

LYCOMING COLLEGE

CHOICES

THE ACADEMIC CATALOG

1994-1995



THE MISSION

The mission of Lycoming College is to provide a distinguished baccalaureate education in the liberal arts. This is achieved within a coeducational, supportive, residential setting through programs that develop communication and critical thinking skills; foster self-awareness while increasing receptivity to new concepts and perspectives; explore literary and scientific traditions; cultivate an aesthetic sensibility; elicit social responsibility; promote racial inclusiveness, gender equality, and an appreciation of cultural diversity; and produce leadership for the institutions of society. Each student is encouraged to develop and strengthen virtues and traits of character that enable, ennoble, and emancipate the human spirit while deepening commitment to those values that undergird civilization.

Fully accredited, Lycoming is a member of the Middle States Association of Colleges and Schools, and the University Senate of The United Methodist Church. It is a member of the Association of American Colleges and Universities, the Pennsylvania Association of Colleges and Universities, the Commission for Independent Colleges and Universities, the National Commission on Accrediting and the National Association of Schools and Colleges of The United Methodist Church.

Also, the Department of Nursing is accredited by the National League for Nursing. The Department of Chemistry is approved by the American Chemical Society to certify upon graduation those students who meet or exceed the requirements established by the Society for membership.

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The general regulations and policies stated in this catalog are in effect for the 1994-95 academic year. Freshmen beginning their first terms at Lycoming College in the fall of 1994 or the spring of 1995 are thereafter governed by the policies stated in this catalog.

If changes are made in subsequent editions of the catalog to either general requirements or major requirements, students have the option of following their original program or a subsequent catalog version, but 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.

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

1994 - 1995

	Fall Semester	Spring Semester
Bills are due	August 12	December 16
Orientation of new faculty	August 25	
Residence halls open for freshmen	August 26 at 8 a.m.	January 8 at Noon
Residence halls open for upperclassmen	August 28 at 8 a.m.	January 8 at Noon
Classes begin first period	August 29	January 9
Processing of drop/add begins	August 29	January 9
Re-registration fee of \$25 applies after this date	September 2	January 13
Last day for drop/add	September 2	January 13
Last day to elect audit and pass/fail grades	September 2	January 13
Last day for submission of final grades for courses for which Incomplete grades were recorded in Spring, May, and Summer terms	October 7	
Last day for submission of final grades for courses for which Incomplete grades were recorded in fall semester		February 17
Mid-semester deficiency reports due in Registrar's Office at noon	October 17	February 24
Residence halls close at 9 p.m. for spring recess		February 24
Residence halls open at 8 a.m.		March 5
Classes resume first period after spring recess		March 6
Enrollment deposit deadline		March 24
Preregistration: Phase I	November 2	March 29
Preregistration: Phase II	November 14,15,16	April 12, 13

		Fall Semester	Spring Semester
Last day to withdraw from courses		October 28	March 17
Last days to withdraw from half semester courses.	1st 7 weeks 2nd 7 weeks	September 28 November 16	February 8 April 5
Residence halls close at 9:00 p.m. for Thanksgiving recess		November 22	
Residence halls open at 8 a.m.		November 27	
Classes resume first period after Thanksgiving		November 28	
Final examinations begin		December 12	April 24
Semester ends at 5:00 p.m.		December 16	April 28
Residence halls close at 9:00 p.m.		December 16	April 28

	SPECIAL SESSIONS		
	May Term	Summer Session #1	Summer Session #2
Residence halls open noon - 5 p.m.	May 7	May 7	June 18
Classes begin	May 8	May 8	June 19
Last day for drop/add	May 9	May 10	June 21
Last day to elect audit and pass/fail grades	May 9	May 10	June 21
Last day to withdraw from courses	May 24	June 1	July 13
Term ends	June 2	June 16	July 28
Residence halls close at 4:00 p.m.	June 2	June 16	July 29

Special dates to remember:

Freshman Seminar. August 26,27,28
 New Student Convocation. August 26
 Labor Day (classes in session). . . September 5
 Science SaturdaySeptember 24
 Homecoming Weekend. October 7, 8, 9
 Long Weekend (no classes) . .October 14, 15, 16
 Admissions Open House. October 22
 Parents Weekend. October 28, 29, 30
 Admissions Open House. November 12
 Thanksgiving recess Nov. 22 - Nov. 27

Admissions Open House. February 18
 Spring recess. February 24 - March 5
 Good Friday (no classes). April 14
 Accepted Students Day. April 2
 Honors Convocation. April 9
 Baccalaureate. May 6
 Commencement. May 7
 Memorial Day (no classes). May 29
 Independence Day (no classes). July 4

WELCOME TO LYCOMING COLLEGE

Lycoming College is a small liberal arts college 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.

In 1992 *U.S. News and World Report* recognized Lycoming as one of the top ten small, regional colleges in the United States. It is something that Lycoming alumni have quietly known for years. The reasons are simple.

All of Lycoming's resources and faculty are dedicated to the undergraduate education of just 1500 students. Classes are small and all faculty members teach. With a 15 to 1 ratio of students to faculty, classes of five or ten 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.

Lycoming students are superbly prepared to meet the challenges of life through an academic program that includes both breadth of study in the humanities, social sciences and natural sciences and depth of study in at least one area of concentration.

Those areas of concentration include bachelor of arts programs in 32 major fields, a Bachelor of Fine Arts degree in sculpture, and a Bachelor of Science degree in nursing.

Those who intend to continue in medicine, dentistry, law, the ministry or teaching will find excellent preprofessional preparation. Through a number of cooperative programs with other colleges and universities, Lycoming students can study engineering, forestry, environment, podiatric medicine,



optometry, and medical technology—while still enjoying the benefits of a small college experience. They can also study abroad or spend a semester in Washington, D.C., or New York City through a number of other cooperative 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, mass 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.

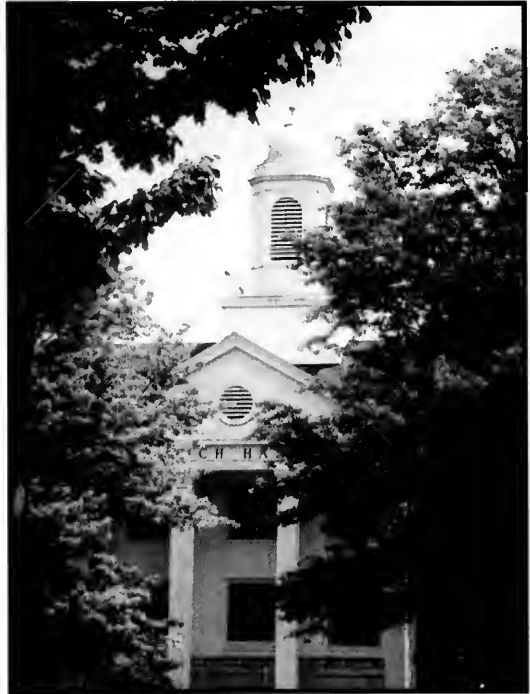
The quality of campus life is enriched by a variety of extracurricular activities in which Lycoming students gain valuable leadership training.

Students produce a weekly newspaper, run the campus radio station, edit a yearbook and a literary magazine, 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.

Student athletes can try out for 17 different varsity sports (9 for men, 8 for women) or participate in the College's strong intramural program.

All students are admitted free to the Lycoming College Artist Series which has brought The New York City Opera National Company; such Broadway musicals as *Annie*, *Into the Woods* and *Big River*; and other artists, ranging from the Tokyo String Quartet to the Pilobolus Dance Theater. Student-run programs have brought in Gin Blossoms, C & C Music Factory, Howie Mandel, Brian Adams, and Rythm Syndicate.

Lycoming's campus lies near the historic downtown of Williamsport, a city best known as the birthplace of Little League Baseball and the site of its annual international champion-



ship. The greater metro area has a population of approximately 75,000.

The rolling hills and forestlands of northcentral 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 such metropolitan centers as 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 three name changes in the process. Sold by the Presbyterians to the Methodists (who bought it as a source of revenue), it is today an independent non-profit, 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 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 Indian word "Iacomie," 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

Nineteen buildings sit on Lycoming's 35-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 eight residence halls, which contain clean and comfortable single and double rooms; the student union; and the physical education/recreation center. Up-to-date facilities include the library, 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 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 America, who made the circuit through the upper Susquehanna District in 1812, the year Lycoming (then the Williamsport Academy) opened its doors.

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 chapters of Lycoming's national fraternities and local sororities. The self-contained units contain sleeping rooms, a lounge, 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 the health and counseling services, campus security, coordinator of residence life, and building and grounds. The Academic Resource Center is located in the north lounge on the first floor. It is operated by peer tutors and professional staff during specified hours Sunday through Friday.

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.

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.

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 Arena Theatre and Laboratories, and the faculty office building.

John G. Snowden Memorial Library (1968) — The library is named after the late state senator John G. Snowden. An active instruction program acquaints students with academic library strategies and supports their specific research in each discipline studied. Students become familiar with traditional methods of research as well as new information technologies utilizing computerized CD-ROM and on-line searching. The collection includes more than 160,000 volumes, approximately 1100 periodical titles, and a strong reference section suitable to an undergraduate education. The Snowden Memorial Library also serves as a partial depository for U.S. government publications and houses the archives of the Central Pennsylvania Conference of the United Methodist Church and the College archives.

Art Gallery (1980) — Located in the north-west corner of the first floor of the John G. Snowden Memorial Library, the gallery contains exhibits year-round, including shows of student work.

College Computer Center (1969) — Located in the lower level of the library building, the center houses a Hewlett Packard 827S which is used for administrative computing and an IBM RS6000 which is used for academic computing.

