequisite: GERM 111 or equivalent.*

221**GERMAN CONVERSATION AND REVIEW**

Refinement and improvement in the development of interpersonal, interpretive and presentational modes of communication with a view to increasing proficiency toward the advanced level. Conversations and writing focus on contemporary films, cultural readings, and literary texts. Phonetics, pronunciation and in-depth grammar review. *Prerequisite: GERM 112 or equivalent.*

222**GERMAN COMPOSITION AND REVIEW**

Intensive reading and writing program based largely on current topics in the German-speaking countries, and on literature, film, music, art, and other cultural products. Literary texts include two novels. Strong emphasis placed on reading comprehension and the further development of writing skills toward the advanced level. *Prerequisite: GERM 221.*

311**MODERN GERMANY**

This course is designed to familiarize students with social and political structures and cultural attitudes in contemporary German, Austrian, and Swiss society. Material studied may include newspaper articles, interviews, films, and readings in history, religion, anthropology, and the arts. Some attention is paid to the changing education system, to the family and to events and ideas that have shaped German-speaking cultures. *Prerequisite: GERM 221 or consent of instructor.*

315**INTRODUCTION TO GERMAN-LANGUAGE LITERATURE**

Diverse readings in this course draw from German, Swiss, and Austrian literature and represent significant literary movements from the Middle Ages to the present. The course is designed to acquaint the student with literary concepts and terms, genre study and the basic skills of literary analysis. *Prerequisite: GERM 222 or consent of instructor.*

321**SPECIAL TOPICS IN GERMAN LITERATURE AND CULTURE**

Examination of significant cultural or literary topics concerning the German-speaking world. Possible topics include: the German Novelle; German theatre; the fairy tale; German poetry; German film; German art and culture. *Prerequisite: GERM 222 or consent of instructor. May be repeated for credit with consent of instructor.*

411**THE NOVELLE**

The German Novelle as a genre relating to various literary periods. *Prerequisite: One German 300 level course, or consent of instructor.*

418**ADVANCED LANGUAGE PRACTICE**

Intensive practice for advanced students who want to improve their spoken and written German. Includes work in oral comprehension, phonetics, pronunciation, oral and written composition, translation, and the development of the language and its relationship to English. *Prerequisite: GERM 222 or consent of instructor.*

426**SPECIAL TOPICS IN GERMAN LITERATURE AND CULTURE**

The study of important works and movements in German literature and culture. Reading selections may focus on a particular genre or they may be a combination of drama, poetry and prose. Cultural topics may be explored with an interdisciplinary approach. Possible topics include: Medieval literature, Romanticism, Classicism, fairy tales, Goethe, East and West Germany, the Weimar Republic, the Uncanny, post-reunification literature and film. *Prerequisite: One German 300 level course, or consent of instructor. May be repeated for credit with consent of instructor.*

441**CONTEMPORARY GERMAN LITERATURE**

Representative poets, novelists and dramatists of contemporary Germany, Switzerland and Austria covering the period from the 1960's to the present. Readings selected from writers such as: Böll, Brecht, Frisch, Dürrenmatt, Bichsel, Handke, Walser, Grass, Becker, and others. *Prerequisite: One German 300 level course, or consent of instructor.*

470-479

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

Examples of recent studies in German include Classicism, Germanic Mythology, Hermann Hesse, the dramas of Frisch and Dürrenmatt.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

GREEK (GRK) SEE RELIGION

HEBREW (HEBR) SEE RELIGION

LATIN (LAT) SEE RELIGION

SPANISH (SPAN)

Major

A major consists of 36 semester hours of SPAN courses numbered 111 and above or approved courses from a Study Abroad program. From courses numbered 315 or higher, one course must focus on literature or culture from Spain and one course must focus on literature or culture from Latin America. SPAN 315 and approved topics courses may focus on Hispanic literatures with representative readings from both Spain and Latin America. When this is the case, the course may count toward either the Spanish or Latin American requirement. Eight semester hours must be at the 400 level, not including 449. Spanish majors must pass at least two semesters of MLS 449 and complete two of the additional requirements as explained under the Capstone Experience section. Recommended course: HIST 120. Students who wish to be certified for secondary teaching must complete the major with at least a 3.00 GPA and pass SPAN 221, 222, 311, 418 and MLS 338 (the latter two with a grade of B or better).

The following courses satisfy the cultural diversity requirement: SPAN 221, 222, and 311.

The following courses, when scheduled as W courses, count toward the writing intensive requirement: SPAN 315, 323, 418, 424, and 426.

Minor

A minor in Spanish consists of at least 20 semester hours of courses numbered 221 and above. Eight of the credits must be numbered 300 or above.

Courses 111 and 112 may be counted towards the minor, but then the minor must consist of at least 24 semester hours of courses, 8 hours of which must be numbered 300 or above.

101**ELEMENTARY SPANISH I**

Students acquire novice-level Spanish proficiency in listening, speaking, reading, and writing. Examination of Spanish and Latin American cultural products encourages students to view diverse peoples as different yet interrelated.

102**ELEMENTARY SPANISH II**

Students continue to acquire novice-level Spanish proficiency in listening, speaking, reading, and writing. Examination of Spanish and Latin American cultural products encourages students to view diverse peoples as different yet interrelated. *Prerequisite: SPAN 101 or equivalent.*

111**INTERMEDIATE SPANISH I**

Intensive review and development of intermediate proficiency in all language skills. Focus on the development of interpersonal, interpretive and presentational modes of communication. Cultural and short literary readings are broader in scope and the study of Spanish and Latin American films is incorporated in the curriculum. *Prerequisite: SPAN 102 or equivalent.*

112**INTERMEDIATE SPANISH II**

Continued review and development of intermediate proficiency in all language skills. Focus on the development of interpersonal, interpretive and presentational modes of communication. Cultural and short literary readings are broader in scope and the study of Spanish and Latin American films is incorporated in the curriculum. In addition a task-based component is featured in this course. *Prerequisite: SPAN 111 or equivalent.*

221**SPANISH CONVERSATION AND REVIEW**

Refinement and improvement in the development of interpersonal, interpretive and presentational modes of communication with a view to increasing proficiency toward the advanced level. Conversations and writing focus on contemporary cultural readings, literary texts, and film. Phonetics, pronunciation and in-depth grammar review. *Prerequisite: SPAN 112 or equivalent.*

222**SPANISH COMPOSITION AND REVIEW**

Intensive reading and writing program based largely on current topics in Spanish-speaking countries, and on literature, film, music, art, and other cultural products. Literary texts include poetry, short fiction, and a novel. Strong emphasis placed on reading comprehension and the further development of writing skills toward the advanced level. *Prerequisite: SPAN 221.*

311**HISPANIC CULTURE**

To introduce students to Spanish-speaking peoples—their values, customs and institutions, with reference to the geographic and historical forces governing present-day Spain and Spanish America. *Prerequisite: SPAN 222 or consent of instructor. Alternate years.*

315**INTRODUCTION TO HISPANIC LITERATURES**

Diverse readings in this course include both Spanish and Latin American literatures designed to acquaint the student with significant Hispanic authors and literary movements. The course deals with genre study, literary terms in Spanish, literary concepts and forms, as well as the basic skills of literary analysis. The course counts toward the requirement in the major as either a course in the literature of Spain or in the literature of Latin America. *Prerequisite: SPAN 222 or consent of instructor.*

321**SPECIAL TOPICS IN HISPANIC LITERATURE AND CULTURE**

Examination of significant cultural or literary topics concerning the Spanish-speaking world. Possible topics include: Latin American short stories; Spanish theatre; Latin American women writers; Hispanic film; Hispanic art. *Prerequisite: SPAN 222 or consent of instructor. May be repeated for credit with consent of instructor.*

323**SURVEY OF SPANISH LITERATURE AND CIVILIZATION**

Designed to acquaint the student with important periods of Spanish literature, representative authors, and major socioeconomic developments. The course deals with the literature from the Middle Ages to the present. *Prerequisite: SPAN 222 or consent of instructor. Alternate years.*

325**SURVEY OF SPANISH-AMERICAN LITERATURE AND CIVILIZATION**

Designed to acquaint the student with important periods of Spanish-American literature, representative authors, and major socio-economic developments. The course deals with the literature, especially the essay and poetry, from the 16th century to the present. *Prerequisite: SPAN 222 or consent of instructor. Alternate years.*

335**TRANSLATION**

Examination of technical issues related to Spanish and English lexical, syntactical, and semantic differences as well as the various cultural issues involved in the act of translation. Students are asked to translate a variety of literary and non-literary texts and to reflect upon and discuss both the theory and practice of translation. Special emphasis is given to increasing Spanish vocabulary and perfecting Spanish grammar. *Prerequisite: SPAN 222 or consent of instructor. Alternate years.*

418**ADVANCED LANGUAGE PRACTICE**

Intensive practice for advanced students who wish to improve their spoken and written Spanish. Includes work in oral comprehension, pronunciation, oral and written composition, and translation. *Prerequisite: Either two Spanish 300 level courses or one Spanish 400 level course; or consent of instructor. Alternate years.*

426**SPECIAL TOPICS IN HISPANIC LITERATURE AND CULTURE**

Readings of important works in Spanish and/or Latin American literature. Reading selections may focus on a particular genre or they may be a combination of drama, poetry and prose. Cultural topics may be explored with an interdisciplinary approach. Possible topics include: Medieval literature; the Golden Age; Romanticism and realism in Spain and Latin America; the Modernist movement in Latin America; 20th century poetry; Lorca and the avant-garde; the Latin American novel or short story; the literature of the Civil War and Franco Spain; the theme of honor in Spanish literature; dramatic revisions of Spanish history in modern Spanish theatre. *Prerequisites: Two Spanish courses at the 300 or 400 level, or consent of instructor. May be repeated for credit with consent of instructor.*

470-479

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

Recent studies include literary, linguistic, and cultural topics and themes such as urban problems as reflected in the modern novel.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

MUSIC (MUS)

Associate Professor: Ciabattari (Chairperson)

Assistant Professors: Gunderson, Jackson

Part-time Instructors: Adams, Breon, Brumbaugh, Burke, R. Ciabattari, Fisher, Laczkoski, Lakey, Muller, Orris, Rammon, Wertz, Whyman

The student majoring in music is required to take a balanced program of music theory, history, applied music, and ensemble. A minimum of eight courses (exclusive of all ensemble, applied music and instrumental and vocal methods courses) is required and must include MUS 120, 121, 220, 221, 335, and 336. Each major must complete the senior project 447, participate in an ensemble (MUS 167, 168, and/or 169) and take one hour of applied music per week for a minimum of four semesters including the entire period in which the individual is registered as a music major (see MUS 160-166, 170-171). All music majors must pass a piano proficiency exam. The Department strongly recommends that students begin applied study in piano and a major applied instrument or voice as soon as possible, preferably in the first semester of the freshman year. Anyone declaring music as a second major must do so by the beginning of the junior year. Four semesters of Music Colloquium are required of all students majoring in music.

Students interested in teacher certification should refer to the Department of Education listing.

The Music Department recommends that non-majors select courses from the following list to meet distribution requirements: MUS 116, 117, 128, 224, 234, and 238. Applied music and ensemble courses may also be used to meet distribution requirements.

Student recitals offer opportunities to gain experience in public performance. Music majors and other students qualified in performance may present formal recitals.

The following courses satisfy the cultural diversity requirement: MUS 116, 128, 234 and 238. The following course, when scheduled as a W course, counts toward the writing intensive requirement: MUS 336.

The minor in music requires MUS 116 or 120, plus four additional full-unit courses in music, at least two of which must be level 200 or above. In addition, students must complete 2 credits of applied music, ½ credit of which must be in piano. Students may substitute 7 semesters of ensemble performance (band, choir, or orchestra) for one of the courses below the 200 level.

116

INTRODUCTION TO MUSIC

A basic course in the materials and techniques of music. Examples drawn from various periods of western and non-western styles are designed to enhance perception and appreciation through careful and informed listening.

117**SURVEY OF WESTERN MUSIC**

A chronological survey of music in Western civilization from Middle Ages to the present. Composers and musical styles are considered in the context of the broader culture of each major era.

120**MUSIC THEORY I**

A course intended for students who have some music-reading ability, which examines the fundamental components and theoretical concepts of music. Students develop musicianship through application of applied skills. *Prerequisite to MUS 111: MUS 110.*

121**MUSIC THEORY II**

A continuation of MUS 120, intended for students who have some music-reading ability, which examines the fundamental components and theoretical concepts of music. Students continue to develop musicianship through application of applied skills. *Prerequisite: MUS 120.*

128**AMERICAN MUSIC**

An introductory survey of all types of American music from pre-Revolutionary days to the present. Categories to be covered are folk music of different origins, the development of show music into Broadway musicals, serious concert music for large and small ensembles, jazz, and various popular musics from “Tin Pan Alley” to Rock to New Wave. *Alternate years.*

220**MUSIC THEORY III**

A continuation of the integrated theory course moving toward newer uses of music materials. *Prerequisite: MUS 121.*

221**MUSIC THEORY IV**

A continuation of the integrated theory course moving toward newer uses of music materials. *Prerequisite: MUS 220.*

224**MUSIC AND TECHNOLOGY I**

An introduction to electronic music and MIDI (Musical Instrument Digital Interface) for the major and non-major alike. The course traces the development of MIDI from its origin to present-day. Students utilize relevant equipment and software to create music and other sounds. Particular focus is given to those technologies that are commonly used in public school music classrooms today.

225**MUSIC AND TECHNOLOGY II**

Further consideration of recording techniques. Use of microphones, multi-track recording,

mixing, special effects devices, and synchronization are introduced. Students take part in live recording of concerts and rehearsals of a variety of ensembles. Student projects include complete recording sessions and the production of electronic music compositions utilizing classical studio techniques and real-time networks. *Prerequisite: MUS 224 or consent of instructor.*

234

HISTORY OF JAZZ

A survey of jazz styles, composers, and performers from 1890 to the present: origins, ragtime, blues, New Orleans, Chicago, swing, bebop, cool, funky, free jazz, third stream, and contemporary.

238

WORLD MUSIC

An exploration of the music of non-Western cultures as well as the influences of non-Western music on Western musical development. Primary course content includes the musical traditions from Asia, Africa, and Australia.

330

COMPOSITION I

An introductory course for majors and non-majors who wish to explore their composing abilities. Guided individual projects in smaller instrumental and vocal forms, together with identification and use of techniques employed by the major composers of the 20th and 21st centuries.

Prerequisite: MUS 111 or consent of instructor.

335

HISTORY OF WESTERN MUSIC I

The development of musical styles and forms from Gregorian chant through Mozart, including composers from the medieval, Renaissance, baroque, and early classical eras.

336

HISTORY OF WESTERN MUSIC II

The development of musical styles and forms from Beethoven to the present, including composers from the late classical, romantic, and modern eras. *Prerequisite: MUS 335 or consent of instructor.*

337

CONDUCTING

A study of the techniques and philosophy of conducting both choral and instrumental ensembles. Topics include the physical skills and intellectual preparation necessary for clear, expressive, and informed conducting. Other areas such as the development of rehearsal techniques and improvement of aural skills are addressed on a continual basis. *Prerequisite: MUS 120-121 or consent of instructor. Alternate years.*

339**ORCHESTRATION**

A study of modern orchestral instruments and examination of their use by the great masters with practical problems in instrumentation. The College Music Organizations serve to make performance experience possible. *Prerequisites: MUS 110-111 or consent of instructor. Alternate years.*

340**TEACHING MUSIC IN THE ELEMENTARY SCHOOL**

Methods and materials of teaching music in the elementary school with emphasis on conceptual development through singing, moving, listening, playing classroom instruments, and creating music. Course work includes peer teaching demonstrations, practical use of the recorder and autoharp, as well as observation of music classes in elementary schools in the Greater Williamsport area. *Alternate years.*

341**TEACHING MUSIC IN SECONDARY SCHOOLS**

Methods and materials of teaching music in the secondary schools with emphasis on the development of concepts and skills for effective instruction in all aspects of music learning. The teaching of general music and music theory, as well as the organizing and conducting of choral and instrumental ensembles, is examined. Course work includes evaluation of instructional and performance materials, practical use of the recorder and guitar in middle school settings, as well as observation of music classes in secondary schools in the Greater Williamsport area. *Alternate years.*

440**COMPOSITION II**

For students interested in intensive work emphasizing the development of a personal style of composing. Guided individual projects in larger instrumental and vocal forms, together with analysis of selected works from the 20th and 21st century repertory. *Pre-requisite: MUS 330 or consent of instructor.*

445**SPECIAL TOPICS IN MUSIC**

The intensive study of a selected area of music literature, designed to develop research techniques in music. The topic is announced at the Spring pre-registration. Sample topics include: Beethoven, Impressionism, Vienna 1900-1914. *Prerequisite: MUS 116, 117 or 221; or consent of instructor.*

446**RECITAL**

The preparation and presentation of a full-length public recital, normally during the student's senior year. MUS 446 may substitute for one hour of applied music (MUS 160-166). *Prerequisite: Approval by the department. May be repeated for credit.*

447**SENIOR PROJECT**

For this capstone course, students complete a portfolio of work to represent the culmination of their creative and academic achievements in music. The portfolio may include: A revised and expanded paper from an upper-level musicology or theory course and a public lecture-presentation; an interdisciplinary study (i.e. Psychology, Business) culminating in a paper or portfolio of work and presentation; a portfolio of musical compositions and a public performance/lecture; or a public recital, including printed program notes or lecture notes, a recording of the recital. Zero credit. For students electing to do a recital, co-enrollment with the relevant applied music for 1.0 credit is required.