Computer Graphics Lab (1993) — This computer lab features state-of-the-art Macintosh graphic stations equipped with animation, photographic imaging, and paint and draw programs for commercial design students, along with desktop publishing and a number of other programs for general use. The programs are updated annually.

Nursing Skills Laboratory (1983) — Located in the lower level of the Academic Center, it is a replica of a modern hospital ward, complete with 10 simulated work stations, a nurses' station, an intensive care unit and all the medical equipment used by nurses.

Wendle Hall (1968) — Named after the George Wendle family, a College benefactor, this building contains 21 classrooms, the psychology laboratories, three computer laboratories with 50 IBM terminals available for use, and spacious Pennington Lounge, an informal meeting place for students and faculty.

Arena Theatre and Laboratories (1968) — The 204-seat thrust-stage theatre is one of the finest in the region. It includes projection facilities, scene and costume shops, a make-up room, and a multiple-use area known as the Down Stage, where one-act experimental plays are performed. The language, business, mathematics, and physics laboratories are situated on the upper floors. The Detwiler Planetarium is located on the ground floor.

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

Fine Arts Center (1923, renovated 1983) — Contains studios, sculpture foundry, woodshop, printmaking shop, classrooms, lecture hall, offices.

Photography Laboratory (1984) — Located in the lower level of the Fine Arts Center, it contains all the materials and equipment of any commercial laboratory.

Mass Communication Center (1987) — The focal point of the facility is a fully equipped broadcast quality television studio and control room. The building also houses two editing rooms, a classroom, 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 and 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, the United Campus Ministry Center, as well as a recital hall, music classrooms, practice studios, an electronic-music studio and faculty offices.

Administration Buildings

Drum House — Built in 1857 as a rental property, 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 twenty-eight 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 for the President, Dean, Treasurer, Dean of Student Affairs, Registrar, Alumni and Parent Programs, College Relations, Institutional Advancement, Publications, and Financial Aid. It includes a reception area and the printing and bulk mail 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 Alumni Lounge.

Wertz Student Center (1959) — Named after D. Frederick Wertz, President (1955-1968), it contains the main and private dining rooms, Burchfield Lounge, a recreation area, game rooms, Jack's Corner, bookstore, post office, student activities office, Career Development 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.

ADMISSION TO LYCOMING

Lycoming College welcomes applications from prospective students regardless of age, sex, race, religion, financial resources, color, national or ethnic background.

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 foreign 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 SAT 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 July 31st of the year in which studies are to begin. Applications for the spring semester are accepted from the preceding May 1st through December 15th. A limited number of applications may be considered on a space-available basis up to one month prior to the beginning of a semester.



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 the completed Lycoming College Admission Application.
- 2) Submit the non-refundable \$25 application fee.

- 3) Provide official transcripts of all high school and post-secondary school studies (whether or not completed).
- 4) Submit official results of the Scholastic Aptitude Test (SAT) or the American College Test (ACT).

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 2.0 (on a 4 point scale) in transferable courses at the post-secondary institution(s) attended.

Transfer applicants must complete each of the following steps:

- 1) Complete and return application with the \$25 application fee.
- 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 credit hours must also submit high school transcripts.

- 3) Submit the Lycoming Transfer Form (it will be sent to you upon application).

Applicants may transfer up to 64 semester credits of lower-division coursework, and up to 32 semester credits of upper-division course work for a total of 96 credits. Students must complete the final 32 credits of their degree program at Lycoming College.

Additional information regarding the transfer of college credit appears on page 27.

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 completed Lycoming College Admission 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 500, or comparable evidence of English language fluency.
- 5) 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. \$20,000. Summer living expenses (May through August) average an additional U.S. \$4,000, and are not included in \$20,000 amount.

Note To All Students:

- 1) If there is additional information that would be helpful to the Admissions Committee in reviewing your application, please indicate it on a separate piece of paper.
- 2) If you are 24 or older, you need only complete the unshaded sections of the application. If you have not taken the SAT or ACT assessment, that requirement may be waived.

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. Nonresident, commuting students are required to submit a \$100 Tuition Deposit. Resident students are required to submit the \$100 Tuition 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 after May 1st for the following fall semester, and December 1st for the following spring semester.

Student Orientation

Incoming freshmen are required to attend one of three summer orientation sessions with at least one parent before they enroll in the fall. Upperclass transfer students are invited to a separate session. The purpose of the program is to acquaint the new students and their parents 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 or (717)321-4026, or write Office of Admissions, Lycoming College, Williamsport, PA 17701.

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 1994-95

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 two weeks prior to the start of classes for the semester as indicated on the semester bill.

	Per Semester	Per Year
Fees		
Tuition	\$6,950	\$13,900
Room Rent	\$1,125	\$2,250
Board	\$1,025	\$2,050
Total	\$9,100	\$18,200

One-Time Student Fees

Application Fee.....	\$25
Admissions Deposit.....	\$100
Contingency Deposit.....	\$100
Room Reservation Deposit.....	\$100

Part-Time Students Fees

Application Fee.....	\$25
Each Unit Course.....	\$1,740

Additional Charges

Enrollment Deposit for Returning Students..	\$100
Activity Fee	\$60
Applied Music Fee (half-hour per week per semester).....	\$175
Cap and Gown Rental.....	prevailing cost
Laboratory Fee per Unit Course..	\$20 to \$160
Reregistration Fee.....	\$25
Parking Permit (for the academic year)....	\$20
Practice Teaching Fee (payable in junior year).....	\$400
School Nurse Fee	\$400
R.O.T.C. Uniform Deposit (payable at Bucknell University.....)	\$75
Transcript Fee.....	\$3*
Placement Retest Fee.....	\$25
Single Room Charge.	additional charge of \$450 per semester.

The tuition covers the regular course load of twelve to sixteen credits each semester. Resident students must board at the College unless, for extraordinary reasons, authorization is extended for other eating arrangements. If a double room is used as a single room, there is an additional charge of \$450 per semester. The estimated cost for books and supplies is up to \$500 per year, depending on the course of study. Special session (May term and summer term) charges for tuition, room, and board are established during the fall semester.

**\$3 for 1 transcript; \$1 for each additional copy ordered in the same request. Transcripts provided free to currently-enrolled students*

Entry Fees and Deposits

Application Fee — All students applying for admission must submit a \$25 application fee. This charge defrays the cost of processing the application and is nonrefundable.

Admission Deposit — After students have been notified of their admission to Lycoming, they are required to make a \$100 Admissions

Deposit to confirm their intention to matriculate. Students seeking residence must submit an additional \$100 Room Reservation Deposit. All deposits are applied to the general charges for the first semester of attendance. After May 1, deposits are nonrefundable.

Contingency Deposit — A one-time deposit of \$100 is required of all full-time students as a guarantee for payment of damage to or loss of College property, for library and parking fines, or similar penalties imposed by the College. The balance of this deposit is refunded after all debts to the College have been paid, either upon graduation or upon written request submitted to the Registrar two weeks prior to voluntary permanent termination of enrollment. (See page 29.)

Enrollment Deposit — An 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 and is non-refundable after May 31.

Partial Payments

For the convenience of those who find it impossible to follow the regular schedule of payments, arrangements may be made with the College Bursar for the monthly payment of College fees through various educational plans. Additional information may be obtained from the Treasurer's Office or Admissions Office.

Refunds for Students Who Withdraw

Room rent is not refundable after classes begin. Tuition and board fees are refunded to students who officially and voluntarily withdraw from the College according to the following schedule. (Comparable schedules apply to May and summer terms.)

Period of Withdrawal	Refund %	Charge %
During the first week of the semester	80	20
During the second and third week	60	40
During the fourth and fifth week	40	60
During the sixth and seventh week	20	80
After seven weeks	0	100

- *Tuition and/or lab fees are not refundable for individual courses dropped after the drop/add period ends*
- *No refunds are given to students who are suspended for disciplinary reasons.*
- *Exception: If you are a student attending Lycoming for the first time and receiving federal student aid, federal regulations may mandate a slightly different withdrawal deadline and method of prorating tuition, room and board charges. Contact the Business Office for further information.*

The date on which the Dean of the College approves the student's withdrawal form is considered the official date of withdrawal. Charges are levied for services provided after withdrawal.

Lycoming scholarships and grants are applied during the fall and spring semesters on the same basis as the tuition charges. If a withdrawing student is charged 60% of the tuition, he/she will receive 60% of the scholarship or grant. Government financial aid is adjusted according to federal and state guidelines.

Room charges, which are established on a semester basis, and special charges such as laboratory fees, are not refundable if a student leaves the College prior to the end of the semester.

Full-time students who, after reducing their course loads, continue to be enrolled for 12 or more semester hours are not eligible for a refund of tuition for an individual course. Similarly, students who register for extra

hours in excess of 16 hours per semester and who later reduce their loads are not eligible after the fifth day of the semester for a refund of the fee charged for overloads. Charges will be recalculated for students who enroll full-time and subsequently assume part-time status by reducing their loads below 12 hours during the drop/add period. The assumption of part-time status normally involves a substantial reduction of financial aid since most financial aid programs do not extend eligibility to part-time students.

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.

FINANCIAL AID

NOTE: A more detailed explanation of Lycoming College financial aid programs, policies and procedures is contained in the student consumer's guide available through the Office of 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.

It is important to submit financial aid applications after January 1st, as appropriate income information becomes available, but

before April 1. Although applications may be filed later, applicants can only receive consideration for remaining available funds and normally will not receive full funding of his or her eligibility.

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 Lycoming Financial Aid Application (LFAA). Return the completed application to the Financial Aid Office.
2. When completed, send signed copies of the student's and parent(s) Federal tax returns (1040, 1040A or 1040EZ), including all schedules, to the Financial Aid Office. The tax returns required are for the year preceding the academic year in which the student seeks assistance.
3. Fully complete and submit the Free Application For Federal Student Aid (FAFSA). Returning students should submit the Renewal FAFSA.
4. 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 listed on the FAFSA application. Students are responsible for understanding the basic eligibility requirements.