148, 248, 348, and 448**MUSIC COLLOQUIUM**

A non-credit seminar in which faculty, students, and invited professionals attend concerts and discuss topics related to musical composition, performance, history and pedagogy. Four semesters of Music Colloquium are required of all students majoring in music. *Meets 7-8 times per semester. Pass/fail. Non-credit seminar.*

470-479

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

APPLIED MUSIC AND ENSEMBLE

The study of performance in piano, harpsichord, voice, organ, strings, guitar, brass, woodwinds, percussion, jazz improvisation, or composition is designed to develop sound technique and a knowledge of appropriate literature within each performance area. Student recitals offer opportunities to gain experience in public performance. Credit for applied music courses (private lessons) and ensembles (choir, orchestra and band) is earned on a fractional basis. One hour lesson per week earns one hour credit. One half- hour lesson per week earns one half-hour credit. Ensemble credit totals one hour credit if the student enrolls for one or two ensembles (for more information, see course descriptions below). When scheduling please note that an applied course or ensemble should not be substituted for an academic course, but should be taken in addition to the normal four academic courses.

Applied music courses are private lessons given for 13 weeks: 160, Piano or Harpsichord; 161, Voice; 162, Guitar; 163, Organ; 164, Brass; 165, Woodwinds; 166, Percussion; 170 Jazz Improvisation; and 171, Composition. Extra fees apply. See additional charges under Financial Matters.

167**ORCHESTRA**

The Williamsport Symphony Orchestra allows students with significant instrumental experience to become members of this regional ensemble. Participation in the W.S.O. is contingent upon audition and the availability of openings. Students are allowed a maximum of one hour of Ensemble credit per semester. A student who is enrolled in orchestra only should register for MUS 167B (one hour credit). A student may belong to two ensembles, choosing either Choir or Concert Band as the second group. Such a student then registers for MUS 167A (1/2 hour credit) plus either MUS 168A (1/2 hour credit) or MUS 169A (1/2 hour credit).

168**CHOIR**

The Lycoming College Choir is open to all students who would like to sing in an ensemble setting. Emphasis is on performing quality choral literature while developing good vocal technique. Students are allowed a maximum of one hour of Ensemble credit per semester. A student who is enrolled in Choir only should register for MUS 168B (one hour credit). A student may belong to two different ensembles, choosing either Orchestra or Band as the second ensemble. Such a student then registers for MUS 168A (1/2 hour credit) plus either MUS 167A (Orchestra - 1/2 hour credit) or MUS 169A (Band - 1/2 hour credit). If a student has auditioned and been selected for the Chamber Choir (no credit available), he/she should register for MUS 168C in addition to registering for the Lycoming College Choir.

169**BAND**

The College Concert Band allows students with some instrumental experience to become acquainted with good band literature and develop personal musicianship through participation in group instrumental activity. Participation in the Band is contingent upon audition. Students are allowed a maximum of one hour of Ensemble credit per semester. A student who is enrolled in Band only should register for MUS 169B (one hour credit). A student may belong to two ensembles, choosing either Orchestra or Choir as the second group. Such a student then registers for MUS 169A (1/2 hour credit) plus either MUS 167A (1/2 hour credit) or MUS 168A (1/2 hour credit). If a student has auditioned and been selected for the woodwind or brass quintets (no credit available), he/she should register for MUS 169C or 169D.

261-267**INSTRUMENTAL AND VOCAL METHODS**

Instrumental and vocal methods classes are designed to provide students seeking certification in music education with a basic understanding of all standard band and orchestral instruments as well as a familiarity with fundamental techniques of singing.

MUS 261 Brass Methods (one hour credit)

MUS 262 Percussion Methods (one hour credit)

MUS 263, 264 String Methods I and II (one hour credit each)

MUS 265 Vocal Methods (one hour credit)

MUS 266, 267 Woodwind Methods I and II (one hour credit each)

NEUROSCIENCE MINOR (INTERDISCIPLINARY)

Assistant Professors: Gilbertson, Morrison (Coordinators)

The neuroscience minor is designed for students in any major who are interested in theory and research on the mind, brain, and nervous system. It requires a minimum of six courses. The two required courses, Neurobiology and Biological Psychology, provide students with an interdisciplinary approach to the fundamental structure and function of the brain that includes laboratory experiences across the breadth of current neuroscience research. These core courses train students to access, read, and critically analyze primary neuroscience literature, develop hypotheses, design and carry out experiments, analyze data, present the results, and engage in discussion of ethical issues related to neuroscience research. The four elective courses allow students to explore interdisciplinary developments in biology, chemistry, computer science, mathematics, philosophy, physics, psychology, and sociology that enrich and extend our understanding of the brain and of human thought and behavior.

The minor requires 6 courses, including at least 3 courses outside the student's major.

2 core courses required for all neuroscience minors:

BIO 337 Neurobiology
PSY 433 Biological Psychology

Plus 4 elective courses chosen from:

BIO 222 Genetics
BIO 323 Human Physiology
BIO 347 Immunology
BIO 342 Animal Behavior
BIO 439 Medical Genetics
BIO 435 Cell Biology (recommended)
BIO 447 Cell and Molecular Biology Research Methods
BIO 444/CHEM 444 Biochemistry
CHEM 110 Intro to Chemistry I (recommended)
CHEM 220 Organic Chemistry I
CHEM 444/BIO 444 Biochemistry
CPTR 125 Introduction to Computer Science
PHIL 330 Knowledge and Reality
PHIL 333 Philosophy of Natural Science
PHYS 225 Fundamentals of Physics I
PHYS 226 Fundamentals of Physics II
PSY 237 Cognition
PSY 242 Drugs, Behavior, and Society
PSY 331 Research Methods in Psychology
PSY 352 Health Psychology
PSY 432 Sensation and Perception
SOC 310 Medical Sociology
Independent Studies or Honors Thesis Research Projects in Biology or Psychology:
N80-N89 Independent Study

490-491 Independent Study for Departmental Honors

Note: Independent Studies and Honors Thesis projects require advance consultation with the project advisor and both Neuroscience Minor coordinators, and advance approval of a formal application by the Individual Studies Committee. Research projects outside of Biology and Psychology may be considered for fulfillment of the minor requirements, with advance permission of the coordinators.

Experimental or topics courses may be considered for inclusion in the minor, with advance approval from the coordinators.

Recommendations:

Students should design their Neuroscience minor in consultation with a program coordinator. Students are encouraged to schedule the two required courses before beginning their senior year when course rotations allow. Students are also encouraged to attend neuroscience-related presentations at BIO449 Biology Colloquium during each of their four years of study.

Students planning to attend graduate school are strongly encouraged to take CHEM220 Organic Chemistry I and BIO444/CHEM444 Biochemistry, and to complete an Independent Study or Honors Project in Biology or Psychology

PHILOSOPHY (PHIL)

Professor: Whelan (Chairperson)
Assistant Professors: Rice, Young
Part-time Instructor: Jacques

The study of philosophy develops a critical understanding of the basic concepts and presuppositions around which we organize our thought in morality, law, religion, science, education, the arts, and other human endeavors.

A major in philosophy, together with other appropriate courses, can provide an excellent preparation for policy-making positions of many kinds, for graduate study in several fields, and for careers in education, law, and the ministry.

The major in Philosophy requires eight courses, including PHIL 225, 440, any two of PHIL 301, 302, and 303, and at least three other PHIL courses numbered 300 or above. PHIL 340 may be counted toward the major only once except with departmental approval.

The following courses, when scheduled as W courses, count toward the writing intensive requirement: PHIL 216, 217, 219, 301, 302, 318, 333, 334, 336, 340, 440.

Students interested in teacher certification should refer to the Department of Education listing.

Minors

The Philosophy Department offers five minors:

- (1) *Philosophy*: any four Philosophy courses numbered 225 or above, or any five Philosophy courses that include three numbered 225 or above.
- (2) *Philosophy & Law*: four courses from PHIL 225, 318, 334, 336, a departmentally approved 340, or a departmentally-approved independent study.
- (3) *Philosophy & Science*: PHIL 225, 228, 330, and 333.
- (4) *History of Philosophy*: PHIL 301, 302, 303, and any other Philosophy course numbered 225 or above.
- (5) *Ethics & Political Philosophy*: any one of PHIL 216, 217, or 219 along with PHIL 318, 334, 336, and one other course numbered 300 or above.

105

PRINCIPLES OF CRITICAL THINKING

An introduction to the elements of critical thinking centered on developing the skills necessary to recognize, describe, and evaluate arguments. Not open to juniors and seniors except with consent of instructor.

120**INTRODUCTION TO MORAL PHILOSOPHY**

An introduction to philosophy focusing on central problems and basic texts in moral philosophy. Problems may include the relation of reason and morality, proposed justifications for killing human beings and animals, the nature of the good life, and other general problems of moral philosophy. Texts may include works by Plato, Aristotle, Augustine, Aquinas, Hume, Kant or Mill as well as writing by contemporary philosophers. *Not open to juniors or seniors except with consent of the instructor.*

125**INTRODUCTION TO POLITICAL PHILOSOPHY**

An introduction to philosophy focusing on central problems and basic texts in political philosophy. Problems may include the obligation to obey the law and the right to enforce it, the nature and desirability of democracy, the nature and possibility of political rights. Texts may include writing by Plato, Aristotle, Hobbes, Locke, Hume or Rousseau as well as writing by contemporary philosophers. *Not open to juniors or seniors except with consent of the instructor.*

140**CENTRAL PROBLEMS IN PHILOSOPHY**

An introduction to philosophy focusing on central problems and basic texts. The problems may include free will and determinism, the relationship between mind and body, the nature and limits of human knowledge, and arguments for the existence of God. Texts may include works by Plato, Aristotle, Augustine, Aquinas, Hume, and Kant as well as writing by contemporary philosophers. *Not open to juniors or seniors except with consent of instructor. Credit may not be earned for both PHIL 140 and 145.*

145**PHILOSOPHY THROUGH FILM**

An introduction to philosophy using film and basic texts to focus on central problems. Those problems may include the value of philosophy, moral responsibility, arguments about the existence of God, the nature and limits of human knowledge, the relationship between mind and body, and the nature of art. Texts may include works by Plato, Descartes, Locke, Aquinas, Mill, Hume, Kant, and Russell as well as writing by contemporary philosophers. *Not open to juniors or seniors except with consent of instructor. Credit may not be earned for both PHIL 140 and 145.*

216**BUSINESS ETHICS**

A systematic and philosophically informed consideration of some typical moral problems faced by individuals in a business setting, and a philosophical examination of some common moral criticisms of the American business system.

217**PHILOSOPHICAL ISSUES IN EDUCATION**

An examination of the basic concepts involved in thought about education, and a consideration of the various methods for justifying educational proposals. Typical of the issues discussed are: Are education and indoctrination different? What is a liberal education? Are education and schooling compatible? What do we need to learn? *Alternate years.*

219**PHILOSOPHICAL ISSUES IN HEALTH CARE**

An investigation of some of the philosophical issues which arise in therapy and in health research and planning. Topics typically include euthanasia, confidentiality, informed consent, behavior control, experimentation on humans and animals, abortion, genetic engineering, population control, and distribution of health care resources.

225**SYMBOLIC LOGIC**

A study of modern symbolic logic and its application to the analysis of arguments. Included are truth-functional relations, the logic of propositional functions, and deductive systems. Attention is also given to various topics in the philosophy of logic. *Alternate years.*

227**RELIGION & REASON**

This course examines philosophical questions about the idea of God found in the Jewish, Christian, and Islamic religious traditions. What attributes must God have? Must God be a perfect being? Is the concept of a perfect being coherent? Is the existence of a perfect God compatible with the presence of evil in the world and the existence of human freedom? Does human morality depend in any important way on the will of God? Can the existence of God be proven? Can it be disproven? Is it rational to believe in God? The course approaches these questions via readings from classic and contemporary philosophical texts. *Alternate years.*

228**PHILOSOPHY AND THE ENVIRONMENT**

A reexamination of views about nature and the relation of human beings to it. Many intellectual, spiritual, ethical and aesthetic traditions have taken a stance on this issue. This course examines some of the most influential of these traditions philosophically and considers how these views influence thoughts about the environment. Topics might include the following: how sentient, non-human animals factor in human moral reasoning, the status of the wilderness, the preservation of diverse ecosystems, the human relationship to the greater biotic community, moral questions pertaining to the transformation of the natural world into economic commodities, and the relationship between conceptions of beauty and the natural world.

301**ANCIENT GREEK PHILOSOPHY**

A critical examination of the ancient Greek philosophers, with particular emphasis on Plato and Aristotle. Prerequisite: Students who have not completed at least one prior course in philosophy must have consent of instructor. *Alternate years.*

302**MEDIEVAL PHILOSOPHY**

A survey of the philosophical developments that took place primarily in Western Europe in the period from about 400 to about 1400 CE, roughly between the fall of Rome and the beginning of the Renaissance. Philosophers from the Christian, Islamic and Jewish philosophical traditions are studied. The course is devoted to questions concerning philosophical theology (proofs for God's existence, the problem of evil, God's foreknowledge, the possibility of free action and the immortality of the soul) and to questions that aren't theological (the role of the state, theories of knowledge and perception). Readings are drawn from Augustine, Boethius, Anselm, Avicenna, Averroes, Maimonides, Aquinas, Duns Scotus, and William of Ockham. *Prerequisite: Students who have not completed at least one prior course in philosophy must have consent of instructor. Alternate years.*

303**MODERN PHILOSOPHY**

A survey of seventeenth- and eighteenth-century European philosophy which examines important philosophical texts from some of the following: Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, Rousseau, and Kant. The course considers these texts in their historical context and also tries to see how the views of these philosophers have influenced ours on a variety of issues, particularly those concerning mind and matter, science and knowledge, and the nature of a morally acceptable government. *Prerequisite: Students who have not completed at least one prior course in philosophy must have consent of instructor. Alternate years.*

318**PHILOSOPHICAL ISSUES IN CRIMINAL JUSTICE**

A philosophical examination of some important controversies which arise in connection with the American criminal justice system. Typically included are controversies about the nature and purpose of punishment, the proper basis for sentencing, the correct understanding of criminal responsibility, and the rationale and extent of our basic human rights with respect to the criminal law.