Financial Aid Satisfactory Progress Policy

To remain eligible for federal, state, and institutional financial aid, all students must maintain financial aid satisfactory progress as defined below. The financial aid satisfactory progress policy is separate and distinct from the College's academic progress policy.

Students retain eligibility for financial aid for ten (10) semesters of full-time study. However, it is the College's practice to limit

institutional grants/scholarships to eight (8) semesters of full-time study. Should students attend beyond eight semesters of full-time study, they may still be eligible for federal and/or state aid for the 9th or 10th semester.

In some instances a student may appeal academic suspension and be permitted to continue enrollment even though the student has fallen behind in credit hours or cumulative GPA (see Academic Levels and Academic Standing sections on page 31). A student who is granted an academic appeal may continue to receive financial assistance only if the student meets the minimum qualitative (GPA) and quantitative (credits completed) requirements listed below:

End of Semesters	Min. Cum. GPA	Min. Cr. Completed
1	1.5	10
2	1.6	20
3	1.7	34
4	2.0	48
5	2.0	61
6	2.0	74
7	2.0	88
8	2.0	102
9	2.0	115
10	2.0	128

Students who fail to successfully complete the minimum number of credits and/or who fail to meet the minimum cumulative GPA requirement will be placed on financial aid probation. This allows one additional semester of course work to bring the academic record up to minimum standards. Failure to meet the stated minimum after the probation period will result in a suspension of all (federal, state, and institutional) financial aid until the standards are met.

Financial aid satisfactory progress is measured annually and cumulatively by the Office of Financial Aid. Official notification of probation or suspension is made by the Office of Financial Aid. Students wishing to appeal his or her suspension of aid, and who have legitimate reason for doing so (e.g. illness),

must put their request in writing to the Director of Financial Aid at least two weeks prior to the start of the semester for which the exception is sought. Acceptance of an appeal is only valid for determining eligibility for financial assistance and has absolutely no bearing on any determination made by the Registrar and/or Academic Standards Committee.

College Scholarships & Grants

NOTE: Lycoming Scholarships and Grants (including Endowed and Restricted College funds) are awarded only to eligible students who are full-time and degree-seeking. Students already possessing a bachelor's degree are ineligible for scholarships, grants and institutional loans. Refer to the student consumer's guide for a more detailed explanation of eligibility requirements for all Lycoming programs.

Lycoming Academic Scholarships of \$2,000 to \$5,000 may be awarded to students who rank in the top 30% of their high school graduating class and have a combined SAT score of 1000 or above. Scholarships of \$2,000 to \$4,000 may be awarded to students who rank in the top 20% of their high school graduating class and have a combined SAT score of 950 to 990. Scholarships of \$3,000 may be awarded to students who rank in the top 10% of their high school graduating class and have combined S.A.T. scores of 900 to 940. Renewal of all scholarships requires a minimum cumulative GPA of 3.00.

Valedictorian Scholarships are academic scholarships of \$7,500 and may be awarded to students who rank first in their graduating class as certified by their high school guidance counselor. Renewal requires a minimum cumulative GPA of 3.00.

Salutatorian Scholarships are academic scholarships of \$7,500 and may be awarded to students who rank second in their graduating class as certified by their high school guidance counselor. Renewal requires a minimum cumulative GPA of 3.00.

Departmental Scholarships are academic scholarships of \$7,000 and may be awarded to students who rank in the top 10% of their graduating class and have a combined SAT score of at least 1150. An interview with a department chairperson is required prior to March 1, before the first semester of enrollment, and the student must be approved by the chairperson in order to receive the scholarship. Students that meet the SAT and class rank requirements but do not interview for the award, or are not approved for the award, will receive a \$5,000 academic scholarship. Renewal requires a minimum cumulative GPA of 3.00.

Faculty Scholar Awards are academic scholarships of \$12,500 and may be awarded to students who rank in the top 10% of their graduating class and have a combined S.A.T. score of at least 1250. An interview with a department chairperson and Academic Dean is required prior to April 1, before the first semester of enrollment, and the student must be approved by the chairperson and Dean in order to receive the award. Students that meet the S.A.T. and class rank requirements but do not interview for the award, or are not approved for the award, will receive a \$9,000 academic scholarship. Renewal requires a minimum cumulative GPA of 3.00.

Art Scholarships of up to \$1,500 may be available. These scholarships are awarded on the basis of juried competition. Selection is determined by the Art Department faculty. Renewable upon continued recommendation of departmental faculty. Students must maintain a minimum cumulative GPA of 2.00 and be an Art major.

Music Scholarships of up to \$2,000 may be available. Selection is determined by departmental faculty members. Renewable upon continued recommendation of the department. Students must maintain a minimum cumulative GPA of 2.00.

Theatre Scholarships of up to \$1,500 may be available upon recommendation of departmental faculty. Students must submit a Theatre Information Card and a recommendation from a theater instructor. Renewable upon continued recommendation of the faculty. Students must maintain a minimum cumulative GPA of 2.00.

Lycoming Grant-in-Aid awards of \$200 to full tuition, depending upon financial need, may be granted to students to help meet their documented financial need. Renewal requires continued financial need as determined by Federal Methodology and/ or the financial aid director. Students should expect the Grant-in-Aid award to remain constant for each semester they are enrolled.

Ministerial Grants are awarded to dependent children of United Methodist ministers and ordained ministers of other denominations. This grant amounts to one-third of tuition for children of United Methodist ministers in the Central Pennsylvania Conference and one-fourth of tuition for all others. Students meeting the criteria for this grant and any other Lycoming Scholarship(s) will be awarded the scholarship(s)/grant that provides the highest dollar amount; both will not be awarded.

Pre-Ministerial Student Grants of up to one-fourth tuition are awarded to students preparing for the Christian ministry. Students must complete a pre-ministerial grant application available through the financial aid office. Students meeting the criteria for this grant and any other Lycoming Scholarship(s) will be awarded the scholarship(s)/grant that provides the highest dollar amount; both will not be awarded.

Two-in-Family Grants are awarded to each member of a family attending Lycoming at the same time. The amount is 10% of tuition, room and board charged by the College for resident students (for commuting students the amount is 10% of tuition only). Each family member must not be eligible for any other

financial aid program of the College. If the student is eligible for any other Lycoming aid, the student will be awarded whichever is greater.

Federal Grants

Pell Grants are made available by the federal government. Eligibility is based upon a federal formula.

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.

Paul Douglas Teacher Scholarships may be available to PA residents who rank in the top 10% of their high school class and plan to enter the elementary or secondary teaching field. Scholarships are for up to \$5,000 per year and the student must sign an agreement to teach. This program is administered by PHEAA.

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. (Refer to the last page regarding PHEAA progress requirements). 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 Subsidized Stafford Loan allows eligible Freshmen to borrow a maximum of \$2,625 annually. Eligible Sophomores may borrow up to a maximum of \$3,500 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. The student begins to repay the loan (interest and

principal) 6 months after leaving school. The interest rate for new borrowers is variable based on the 91-DAY T-BILL plus 3.1%, capped at 9%. The rate is adjusted every July 1. Loan amounts are pro-rated for less than full-time students. Eligibility is based on financial need.

Federal 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.

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.

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. The interest rate is variable but is capped at 10%. The interest rate is determined every July 1 and is equal to the bond equivalent rate of 52-week T-Bill plus 3.1%. An application is available at your bank or other lending institution.

Employment Opportunities

Federal College Work-Study Program awards provide work opportunities on campus for qualified students. Students receive pay-checks 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.

Presidential Fellowships in Music are available for selected students. Auditions and interviews are conducted annually by the Music department. A tuition stipend of \$250 is awarded for each semester the student serves as a Fellow. Recipients are expected to fulfill responsibilities assigned each semester by the Department with the primary responsibility being musical performance. Renewable upon Departmental recommendation.

Faculty Scholar Fellowships of \$1,500 may be available to students receiving the \$12,500 Faculty Scholar Award. Fellowship recipients are expected to work approximately 10 to 12 hours per week for the department sponsoring the fellowship. Renewable upon Departmental recommendation; students must also maintain a 3.00 cumulative G.P.A.

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. Application

should be made at your nearest Veterans' Administration Office.

Reserved Officers Training Corps (ROTC)

Stipends and Scholarships are available for qualified students. Contact the Financial Aid Office for more information.

Tuition Exchange Grants may be available. Lycoming College is a member of both the Tuition Exchange Program and the CICU Tuition Exchange Program. These programs are for dependent students of employees at participating institutions of higher education. Students should contact the Tuition Exchange officer at their sponsor institution for information regarding sponsorship. Students are expected to apply for all federal and state grants. If the student receives a federal or state grant, those amounts may be applied toward room and board charges if the student resides in the dorms. If the student commutes, the grant amount is equal to tuition less federal and state grants.

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. Normally, seven \$500 scholarships are awarded each year. 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. The maximum amount which may be borrowed for an academic year is \$1,000 subject to the availability of the funds. 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.

Endowed & Restricted College Funds

These funds are thoughtfully and generously provided by alumni and friends of Lycoming College. Most awards are based on documented financial need, in combination with other criteria, and are awarded through the Financial Aid Office.

Franklin L. Artley Scholarship is available annually to assist a ministerial student(s).

Eph and Bess Baker Scholarship of \$6,000 is available at \$1,500 per year for four years. It is awarded annually to a full-time student who exhibits academic promise and has a permanent residence in Lycoming County. Preference is given to students with demonstrated financial need. A minimum cumulative GPA of 3.00 is needed for renewal.