330**KNOWLEDGE AND REALITY**

This course explores two broad areas of philosophical inquiry: metaphysics, which is concerned with general questions about the ultimate nature of the universe (reality), and epistemology, which is concerned with general questions about what we know or have reason to believe (knowledge). *Prerequisite: Students who have not completed at least one prior course in philosophy must have consent of instructor. Alternate years.*

333**PHILOSOPHY OF NATURAL SCIENCE**

A consideration of philosophically important conceptual problems arising from reflection about natural science, including such topics as the nature of scientific laws and theories, the character of explanation, the importance of prediction, the existence of “non-observable” theoretical entities such as electrons and genes, the problem of justifying induction, and various puzzles associated with probability. *Prerequisite: Students who have not completed at least one prior course in philosophy must have consent of instructor. Alternate years.*

334**CONTEMPORARY POLITICAL PHILOSOPHY**

A close reading of four or five defining works of contemporary political philosophy, beginning with the work of John Rawls. *Prerequisite: Students who have not completed at least one prior course in philosophy must have consent of instructor. Alternate years.*

336**CONTEMPORARY MORAL PHILOSOPHY**

A close reading of four or five centrally important works of contemporary moral philosophy. *Prerequisite: Students who have not completed at least one prior course in philosophy must have consent of instructor. Alternate years.*

340**SPECIAL TOPICS**

Study of selected philosophical problems, texts, writers, or movements. Recent topics include ethical obligations to animals, lying and lawbreaking, artificial intelligence, intelligent design, and homicide. *Prerequisite: Students who have not completed at least one prior course in philosophy must have consent of instructor. When topics differ, this course may be repeated for credit; however, except with departmental approval, it may be counted only once toward a major in philosophy.*

440**PHILOSOPHICAL RESEARCH AND WRITING**

In-depth instruction in both the independent and the cooperative aspects of philosophical research and writing. Each student undertakes an approved research project and produces a substantial philosophical paper. *Open only to, and required of, senior philosophy majors.*

470-479

INTERNSHIP (See index)

N80-N89

INDEPENDENT STUDY (See index)

Recent independent studies in philosophy include Nietzsche, moral education, Rawls' theory of justice, existentialism, euthanasia, Plato's ethics, and philosophical aesthetics.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

PHYSICS (See Astronomy/Physics)

PHYSICAL EDUCATION

Instructor: Henrie (Coordinator)

Part-time Instructors: Bliss, Dill, Ditzler, Keene, Lucas, Matter, Matty, Moorhouse, Ring, Stipcak, Zimmerman

PHYSICAL ACTIVITIES, WELLNESS, AND COMMUNITY SERVICE

This program is designed to promote students' physical welfare, health awareness, and encourage a sense of civic responsibility. Students must successfully complete any combination of two semesters of course work selected from the following:

1. Designated Physical Activity courses,
2. Designated varsity athletics,
3. Designated wellness courses,
4. Designated community service projects,
5. Designated military science courses.

PHYSICAL ACTIVITY COURSES (PHED)

102

PHYSICAL EDUCATION ACTIVITIES

This topics course satisfies one-half semester of physical education. Coeducational classes meet twice a week with basic instruction in fundamentals, knowledge, and appreciation of various sports. Emphasis is on the potential use of activities as recreational and leisure time interests. *No credit.*

105

PHYSICAL EDUCATION ACTIVITIES

This topics course satisfies one semester of physical education. Coeducational classes meet twice a week with basic instruction in fundamentals, knowledge, and appreciation of various sports. Emphasis is on the potential use of activities as recreational and leisure time interests. *No credit.*

110 - 125

VARSITY ATHLETICS

Students who compete on a varsity sports team receive a full semester of Physical Activity. Two full seasons must be completed to satisfy the Physical Activity requirement. *No credit.*

110 - BASKETBALL

111 - CROSS COUNTRY

112 - FOOTBALL

113 - GOLF

114 - SOCCER

115 - SOFTBALL

116 - SWIMMING

117 - TENNIS

118 - TRACK

119 - VOLLEYBALL

120 - WRESTLING

121 - LACROSSE

WELLNESS (WELL)

102

TOPICS IN WELLNESS

This topics course satisfies one-half semester of wellness study. Wellness courses meet two hours per week covering various topics that may include Stress Management, Preventing Communicable Diseases, Personal Health and Wellness, and other current health issues. These courses promote student wellness during their stay at Lycoming as well as their post-graduate years. *No credit. This course may be repeated with the same topic only with departmental consent.*

105

TOPICS IN WELLNESS

This topics course satisfies one semester of wellness study. Wellness courses meet two hours per week covering various topics that may include Stress Management, Preventing Communicable Diseases, Personal Health and Wellness, and other current health issues. These courses promote student wellness during their stay at Lycoming as well as their post graduate years. *No credit. This course may be repeated with the same topic only with departmental consent.*

106

FIRST AID/CPR

This course satisfies one semester of wellness study. This course prepares students to recognize emergencies and make appropriate decisions for first aid care. Also included are an emphasis on safety and assessment of personal habits to reduce risk of injury and illness. American Red Cross First Aid and CPR certifications are earned upon successful completion of the course. *No credit.*

COMMUNITY SERVICE (COMS)

These courses require 2-3 hours per week in a combination of seminars and agency placement. Child abuse and criminal background clearances may be required to work at a particular agency. Students must meet with the Community Service Director in the Campus Ministry Center during the preregistration process to obtain further information and forms. Clearances must be obtained prior to the beginning of the semester in which the student is registered for Community Service.

105

COMMUNITY SERVICE I

This course satisfies one semester of community service. An experiential learning opportunity accomplished in conjunction with local agencies or college departments. The outcome of such service promotes students' personal and social development as well as civic responsibility. *No credit. May not be repeated.*

106**COMMUNITY SERVICE II**

This course satisfies one semester of community service. Students may elect to enroll in a second semester of community service to satisfy the graduation requirement. This requires the student to be engaged in a somewhat more sophisticated level of learning and service. *No credit.*

Prerequisite: COMS 105.

POLITICAL SCIENCE (PSCI)

Associate Professor: Williamson (Chairperson)

Assistant Professors: Payne

The major is designed to provide a systematic understanding of government and politics at the international, national, state, and local levels. Majors are encouraged to develop their skills to make independent, objective analyses which can be applied to the broad spectrum of the social sciences.

Although the political science major is not designed as a vocational major, students with such training may go directly into government service, journalism, teaching, or private administrative agencies. A political science major can also provide a solid foundation for the study of law, or for graduate studies leading to administrative work in federal, state, or local governments, international organizations, or teaching at the university level. Students seeking certification to teach secondary school social studies may major in political science but should consult their advisors and the Education Department.

Students interested in teacher certification should refer to the Department of Education listing.

A major in Political Science consists of ten courses as follows: PSCI 110; two other introductory courses from PSCI 130, 140 and 160; PSCI 300; PSCI 400 and five others. These five courses must cover at least two subfields of Political Science—American Politics and Public Policy (Designated by course numbers in the 10s or 20s), Legal Studies (Designated with course numbers in the 30s), Comparative Politics (Designated with course numbers in the 40s), or International Relations (Designated with course numbers in the 60s). In addition two of these five courses must be at the 300 level or above.

The following courses satisfy the cultural diversity requirement: PSCI 140, 241, 331, and 367. The following courses, when scheduled as W courses, count towards the writing intensive requirement: PSCI 220, 242, 331, 334, 400.

Minors

The department offers four minors:

- 1) Political Science—any five courses, three of which are numbered 200 or above.
- 2) American Politics—PSCI 110 and four courses selected from those with course numbers ending in the 10s or 20s.
- 3) World Politics—PSCI 140 or 160 and four courses selected from those with course numbers ending in the 40s or 60s.
- 4) Legal Studies—PSCI 130 and four courses selected from those with course numbers in the 30s.

Students are encouraged to consult with department members on the selection of a minor.

110**U.S. GOVERNMENT AND POLITICS**

The ideologies, institutions, and processes of American politics at the national level, with attention to the internal workings of government and the extra-governmental actors including voters, political parties, and interest groups—that influence policy.

130**THE AMERICAN LEGAL SYSTEM**

An introduction to all aspects of the American legal system. Students examine the historical development of the American court system, its current incarnation and organization, the "players" who participate in this system (i.e., lawyers, judges, interest groups), and the stages of the trial process. In addition, students explore the special role that the Supreme Court plays in the American legal system, focusing on the structure of the Court, which cases the Court agrees to hear and why, judicial decision-making, opinion assignment and bargaining, and the notion of constraints on the Court.

140**COMPARATIVE POLITICS AND GEOGRAPHY**

The politics and geography of states in Europe, Asia, the Middle East, Africa, and South America in a search for comparisons and patterns. Includes history, institutions, cultures, borders, regions, and map exercises.

160**INTERNATIONAL RELATIONS**

The basic factors and concepts of international relations, such as international systems, national interest and security, wars, decolonization, nationalism, economic development, trade blocs, and international law and organizations.

211**STATE AND LOCAL GOVERNMENT**

An examination of the general principles, major problems, and political processes of the states and their subdivisions, together with their role in a federal type of government. *Alternate years.*

212**POLITICAL PARTIES**

The role and impact of political parties in America, focusing on theories of individual partisan attitudes and behavior, party organizations and activities, and partisan performance in government. *Alternate years.*

213**CONGRESSIONAL POLITICS**

Study of the U.S. Congress emphasizing internal structure and operations, rules and procedures, party leadership, committee system, external influences, incentives for congressional behavior, and elections. *Alternate years.*

214

THE PRESIDENCY

The structure and behavior of the American presidency, including elections, organization of the office, and relation to other national institutions. *Alternate years.*

220

PUBLIC POLICY IN AMERICA

An investigation of the public policymaking process in the United States. Students examine how issues get on the public policy agenda, the processes policymakers work through in making policy choices, the challenges and associated politics of implementing policy, and the substantive issues that remain once policymakers address a problem. To illustrate the concepts and principles of the public policy process, the course also explores controversial issues ranging from abortion and climate change to gun control and same-sex marriage. *Alternate years.*

231

LAW IN AMERICA

A survey of the sources and functions of American law. Students examine the various types of law (e.g., business, civil, constitutional, criminal, family, etc.) to determine the capacity and limitations of law and legal processes to deal with social problems.

241

POLITICS OF DEVELOPING COUNTRIES

General understanding of what developing countries are and how they compare to the developed world. Critical discussion of the sources of underdevelopment, the issues which plague contemporary developing countries and prevent advancement, possible solutions, and the general future of a developing/developed divide. *Alternate years.*

242

HUMAN RIGHTS

Examination of the historical, philosophical and religious documents in which contemporary human rights are grounded, accompanied by discussions of how these rights change over time and space. Analysis of the future effectiveness of human rights legislation and organizations. *Alternate years.*

261

INTERNATIONAL ORGANIZATIONS

Exploration of the international organizations that purportedly facilitate cooperation within the international system. Discussions focus on the origins of these institutions, their past and present functions, as well as the role they might play in the future of international politics and international law. Students will examine these issues in the context of IOs such as the United Nations, European Union, African Union, Organization of American States, World Bank, and World Trade Organization. *Alternate years.*

300**POLITICAL SCIENCE RESEARCH METHODS**

An examination of the conceptual and analytical tools in political science research. Topics include research design, issue of measurement and empirical analysis. *Prerequisite: Junior standing having completed 2 prior courses in Political Science, or consent of instructor.*

316**PUBLIC OPINION AND POLLING**

A course dealing with the general topic and methodology of polling. Content includes exploration of the processes by which people's political opinions are formed, the manipulation of public opinion through the uses of propaganda, and the American response to politics and political issues. *Prerequisite: PSCI 110, or consent of instructor.*

330**CONSTITUTIONAL LAW**

An investigation of the Constitution's distribution of political power among coequal branches of the federal government (separation of powers) and between the levels of government (federalism). The venue for studying constitutional law will be the decisions of the United States Supreme Court. The investigation will require students read, critically analyze, and discuss cases pertaining to controversial issues ranging from the authority to tax, spend, and declare war to the impact of national emergencies and terrorism. *Prerequisite: PSCI 130 or 231, or consent of instructor. Alternate years.*

331**CIVIL RIGHTS AND LIBERTIES**

An investigation of the Bill of Rights and its place in American democracy. The venue for studying civil rights and liberties will be the decisions of the United States Supreme Court. The investigation requires students to read, critically analyze, and discuss cases pertaining to controversial issues ranging from abortion and flag burning to obscenity and zoning restrictions. *Prerequisite: PSCI 130 or 231, or consent of instructor. Alternate years.*

334**LEGAL RESEARCH AND WRITING**

Designed to develop the skills needed to find, read, and analyze legal sources in order to write persuasive briefs, memoranda, and pleadings. While useful for all, this skill set provides a great advantage to students hoping to attend law school or work in the legal profession. Some class meetings may be held at the James V. Brown Library. *Prerequisite: PSCI 130 or 231, or consent of instructor. Alternate years.*

338**ENVIRONMENTAL LAW AND POLITICS**

An examination of the law, institutions, actors, processes, and context influencing American environmental policymaking. Students investigate contemporary environmental issues including pollution, resource depletion, urban congestion and sprawl, and extinction. *Alternate years.*

339**JUDICIAL POLITICS AND BEHAVIOR**

An exploration of the academic scholarship on judicial politics and behavior designed to develop students' ability to read and critically analyze such research. Questions examined in the course include: Why do judges decide cases the way they do? What effect does public opinion have on judicial decision-making? How do interest groups pursue their objectives in the court system? How are state and federal benches staffed? What effect do institutional differences have on judicial decision-making? *Prerequisite: Junior or senior standing and PSCI 130 or 231, or consent of instructor. Alternate years.*

342**CIVIL CONFLICT**

Examination of the contemporary dominant form of conflict: civil war. Discussion of the political, economic, and institutional sources of civil conflict; determinants of length and intensity; the actors involved and their diverse motivations and actions; the various consequences; and finally, some potential solutions. *Prerequisite: PSCI 140, 160 or CJCR 346; or consent of instructor. Alternate years.*

361**INTERNATIONAL WAR**

Application of the various theories of interstate conflict, grounded in traditional theories of international relations. An examination of the following questions: where, when, and why do wars start? Why should we care? Can war achieve peace? Or are there alternative paths to peace? *Prerequisite: PSCI 160, or consent of instructor. Alternate years.*

362**TERRORISM**

Examination of the causes and strategies of terrorism as well as potential solutions. Students engage a variety of theories and debate whether terrorism has psychological, religious, cultural, and/or rational causes. Terrorism as a strategy is also studied, with particular attention to primary texts on insurgency and counterinsurgency. Application of what we have learned in an effort to evaluate a number of potential solutions. *Prerequisite: PSCI 140, 160 or CJCR 346; or consent of instructor. Alternate years.*

367**WAR AND PEACE IN THE MIDDLE EAST**

Is the Middle East an exceptionally dangerous region? If so, why? Examination of the geography, history, religions, and politics as well as the region's chances for peace. *Prerequisite: PSCI 140 or 160, or consent of the instructor. Alternate years.*

369**AMERICAN FOREIGN POLICY**

The U.S. role in the world in geographic, strategic, historical, and ideological perspectives, plus an examination of the domestic forces shaping U.S. policy. *Prerequisite: PSCI 160, or consent of the instructor. Alternate years.*

400**POLITICAL ANALYSIS**

Capstone course required of majors, normally taken in their senior year, integrates and deepens knowledge and methods of the study of politics by means of empirical political inquiry and quantitative techniques. Open to non-majors with consent of instructor. *Prerequisite: PSCI 300.*

470-479**INTERNSHIPS (See index)**

Students may receive academic credit for serving as interns in structured learning situations with a wide variety of public and private agencies and organizations. Students have served as interns with the Public Defender's Office, the Lycoming County Court Administrator, and the Williamsport City government.

N80-N89**INDEPENDENT STUDY (See index)**

Current studies relate to elections—local, state, and federal—while past studies have included Soviet and world politics.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

PSYCHOLOGY (PSY)

Professor: Ryan (Chairperson)

Associate Professor: Kelley, Beery

Assistant Professors: Gilbertson, Norton, Olsen

Part-time Instructor: Mitchell

The major provides training in both theoretical and applied psychology. It is designed to meet the needs of students seeking careers in psychology or other natural or social sciences. It also meets the needs of students seeking a better understanding of human behavior as a means of furthering individual and career goals in other areas. Psychology majors and others are urged to discuss course selections in psychology with members of the department to help insure appropriate course selection.

The B.A. degree

To earn the B.A. degree, students must complete 32 semester hours in psychology including PSY 110, 331, 336, and one additional course with a laboratory (either PSY 424 or PSY 432 or PSY 433). Statistics is also required.

The B.S. degree

To complete the B.S. degree, students must complete 32 semester hours in psychology and statistics as described for the B.A. and take the following additional courses:

- One additional lab course in Psychology;
- Three of the following Natural Science courses from at least two departments: BIO 110, 111, 323, 338; CHEM 110, 111; PHYS 225, 226;
- One of the following computation courses: CPTR 125; MATH 128, 214; ECON 340, 441;
- An Individual Studies or Honors Project in Psychology or, with department permission, an Internship or the Practicum in Psychology.

Students are also recommended to take one of the following: PHIL 225 or 333.

Students interested in teacher certification should refer to the Department of Education listing.

The following course satisfies the cultural diversity requirement: PSY 341. The following courses, when scheduled as W courses, count toward the writing intensive requirement: PSY 225, 331, 336, 424, 432 and 433.

Minor

A minor in psychology consists of 20 semester hours in psychology including PSY 110, two courses numbered 200 or higher, and one course from PSY 331, 424, 432, or 433.

101**TOPICS**

Exploration of a specific basic or applied topic in psychology. Different topics are explored different semesters. Potential topics include the psychology of disasters, applied behavioral psychology, and organizational psychology. The course is open to elementary and advanced undergraduates. One-half unit of credit. May be repeated once for credit with departmental permission. May not be used to satisfy distribution or major requirements.

110**INTRODUCTORY PSYCHOLOGY**

An introduction to the empirical study of human and other animal behavior. Areas considered may include: learning, personality, social, physiology, sensory, cognition, and development. *Three hours of lecture and one two-hour laboratory per week.*

115**DEVELOPMENT FROM INFANCY TO MIDDLE CHILDHOOD**

This course examines how children grow and develop physically, emotionally, socially, and cognitively. Students take a detailed look at development over the infancy, early, and middle childhood years of life. The implications of development at different points in life for parenting and education are reviewed. *Prerequisite: PSY 110.*

116**ABNORMAL PSYCHOLOGY**

An introduction to the patterns of deviant behavior with emphasis on cause, function, and treatment. The various models for the conceptualization of abnormal behavior are critically examined. *Prerequisite: PSY 110.*

117**DEVELOPMENTAL PSYCHOLOGY**

A general introduction to the field of developmental psychology. The course provides a broad overview of several areas of development (e.g., physical, cognitive, emotional, social, moral) throughout the lifespan. *Prerequisite: PSY 110.*

118**ADOLESCENT PSYCHOLOGY**

The study areas include theories of adolescence; current issues raised by the "generation of youth", research on theories and issues of growth beyond childhood, and self-exploration. *Prerequisite: PSY 110.*

138**EDUCATIONAL PSYCHOLOGY**

An introduction to the empirical study of the teaching-learning process. Areas considered may include educational objectives, pupil and teacher characteristics, concept learning, problem-solving and creativity, attitudes and values, motivation, retention and transfer, evaluation and measurement. *Prerequisite: PSY 110 or consent of instructor.*

211**LEARNING DISABILITIES**

An examination of learning disabilities, emotional problems, and social problems of children. Topics include the legal and educational rights of children with disabilities, the categories of disability qualifying for Special Education services, assessment of children with learning disabilities, characteristics of and interventions to help children with learning disabilities and attention difficulties, the educational placements and support services available, and Individualized Educational Programs (IEPs). *Prerequisite: PSY 110.*

216**ABNORMAL CHILD PSYCHOLOGY**

This course examines in detail the symptoms, assessment, causes, and treatments for psychological disorders primarily experienced by children and adolescents. These include separation anxiety, Attention Deficit Hyperactivity Disorder (ADHD), oppositional defiant disorder, conduct disorder, learning disabilities, autism, Asperger's disorder, and mental retardation. This course also explores the application of specific treatment approaches to children/adolescents for disorders that can be experienced by both children and adults (e.g., phobias, obsessive-compulsive disorder, post traumatic stress disorder, depression, bipolar disorder). Interventions for peer/social problems, physical conditions/illness, traumatic brain injury, and the effects of poverty, divorce, and abuse are also discussed. *Prerequisite: PSY 110.*

220**THE PSYCHOLOGY OF CLOSE RELATIONSHIPS**

This course will review current theory and research on love. The progress of close, interpersonal relationships from initiation to termination will be discussed. In addition, the relation between love and sex is explored, and current research on sexuality reviewed. *Prerequisite: PSY 110.*

221**ENVIRONMENTAL PSYCHOLOGY**

Environmental Psychology explores the relationship between the individual and the environment. Environmental Psychology uses theory and research to explore issues concerning the relationship between the physical environment and human behavior. Environmental Psychology promotes a more socially conscious relationship between humans and our physical environment. Topics include population control, conservation, urbanization, and environmental design. *Prerequisite: PSY 110 or consent of instructor.*

223**FOUNDATIONS OF SPORT AND EXERCISE PSYCHOLOGY**

An introduction to sport and exercise psychology, from the history and development of the field to the theories and principles that are central to the study of sport and exercise psychology. Topics include the evolution of the field of sport psychology, theories surrounding sport participants and sport environments, the group processes that are an essential part of sport, the basic principles of performance enhancement within the field, issues related to enhancing health and well-being in sport and exercise, and issues related to the facilitation of psychological growth and development in sport and exercise. *Prerequisite: PSY 110.*

225**INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY**

The application of the principles and methods of psychology to selected industrial and organizational situations. *Prerequisite: PSY 110 or consent of instructor.*

237**COGNITION**

An in-depth examination of the field of human cognition. Topics include perception, attention, short and long term memory, reading comprehension, problem solving and decision making. Emphasis is placed on understanding the scientific nature of the discipline.

Prerequisite: PSY 110.

239**BEHAVIOR MODIFICATION**

A detailed examination of the applied analysis of behavior. Focus is on the application of experimental method to the individual clinical case. The course covers targeting behavior, baselining, intervention strategies, and outcome evaluation. Learning-based modification techniques such as contingency management, counter-conditioning, extinction, discrimination training, aversive conditioning, and negative practice are examined.

Prerequisite: PSY 110 or consent of instructor.

242**DRUGS, BEHAVIOR, AND SOCIETY**

This course examines the effects of drugs on brain, behavior, and society. The major focus of the course is legal and illegal psychoactive drugs, including their origins, history of use, and effects on the mind and body. Psychiatric medications and over-the-counter drugs are also addressed. Distinctions are made between drug use, abuse, and addiction. Various approaches to prevention and treatment of abuse are discussed. Students are encouraged to think critically about drug use and its impact on society. *Prerequisite: PSY 110 or consent of instructor.*

310**FORENSIC PSYCHOLOGY**

An examination of psychological theories and research on topics related to psychology and law. Areas covered include forensic pathology, psychological theories of criminal behavior, eyewitness testimony, jury decision making, expert witnesses, the insanity defense, and criminal profiling analysis. *Prerequisites: PSY 110 and 116.*

331**RESEARCH METHODS IN PSYCHOLOGY**

A study of the scientific method and the application of statistics to psychology. This course compares qualitative methods such as case studies, ethnographies, and naturalistic observations with quantitative methods such as correlational research, surveys, experiments, and quasi-experimental designs. The focus of the course is on quantitative methods though the relative strengths and weaknesses of the different research approaches will be highlighted. Emphasis is placed on understanding the place of research in the field of psychology. *Three hours of lecture and one two-hour laboratory per week. Prerequisites: PSY 110 and statistics.*

334**PRINCIPLES OF MEASUREMENT**

Psychometric methods and theory, including scale transformation, norms, standardization, validation procedures, and estimation of reliability. *Prerequisites: PSY 110 and statistics.*

336**PERSONALITY THEORY**

A review of the major theories of personality development and personality functioning. In addition to covering the details of each theory, the implications and applications of each theory are considered. This course is best taken by Psychology majors in the junior year, because it integrates material from diverse areas of psychology. *Prerequisite: PSY 110.*

341**PSYCHOLOGY OF WOMEN**

A review of contemporary theory and research on the psychology of gender differences. Special topics include sex differences in achievement, power, and communication; sex-role stereotypes; beliefs about masculinity and femininity; and gender influences on mental health.

Prerequisite: PSY 110.

410**DYSFUNCTIONAL FAMILIES AND CHILD DEVELOPMENT**

This course explores the relations between a variety of types of family dysfunctions and child development and psychopathology. Topics studied include child abuse, neglect, sexual abuse, and children from violent homes and homes with mentally ill parents. The course will focus on empirical literature about dysfunctional families and child development, biographical and political perspectives. *Prerequisites: PSY 116 and 117, or consent of instructor.*

424**SOCIAL PSYCHOLOGY**

The scientific exploration of interpersonal communication and behavior. Topics include attitudes and attitude change, attraction and communication, social perception and social influence, prosocial and antisocial behavior and group processes. *Three hours of lecture and one two-hour laboratory per week. Prerequisite: PSY 110 and 331, or consent of instructor.*

432**SENSATION AND PERCEPTION**

The examination of psychophysical methodology and basic neurophysiological methods as they are applied to the understanding of sensory processes. *Three hours of lecture and one two-hour laboratory per week. Prerequisites: PSY 110, and 331, or consent of instructor.*

433**BIOLOGICAL PSYCHOLOGY**

An introduction to the biological psychologist's method of approach to the understanding of behavior as well as the set of principles that relate the function and organization of the nervous system to the phenomena of behavior. *Three hours of lecture and one two-hour laboratory per week. Prerequisite: PSY 110, and 331, or consent of instructor.*

448-449**PRACTICUM IN PSYCHOLOGY**

An off-campus experience in a community setting offering psychological services, supplemented with classroom instruction and discussion. PSY 448 covers the basic counseling skills, while PSY 449 covers the major theoretical approaches to counseling. *Prerequisite: Consent of instructor.*

470-479**INTERNSHIP (See index)**

Internships give students an opportunity to relate on-campus academic experiences to society in general and to their post-baccalaureate objectives in particular. Students have, for example, worked in prisons, public and private schools, county government, and for the American Red Cross.

N80-N89**INDEPENDENT STUDY (See index)**

Independent study is an opportunity for students to pursue special interests in areas for which courses are not offered. In addition, students have an opportunity to study a topic in more depth than is possible in the regular classroom situation.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)**

Honors in psychology requires original contributions to the literature of psychology through independent study.

PUBLIC POLICY

Assistant Professor: Payne (Coordinator)

Students may select either the Domestic Public Policy or International Public Policy minor.

Domestic Public Policy Minor:

Students are required to take PSCI 110; PSCI 220; either ECON 110 or 111; and MATH 123 or MATH 214. Students intending to pursue graduate work are strongly encouraged to enroll in MATH 214 and at least one social science research methods course. In addition to these four core courses, students are also required to take three electives from the following list. The three electives must be from three different departments, and at least one elective course must be numbered 300 or above. Only one elective may count toward any other major or minor program of student study.

Domestic Public Policy Electives:

CJCR 201	Policing and Society
CJCR 203	Correctional Systems
CJCR 300	Criminology
CJCR 441	Crime Prevention
ECON 224	Urban Problems
ECON 225	Environmental Economics
ECON 337	Public Finance
HIST 230	African American History
HIST 338	Rights, Reform, and Protest
HIST 404	U.S. Since 1945
PHIL 334	Contemporary Political Philosophy
PSCI 211	State and Local Government
PSCI 213	Congressional Politics
PSCI 231	Law in America
PSCI 316	Public Opinion and Polling
PSCI 338	Environmental Law and Politics
SOC 220	Sociology of Family
SOC 231	Sociology of War and the Military
SOC 310	Medical Sociology
SOC 334	American Immigration

International Public Policy Minor:

Students are required to take PSCI 140 or PSCI 160; PSCI 261; ECON 110; and MATH 123 or MATH 214. Students intending to pursue graduate work are strongly encouraged to enroll in MATH 214 and at least one social science research methods course. In addition to these four core courses, students are also required to take three electives from the following list. The three electives must be from three different departments. Only one elective may count toward any other major or minor program of student study.

International Public Policy Electives:

ANTH 229 Cultural Anthropology
ANTH 230 Anthropology of Latin America
ANTH 232 Environmental Anthropology
ANTH 234 Economic Anthropology
ECON 343 International Trade
HIST 219 Contemporary Europe
HIST 232 Rise of Islam
HIST 240 Modern China
HIST 246 Africa and the World
HIST 320 Diplomatic History of Europe Since 1789
PHIL 334 Contemporary Political Philosophy
PSCI 241 Politics of Developing Countries
PSCI 242 Human Rights
PSCI 342 Civil Conflict
PSCI 361 International War
PSCI 369 American Foreign Policy

RELIGION (REL)

Professors: Hughes, Gaber, Johnson (Chairperson)

Assistant Professor: Knauth

Part-time Instructors: Adams, Gilmore, McNassor

A major in Religion consists of 10 courses, including:

- A. Two courses in comparative religions—REL 110 Introduction to World Religions, plus one of the following:
 - REL 121 After Death and Dying
 - REL 210 Judaic Studies: From the Exodus to the Romans
 - REL 212 Islam
 - REL 225 Asian Religions
 - REL 320 Topics in Comparative Religions
 - HIST 232 The Rise of Islam
- B. Two courses in analysis of scriptures—REL 113 Old Testament Faith and History or REL 114 New Testament Faith and History, plus one of the following:
 - REL 333 Old Testament Women
 - REL 337 Biblical Topics
 - REL 433 The Sayings of Jesus
- C. One theology/ethics course selected from the following:
 - REL 211 Judaic Studies: Talmud to Today
 - REL 222 Protestantism in the Modern World
 - REL 230 Psychology of Religion
 - REL 331 Christian Social Ethics
 - PHIL 227 Religion & Reason
 - PHIL 228 Philosophy and the Environment
 - PHIL 302 Medieval Philosophy

No more than four 100 level courses may be applied toward the major, and at least two courses must be numbered 320 or above. At least seven courses must be taken in the department. Up to three of the following courses may be counted toward fulfilling the major requirements: GRK 221, 222; HEBR 221, 222; HIST 232; PHIL 227, 228, 302.

Capstone Experience

Seniors must (1) select, expand upon, and submit for department review a significant paper, written in an upper-level course, that concerns theology or ethics, analysis of scriptures, or the comparative study of religion; and (2) submit a portfolio of writing during the first month of their final semester. The portfolio must include four major papers from Religion courses and an essay in self-understanding. (3) Seniors will also arrange an oral defense with the department faculty, consisting of an assessment interview occurring during the last two months of the final semester.

REL 120 is strongly recommended for pre-ministerial students after their first year, regardless of their major.

The following Religion courses satisfy the cultural diversity requirement: REL 110, 210, 211, 212, 225, 226, 320, 323, 328, and 333.

The following courses, when scheduled as W courses, count toward the writing intensive requirement: REL 230, 323, 331, 333, 337, and 433.

Minors

A minor in Religion consists of one course from REL 110, 113 or 114 and four religion courses numbered 200 or above. At least one course must be taken from REL 110, 210, 211, 212, 225, or 320.

An interdisciplinary minor in Biblical Languages requires the completion of GRK 101, 102, HEBR 101, 102, and two from GRK 221, 222, HEBR 221, 222.

110

INTRODUCTION TO WORLD RELIGIONS

Designed for the beginning student, this course examines what it means to be religious, especially within the major traditions of the world. Issues addressed include the definition of religion, the meaning of ritual and symbolism, and ecstatic phenomena. Attention is paid to significant developments within the major religious traditions.

113

OLD TESTAMENT FAITH AND HISTORY

A critical examination of the literature within its historical setting and in the light of archaeological findings to show the faith and religious life of the Hebrew-Jewish community in the Biblical period, and an introduction to the history of interpretation with an emphasis on contemporary Old Testament criticism and theology.

114

NEW TESTAMENT FAITH AND HISTORY

A critical examination of the literature within its historical setting to show the faith and religious life of the Christian community in the Biblical period, and an introduction to the history of interpretation with an emphasis on contemporary New Testament criticism and theology.

120

DEATH AND DYING

A study of death from personal, social and universal standpoints with emphasis upon what the dying may teach the living. Principal issues are the stages of dying, bereavement, suicide, funeral conduct, and the religious doctrines of death and immortality. Course includes, as optional, practical projects with terminal patients under professional supervision. Only one course from the combination of REL 120 and 121 may be used for distribution.