Case Memorial Scholarship is awarded annually to a student(s) in good academic standing with demonstrated financial need.

Mary Strong Clemins Scholarship is available for a student(s) preparing for Christian ministry or for deaconess work or its equivalent in the United Methodist Church.

C. Luther Culler Memorial Scholarship is awarded to a student based on scholarship.

Dewitt-Bodine Scholarship is awarded to the highest-ranked student in the graduating class each year from the Hughesville High School who attends Lycoming College. The recipient is designated by the Hughesville Guidance Counselor. The scholarship amount is \$2,200

and is credited at \$550 per year for four years attendance at Lycoming.

Clara Kramer Eaton Scholarship is awarded to the highest-ranked student in the graduating class from Line Mountain High School who attends Lycoming College. The recipient is selected by the high school's guidance office. The scholarship is \$400 per year for up to four years of attendance at Lycoming.

Richard W. Gieniec Memorial Scholarship is available to a full-time student in good academic standing who has demonstrated financial need and who has the prospect of contributing positively to the college community. Preference is given to a student who meets any or all of the following criteria: 1) resident of Lancaster County, Pa.; 2) learning-disabled; 3) soccer player.

Beryl Kline Glenn Scholarship is periodically awarded to a student majoring in music.

Mr. and Mrs. David Grove Scholarship is periodically awarded to a needy student studying faith and ministry.

Robert I. Hamilton Scholarship is awarded through the generosity of Mr. Hamilton, to a needy student.

Sarah and Elsie Harding Scholarship is awarded to a student(s) in good academic standing with demonstrated financial need.

Esther M. Heefner Scholarship is available to help a needy and deserving student(s).

Edward P. and Jeanette Fuller Heether Scholarship is available to help needy and deserving students who are in good academic standing.

James A. Heether Scholarship is available based on financial need. Priority will be given to a chemistry major.

R. Lee Hite Memorial Scholarship is awarded to a student in economics, engineering, business or a related field of study and

who is from one of the 29 counties in Pennsylvania and 2 counties in New York served by The Hite Company.

The Helen Clarke Holder Scholarship is available to student(s) with demonstrated financial need who are preparing to teach. Mrs. Holder, a master teacher and a member of the Class of 1933, established the scholarship through a bequest.

George W. Huntley Jr. Scholarship of \$900 is available to help defray the tuition and expenses for the first year only of any undergraduate of Cameron County High School. The selection is made by the Superintendent of Schools, Cameron, Pa. In case there is no applicant from Cameron County, the scholarship may be awarded to any student preparing for the Christian Ministry.

Elizabeth S. Jackson Scholarship may be available to the student who attains the required rank highest in department and scholarship in the sophomore class.

Paul and Mildred John Scholarship was established in 1990 by Mr. and Mrs. John to recognize the significant contributions their friend, Robert L. Shangraw '58, has made to the betterment of Lycoming College. This endowed scholarship provides annual income for full-time students who are pursuing a major in any of Lycoming's business programs. Preference is given to candidates who demonstrate financial need, are children of employees of the Ritz-Craft Corporation of Pa., Inc. and/or residents of Union County, Pa.

Amos Johnson Scholarship is available for the education of a ministerial student of limited means.

Morgan V. Knapp Music Scholarship Fund is awarded as follows: 40% to financially needy students, in satisfactory academic standing, who are majoring in music or who are pursuing courses in vocal music, key-

board, strings, and/or other musical instruments in that priority order; 20%, as needed, on the recommendation of the Music Department faculty, to students, who in their opinion should be encouraged to study privately in the areas of voice, keyboard, strings, and/or other musical instruments in that priority order; 20% to the College Tour Choir Fund and 20% to the Band Tour Fund.

John R. and Leona Fisher Knaul Scholarship is awarded annually to a student(s) in good academic standing with demonstrated financial need.

Charles J. and Jean M. Kocian Scholarship is awarded annually to an upperclass student(s) in good academic standing with demonstrated financial need.

LAMCO Scholarship may be available to students with the following selection priorities: 1) children and grandchildren of employees of The Grit; 2) graduates of high schools of the city of Williamsport; 3) graduates of high schools of Lycoming County.

James G. and Fern S. Law Scholarship was established in 1990 by Mrs. Fern S. Law as a memorial tribute to her husband, James Graham Law, who served Lycoming College as a member of the Board of Trustees from 1965 to 1986. Annual income is to be awarded to a full-time student from the Bloomsburg area who shows academic promise and demonstrates financial need.

Doris Lennon Scholarship is available to help dedicated young students, in need of financial assistance, who are preparing for church work.

Lenore M. Losch Scholarship is awarded annually to a student in good academic standing with demonstrated financial need. Preference may be given to Lycoming County students preparing to teach.

Lycoming County Medical Society Auxiliary Scholarship is awarded annually to a student in good academic standing with demonstrated financial need, who is majoring in Nursing or another pre-professional program in health care. Preference will be given to non-traditional single parents.

The Lycoming County Scholarship is awarded annually to students who permanently reside in Lycoming County, with preference given to entering freshmen who demonstrate financial need.

Mary E. McLane Endowed Nursing Scholarship is awarded to a junior or senior nursing student at Lycoming College who has demonstrated financial need.

James E. and Bernadine Decker Nancarrow Scholarship is awarded to a student(s) in good academic standing with demonstrated financial need. Preference may be given to students from Lycoming County.

Earl Nearoof Memorial Scholarship is available to assist young students entering Christian work with preference given to students from the Warrior Mark and Tyrone, Pa., areas.

Fred A. and Elizabeth W. Pennington Endowed Scholarship is awarded to financially needy students who are chemistry majors and plan to pursue a career using their chemistry training.

Polcyn Loan Fund was established in 1986 by Dr. Kenneth A. Polcyn '58, in honor of his parents. Loan awards may be made to student athletes who are in good academic standing and who have documented financial need.

John A. Radspinner Scholarship created by his former students to honor and recognize this beloved faculty member's thirty years of service to Lycoming College and its students. This endowed scholarship is awarded to chemistry majors with a preference but not limited to students who demonstrate financial need.

Mort Rauff Memorial Scholarship is awarded to a deserving student in good academic standing. Preference is given to an individual who demonstrates financial need and who is an active member of the swimming team.

Ada Remley Memorial Scholarship is an award available to a currently-enrolled female who has 1) earned a minimum cumulative grade point average of 3.25; 2) completed a minimum of 5 full-time semesters or the equivalent (72 semester hours); 3) has an intended graduation date during the coming academic year (January, May or September); and 4) who has not already been a recipient of the scholarship.

Jennie M. Rich Memorial Scholarship is available for worthy and needy students preparing for the Christian ministry or deaconess or missionary work.

Margaret Rich and Elmer B. Staats Scholarship of up to \$1,000 is available to an academically-talented student who intends to pursue a career in public service. Preference is given to students with documented financial need.

Leonard H. Rothermel Scholarship is awarded to financially needy students in satisfactory academic standing, with primary preference given to Treverton residents and secondary preference given to Line Mountain School District Area students.

J. Milton Skeath Memorial Scholarship is available for a psychology major.

Robert Barry Spieth Memorial Scholarship is awarded to a student who demonstrates financial need with preference given to a Business Administration major who is an active member of Sigma Pi. Minimum cumulative GPA is 2.00.

Albert R. and Judith L. Styracula Scholarship is awarded to a Dundee, N.Y. Central High student of scholastic ability enrolling in one of Lycoming's four-year programs. Second

consideration will be given to dependents of Foodcraft, Inc. employees (employed from 1972 through 1988). Third consideration will be given to any qualified resident of Snyder or Lycoming County in Pa. or Yates County in N.Y.

Brandy Lee Sudol Memorial Scholarship is awarded annually to a student in good academic standing with demonstrated financial need. Preference will be given to nursing majors from the Danville, Pa., area.

Bishop D. Frederick Wertz and Betty Rowe Wertz Scholarship is awarded annually to a student(s) in good academic standing with demonstrated financial need.

Andrew J. and Mary Wood White Scholarship is awarded with preference to a freshman female with demonstrated financial need, based on scholastic achievement and academic promise, who is pursuing courses in the pure liberal arts.

Samuel Willard Memorial Scholarship is awarded to a junior or senior student who is in need of financial assistance in order to complete his or her degree.

Hiram and Elizabeth Wise Scholarship is available for a ministerial or missionary student who, because of present circumstances and promise of future usefulness, is deemed worthy of the award.

Dr. Paul E. Witmeyer Memorial Scholarship is available for a student interested in education.

Donald C. Wolfe Memorial Scholarship is available for a worthy ministerial student.

William Woodcock Scholarship is available annually to the full-time, degree-seeking student who attains the required rank second in scholarship and deportment in the sophomore class.

Raymond A. and L. Marie Zimmerman Scholarship is available for the benefit of students preparing for the Christian ministry.

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 composite of programs, offices, and staff including:

- Career Development Center
- Campus Ministry
- Commuter Student Affairs
- Counseling Services
- Greek life
- Health Services
- International student advising
- Intramural sports, recreation, and leisure time activity
- Judicial affairs
- Residence Life
- Safety and Security
- Student activities and leadership development

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

Career Development Center

The Career Development Center provides services which are designed to help students identify their abilities and interests, set realistic goals, and plan academic programs to meet these goals. Counseling for Lycoming students begins in the freshman year.

Individual and group counseling focus on teaching students how they can learn about different career fields and present themselves to potential employers in a positive and effective manner. Helping students make appropriate and meaningful connections between college and career is a goal of the Career Development Center.

Counseling Services

Counseling Services assist students to ensure that their college experience is prosperous and rewarding. Professional, confidential services are provided free of charge to Lycoming students. Counseling Services are designed to facilitate one's self-understanding as well as to provide support for students' adjustment and transition to college life. Counseling Services also provide advocacy to students with learning differences and conducts outreach programs for the entire college community.

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 without charge on a daily basis Monday-Friday 8:00 a.m.-4:30 p.m. during the fall and spring semesters. The office is staffed by a full-time registered nurse with a physician available on a 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).

Residence Life

Lycoming College is first and foremost a residential college with approximately 75% of the student body residing on campus. Students under the age of 23 who do not live at home with a parent or legal guardian are required to live on campus and subscribe to the board plan in the dining room. As students are accepted to the college, they will receive residential

literature and information about the various housing program options.

As a residential campus, Lycoming students are encouraged to become involved in social, cultural, extra and co-curricular activities. It is through this type of involvement that students have opportunities to live and learn in a residence hall and where they are expected to become more independent and self-disciplined.

The residence halls are staffed with upper class students who serve as Resident Advisor (RA) staff. These para-professional students are especially selected and trained to assist residents in all aspects of college life and community living. In addition, a residence hall council, an elected group of students, is responsible for providing activities and programs.

The eight on-campus residence halls offer several different living options for students. First year students will reside in either Skeath or Asbury Halls. Here the opportunity exists for the class to begin developing identity and promote unity. The other six halls offer opportunities for upper class students to choose from several housing options, including: a co-educational living experience; single sex living; floors for special interest groups to occupy including fraternities and sororities, non-smoking environments, and contract study areas for a more structured study environment.

Students are challenged to become involved at Lycoming. Students' investment in student life outside of the classroom can be directly related to a satisfactory educational experience.

Athletics

Athletics are 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, swimming, tennis, and track and field.

Women can compete in soccer, cross country, volleyball, basketball, swimming, softball, tennis, and track and field.

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.

In addition, the College offers a very active intramural and recreation program that is open to all students. This program includes, among others, basketball, softball, water polo, beach volleyball, and flag football.

Student Activities

The Office of Student Activities offers assistance and resources for all campus activities and student organizations. Through the efforts of the student administered Campus Activities Board (CAB), extra and co-curricular programming is offered to the entire college community. CAB programming is designed to enhance the overall educational experience of students through the exposure to social, cultural, and recreational programs. Members of the staff in Student Activities also direct leadership training programs for the student government, the Interfraternity and Panhellenic Councils, the International Student Organization, the Arrow Yearbook, and all registered student organizations.

Religious Life

The United Campus Ministry, staffed by a Protestant minister and a Roman Catholic lay minister, 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, study opportunities, and personal counseling. The chaplains are an integral part of campus life and are available to students who may need support, counsel, or direction.

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 to respond to serious events on campus. 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.

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 are part of the contractual agreement students enter into when they register at Lycoming College.

Students who demonstrate an unwillingness to abide by these policies will be subject to disciplinary action which may include suspension or expulsion from the College. Students are encouraged to review the Student Handbook and Residence Hall Agreement in order to familiarize themselves with the policies governing student conduct.



ACADEMIC POLICIES AND REGULATIONS

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, and in departments that have elected to offer certain courses for the equivalent of one, two or three semester hours of credit. Furthermore, independent studies and internships carrying two semester hours of credit may be designed.

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

during the fall or spring semesters, one course for the May term, and two courses for each of the summer terms.

Students may enroll in five courses 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. 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 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. In addition, students are expected to be registered at Lycoming for their last eight courses. Requests for waivers of this regulation must be sent to the Committee on Academic Standards. Final determination of transfer credit will be made by the Lycoming College Registrar based on official transcripts only.

Credit By Examination

Advanced Placement — Entering freshmen who have completed an advanced course while in secondary school and who have taken the appropriate advanced-placement examination of the College Entrance Examination Board (CEEB) are encouraged to apply for credit and advanced placement at the time of admission. A grade of three or above is considered

satisfactory. Students should inform the Registrar's Office and their academic advisor immediately when advanced placement examinations have been taken.

College Level Examination Program (CLEP) -

Students may earn college credit for superior achievement through CLEP. By scoring at the 75th percentile or above on the General Examinations and in the 65th percentile or above on approved Subject Examinations, students may earn up to 50 percent of the course requirements for the Bachelor of Arts degree. Although these examinations may be taken after enrollment, new students who are competent in a given area are encouraged to take the examination of their choice during the second semester of their senior year so that Lycoming will have the test scores available for registration advising for the first semester of enrollment. Further information about CLEP may be obtained through the secondary school guidance office or the Office of Admissions or the Registrar at Lycoming College. Students should inform the Registrar's Office and their academic advisors immediately when CLEP examinations have been taken.

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 and 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 12th week of classes must secure a withdrawal form from the Office of the Registrar. Withdrawal grades are not computed in the grade point average. Students may not withdraw from courses after the 12th week of a semester and the comparable period during the May and summer terms.

In two-credit (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 half-semester courses with a withdrawal grade may occur within six 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 Pennsylvania College of Technology. Students may enroll for less than a full-time course load at Penn College while remaining enrolled in courses at Lycoming.

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 one or two courses are considered to be enrolled part-time; students who register for three or four courses are considered to be enrolled full-time.

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 courses, the Dean of the College reserves the right to grant or deny permission to continue to register in this category.

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 individuals who do not meet the standards of the College.

Students who wish to change from a non-degree to a degree status must reapply (with no application fee) and satisfy all conditions for admission and registration in effect at the time of application for degree status.

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 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 during the same period (currently five days) at the beginning of each semester, half-semester, or term as drop/add and pass/fail and must be completed 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 Office of the Associate Dean of the College or the Assistant Dean for Freshmen. 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 page 14 for details.

The student may also wish to review the Leave of Absence section of the *Student Handbook*.

GRADING SYSTEM

The evaluation of student performance in credit 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 twelfth week of the semester.

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

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 the quality of work done by the student.

The grade point average for the major 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 to meet the requirements for graduation. The cumulative GPA is not determined by averaging semester GPA's.

Pass/Fail

Use of the pass/fail grading option is limited as follows (this does not apply to English 105):

- Students may enroll on a P/F basis in no more than one course per semester and in no more than four courses during their undergraduate careers.
- P/F courses completed after declaration of a major may not be used to satisfy a requirement of that major, including courses required by the major 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 English 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 the 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 (with no designated minimum acceptance grade) 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 deadlines.
- 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.

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.
- A repeated course will be counted toward the total number of unsuccessful attempts.

ACADEMIC LEVELS

The following table is used to determine the academic grade level of degree candidates. See page 17 for related Financial Aid information.

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

ACADEMIC STANDING

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

Hours Completed	Cumulative GPA
less than or equal to 16	1.70
more than 16, less than or equal to 32	1.80
more than 32, less than or equal to 48	1.90
more than 48	2.00

Students who do not meet this standard will be placed on academic probation.

Students will be subject to suspension from the College if they:

- are on probation for two consecutive semesters
- achieve a grade point average of 1.00 or below during any one semester

Students will be subject to dismissal from the College if they:

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

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 Faculty Handbook* and *The Pathfinder* (the student academic handbook), copies of which are available in the library.

ACADEMIC HONORS

Dean's List

Students are admitted to the Dean's List at the end of the fall and spring semesters if they have completed at least 15 credits with other than P or R grades, and have a minimum grade point average of 3.50 for the semester.

Graduation Honors

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

<i>summa cum laude</i>	3.90-4.00
<i>magna cum laude</i>	3.50-3.89
<i>cum laude</i>	3.25-3.49

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
Freshmen Men	Blue Key
Freshmen Women	Gold Key
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

Nursing	Sigma Theta Tau
Philosophy	Phi Sigma Tau
Physics	Sigma Pi Sigma
Political Science	Pi Sigma Alpha
Psychology	Psi Chi
Social Science	Pi Gamma Mu
Theatre	Alpha Psi Omega

PRIZES AND AWARDS

Endowed Funds

William T. and Ruth S. Askey Music Prize is given to a graduating senior who is recognized for his/her proficiency as a music major.

Jack C. Buckle Award is given annually to a junior male student with high moral qualities, who has at least a 2.0 cumulative GPA and, who has made an unusual contribution to campus life through leadership in student activities.

Byron C. Brunstetter Science Award is given to a senior chemistry/biology major for outstanding achievement in chemical and biological sciences.

Class of 1907 Prize is given to the senior who has been outstanding in the promotion of College spirit through participation in athletics and other activities.

Benjamin C. Conner Prize is given to the graduating student who has done outstanding work in mathematics.

Criminal Justice Society Prize is given to the criminal justice major who has demonstrated outstanding classroom performance, a promise of leadership and service to college and community.

W. Arthur Faus Memorial Prize is given in memory of Dr. W. Arthur Faus, a former Professor of Philosophy at Lycoming College, to the graduating senior who has done outstanding work in philosophy.

Durant L. Furey III Memorial Prize is given to the senior accounting major who has shown outstanding achievement in accounting.

Gillette Foreign Language Prizes are given to senior French, German, and Spanish majors who have achieved excellence in these foreign languages.

Dan Gustafson Award, in memory of a former member of the English Department, is given to the senior English major whose analytical writing demonstrates the highest standards of literary and critical excellence.

Helen R. Hoover Community Service Prize is given annually to a graduating senior who has demonstrated a personal commitment to serving the fortunate citizens in either greater Williamsport or their own community of permanent residence.

Elisha Benson Kline Prize is given to the senior mathematics major with outstanding achievement in the field.

Charles J. Kocian Awards are given to the accounting, business administration, and economics majors who show the greatest proficiency in statistics; the mathematics major who shows the greatest proficiency in applied mathematics; the graduating senior who shows the greatest proficiency in computer science; the graduating senior who shows the greatest proficiency in operations research; the graduating senior business administration major with the highest grade point average; the graduating political science major with the highest grade point average; the graduating senior with the highest average in the class and the graduating nursing major with the highest grade point average.