121**AFTER DEATH AND DYING**

An examination of the question of life after death in terms of contemporary clinical studies, the New Testament resurrection narratives, the Asian doctrine of reincarnation, and the classical theological beliefs of providence and predestination. *Prerequisite: REL 120 is recommended but not required. Only one course from the combination of REL 120 and 121 may be used for distribution. Alternate years.*

210**JUDAIC STUDIES: FROM THE EXODUS TO THE ROMANS**

An examination of the Jewish vision of the foundation stories, the history, and the impact of events upon the Jewish world-view. The sources of the Bible are examined in detail, and the changing self-perception of the Israelites is a major focus. Ultimately this period is formative in what will become the Jewish People. *Alternate years.*

211**JUDAIC STUDIES: TALMUD TO TODAY**

An examination of the development of Jewish traditions from the destruction of the second temple in 70 C.E. to the present day. Particular attention is paid to the relationship between the living situations of Jews in the Diaspora to the development of interpretation of Jewish law. *Alternate years.*

212**ISLAM**

A comprehensive examination of the many religious dimensions of Islam, including the life of Muhammad, key textual sources such as the Quran and Hadith, basic beliefs and practices, Sufism, Muslim theology, differences between Sunni and Shi'ite interpretations of the faith, the historical evolution of Islam and its interaction with other cultures, and the theological and socio-political roots of the recent worldwide resurgence of Islam. *Alternate years.*

222**PROTESTANTISM IN THE MODERN WORLD**

An examination of Protestant thought and life from Luther to the present against the backdrop of a culture rapidly changing from the 17th century scientific revolution to Marxism, Darwinism, and depth psychology. Special attention is paid to the constant interaction between Protestantism and the world in which it finds itself. *Alternate years.*

225**ASIAN RELIGIONS**

A phenomenological study of the basic content of Hinduism, Buddhism, and Chinese Taoism with special attention to social and political relations, mythical and aesthetic forms, and the East-West dialogue. *Alternate years.*

226**BIBLICAL ARCHAEOLOGY**

A study of the role of archaeology in reconstructing the world in which the Biblical literature originated with special attention given to archaeological results that throw light on the clarification of the Biblical text. Also, an introduction to basic archaeological method and a study in depth of several representative excavations along with the artifacts and material culture recovered from different historical periods.

227**EARLY HISTORY AND THEOLOGIES OF CHRISTIANITY**

This course traces the development of Christianity from the early Jesus movements up to the post-Constantinian, institutional Church. Issues addressed include early apostolic preaching, the formation of the New Testament canon, the structuring of the community, and controversies regarding the person and nature of Christ, the trinity, the nature of salvation, and the sacraments.

230**PSYCHOLOGY OF RELIGION**

A study into the broad insights of psychology in relation to the phenomena of religion and religious behavior. The course concentrates on religious experience or manifestations rather than concepts. Tentative solutions are sought to questions such as: What does it feel like to be religious or to have a religious experience? What is the religious function in human development? How does one think psychologically about theological problems? *Alternate years.*

320**TOPICS IN COMPARATIVE RELIGIONS**

A topics course with a comparative religions focus. *Prerequisite: REL 110. Topics will vary from year to year and may be repeated for credit with consent of instructor.*

323**THE HELLENISTIC-ROMAN CULTURAL WORLD**

A survey of historical, cultural, and religious aspects of the eastern Mediterranean world that helped shape the development of second-temple Judaism and early forms of Christianity. Topics include political history, patronage and other Roman social structures, education, rhetoric, literature, philosophy, and Hellenistic-Roman modes of religious expression, including Judaism, the mysteries, and imperial religion.

328**HISTORY AND CULTURE OF THE ANCIENT NEAR EAST**

A study of the history and culture of Mesopotamia, Anatolia, Syria-Palestine, and Egypt from the rise of the Sumerian culture to Alexander the Great. Careful attention is given to the religious views prevalent in the ancient Near East as far as these views interacted with the culture and faith of the Biblical tradition.

331**CHRISTIAN SOCIAL ETHICS**

A study of Christian ethics as a normative perspective for contemporary moral problems with emphasis upon the interaction of law and religion, decision-making in the field of biomedical practice, and the reconstruction of society in a planetary civilization. *Alternate years.*

333**OLD TESTAMENT WOMEN**

An in-depth study of a variety of biblical texts and themes relevant to the roles and character of women in the Old Testament, including selections from Genesis, Ruth, Esther, Song of Songs, Proverbs (esp. ch. 31), and the songs of Deborah and Miriam. Excerpts from the prophecies of Hosea and Ezekiel are also considered. *Alternate years. Prerequisite: REL 113 or 114, or consent of instructor.*

337**BIBLICAL TOPICS**

An in-depth study of Biblical topics related to the Old and New Testaments. Recently offered titles include Exodus, King David, Kingship Ideologies, and The Gospels of Mark and Thomas. *Prerequisite: REL 113 or 114, or consent of instructor. May be repeated for credit with consent of instructor when topics are different.*

342**THE NATURE AND MISSION OF THE CHURCH**

A study of the nature of the Church as “The People of God” with reference to the Biblical, Protestant, Orthodox, and Roman Catholic traditions.

401**FIELD ARCHAEOLOGY**

Participation in an approved archaeological dig or field school program, usually in the Near East or Mediterranean region. Includes instruction in excavation techniques, recording and processing of artifacts. A survey of excavation and research and the use of archaeology as a tool for elucidating historical and cultural changes. *Special fees apply. May Term or Summer Sessions only. Cross-listed as ANTH and as ARCH 401. Students desiring credit toward the Religion major or humanities distribution requirement should register for REL 401.*

401**FIELD ARCHAEOLOGY**

Participation in an approved archaeological dig or field school program. Includes instruction in excavation techniques, recording and processing of artifacts. A survey of excavation and research and the use of archaeology as a tool for elucidating historical and cultural changes. *Special fees apply. May Term or Summer Sessions only. Cross-listed as ARCH 401, and as REL 401 for Mediterranean and Near Eastern digs only. Students desiring credit toward the Religion major or humanities distribution requirement should register for REL 401.*

433**THE SAYINGS OF JESUS**

An exploration of the ways in which early followers understood the nature and person of Jesus of Nazareth through their appropriation and interpretation of his teachings. An examination of the means and methods by which the teachings of Jesus were passed down from community to community and adapted to changing social and theological contexts in the first centuries of the Christian era. *Prerequisite: REL 113 or 114, or consent of instructor. Alternate years.*

470-479**INTERNSHIP (See index)**

Interns in religion usually work in local churches, hospitals, or other religion-based organizations or programs under the supervision of the pastor, chaplain, or supervisor and a member of the faculty.

N80-N89**INDEPENDENT STUDY (See index)**

Current study areas are in the Biblical languages, Biblical history and theology, Biblical archaeology, comparative religions, and the ethics of technology.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)****ANCIENT LANGUAGES**

Greek, Hebrew, and Latin satisfy the Modern and Ancient Language Study distribution requirement, not the humanities distribution requirement.

GREEK (GRK)

Greek is not offered as a major. An interdisciplinary minor in Biblical Languages requires the completion of GRK 101, 102, HEBR 101, 102, and two from GRK 221, 222, HEBR 221, 222.

101**BIBLICAL GREEK GRAMMAR AND READINGS I**

Fundamentals of Biblical Greek grammar, with an emphasis on the writings of the Greek New Testament. *Alternate years.*

102**BIBLICAL GREEK GRAMMAR AND READINGS II**

Continuation of fundamentals of Biblical Greek grammar, with readings from selected passages of the Greek New Testament. Introduction to the use of lexicons, library resources, and the critical apparatus of the UBS *Greek New Testament* for word study and exegesis. *Prerequisite: GRK 101 or equivalent, or consent of instructor. Alternate years.*

221**READINGS IN THE SYNOPTIC GOSPELS**

A comparative study of the synoptic tradition in Greek. *Prerequisite: GRK 102 or equivalent, or consent of instructor. Alternate years.*

222**READINGS IN THE PAULINE EPISTLES**

Selected readings from the letters of Paul in Greek with a focus on the translation of one letter in its entirety. *Prerequisite: GRK 221 or equivalent or consent of instructor. Alternate years.*

HEBREW (HEBR)

Hebrew is not offered as a major. An interdisciplinary minor in Biblical Languages requires the completion of GRK 101, 102, HEBR 101, 102, and two from GRK 221, 222, HEBR 221, 222.

101**BIBLICAL HEBREW GRAMMAR AND READINGS I**

Fundamentals of Biblical Hebrew grammar and readings of selected passages of the Hebrew Bible. *Alternate years.*

102**BIBLICAL HEBREW GRAMMAR AND READINGS II**

Continuation of fundamentals of Biblical Hebrew grammar and readings of selected passages of the Hebrew Bible. Introduction to the use of lexicons, library resources, and the critical apparatus of BHS for word study and exegesis. *Prerequisite: HEBR 101 or equivalent, or consent of instructor. Alternate years.*

221**READINGS IN BIBLICAL HEBREW NARRATIVE**

A critical reading of the Hebrew text of selected narrative portions of the Old Testament with special attention being given to exegetical questions. The texts read vary from year to year. *Prerequisite: HEBR 102 or equivalent, or consent of instructor. Alternate years.*

222**READINGS IN THE PROPHETIC BOOKS AND WISDOM LITERATURE**

A critical reading of the Hebrew text of selected portions of Old Testament prophecy and wisdom literature, with special attention being given to poetic texts and to exegetical questions. The texts read vary from year to year. *Prerequisite: HEBR 221 or equivalent, or consent of instructor. Alternate years.*

LATIN (LAT)

Latin is not offered as a major.

101**LATIN GRAMMAR AND READINGS I**

Fundamentals of classical Latin grammar and readings of selected passages from Latin authors.

102**LATIN GRAMMAR AND READINGS II**

Continuation of fundamentals of classical Latin grammar and readings of selected passages from Latin authors. *Prerequisite: LAT 101 or equivalent, or consent of instructor.*

221**LATIN READINGS AND CULTURE I**

Readings in a variety of classical Latin texts, including a brief grammar review. *Prerequisite: LAT 102 or equivalent, or consent of instructor.*

222**LATIN READINGS AND CULTURE II**

Readings in a variety of classical Latin texts, including the study of Latin inscriptions. *Prerequisite: LAT 221 or equivalent, or consent of instructor.*

SCHOLAR PROGRAM (SCHOL)

Associate Professor: Chandler (Director)

The Lycoming College Scholar Program is a special program designed to meet the needs and aspirations of highly motivated students of superior intellectual ability. Lycoming scholars satisfy the College's distribution requirements with more challenging courses than students not in the Scholar Program are required to complete. (Substitutions to the Scholar Distribution Requirements can be made only by successful application to the Scholar's Council.) Lycoming Scholars also participate in special interdisciplinary seminars and in an independent study culminating in a senior presentation.

301

LYCOMING SCHOLAR SEMINAR

Team taught interdisciplinary seminar held each semester under the direction of the Lycoming Scholar Council. May be repeated for credit. Completion of five semesters is required by the Scholar Program. *Prerequisite: Acceptance into the Lycoming Scholar Program. One-quarter unit of credit. Grade will be recorded as "A" or "F."*

450

SENIOR SEMINAR

During the senior year, Lycoming Scholars complete independent studies or departmental honors projects. These projects are presented to scholars and faculty in the senior seminar. *Non-credit course. Prerequisite: Acceptance into the Lycoming Scholar Program.*

SOCIAL AND ECONOMIC JUSTICE MINOR

Assistant Professor: Adams (Coordinator)

The Social and Economic Justice minor is designed to provide students with a framework to address the causes, consequences, and expressions of social and economic inequalities. The core curriculum consists of either ECON 110 or ANTH 234, either SOC 240 or HIST 338, and either PHIL 334 or PSCI 242. In addition to these core courses, students are also required to take three electives from the following list. The three electives must be from at least two different departments. Students are free to take additional core courses as electives, but a course may not count as both a core course and an elective.

Electives:

ANTH 230	Anthropology of Latin America
ANTH 232	Environmental Anthropology
ANTH 234	Economic Anthropology
ART 339	Gender and Identity in Art
BUS 313	Sustainable Business Management
CJCR 242	Organizational Crime
CJCR 334	Race, Class, Gender and Crime
ECON 110	Principles of Macroeconomics
ECON 224	Urban Problems
ECON 332	Government and the Economy
ECON 335	Labor Economics
ECON 337	Public Finance
ENGL 229	African American Literature
ENGL 334	Women and Literature
FILM 300	Film and Social Change
HIST 120	Latin American History
HIST 230	African American History
HIST 232	The Rise of Islam
HIST 238	Civil Rights Revolution
HIST 246	Africa and the World
HIST 325	Women in History
HIST 338	Rights, Reform, and Protest
PHIL 334	Contemporary Political Philosophy
PHIL 115	Philosophy and Public Policy
PSCI 241	Politics of Developing Countries
PSCI 242	Human Rights
PSCI 331	Civil Rights and Liberties
PSCI 342	Civil Conflict
REL 331	Christian Social Ethics
SOC 240	Race, Class, Gender, and Sexuality
SOC 305	Sociology of Law
WGST 200	Gendered Perspective

SOCIOLOGY-ANTHROPOLOGY (SOC, ANTH)

Professor: Ross (Chairperson)

Assistant Professors: Adams, McClain

The Sociology-Anthropology Department offers a major in sociology-anthropology with the requirement to concentrate elective coursework in either anthropology or sociology. Since the sociology-anthropology major involves a core foundation of study in both disciplines, students may not “double concentrate” in sociology and anthropology. Regardless of concentration area, students may minor in human services.

Core courses required of all majors:

ANTH 114, 229, SOC 110, 240, 330, and 430

Concentration Requirements:

1. Anthropology:

ANTH 344, two ANTH electives, and an additional elective appropriate to the student’s sub-field interest. This elective must receive approval from the Department of Sociology-Anthropology, with BIO 338 or 436 (for bioanthropology), ENGL 219 (for linguistic anthropology), a MLS course numbered 221 or above (for cultural anthropology), and REL 226 (for archaeology) being recommended.

2. Sociology:

SOC 344 and three additional departmental electives, two of which must be from SOC 220, 231, 305, 310, 320, 334, or CJCR 300. SOC 222, 325, and 448 may not be counted as electives for the sociology concentration.

The following courses satisfy the cultural diversity requirement: ANTH 114, 229, 230, 232, 234, 310, 320, and 344; SOC 240 and 334.

The following courses, when scheduled as W courses, count toward the writing intensive requirement: ANTH 232, 310 and SOC 210, 222, 228, and 330.

Minor

The Department of Sociology-Anthropology offers three minors: Anthropology, Human Services, and Sociology.

A minor in Anthropology requires ANTH 114, 229, and three ANTH electives numbered 200 or above.

A minor in Human Services requires either ANTH 229 or SOC 240; SOC 222; SOC 325; SOC 448; and either MATH 123 or MATH 214.

A minor in Sociology requires SOC 110 and four SOC electives from SOC 220, 231, 240, 305, 310, 320, 330, 334, 344, and 430. CJCR 300 may be counted as an elective within the Sociology minor.

ANTHROPOLOGY (ANTH)

114

INTRODUCTION TO ANTHROPOLOGY

This course serves as an introduction to anthropology, including all four sub-fields of anthropology, which are cultural anthropology, archaeology, biological/physical anthropology, and anthropological linguistics. By looking at human societies holistically and across cultural contexts, anthropology offers a series of tools to address contemporary problems.

229

CULTURAL ANTHROPOLOGY

Cultural anthropology seeks to explain the diversity of human societies, while looking for commonalities across them. This course serves as a general introduction to the field of cultural anthropology, including an introduction to the history of anthropological research and the practice of ethnography. Topics include kinship, race, globalization, gender, social status, identity and violence.

230

ANTHROPOLOGY OF LATIN AMERICA

This course examines the history of anthropology in Latin America, from early concerns with Native American populations in Central and South America, to current concerns with cultural plurality, neoliberal economic reforms and environmental conservation. Topics include European colonization, globalization, gender, and medical anthropology. *Alternate years.*

232

ENVIRONMENTAL ANTHROPOLOGY

Anthropologists have examined the interaction between people and the environment from many different perspectives. This course surveys several of these approaches to understanding human/environment interactions with particular emphasis on human adaptation to the environment across cultures and through time, as well as the current concerns with environmental sustainability and the social context of the environmental movement. *Alternate years.*

234

ECONOMIC ANTHROPOLOGY

There is a tremendous diversity in how human societies organize themselves for production, distribution and consumption. This course is an examination of the ways people organize themselves around these tasks. The class is both theoretical and practical. Students concerned about real-world business problems re-examine desire, decision-making and the impact of culture on economic behavior, while anthropological theories are considered in terms of their practical utility for understanding observed economic behavior. Topics include the origins of

economic systems, ancient economies, colonialism, globalization and international commerce.
Alternate years.

310

FOOD AND CULTURE

This course surveys the growing body of scholarship in food studies and the anthropology of food. Food production and consumption are examined in terms of human biology, culture, and social status across time from our evolutionary ancestors to the present day. Topics include systems of food production, the social and cultural context of agricultural settings, the rise of industrial agriculture and fast food, and social movements based in ideas about food, such as the organic and locavore movements. *Prerequisite: ANTH 114 or 229, or junior or senior standing.*
Alternate years.

320

SPECIAL TOPICS IN ANTHROPOLOGY

Study of selected anthropological problems, theorists, or movements. Sample topics include art and society, ethnography and ethnology, applied anthropology, anthropology of gender, culture and agriculture, and Geographic Information Systems (GIS). *With departmental consent, this course may be repeated for credit. Prerequisite: ANTH 114 or 229, or junior or senior standing.*
Alternate years.

344

ANTHROPOLOGICAL THEORY

This course covers the history of theory in anthropology, with a greater emphasis on theories used within cultural anthropology, although theoretical trends in archaeology, anthropological linguistics and biological/physical anthropology are included to a more limited degree. The course is reading intensive and broad, including work by Franz Boas, Eric Wolf, Clifford Geertz, and Pierre Bourdieu among others. *Prerequisite: ANTH 114 or 229, or junior or senior standing.*
Alternate years.

401

FIELD ARCHAEOLOGY

Participation in an approved archaeological dig or field school program, usually in the Near East or Mediterranean region. Includes instruction in excavation techniques, recording and processing of artifacts. A survey of excavation and research and the use of archaeology as a tool for elucidating historical and cultural changes. Under certain circumstances, participation in an archaeological field school in North, Central, or South America, or elsewhere may be accepted. *Special fees apply. May Term or Summer Sessions only. Cross-listed as ANTH 401, and as REL 401 for Mediterranean and Near Eastern digs only. Students desiring credit toward the Religion major or humanities distribution requirement should register for REL 401.*

470-479

INTERNSHIP (See index)

Anthropology internship experiences, such as with the Lycoming County Historical Museum, are available.

N80-N89**INDEPENDENT STUDY**

(See index) An opportunity to pursue specific interests and topics not usually covered in regular courses. Through a program of readings and tutorials, the student will have the opportunity to pursue these interests and topics in greater depth than is usually possible in a regular course.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

SOCIOLOGY (SOC)**110****INTRODUCTION TO SOCIOLOGY**

An introduction to the problems, concepts, and methods in sociology today, including analysis of stratification, organization of groups and institutions, social movements, and deviants in social structure.

220**SOCIOLOGY OF FAMILY**

This course examines American families from a sociological perspective with particular emphasis on the interplay of family as it relates to other social institutions such as the economic, political, educational, religious, and legal institutions. We look at the multiple forms of family and examine racial, ethnic, and social class variations. Additionally, family as a gendered institution and its implications for men's and women's lives are addressed.

222**INTRODUCTION TO HUMAN SERVICES**

This course is for students interested in learning about, or entering, the human services profession. It reviews the history, the range, and the goals of human services together with a survey of various strategies and approaches to human problems. A twenty-hour community service component is an optional element of the course.

231**SOCIOLOGY OF WAR AND THE MILITARY**

Through an emphasis on the American military and American wars of the later 20th and early 21st centuries, this course examines the modern military as a social institution and includes discussion of the origins, nature, experience, social consequences, and future of warfare. The course addresses implications and consequences of having rebuilt the American military following the Vietnam War with an all-volunteer force, including the demographic transformations, the military as employee recruiter, the planned reliance upon reserve forces, the impact on civilian-military relations, and the impact of fighting protracted wars with a volunteer force. *Alternate years.*

240**RACE, CLASS, GENDER, AND SEXUALITY**

A survey course in the sociological field of social inequality. This course explores the

explanations and persistence of poverty and inequality. Consideration is given to how dynamics of race, class and gender interact, creating historically specific and enduring patterns of inequality. Among the subjects explored are class, race/ethnicity, gender, intersectionality, power, elites, poverty, social mobility and status attainment. While most of the focus is on the United States, these subjects are also explored within comparative and historical frameworks.

305

SOCIOLOGY OF LAW

This course examines law as a social institution that involves an interactive process: on the one hand, law is created and maintained by human beings, and on the other hand, law provides the structure within which human beings develop values pertaining to justice and injustice. This course examines how law is utilized to address social problems, settle disputes, and exert power over others. Specific attention is given to the legal social control of race, class, and gender. This course addresses how law permeates all facets of life from personal identity to the development of domestic institutions to the governing of international relations. *Prerequisite: SOC 110 or junior or senior standing. Alternate years.*

310

MEDICAL SOCIOLOGY

This course examines the social contexts of health, illness and medicine. It gives prominence to the debates and contrasting perspectives that characterize the field of medical sociology. Topics include the social environmental and occupational factors in health and illness, the development of the health professions, ethical issues in medicine, healthcare reform, and the conundrum of managed care. In exploring these topics, emphasis is given to how the socially constructed categories of gender, race/ethnicity, social class, and age relate with physical and mental health, illness, and health care. *Prerequisite: SOC 110 is recommended but not required. Sophomore standing or higher. Alternate years.*

320

SPECIAL TOPICS IN SOCIOLOGY

Study of selected sociological and problems, theorists, or movements. Sample topics include sociology of education, environmental sociology, art and society, sociology of childhood, and media and culture. *Prerequisite: SOC 110 or junior or senior standing. With departmental consent, this course may be repeated for credit. Alternate years.*

325

PROGRAM EVALUATION AND GRANT WRITING

This course introduces a range of basic quantitative and qualitative research methods with emphasis on application of these to the evaluation of social programs. Topics include observational and qualitative methods, survey and interview (structured and unstructured) techniques, using data from records and archives, and data analysis. Students learn about the application of the research process and skills in all phases of assessing a social policy and developing a social program, including needs assessment, implementation analysis, and evaluation of policy or program effectiveness. In addition, a portion of the course covers the process of grant writing in the non-profit arena. The class completes either a community

assessment or a program evaluation as well as prepares a grant application for a local non-profit human service organization. *Prerequisites: Math 123 and SOC 222. Alternate years.*

330

RESEARCH METHODS I

In studying the research process in sociology-anthropology, attention is given to the process of designing and administering both qualitative and quantitative research. Students complete an original field work project in a public setting. Additionally, students learn to compile and analyze quantitative data through a statistical software package. Different methodological skills considered include: field work, survey design, experiments, content analysis, use of secondary data analysis and existing statistics, and qualitative interviews. *Prerequisites: SOC 110 and MATH 123.*

334

AMERICAN IMMIGRATION

A course on U.S. immigration and assimilation that encompasses America's multicultural diversity and covers the historical significance of U.S. immigration and the experience of immigrants from 1492 until the present day. Comparisons between when and why groups immigrate as well as their various successes and failures are explored. This course is designed to facilitate an increased understanding of cultural identity, provide a forum to discuss and better understand cultural differences, investigate the mechanisms and consequences of prejudice, oppression, and discrimination on American minority groups, and to explore personal beliefs about human differences. *Prerequisite: SOC 110, or junior or senior standing. Alternate years.*

344

SOCIOLOGICAL THEORY

This course traces the origins of modern social theory beginning with the aftermath of the democratic revolutions in America and France and the capitalist Industrial Revolution in Britain. Analysis of the classical theoretical paradigms of functionalism and conflict theory draws specifically on the works of Marx, Weber, Durkheim, and Simmel. Contemporary theories include exchange and rational choice theory, symbolic interactionism, ethnomethodology, phenomenology, feminist theory, critical theory, and post-modernism. *Prerequisite: SOC 240. Alternate years.*

430

RESEARCH METHODS II

Building on the research skills acquired during a first course in research methodology, students complete an original quantitative or qualitative research project utilizing one of the many data collection strategies available to sociologists and anthropologists such as field work, content analysis, surveys, qualitative interviews, experimental design, secondary data analysis, or program evaluation. Topic selection is of individual student's choice. *Prerequisite: SOC 325, SOC 330, or CJCR 447.*

448

PRACTICUM IN SOCIOLOGY-ANTHROPOLOGY

This course provides students with the opportunity to apply a socio-cultural perspective to any of

a number of organizational settings in the Williamsport area. As the basis for the course, students arrange an internship in the local community. At the same time the student is contributing time and talent to the organization in question, he/she will also be observing, from a socio-cultural perspective, the events, activities, structure, and dynamics of the organization. These experiences will be supplemented by academic readings, a regularly scheduled seminar, and the keeping of a detailed field journal. *Prerequisite: Consent of instructor.*

470-479

INTERNSHIP (See index)

Interns in sociology typically work off campus with social service agencies under the supervision of administrators.

N80-N89

INDEPENDENT STUDY (See index)

An opportunity to pursue specific interests and topics not usually covered in regular courses. Through a program of readings and tutorials, the student has the opportunity to pursue these interests and topics in greater depth than is usually possible in a regular course.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

THEATRE (THEA)

Associate Professor: Stanley (Chairperson)

Assistant Professor: Innerarity, Towns

Part-time Instructors: Moyer, Stoytcheva-Horissian

Theatre is a combination of many art forms, and the theatre curriculum provides opportunities to explore all its aspects: dramatic literature, theatre history, acting, directing, stage management, design, and technical theatre. The rigorous production program offers practical training to complement the comprehensive curriculum.

The Theatre Department produces a full season of faculty- and student-directed productions each year. In addition, the department also manages a children's theatre company, the Emerald City Players. The department's production facilities include the Mary L. Welch Theatre, an intimate thrust stage, and the Dragon's Lair Theatre, a small black-box studio theatre in the Academic Center. The department also maintains support facilities, including a scene shop, costume shop, dressing rooms, makeup room, and rehearsal areas.

The following courses satisfy the cultural diversity requirement: THEA 114, 212, 332, 333, 335, and 410. The following courses, when scheduled as W courses, count toward the writing intensive requirement: THEA 212, 332, and 333.

Major

All students majoring in Theatre must complete the core courses and the requirements for at least one of the three concentrations listed below. Should a student elect to pursue two concentrations, the student is required to complete 4 credits of THEA 160 and/or 161 for each concentration, totaling 8 credits.

Core courses required of all majors:

THEA 145, 201, 210, 226, 246, 247, 332, 333, and 410.

Concentration Requirements:

1. Acting:

THEA 148, 245, 249, 345, 402, and 460; 3 credits of THEA 160 in either Section A or B; 3 credits of THEA 161 and/or 162, including ½ credit of 162, which must be earned serving as Assistant Stage Manager or Crew Head for a Mary L. Welch Theatre production.

2. Directing:

THEA 148, 225, 227, 326, 402, and 461; 3 credits of THEA 160 in either section A or B; 3 credits of THEA 161 and/or 162, including ½ credit of 162, which must be earned serving as Assistant Stage Manager for a Mary L. Welch Theatre production and one credit of 162 serving as Stage Manager for a Mary L. Welch production.

3. Design/Tech:

THEA 149, 225, 228, 229, 230, and 462; one from the following: 427, 428, 429; 4 credits of THEA 160 in either section A or B; 2 credits of THEA 161 and/or 162.

Minors

Three minors are available in the Theatre Department.

- A minor in Performance consists of THEA 100, 145, 148, 226, 245, 246 and two credits of THEA 160, 161, and/or 162.
- A minor in Technical Theatre consists of THEA 100, 149, 228, 229, 230, 246, and two credits of THEA 160, 161, and/or 162.
- A minor in Theatre History and Literature consists of THEA 100, 210, 246, 332, 333, 410, and two credits of THEA 160, 161, and/or 162.

100

UNDERSTANDING THEATRE

A comprehensive introduction to the theatre as a distinctive art form. Explores the creative process of the various artists involved in developing a theatrical production—actors, directors, designers, technicians, etc.—and examines the unique characteristics of dramatic literature.

114

FILM ART: MOTION PICTURE MASTERPIECES

Study of selected classic experimental and narrative films from around the world as well as from Hollywood. Consideration of what makes a classic through examination of such topics as acting, writing, directing, style, and genre. *Alternate years.*

135

INTRODUCTION TO DANCE I

An introduction to the techniques of beginner conditioning and basic movement in ballet, jazz, and tap. *One-half unit of credit.*

136

INTRODUCTION TO DANCE II

Continuing exploration of beginner conditioning techniques and basic movement in ballet, jazz, and tap. *Prerequisite: THEA 135 or consent of instructor. One-half unit of credit.*

137

HISTORY OF THE DANCE I

A survey of tribal, ethnic, and folk dance from the earliest recorded dance to the 1900s. *One-half unit of credit.*

138

HISTORY OF THE DANCE II

A survey of the forms of dance as they have reflected the history of civilization from the 1900s through the present. *One-half unit of credit.*

145**ACTING I**

An introductory study of the actor's preparation with emphasis on developing the actor's creative imagination through improvisation, character analysis, and scene study.

148**PLAY PRODUCTION**

Stagecraft and the various aspects of production are introduced. Through material presented and laboratory work on the Mary L. Welch Theatre productions, students acquire experience with design, scenery, properties, costumes and lighting.

149**THEATRE GRAPHICS**

A comprehensive course in mechanical drafting, perspective rendering, figure drawing, color theory, and scene painting as these skills relate to the study of theatrical design.

160**THEATRE PRODUCTION PRACTICUM**

Faculty-supervised participation in one of the department's two shops, the Costume Shop or the Scene Shop. Enrollment in this course requires the student to work for 30 hours during one semester, which earns one semester hour of credit. Practicum credit is limited to eight semester hours of credit over four years. Students may not register for Theatre Practicum; the department chair registers all students for Practicum after productions have been cast and all duties have been assigned each semester. Course may be repeated.

161**THEATRE PERFORMANCE PRACTICUM**

Faculty-supervised participation in the creation of productions in the Mary L. Welch Theatre, which includes actors and all running crews involved in each production. Enrollment in this course earns one-half semester hour of credit for participation as an actor and/or running crew member. Practicum credit is limited to eight semester hours of credit over four years. Students may not register for Theatre Practicum; the department chair registers all students for Practicum after productions have been cast and all duties have been assigned each semester. Course may be repeated.

162**THEATRE LEADERSHIP PRACTICUM**

Faculty-supervised participation in the production process through positions of leadership, which includes but is not limited to: crew heads, stage management, assistant directors, assistant designers, and assistant technical directors. Enrollment in this course earns one-half semester hour of credit, with the exception of Stage Manager, which earns one semester hour of credit. Practicum credit is limited to eight semester hours of credit over four years. Students may not register for Theatre Practicum; the department chair registers all students for Practicum after productions have been cast and all duties have been assigned each semester. Course may be repeated.

201**THEATRE FOR YOUTH AND YOUNG AUDIENCES**

Study of theatre for children, theatre by children, and youth theatre. Students create and rehearse a production and/or workshops for children or teens that will tour and perform at area grade and high schools, all during the slated class times. Students may repeat this course once with a different project. *Prerequisites: THEA 145, and either 148 or 149, OR consent of instructor. Alternate years.*

210**MODERN DRAMA**

The study and application of various analytical methodologies using plays selected from the canon of modern drama, 1875 to the present. *Prerequisites: THEA 145, and either 148 or 149. Alternate years.*

212**MULTICULTURAL AMERICA ON SCREEN**

Introduction to the art of understanding moving images to discover the cultural values of American filmmakers and their audiences. Comparison of the ways in which films and television use comedy, drama, and the documentary to examine topics having to do with values, beliefs, and cultural diversity in America.