Don Lincoln Larrabee Law Prize is given to the graduating student who has shown outstanding scholarship in legal principles.

The John M. Lindemuth Endowed Prize Fund, established in 1986 by Mr. and Mrs. John M. Lindemuth of Williamsport, Pennsylvania, provides annual cash awards for varsity football players who earn the highest

cumulative grade point average in their chosen field of academic study at Lycoming College. This prize is managed in compliance with current NCAA regulations concerning scholastic awards for athletes.

C. Daniel and Jeanne Little Award, presented in memory of two Lycoming alumni, is given to the outstanding student in public administration.

Phoebe R. Lyon Prize, is given to the senior who has achieved outstanding attainments in the study of English.

The Gertrude B. Madden Mass Communication Award, established in 1985 by the students of the Mass Communication Society, is presented annually to the senior mass communication major who, in the judgment of his or her peers, has best integrated academic excellence, professional development in a mass media field and contribution to campus media.

The McDowell Prize is given to the senior ministerial student who excels in scholarship, deportment, and promise of usefulness, and who declares his intention to make the ministry his life work.

The Metzler Prize is given to a junior for superior work in Junior English.

M.B. Rich Prizes are given to: the student in the freshman class who attains the highest rank in scholarship and deportment; to the two students who at a public contest excel in reading the Scriptures; and to the two students who excel in writing and delivering an original oration.

The Professor Logan A. Richmond Accounting Prize is awarded annually to a graduating senior who has done outstanding work in accounting and demonstrated exceptional proficiency in writing.

The Janet A. Rodgers Academic Award, established in honor of the founding chair of the Department of Nursing, provides an

annual \$100 award to a senior nursing student who demonstrates exceptional academic achievement and has been an active participant in health-related programs.

Mary L. Russell Award, named in honor of a professor emeritus of music, is given for outstanding musical achievement.

Nathan A. Scheib Memorial Music Fund, in memory of a friend of the College, provides financial assistance to qualified deserving students for advanced training in music.

Trask Chemistry Prize is given to the senior chemistry major who has done outstanding work in the field.

The James E. Wehr Award is presented to a student who has demonstrated a personal expertise in the subject of financial accounting.

Williamsport Rotary Club Nursing Prize
This prize is awarded to a part-time student taking courses on a regular basis in the B.S.N. program. Preference will be given to a registered nurse with the highest cumulative GPA who is also a permanent resident of the greater Williamsport community.

The Sol "Woody" Wolfe Athletic Prize is awarded annually to that participant in an authorized N.C.A.A. sport who has shown the most improvement in intercollegiate competition in his first three years in college.

Annual Prizes

American Chemical Society Award, sponsored by the Susquehanna Valley Chapter of the society, is given to the outstanding senior in chemistry.

Accounting Society Service Award is given for outstanding service to the Lycoming College Accounting Society.

American Institute of Chemists Prize, given by the Philadelphia section of the Institute, goes to a senior major with an outstanding

record of leadership, ability, character and scholastic achievement.

Arena Theatre Awards:

Performance - This award is given to the senior who has demonstrated outstanding ability in theatre performance.

Technical Theatre - This award is given to the senior who has demonstrated outstanding ability in technical theatre.

Biology Service Award is given to the student who has shown good academic work and has fostered the ideals of the department by willingness to become involved in the activities of the department.

Freshman Biology Award is given to the freshman who has obtained the highest overall average in Biology 110-111 (major biology lecture and laboratory).

CRC Press Chemistry Achievement Award is given to that freshman who has demonstrated outstanding achievement in general chemistry.

Chieftain Award, the College's most prestigious award, is given to the senior who has contributed most to Lycoming through support of school activities; who has exhibited outstanding leadership qualities; who has worked effectively with other members of the College community; who has evidenced a good moral code; and whose academic rank is above the median for the preceding senior class.

Civic Choir Award is given to the College choir member who has outstanding musical ability and who has made significant leadership contributions to the choir.

Contribution Award is awarded to the chapter who through volunteerism or philanthropic work has contributed to either or all of the area, campus, or world communities.

Elizabeth Cowles Dedication to Greek Life Award is awarded in honor of the Alpha Rho Omega advisor from 1983-1994 to the individual who has dedicated his/her time and

energy for the betterment of Greek life at Lycoming College.

Durkheim Prize is given to the outstanding senior sociology/anthropology major(s).

Bishop William Perry Eveland Prize is given to the senior who has shown progress in scholarship, loyalty, school spirit, and participation in school activities.

Excellence in Two-Dimensional Art Award is given to the outstanding senior art major in this field.

Excellence in Three-Dimensional Art Award is given to the outstanding senior art major in this field.

Excellence in Political Science Award is given to the senior political science major who has performed with excellence.

J.W. Feree Award, given in memory of the first mathematics professor at Lycoming's forerunner, the Dickinson Seminary, goes to the student most active in mathematical sciences.

Faculty Prize is given to the commuting student with satisfactory scholarship and who has been outstanding in promotion of school spirit through participation in school activities.

Freshman Academic Award is given to the freshman student(s) with the highest GPA after the fall semester.

John P. Graham Award, named in honor of a professor emeritus, is given to the senior English major who achieves the highest average in English.

Edward J. Gray Prizes are given to the graduating students with the highest and second highest averages.

Greek Man of the Year is bestowed upon the man of outstanding character within the Greek community. He is one who has contributed greatly to the Greek system as well as his chapter while at Lycoming College.

Greek Woman of the Year is bestowed upon the woman of outstanding character within the Greek community. She is one who has contributed greatly to the Greek system as well as her chapter while at Lycoming College.

The John G. Hollenback Award is given for high academic performance and outstanding service to the Business Department.

IRUSKA Awards denote membership in the society for juniors who are very active on campus.

Junior Book Award is given to the outstanding junior political science major.

The Kramer and Hoffman Associates Award is given for superior achievement in the study of federal income tax.

The Makisu Award is given for outstanding service to the college community, for dedication above and beyond the realm of one's obligations to the College.

Department of Mathematical Sciences Award is given to that student demonstrating excellence in computer programming. [Or other criterion to be specified (by the department); e.g. "outstanding scholarship"]

Ethel McDonald Pax Christi Award is given for outstanding but quiet consistency in the life of faith and the practice of Christianity, noteworthy personal integrity and humble loving compassion expressed in daily life.

Walter G. McIver Award, named after Lycoming's former choir director, is given to an outstanding and dedicated choir member who has made significant campus contributions outside of choir.

New Member Class Academic Excellence is awarded to the new member class (pledge class) who has achieved the highest GPA within the Greek system.

Most Improved Pledge Grades is awarded to the pledge class whose GPA has shown the greatest improvement within the Greek system.

Most Improved GPA for a Greek Chapter is awarded to the chapter whose entire chapter has shown the greatest improvement within the Greek system.

Department of Nursing Award for Clinical Excellence is given for outstanding achievement in the clinical setting.

Department of Nursing Faculty Award is given to the senior nursing major who best exemplifies the spirit of the profession.

Lycoming College Nursing Honor Society Research Recognition Award is given to the nursing student who has demonstrated an in-depth understanding of the research process, as evidenced by a completed research project, with formal dissemination of the results of the study.

Pennsylvania Institute of Certified Public Accountants Award is given to the senior accounting major who has demonstrated high scholastic standing and qualities of leadership.

The Penguin Award, in memory of Robert T. Guellich, II, '92, recognizes the junior student who has excelled in English, preferably with a concentration in political science, and who has contributed significantly to campus life.

Pocahontas Award is given to Lycoming's outstanding female athlete.

Psi Chi Service Award is given for contributions to the Psychology Department.

Research and Writing Prize in History is given to the student who does the best work in History 449.

Sadler Prize is given to the student with the highest achievement in calculus, foundations of mathematics, algebra, and analysis.

Senior Management Award is given to the business major whose senior management project was judged best by the Business Administration Department.

Senior Scholarship Prize in History is given to the senior major with the highest average.

Service to Lycoming Award, sponsored by the Office of Student Services, is given to students who have made outstanding contributions to Lycoming.

Frances K. Skeath Award is given to the senior with outstanding achievement in mathematics.

J. Milton Skeath Award is given for superior undergraduate achievement and potential for further work in psychology.

Sophomore Intermediate Accounting Award is given for the accounting major with the highest average in Intermediate Accounting at the end of the spring term.

The John A. Streeter Memorial Award in Economics is given to a graduating student for outstanding achievement in economics.

The John A. Streeter Memorial Award in Music is given to the College band member who has outstanding musical ability and who has made significant leadership contributions to the band.

Tomahawk Award is given to Lycoming's outstanding male athlete.

Wall Street Journal Awards: One award is given to a senior business major for excellence in the field and service to the College community, and another award is given for excellence in economics.

THE ACADEMIC PROGRAM

Lycoming College awards three different degrees: Bachelor of Arts (B.A.), Bachelor of Fine Arts (B.F.A) and Bachelor of Science in Nursing (B.S.N).

THE BACHELOR OF ARTS DEGREE

Lycoming is committed to the principle that a liberal arts education is the best hope for an enlightened citizenry. Consequently, the Bachelor of Arts degree 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.

Requirements For Graduation

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

- Complete the distribution program.
- Complete Writing Across the Curriculum Program requirements.
- Complete a major consisting of at least eight courses with a minimum grade point average of 2.0.