215**SPECIAL TOPICS IN THEATRE**

Study of selected theatrical subjects, such as plays, writers, movements, or technical projects. Recent topics include stage management, sound design, stagecraft, and professional development. *Prerequisite: THEA 145, and either 148 or 149. With consent of instructor, may be repeated for credit if the topic is different from one previously studied.*

220**VOICE AND DICTION**

Introduction to the fundamental techniques of vocal production for the theatre. Emphasizes an individual program of personal vocal development. Dialects and phonetic study of the major European accents and English accents. Includes oral practice of relevant literature. *Alternate years. One-half unit of credit.*

225**HISTORICAL STYLES IN DESIGN**

An exploration of the evolution of dominant design styles in scenery, lighting, and costumes in Western theatre. *Prerequisite or co-requisite: THEA 148 or 149. Alternate years.*

226**DIRECTING I**

An introductory study of the functions of the director, with emphasis on script analysis, the rehearsal process, and communicating with collaborators. Practical scene work directing student actors is a major component of the course. *Prerequisites: THEA 145 and 148. Majors may take concurrently with THEA 148. Alternate years.*

227**PRINCIPLES OF STAGE MANAGEMENT**

A practical exploration and application of the standard practices of stage management, including the areas of the design process, the rehearsal process, and performance. *Prerequisite: THEA 145 or 148. Alternate years.*

228**SCENE DESIGN**

Development of scene design techniques through study of the practice in rendering, perspective drawing, plan drafting, sketching and model building. Beginning work in theory, techniques, and practices in scenery painting for the theatre. *Prerequisites: THEA 148 or 149, and THEA 225. Alternate years.*

229**LIGHTING DESIGN**

The theory of stage and lighting design with emphasis on their practical application to the theatre. *Prerequisites: THEA 148 or 149, and THEA 225. Alternate years.*

230**COSTUME DESIGN**

The theory of costuming for the stage; elements of design, planning, production, and construction of costumes for the theatre. *Prerequisites: THEA 148 or 149, and THEA 225, or consent of instructor. Alternate years.*

232**STAGE MAKEUP**

Essentials in stage makeup: straight, character, special types. Effects of light on makeup are included. Recommended for performers and directors of educational, church and community theatres. *Prerequisite: THEA 148. One-half unit of credit. Alternate Years.*

235**INTERMEDIATE DANCE**

Intermediate ballet, jazz, tap, and choreography. *Prerequisite: THEA 136 or consent of instructor. One-half unit of credit.*

236**ADVANCED DANCE**

Advanced ballet, jazz, tap, and choreography. *Prerequisite: THEA 235 or consent of instructor. One-half unit of credit.*

245**ACTING II**

Exploration of contemporary realism through intensive character analysis, monologue work, and scene study. *Prerequisite: THEA 145.*

246**FALL THEATRE COLLOQUIUM**

A non-credit seminar in which faculty and students travel to Canada to such venues as the Shaw Festival or the Stratford Theatre Festival to view and discuss required plays, expanding their cultural and theatrical experiences. *Enrollment in one Fall Theatre Colloquium over the 4-year course of study is required for all students majoring in Theatre. Pass/Fail. Non-credit seminar. This course may be repeated.*

247**SPRING THEATRE COLLOQUIUM**

A non-credit seminar in which faculty and students travel to New York City to view and discuss required plays, expanding their cultural and theatrical experiences. *Enrollment in one Spring Theatre Colloquium over the 4-year course of study is required for all students majoring in Theatre. Pass/Fail. Non-credit seminar. This course may be repeated.*

249**STAGE MOVEMENT**

An introductory course that covers a wide range of activities designed to help theatre students become more active, physically expressive, convincing, and dimensional performers. It offers an overview of physical approaches to acting, movement theories and training, including Alexander, Laban, Chekhov, neutral mask, and Commedia dell'Arte among others and their application to successful stage performances. *Prerequisite: THEA 145. Alternate years.*

315**SPECIAL TOPICS IN THEATRE**

Study of selected theatrical subjects, such as plays, writers, movements, or technical projects. Recent topics include stage management, sound design, stagecraft, and professional development. *Prerequisite: a minimum of three THEA courses. With consent of instructor, may be repeated for credit if the topic is different from one previously studied.*

326**DIRECTING II**

Continued exploration of the director's role in the production process with emphasis on the director's work in rehearsal. Practical application includes the direction of a one-act play with student actors in the Dragon's Lair Theatre. *Prerequisite: THEA 226. Alternate years.*

332**THEATRE HISTORY I**

An investigation of the Western theatre as the evolution of a multidisciplinary artistic, cultural, social, economic, religious, and political phenomenon. Dramatic texts representing specific eras are studied as historical evidence of theatre practice. Focuses on the origins of the theatre through 1700. *Prerequisites: THEA 145, and either 148 or 149, or consent of instructor. Alternate years.*

333**THEATRE HISTORY II**

An investigation of the Western theatre as the evolution of a multidisciplinary artistic, cultural, social, economic, religious, and political phenomenon. Dramatic texts representing specific eras are studied as historical evidence of theatre practice. Focuses on the early 18th century through the theatre today. *Prerequisite: THEA 332, or consent of instructor. Alternate years.*

337**PLAYWRITING**

An investigation of the techniques of playwriting with an emphasis on creative writing, culminating in a written one-act play. *Prerequisites: ENGL 106 or 107 and THEA 226, or consent of instructor. Alternate years.*

345**ACTING III**

Exploration of historical acting styles selected from among Greek, commedia dell'arte, Elizabethan, comedy of manners, melodrama, expressionism, etc. Practical application includes character analysis, monologue work, and scene study. *Prerequisite: THEA 245.*

402**SHAKESPEARE ON STAGE**

A study of Shakespeare's plays in production terms. Emphasis on translating works from the page to the stage, with special attention to language, poetry, and acting styles as well as technical problems. Contemporary productions will be viewed. *Prerequisites: THEA 332 and 333, or consent of instructor. Alternate years.*

410**THEATRE AND CULTURE**

Exploration of one or more historic periods in a specific locale to discover the nature of the theatre in its cultural context. Included is a study of the art, music, literature, political and social framework of the period and locale. *Prerequisites: THEA 332 and 333, or consent of instructor. Alternate years.*

415**SPECIAL TOPICS IN THEATRE**

Study of selected theatrical subjects, such as plays, writers, movements, or technical projects. Recent topics include stage management, sound design, stagecraft, and professional development. *Prerequisites: THEA 332 and 333 or consent of instructor. With consent of instructor, may be repeated for credit if the topic is different from one previously studied.*

426**DIRECTING III**

Practical application of script analysis and directing a production in the Dragon's Lair Theatre or the Mary L. Welch Theatre. *Prerequisites: THEA 326 and consent of instructor. May be repeated for credit.*

427**ADVANCED COSTUME DESIGN STUDIO**

Practical application of script analysis and execution of costume design for the productions in the Dragon's Lair Theatre or Mary L. Welch Theatre. *Prerequisites: THEA 230 and consent of instructor. May be repeated for credit.*

428**ADVANCED SCENE DESIGN STUDIO**

Practical application of script analysis and execution of scene design for productions in the Dragon's Lair Theatre or Mary L. Welch Theatre. *Prerequisite: THEA 228 and consent of instructor. May be repeated for credit.*

429**ADVANCED LIGHTING DESIGN STUDIO**

Practical application of script analysis and execution of lighting design for production in the Dragon's Lair Theatre or Mary L. Welch Theatre. *Prerequisite: THEA 229 and consent of instructor. May be repeated for credit.*

432**ADVANCED MAKEUP DESIGN STUDIO**

Practical application of script analysis and advanced techniques in makeup design. Three-dimensional and prosthetic makeup is included, with emphasis on nonrealistic and nonhuman forms. *Prerequisite: THEA 232 and consent of instructor.*

444**ADVANCED DIRECTING STUDIO**

Practical application of script analysis and directing a full-length play in the Dragon's Lair Theatre or Mary L. Welch Theatre. *Prerequisites: THEA 426 and consent of instructor. May be repeated for credit.*

445**ADVANCED ACTING STUDIO**

Practical application of script analysis and performing a major role in a Dragon's Lair Theatre or Mary L. Welch Theatre production. *Prerequisites: THEA 345 and consent of instructor. May be repeated for credit.*

460**SENIOR PROJECT IN ACTING**

The application of script analysis and practical performance skills in a self-proposed performance project. Students are required to submit a formal written proposal by March 1 of their junior year that must be approved by all full-time Theatre Department faculty. *This course is open to senior theatre majors only.*

461**SENIOR PROJECT IN DIRECTING**

The application of script analysis and practical skills in a self-proposed project. Students have the option of demonstrating expertise in directing or stage management. Students are required to submit a formal written proposal by March 1 of their junior year that must be approved by all full-time Theatre Department faculty. Students who choose to direct or stage manage a full-length play in fulfillment of THEA 461 must have completed the THEA 162 requirements of assistant stage managing and stage managing faculty-directed productions. *This course is open to senior theatre majors only.*

462**SENIOR PROJECT IN DESIGN/TECH**

The application of analytical and practical skills in a self-proposed design or technical project. Students have the option of demonstrating expertise in costume design, scene design, lighting design, or technical production. Students are required to submit a formal written proposal by March 1 of their junior year that must be approved by all full-time Theatre Department faculty. *This course is open to senior theatre majors only.*

470 – 479**INTERNSHIP (See Index)**

Students work off campus in professional theatres such as the George Street Theatre in New Jersey and the Walnut Street Theatre and Inter Arts Theatre in Philadelphia.

N80/N89**INDEPENDENT STUDIES (See Index)**

Subjects for Independent Studies are chosen in conjunction with faculty members.

490-491**INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See Index)**

Students who qualify for Departmental Honors produce a major independent project in research and/or theatre production.

WOMEN'S AND GENDER STUDIES (WGST)

Professor: Stanley (Coordinator)

Although a major in women's and gender studies is available only under the policies regarding Individual Interdisciplinary Majors, an established minor in women's and gender studies is provided. WGST 200 and four of the following established cross-listed courses are required for the minor. Students may substitute no more than two experimental or topics courses that have been approved by the coordinating committee. To receive credit for a minor in women's and gender studies, students must maintain at least a 2.00 average in courses taken for that minor.

The following courses satisfy the cultural diversity requirement: WGST 200 and WGST 300.

ART 339	Gender and Identity in Art
ENGL 229	African American Literature
ENGL 334	Women and Literature
HIST 325	Women in History
HIST 338	Rights, Reform, and Protest
HIST 342	Women and Reform
PSY 341	Psychology of Women
REL 333	Old Testament Women
SOC 220	Sociology of Family
SOC 240	Race, Class, Gender, and Sexuality
WGST 300	Topics in Women's and Gender Studies

200

GENDERED PERSPECTIVES

An examination of gender issues from an interdisciplinary perspective. This course explores the social construction of gender and gendered institutions as well as relevant critical approaches such as feminist, utopian, and queer theories. Topics may involve language, art, science, politics, culture, violence, race, class, ethnic differences, sexuality, and pornography.

300

TOPICS IN WOMEN'S AND GENDER STUDIES

An examination of selected topics in Women's and Gender Studies designed to allow students to pursue particular subjects in more depth and detail than in the general introductory course. With the permission of the Coordinator of the Women's and Gender Studies Program, students may repeat this course depending on the content.

N80/N89

INDEPENDENT STUDIES

With the approval of the Coordinator, an appropriate special course or independent-study project may be substituted for one of the four cross listed courses required for the minor.

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- ** On Sabbatical Spring 2015
- *** On Sabbatical Academic Year 2014-15
- **** On Leave Academic Year 2014-15

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Provost and Dean of the College

B.S., B.A., Bethel College

M. A., Ph.D., Indiana University

N. J. Stanley (2002)

Theatre

B.S., Louisiana State University

M.F.A., Florida State Univ., Tallahassee

Ph.D., Indiana University-Bloomington

Arthur Sterngold (1988)

Business Administration

B.A., Princeton University

M.B.A., Northwestern University

Ph.D., The Pennsylvania State University

Howard Tran (2002)

Art

B.F.A., Academy of Art College

M.F.A., Boston University

Jonathan Williamson (2002)

Political Science

B.A., University of Houston

M.A., Ph.D., Emory University

Assistant Professors

Ryan Adams (2010)

Sociology/Anthropology

B.S., M.A., Ph.D., Indiana University

Michelle Briggs (1992)***

Biology

Director of Lycoming Scholars

B.S., Cornell University

M.S., University of Iowa

Ph.D., The Pennsylvania State University

David R. Broussard (2006)

Biology

B.S., M.S., Baylor University

Ph.D., Auburn University

Len Cagle (2005)

Modern Languages and Literatures

B.A., M.A., University of Arkansas

Ph.D., Brown University

Melissa A. Correll (2013)

Snowden Library

B.A., East Stroudsburg University

M.S., L.I.S., Drexel University

Heather M. Demshock (2012)

Accounting

B.A., Lycoming College

B.S., Old Dominion University

M.S., Liberty University

Santusht S. deSilva (1983)

Mathematical Science

B. Sc., University of Sri Lanka

M.A., Ph.D., University of Pittsburgh

Eugene Donati (2011)

Corporate Communication

B.A., University of Pittsburgh

M.P.A., The American University

M.S.C.F., University of Toronto

Rebecca Gilbertson (2010)

Psychology

B.A., Concordia College

M.S., Ph.D., University of Kentucky

Seth Goodman (2008)

Art

B.F.A., University of North Carolina at Asheville

M.F.A., Towson University

Amanda Gunderson (2012)

Music

B.M., Pennsylvania State University

M.A., Pennsylvania State University

M.M., Pennsylvania State University

D.M.A., University of Wisconsin

Rachel Hickoff-Cresko (2009)

Education

B.S., Kutztown University

M.Ed., Universidad del Turabo

Ph.D., Widener University

Jathan Innerarity (2012)

Theatre

B.F.A., Stephen F. Austin State University

M.F.A., The University of Memphis

Christopher Jackson (2014)

Music

B.M., Oklahoma State University

M.M., Westminster Choir College of Rider University

DM.A., University of North Texas

Robin DeWitt Knauth (1999)

Religion/Archaeology

A.B., Princeton University

M.T.S., Regent College

Th.D., Harvard University Divinity School

Lauri L. Kremer (2006)

Accounting

B.A., Lycoming College

M.B.A., Wilkes University

C.P.A. (Pennsylvania)

Marisa Macy (2009)

Education

B.A., University of Washington

M.A., Ph.D., University of Oregon

Charles H. Mahler (1994)

Chemistry

B.A., The Ohio State University

M.S., Ph.D., Northwestern University

Betty McClain (2004)
Sociology/Anthropology
B.A., Lamar University
M.S., Baylor University
M.A., Ph.D., Vanderbilt University

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Biology
B.A., Princeton University
M.A./M.Phil., Ph.D., Columbia University

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Psychology
B.A., M.A. Edinboro University of Pennsylvania
Ph.D., Kent State University

Jessica Oberlin (2012)
Snowden Library
B.A. Lycoming College
M.S., Clarion University

Kurt H. Olsen (1993)*
Psychology
B.S., St. Lawrence University
M.S., Ph.D., University of Rochester

Caroline Payne (2010)
Political Science
B.A., Berea College
M.A., Ph.D., Louisiana State University

Christopher Pearl (2013)
History
B.A., St. John Fisher College
M.A., State University of New York at Brockport
Ph.D., Binghamton University

Jeremy D. Ramsey (2005)
Chemistry
B.S., Clarion University of Pennsylvania
Ph.D., The Ohio State University

Collin Rice (2013)
Philosophy
B.A., Simpson College
M.A., Ph.D., University of Missouri

Kerry Richmond (2009)

Criminal Justice

B.A., Boston College

M.S., Central Connecticut State University

Ph.D., University of Maryland

Amy Rogers (2007)

Education

B.A., Lycoming College

M. Ed., Bloomsburg University

Ph.D., Pennsylvania State University

Michael Smith (2011)

Mathematical Science

B.A., Connecticut College

Ph.D., University of Virginia

Douglas Young (2008)

Philosophy

A.B., Brown University

M.T.S., Harvard University

M.A., Ph.D., Cornell University

Dongjiao Zhao (2011)

Biology

B. of Medicine, China Medical University

M.S., Ph.D., Purdue University

Instructor

Visiting, Special, and Part-time Appointments

Diane Abercrombie (1988)

Mathematical Sciences

B.Bus.Admin., Bernard M. Baruch College, CUNY

George C. Adams, Jr. (2003)

Religion

B.A., Susquehanna University

M.A., Ph.D., Fordham University

M.A., Ph.D., Pennsylvania State University

Hannah Burdette (2013)

Modern Languages and Literature

B.A., University of North Carolina at Greensboro

M.A., Vanderbilt University

Ph.D., University of Pittsburgh

David Burke (1995)

Art and Biology

B.A., Lycoming College

Marlene Cauley (2011)

Education

B.S., Lock Haven University

Mansfield University

Regina Collins (1991)

Mathematical Sciences

B.A., Rosemont College

M.S., Bucknell University

Antonici Crook-Perez (2014)

Art

B.F.A., The School of the Art Institute of Chicago, IL

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Michael Darough (2011)

Art

B.F.A., Arizona State University

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Education

B.A., Lycoming College

Roger Davis (1984)

Computers/Mathematics

B.S., M.S., Pennsylvania State University

William Dever (2008)

Religion/Archaeology

B.A., Milligan College

M.A., Butler University

B.D., Christian Theological Seminary

Ph.D., Harvard University

Pamela Dill (1990)

Wellness

B.S.N., University of the State of New York at Albany

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Astronomy/Physics

B.A., Lycoming College

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Education

B.A., Lycoming College

M. Ed., Wilkes University

Pamela Gaber (2002)

Religion/Archaeology

B.A., University of Wisconsin, Madison

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Stephen Gilmore (2005)