- Earn one year of credit in physical education. Athletic training courses may count towards this requirement.
- Pass a minimum of 32 units (128 semester hours) with a minimum cumulative grade point average of 2.0. Additional credits beyond 128 semester hours may be completed provided the minimum 2.0 cumulative average is maintained.
- Complete *in residence* the final eight courses offered for the degree at Lycoming.
- Satisfy all financial obligations incurred at the College.
- Complete the above requirements within seven years of continuous enrollment following the date of matriculation.

All exemptions or waivers of specific requirements are made by the Committee on Academic Standards.

THE BACHELOR OF FINE ARTS DEGREE

The Bachelor of Fine Arts degree is specifically designed to train professional artists. The B.F.A. in sculpture is a synthesis of three diverse forms of education: a studio art program that emphasizes the skills and concepts of the visual language, an apprenticeship that takes technical expertise as the departure point, and the scholastic method employed in both art history and the general-education component.

Requirements

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

- Complete the 12-course Art Department course of study, while achieving a minimum grade point average of 2.0 in these courses.
- Complete the distribution program.
- Complete Writing Across the Curriculum Program requirements.
- Pass a minimum of 32 units (128 semester hours) with a minimum cumulative grade point average of 2.0 in these courses.
- Complete one of the field specialization apprenticeships at the Johnson Atelier Technical Institute of Sculpture.
- Earn one year of credit in physical education. Athletic training courses may count towards this requirement.
- Complete *in residence* the final eight courses offered for the degree at Lycoming.
- Satisfy all financial obligations incurred at the College.
- Have a public exhibition of original art work and make an oral defense.

THE BACHELOR OF SCIENCE IN NURSING DEGREE

The program of study leading to the Bachelor of Science in Nursing degree is designed to prepare men and women as beginning practitioners of professional nursing, qualified for first-level positions in a variety of health settings and for graduate study in nursing. Upon satisfactory completion of the program, a graduate is eligible to write the State Board of Nursing examination for licensure as a registered nurse. The goal of the program is to develop a liberally-educated and self-directed individual who is prepared to contribute to the welfare of the

nation through the practice of professional nursing, which supports the promotion and restoration of the health of individuals and families in a variety of settings.

Requirements

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

- Complete the 13-course major with a minimum cumulative grade point average of 2.0, including the required May term following the junior year.
- Complete the distribution requirements for the B.S.N. degree.
- Complete Writing Across the Curriculum Program requirements.
- Complete a minimum of 32 units (128 semester hours) with a minimum cumulative average of 2.0.
- Earn one year of credit in physical education. Athletic training courses may count towards this requirement.
- Complete *in residence* the final eight courses offered for the degree at Lycoming
- Satisfy all financial obligations incurred at the College.

Complete the degree requirements within a five-year period after admission to the nursing major. Candidates who are unable to meet this requirement must petition for an extension.

THE DISTRIBUTION PROGRAM

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

A course can be used to satisfy only one distribution requirement. Courses for which a grade of "P" is recorded may not be used toward the fulfillment of the distribution requirements. (Refer to page 29 & 30 for an explanation of the grading system.) A course

in any of the following distribution requirements refers to a full-unit (four semester hours) course taken at Lycoming, any appropriate combination of fractional unit courses taken at Lycoming which accumulate to four semester hours, or any single course of three or more semester hours transferred from another institution. For the B.S.N. degree, see the special modified distribution requirements on page 40. Special distribution requirements apply to students in the Lycoming Scholar Program on page 48.

A. English - Students are required to take English 105 and 106 as well as one other unit of English, unless exempted from English 105 on the basis of the entrance examination administered before enrollment, CLEP, or the AP test in English. English 105 also requires a lab component designed to help the student succeed in college work. A student must either pass English 105 or be exempted from it before taking English 106. Unless the student does not complete English 105 during the first semester of college, English 106 must be taken during the freshman year. English 106 or consent of the instructor is a requirement of all other English courses. Students may choose any course except English 105 and English 106 from the department's offerings to satisfy the requirement for another unit of English.

B. Foreign Language or Mathematical Sciences — Students are required to meet a minimum basic requirement in either a foreign language or the mathematical sciences.

FOREIGN LANGUAGE — Students may choose from among French, German, Greek, Hebrew, and Spanish and are required to pass two courses on the intermediate or higher course level. Placement at the appropriate course level will be determined by the faculty of the Department of Foreign Languages and Literatures. Students 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 foreign language except by written permission of the chairman of the department.

MATHEMATICAL SCIENCES — Students are required to demonstrate competence in basic algebra and to pass three units in mathematical sciences other than Mathematics 100. Competence in basic algebra may be demonstrated either by passing the basic algebra section of the Mathematics Placement Examination or by passing Mathematics 100. By demonstrating higher competence on the Mathematics Placement Examination, students may reduce the requirement to two units in mathematical sciences. *No more than one unit may be taken in computer science.*

The Mathematics Placement Examination may be scheduled a maximum of three times, only one of which may be after matriculation. A retest fee of \$25 will be charged for each private test administration.

C. Religion or Philosophy — Students are required to pass two courses in either religion or philosophy. Any two religion courses may be used to fulfill the philosophy/religion distribution requirement, with this exception: only *one* course from the combination Religion 120-121 may be selected for distribution.

D. Fine Arts — Students are required to pass two courses as indicated in art, literature, music, or theatre.

ART — Any two courses.

LITERATURE - Any two courses from the offerings of the Department of English (except ENGL 105, 106, 217, 321, 338 and 449) and the literature courses of the Department of Foreign Languages (French, German or Spanish).

MUSIC — Any combination of eight (8) credits, including applied music, ensemble, and Music Department courses.

THEATRE — Any two of the following courses: Theatre 100, 110, 140, 148, 332, 333, or other courses with the consent of the instructor.

E. Natural Sciences — Students are required to pass any two courses as indicated in one of the following disciplines: astronomy and physics, except Astronomy 114 and 115; biology; or chemistry.

F. History and Social Sciences - Students are required to pass two courses as indicated in economics, history, political science, psychology or sociology/anthropology.

ECONOMICS — Any two courses.

HISTORY — Any two courses, except History 222.

POLITICAL SCIENCE — Any two courses.

PSYCHOLOGY — Psychology 110 and one other course, except Psychology 101.

SOCIOLOGY/ANTHROPOLOGY — Sociology/Anthropology 110 plus another course.

The Distribution Program For The B.S.N. Degree

A. English — Same as for the B.A. degree.

B. Mathematical Sciences — competence in basic algebra as demonstrated by completion of, or exemption from, Math 100; Mathematics 103; and Computer Science 108, 125, or Mathematics 214.

C. Religion and Philosophy — Religion 120 and Philosophy 219.

D. Fine Arts/Foreign Language — two courses from one department as follows:

ART — Any two courses.

LITERATURE - Any two courses from the offerings of the Department of English (except ENGL 105, 106, 217, 321, 338 and 449) and the literature courses of the Department of Foreign Languages (French, German or Spanish).

MUSIC — Any combination of eight (8) credits, including applied music, ensemble, and music department courses.

THEATRE — Any two courses from among Theatre 100, 110, 140, 148, 332, 333, or other courses with the consent of the instructor.

LANGUAGE — Any two courses at the intermediate or higher level. No student who has had two or more years of a given foreign language in high school shall be admitted to the elementary courses in that same language for credit, except by written permission of the chairman of the department.

E. Natural Sciences - Chemistry 108, 115.

F. Social Sciences - Psychology 110 and 117; Sociology/Anthropology—one from among 110, 114, 220, 222, 224, 227, 228, 229, 331, 334 and 335.

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 skill promotes intellectual growth and is 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

In order to graduate from Lycoming, all students must complete the following writing requirements:

- 1) English 105 or exemption from the course.

2) English 106 (Composition) and one other English course.

3) A writing component in all distribution courses completed at Lycoming.

4) Two courses designated as writing-intensive, or "W" courses.

- Successful completion of English 106 is a prerequisite for enrollment in writing-intensive courses.
- All courses designated "W" are numbered 200 or above.
- Each student must complete one "W" course from among those offered by the major department, or, with department approval, from a related department. The other "W" course completed must be from a department other than the major department. In the case of students with multiple majors, one "W" course must be completed from one of those majors. The second course may be taken in one of the student's other majors.
- Students should take one "W" course during the sophomore year and one during the junior year—although other sequences are possible and may, in certain circumstances, be advisable.
- A writing-intensive course may not duplicate a course taken to satisfy 2) above

III. Approved Writing Intensive Courses

The following courses have been approved to be offered as writing intensive courses and may be offered as such. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

ACCOUNTING	Accounting 331, Philosophy 216
AMERICAN STUDIES	History 443
ART	Art 222, 223, 331, 333, 334
ASTRONOMY	Astronomy 230
BIOLOGY	Biology 222, 224

BUSINESS	Business 440, 441
CHEMISTRY	Chemistry 330, 332
COMPUTER SCIENCE	Computer Science 246, 344
CRIMINAL JUSTICE	History 230, 443
ECONOMICS	Economics 337, 440
EDUCATION	Education 343, 344
ENGLISH	English 331, 334, 335, 336, 420
FRENCH	French 441
GERMAN	German 431, 441
HISTORY	History 218, 230, 443, 449
INTERNATIONAL STUDIES	International Studies 449
MASS COMMUNICATION	Mass Communication 226, 330
MATHEMATICS	Mathematics 234
MUSIC	Music 336
NEAR EAST CULTURE	Art 222
NURSING	Nursing 435
PHILOSOPHY	Philosophy 216, 219, 301, 332, 333
PHYSICS	Physics 338, 447
POLITICAL SCIENCE	Political Science 223, 244
PSYCHOLOGY	Psychology 225, 431, 432
RELIGION	Religion 230, 331
SOCIOLOGY/ ANTHROPOLOGY	Sociology 229, 441
SPANISH	Spanish 418
THEATRE	Theatre 332, 333

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 2.0 or higher grade point average in those courses stipulated as comprising 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 Academic Standards Committee by the student involved or by the recommending department or committee.