Religion

B.S., Millersville University

M.A., Bucknell University

Nathan Guss (2013)

Modern Languages and Literature

B.A., Duke University

M.A., Cornell University

Ph.D., Cornell University

Maria Hebert-Leiter (2010)

English

B.A., Loyola University

M.A., Ph.D., University of North Carolina

Kirsten Hutzell (2014)

Criminal Justice

B.S., York College of Pennsylvania

M.A., Villanova University

Robert Jacques (2008)

Philosophy

B.A., University of Notre Dame

M.A., Ph.D., Pennsylvania State University

Kimberlee Josephson (2013)

Business Administration
B.S., Bloomsburg University
M.I.P.S., La Trobe University

David Keene (2012)

Wellness

John McNassor (2010)

Religion
B.A., Rockmont College
M. Div., Central Baptist Theological Seminary
M. Phil., Drew University
Ph.D., Drew University

Leslie Meeder (2005)

Modern Language Studies – Spanish
B.A., M.S., University of Pennsylvania

John Mitchell (1999)

Psychology
B.A., Florida State University
Psy.D., Indiana State University

Kitty Moyer (2011)

Music/Theatre

Oscar Perez (2014)

Digital Media Communication
B.A., Bard College
M.F.A., Florida State University

Christopher Reed (2008)

Mathematics
B.S., Lycoming College
M.E., Mansfield University

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Mathematics
B.A., M.S., Bucknell University

Daniela Ribitsch (2009)

Modern Language Studies – German
M.A., Ph.D., Karl Franzens University Graz

David Ritter (2009)

Criminal Justice and Criminology
B.A., Mansfield University

Edward Robbins (2001)

Criminal Justice and Criminology
B.A., Mansfield University
M.S., Shippensburg University

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History
B.A., Roger Williams University
M.A., Ohio University

Kathryn Turner Sterngold (1992)

Art
B.S., Kutztown University
M.A., Alfred University

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Theatre
M.F.A., National Academy for Theatre and Film Arts, Sofia Bulgaria
M.A., Ph.D., University of Oregon

Robert Thompson (2008)

Criminal Justice and Criminology
B.S., Pennsylvania University
M.S., Central Missouri University

Tiffany Towns (2012)

Theatre
A.A., Gainesville State College
B.A., Brenau University
M.F.A., University of Alabama

Robin Van Auken (2002)

Communication
B.A., M.A., University of South Florida

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Education

B.S., M.S., Mansfield University

Scott Williams (2012)

Accounting

Sabri Yilmaz (2012)

Economics

B.S., Marmara University

M.S., University of Missouri Columbia Applied Mathematics

M.A., University of Missouri Columbia Applied Mathematics

Ph.D., Southern Illinois University Carbondale

Applied Music Instructors

Richard Adams (2001)

Woodwinds

B.A., Lycoming College

Tim Breon (1998)

Electronic Music Lab

PA Governor's School for the Arts

David Brumbaugh (2007)

Guitar

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Woodwinds

B.M.E., Mansfield University

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Brass

M.M., Cleveland Institute of Music

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Woodwinds

B.M.E., The University of North Carolina of Greensboro

M.A., Western Carolina University

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Woodwinds

M.M., The Julliard School

Donald J. Fisher (2003)

Percussion

B.S., Indiana Univ. of Pennsylvania

Fiona Gillespie (2013)

Voice

Jason Laczkosk (2010)

Woodwinds

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Organ and Piano

A.B., Westminster Choir College

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Voice

B.M.E., Westminster Choir College

M.M. in Vocal Performance and Pedagogy, The Pennsylvania State University

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Voice

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B.A., The Citadel

M.S.L.S., Florida State University

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M.S., Bucknell University

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Professor Emerita of English

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M.A., University of Denver

Ph.D., The Pennsylvania State University

Robert H. Larson (1969)

History

Marshal of the College

B.A., The Citadel

M.A., Ph.D., University of Virginia

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Associate Professor Emeritus of Foreign Language

A.B., University of Rochester

Ph.D., Yale University

Carole Moses (1982)

English

B.A., Adelphi University

M.A., The Pennsylvania State University

Ph.D., SUNY at Binghamton

Roger W. Opdahl

Professor Emeritus of Economics

A.B., Hofstra University

M.A., Columbia University

D. Ed., The Pennsylvania State University

Kathleen D. Pagana

Professor Emerita of Nursing

B.S.N., University of Maryland

M.S.N., Ph.D., University of Pennsylvania

Doris P. Parrish

Associate Professor Emerita of Nursing
B.S., SUNY at Plattsburgh
M.S., Russell Sage College
Ph.D., University of Texas at Austin

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Professor Emeritus of History and Dean of the College, Emeritus
A.B., Lafayette College
B.D., Yale University
Ph.D., Duke University

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Professor Emeritus of English
B.A., University of Florida
M.A., Ph.D., Southern Illinois University

Michael G. Roskin

Professor Emeritus of Political Science
Robert L. and Charlene Shangraw Professor
A.B., University of California at Berkeley
M.A., University of California at Los Angeles
Ph.D., The American University

Roger D. Shipley

Professor Emeritus of Art
B.A., Otterbein College
M.F.A., Cranbrook Academy of Art

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Associate Professor Emeritus of Business Administration
B.B.A., Stetson University
J.D., Vanderbilt University
M.B.A., University of Central Florida

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Assistant Professor Emeritus of Accounting
B.A., Lycoming College
M.S., Bucknell University
M.B.A., Long Island University
C.P.A., (Pennsylvania and New York)

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B.A., Yale Divinity School

M.Div., Yale Divinity School

M.A., Ph.D., Ohio State University

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B.A., Hunter College

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ATHLETIC STAFF

LeRoy Baer

Head Men and Women's Tennis Coach

PTR Professional Tennis Registry

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Melissa Baer

Head Softball Coach

B.A., Mansfield University

David Becker

Assistant Football Coach

B.S., California University of Pennsylvania

M.S., Pennsylvania State University

Mike Beckley

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B.S., Shippensburg University of Pennsylvania

M.S., Shippensburg University of Pennsylvania

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Assistant Volleyball Coach

B.A., Lycoming College

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Karate Instructor

A.CADT, Pennsylvania College of Technology

3rd Degree Black Belt

Isaiah Britton

Assistant Wrestling Coach
B.A., Lycoming College

Michael Clark

Director of Athletics
Head Football Coach
B.A., Lycoming College

Regina Collins

Head Men and Women's Cross Country Coach
M.S., Bucknell University
B. A., Rosemont College

Roger Crebs

Head Wrestling Coach
B.A., Lycoming College

Christen Ditzler

Head Women's Basketball Coach
B.A., Franklin & Marshall College

J. P. Earp

Assistant Men's Lacrosse Coach
B.A., Lycoming College

Zachary Eckstrom

Assistant Wrestling Coach
B.A., Lycoming College

Brie Eilman

Assistant Women's Soccer Coach
B.A., Guilford College

Alicia Engler

Assistant Women's Basketball Coach
B.S., Lycoming College

Royce Eyer

Assistant Men's Wrestling Coach
B.A., Lycoming College

Nathan P. Gibboney

Head Men's Soccer Coach
B.S. Susquehanna University
M.Ed., Westminster College

Tom Griffith

Assistant Women's Basketball Coach
B.S., Pennsylvania State University
M.S. Ed, Misericordia University

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Sports Information Director & Assistant Director of Athletics
B.A., Susquehanna University
M.A., SUNY at Buffalo

Kari Hack

Assistant Women's Soccer Coach
B.A., Lycoming College

Ken Hamanaka

Assistant Men's Basketball Coach
B.A., West Virginia University

Gerald Hammaker

Head Men's & Women's Swimming Coach
B.A., The College of Wooster

George Henry

Assistant Women's Basketball Coach
B.A., Susquehanna University
M.S., Pennsylvania State University

Brandon Kates

Assistant Men's Soccer Coach
B.S., Susquehanna University

Tim Landis

Assistant Football Coach
B.A., Randolph-Macon College

Nick Lansberry

Assistant Wrestling Coach
B.S., Lycoming College

Taylor Lesser

Assistant Softball Coach
B.A., Lycoming College

Eric Lewis

Head Women's Soccer Coach

B.A., High Point University

M.A., Norwich University

Andrea Lucas

Head Athletic Trainer

ATC – B.S., Lock Haven

M.S., Bloomsburg University

Joe Lumbis

Equipment Manager

Jackie Macone

Assistant Women's Lacrosse Coach

B.S., Lock Haven University

Keri Matty

Assistant Athletic Trainer

B.S., University of Pittsburgh

M.S., Ohio University

Timothy P. McMahon

Head Women's Volleyball Coach

A.B., Penn College

B.S. Mgnt., Lock Haven University

Brett Michaels

Assistant Wrestling Coach

M.A., Marygrove College

B.A., Susquehanna University

Kate Morris

Assistant Women's Lacrosse Coach

B.A., Vassar College

M.S., Loyola College of Maryland

Psy.D., Loyola University of Maryland

Steve Radocaj

Assistant Football Coach

B.A., Mansfield University

Charles (Guy) Rancourt

Head Men's Basketball Coach

B.A., Western Connecticut State University

Jeff Rauff

Assistant Swimming Coach
B.A., Lycoming College

Lindsay Reese

Head Women's Lacrosse Coach
M.A., East Tennessee University
B.S., Lock Haven University

Sean Reese

Assistant Wrestling Coach
B.A., Lycoming College
M.S., Marshall University

Joel Reid

Assistant Men and Women's Tennis Coach
Williamsport Community College Graduate
Air Force Veteran

Candida Rivera

Cheerleading Advisor
B.A., Adelphi University

Charlie Robinson

Assistant Swimming Coach
B.A., Lebanon Valley College

Ryan Rybicki

Assistant Football Coach
B.A., Edinboro University of PA

Chris Scanlon

Head Men's Lacrosse Coach
B.A. Hobart & William Smith Colleges
M.Ed, St. Lawrence University

Joe Smith

Assistant Men's Basketball Coach
B.A., St. Mary's College of Maryland

Jamie Spencer

Head Golf Coach
B.A., Lycoming College

Patrick Taylor

Assistant Football Coach
B.A., Lycoming College

Douglas Thiel

Assistant Football Coach
B.S., Lock Haven University

Mike Weber

Assistant Football Coach
B.A., Lycoming College

Steve Wiser

Assistant Football Coach
B.A., Lycoming College

ADMINISTRATIVE SUPPORT STAFF

Julie E. Adams

Help Desk Coordinator

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Administrative Assistant to Residential Life

Lisa D. Barrett

Library Technician, Technical Services

Cynthia Bezilla

Library Evening Proctor

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Terri L. Brewer

Biographical & Research Records Specialist

Bryant E. Brown

Security Officer

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Textbook/Supply Coordinator

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Administrative Assistant for Athletics

Wayne E. Hughes
Media Technology Coordinator

Tamara S. Hutson
Library Technician, Assistant to the Director

Zachary D. Lease
End User Support Specialist

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Executive Administrative Assistant to the Vice President
for Finance and Administration

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Network Specialist

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Systems Analyst

Kathryn M. McNamee
Faculty Administrative Assistant

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Executive Administrative Assistant to the Vice President
for College Advancement & Special Events Coordinator

Tara L. Miller
Payroll & Student Loan Coordinator

Michelle L. Murphy
Shift Supervisor, Security

Karla D. Procopio
Library Technician, Document Delivery

Wilma L Reeder
Library Technician, Serials Manager

John F. Ring
Shift Supervisor, Security

Alysha L. Russo
Library Technician, Circulation Supervisor

Diane Salamone
Coordinator of Student Computing

Mary E. Savoy
Library Technician, Archives

Brenda J. Schmick
Gift Reporting & Records Specialist

Richard B. Seymore
Network Specialist

Debbie M. Smith
Faculty Administrative Assistant

Marilyn E. Smith
Print Shop Coordinator

Dawn M. Sones
Mail Services Coordinator

Barbara J. Stevens
Faculty Administrative Assistant

John C. Stockdale
Security Officer

Mary L. Strassner
Cashier & Bookkeeper

Sheran L. Swank
Faculty Administrative Assistant

Melanie J. Taormina
Foundation Relations Officer &
Library Technician, Archives, Special Projects

Donna A. Weaver
Administrative Assistant for
Student Programs and Leadership Development

Jean C. Wool
Executive Administrative Assistant to the Vice President
for Student Life

ALUMNI ASSOCIATION

The Lycoming College Alumni Association has a membership of over 15,000 men and women. It is governed by an Executive Board comprised of 32 members-at-large representing various class years, geographic areas, and affinity groups; the current presidents and immediate past presidents of the senior class and Student Senate also sit on the Board.

“As an off-campus constituency, the Association’s purpose is to seek ways of maintaining an active and mutually beneficial relationship between the College and its alumni, utilizing their talents, resources, and counsel to further the objectives and programs of Lycoming College” [Lycoming College Alumni Association Constitution].

All former students of Williamsport Dickinson Seminary and all former students who have successfully completed one year of study at Williamsport Dickinson Junior College or Lycoming College are considered members of the Association.

The Director of Alumni Relations manages the activities of the Alumni Office, which is responsible for keeping alumni informed of and engaged with the programs, growth, and activities of the College and the Alumni Association through regular publications, periodic mailings, and the alumni website (www.lycoming.edu/alumni). Arrangements for Homecoming, reunions, regional events, Family Weekend and Alumni Weekend are coordinated through the Office of Alumni Relations. The Alumni Office works closely with the other departments within the Division for College Advancement: Development and College Relations.

Communications to the Alumni Association Executive Board should be addressed to alumni@lycoming.edu or the Office of Alumni Relations.

ALUMNI ASSOCIATION EXECUTIVE BOARD

OFFICERS

Dr. Heather Duda '98 – Past President
Clark Gaughan '77 – President
Christine (Colella) Zubris '04 – 1st Vice President
Wendy (Park) Myers '89 – Treasurer
William Hessert '85 – Secretary

Brian Belz '96
Dr. Kimberly (Lazar) Bolig '79
Alexis Bortle '06
Jamie (Rowe) Brown '08
Andrew A. Bucke '71
Joseph Bunce III '63
James Burget '72
John Casciano '05
Lindsay (Martin) Courteau '07

Anne Marie DiSante '06
Austin Duckett '02
Christina Faust '09
Richard H. Felix '56
Dr. William J. Gallagher III '70
W. Clark Gaughan '77 (**Past President**)
Rev. Robert Graybill '73
Amilcar Guzman '08
Paul Henry '66
S. William Hesser '85 (**Secretary**)
Jordan Hollander '10
Dr. Joanne Hullings '79 (**Vice President**)
CAPT. John Lea III '80
Robert Martin '95
Andrea (Duncan) Mitcheltree '01 (**Treasurer**)
Wendy (Park) Myers '89
April (Sparks) Orwig '98
Mary Louise Paucke-Lovell '97
Russell Rabadeau '04
CAPT. Richard Raudabaugh, USN Ret. '60
Michael Ruddy '05
Neil Ryan '97
John Wilson '67
Christine (Colella) Zubris '04 (**President**)

Student Senate and Senior Class Presidents and Past Presidents

Greg Vartan '15
Matthew Ruth '14
Brandon Sellers '13

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Please address specific inquiries as follows:

Director of Admissions:

Admissions; requests for publications

Treasurer:

Payment of bills; expenses

Director of Financial Aid:

Scholarships and loan fund; financial assistance

Dean of the College:

Academic programs; faculty; faculty activities; academic support services

Assistant Dean for Freshmen:

Freshman Seminar; freshman academic concerns

Dean of Student Affairs:

Student activities; residence halls; religious life; health services

Registrar:

Student records; transcript requests; academic policies

Career Services :

Career counseling; employment opportunities

Vice President for Development:

Institutional relations; annual fund; gift programs

Athletic Director:

Varsity Sports

Director of Alumni and Parent Programs:

Alumni information; Homecoming; Family Weekend activities

Director of College Relations:

Public information; publications; sports information; media relations

All correspondence should be addressed to:

Lycoming College

700 College Place

Williamsport, PA 17701-5192

The College telephone number is (570) 321-4000

<http://www.lycoming.edu>

Visitors

Lycoming welcomes visitors to the campus. If you would like a guided tour, call the Office of Admissions (570) 321-4026 before your visit to arrange a mutually convenient time.

Toll Free Number 1-800-345-3920

e-mail: admissions@lycoming.edu

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Director of Human Resources
Lycoming College
112 Long Hall
Williamsport, PA 17701
(570) 321-4309