Departmental Majors — The following Departmental majors are available:

- Accounting
- Art History
- Art Studio
- Astronomy
- Biology
- Business Administration
- Chemistry
- Computer Science
- Economics
- English
- Foreign Languages and Literatures
French, German, Spanish
- History
- Mass Communication
- Mathematics
- Music
- Nursing
- Philosophy
- Physics

- Political Science
- Psychology
- Religion
- Sociology/Anthropology
- Theatre

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

- Accounting/Mathematical Sciences
- American Studies
- Criminal Justice
- International Studies
- Literature
- Near East Culture and Archaeology

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 10 courses beyond those taken to satisfy the distribution requirements. Students are expected to complete at least six courses at the junior or senior level. Examples of individual interdisciplinary majors are: Racial and Cultural Minorities, Illustration in the Print Medium, Environmental Law, Advertising, Art/Business, Human Behavior, and Images of Man.

Major in Sculpture Leading to Bachelor of Fine Arts Degree — Through a cooperative program with the Johnson Atelier Technical Institute of Sculpture in Mercerville, New Jersey, students may earn a B.F.A. degree in sculpture. The major consists of a core academic program, a course of study in art, elective courses, and an apprenticeship at the Johnson Atelier.

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 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 Art and the minor is Art History. (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 signing a form available in the Registrar's Office, obtaining required faculty signatures, and returning the completed form to the Office of the Registrar.

When students complete a minor, the title will be indicated on their official transcript. Students must meet the requirements for the minor which are in effect at the time they declare a minor or which are in effect subsequent to that time before they graduate.

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

- Financial Accounting
- Managerial Accounting
- Federal Income Tax

ART

- Art History
- Commercial Design
- Painting
- Photography
- Sculpture

ASTRONOMY

BIOLOGY

BUSINESS ADMINISTRATION

- Marketing
- Finance

CHEMISTRY

ECONOMICS

ENGLISH

- Literature
- Writing

FOREIGN LANGUAGES AND LITERATURES

- French
- German
- Spanish

HISTORY

- American History
- European History
- History

MASS COMMUNICATION

MATHEMATICAL SCIENCES

- Computer Science
- Mathematics

PHILOSOPHY

- Philosophy
- Philosophy and Law
- Philosophy and Science
- The History of Philosophy

PHYSICS

POLITICAL SCIENCE

- Political Science
- Foreign Affairs
- Legal Studies

PSYCHOLOGY

RELIGION
 SOCIOLOGY/ANTHROPOLOGY
 THEATRE

Theatre History & Literature
 Performance
 Technical Theatre

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: BIBLICAL LANGUAGES, CRIMINAL JUSTICE, MASS COMMUNICATION, and WOMEN'S STUDIES.

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 — Combining the advantages of a liberal arts education and the technical training of an engineering curriculum, this program is offered in conjunction with The Pennsylvania State University. Students complete three years of study at Lycoming and two years at the cooperating university. Upon satisfactory completion of the first year of engineering studies, Lycoming awards a Bachelor of Arts degree. When students successfully complete the second year of engineering studies, the cooperating university awards a Bachelor of Science degree in engineering.

At Lycoming, students complete the distribution program and courses in physics, mathematics, and chemistry. The Pennsylvania State University offers aerospace, agricultural, ceramic, chemical, civil, electrical, engineering science, industrial, mechanical, mining and nuclear engineering.

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 consid-

ered 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.

Medical Technology - Students desiring a career in medical technology may either complete a Bachelor of Arts program followed by a clinical internship at any American Medical Association-accredited hospital, 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 (Biology 224) and Plant Sciences (Biology 225). Students must take either Microbiology (Biology 221) or Microbiology

for the Health Sciences (Biology 226), and either Animal Physiology (Biology 223) or Cell Physiology (Biology 335). The cooperative program requires successful completion of a one-year internship at an American Medical Association-accredited hospital. Lycoming is affiliated with the following accredited hospitals: Divine Providence, Rolling Hill, Robert Packer, Lancaster, 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 (Biology 224) and Plant Sciences (Biology 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.

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 (Biology 224) and Plant Sciences (Biology 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.

Sculpture — The Art Department with the Johnson Atelier Technical Institute of Sculpture in Mercerville, New Jersey, offers a B.F.A. degree in sculpture. The Atelier uses a classical apprenticeship approach as its teaching method. This ancient method of teaching is combined at Johnson with the most modern and technically advanced foundry and fabricating techniques.

The Art Department offers a synthesis program that interrelates the student experience at both institutions. This is achieved by having the student rotate between Lycoming and the Atelier so that each form of education is a preparation for the other. Lycoming offers a core academic program, a course of study in the Art Department, and elective course opportunities. Lycoming gives eight course units of college credit to the student for having successfully completed one of the apprenticeship programs at the Johnson Atelier.

All work completed by the student at Lycoming by the end of the sophomore year will be applicable to a Bachelor of Arts degree with a major in art should the student decide to withdraw from the B.F.A. program. If the student should withdraw from the cooperative program prior to completing the

apprenticeship at the Johnson Atelier, Lycoming will give up to four units of credits or one semester's work for the internship. If, however, the student completes more work at the Atelier than the four units, that extra work will not be credited to a Bachelor of Arts degree; it will only be counted toward a Bachelor of Fine Arts degree, and then only if the course at the Atelier is completed.

This course of study is very rigorous. It requires the student to study almost continuously, either at Lycoming or at the Johnson Atelier, during the four years it takes to complete the degree. (See Art Department listing for specific program.)

U.S. Army Reserve Officers Training Corps Program (R.O.T.C.) — The program provides an opportunity for Lycoming students to enroll in R.O.T.C. 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. Students who have not completed the basic course may qualify for the advanced course by completing summer camp between the sophomore and junior years. Students enrolled in the advanced course receive an annual stipend of \$1,000. One course each in written communication, human behavior, and military history will fulfill the professional military education requirements. R.O.T.C. scholarship cadets must also complete one semester of a foreign language.

Students successfully completing the advanced course and advanced summer camp between the junior and senior years will qualify for a commission as a Second Lieutenant in the United States Army upon graduation, and will incur a service obligation in the active Army or Army Reserves. The only expense to the student for this program is the \$75 uniform deposit, which is refundable, less costs.

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. The Lycoming Scholar satisfies the College's distribution requirements, generally on a more exacting level and with more challenging courses than the average student. Lycoming Scholars also participate in special interdisciplinary seminars and in serious independent study culminating in a senior project. 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 3.0 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 3.0 or higher. To graduate as a Scholar, a student must have at least a 3.0 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 independent studies. In addition, the following distribution requirements must be met.

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

A. English — Scholars must complete English 106 and one literature course numbered 200 or higher. The Scholar Council strongly recommends that qualified scholars enroll in the honors section of English 106 if scheduling permits. English 106 must be taken during the freshman year.

B. Foreign Language or Mathematical Sciences — Scholars must satisfy the requirement in either language or mathematical sciences.

LANGUAGE — Scholars must complete two courses numbered 111 or higher (excluding courses taught in English).

MATHEMATICAL SCIENCES — The mathematical placement test determines whether a Scholar must take two or three courses for distribution. At least one course must be selected from Mathematics 116, 128, 130, or 214. Only one computer science course may be used to fulfill the mathematical sciences requirements.

C. Philosophy or Religion — Scholars must satisfy this requirement in either of the two areas.

PHILOSOPHY — Two courses numbered 220 or higher.

RELIGION — Two courses numbered 222 or higher.

D. Fine Arts — Scholars must satisfy the requirement in one of four areas.

ART — Two options are available in art. Either two courses from Art 222, 223, 331, 332, 333, 334, 335 (Art History), or two courses from Art 111, 115, 220 and 225 (Studio Art).

MUSIC — The equivalent of two units of credit from Music 117, 160-169, 330 or higher.

THEATRE — Two courses from Theatre 140 or higher, excluding Theatre 148.

LITERATURE - Any two courses from the offerings of the Department of English (except ENGL 321, 338 and 449) and the literature courses of the Department of Foreign Languages (French, German or Spanish).

E. Natural Sciences — Scholars must satisfy the requirements in one of three areas.

ASTRONOMY/PHYSICS — Two courses numbered 111 or higher. *Biology*: Two courses numbered 110 or higher, excluding 114 and 115.

CHEMISTRY — Two courses numbered 110 or higher.

F. History and Social Sciences — Scholars must satisfy the requirements in one of five areas.

ECONOMICS — Two courses numbered 110 or higher.

HISTORY — Two courses, one of which must be numbered 200 or higher.

POLITICAL SCIENCE — Two courses numbered 116 or higher.

PSYCHOLOGY — Two courses including Psychology 110 and one course numbered 224 or higher (excluding Psychology 338).

SOCIOLOGY/ANTHROPOLOGY — Two courses from Sociology 110, 220, 224, 226, 227, 229, 300 or higher.

Scholar Distribution Requirements for Students in B.S.N. Program

A. English — Same as for B.A. and B.F.A. degrees.

B. Mathematical Science — Same as for B.A. and B.F.A. degrees. (Note that the nursing major requires Mathematics 103 and one from Computer Science 108, 125 or Mathematics 214).

C. Philosophy or Religion — Met by taking Philosophy 219 and Religion 120.

D. Fine Arts/Language — Same as for B.A. and B.F.A. scholars.

E. Natural Sciences — Met by Biology 113, Biology 114, Biology 226 (required for the major).

F. History and Social Science — Met by Psychology 110, Psychology 117, (required for the major) and one course in Sociology 300 or higher. (This sociology course may be taken in lieu of the introductory guided elective in Sociology for the B.S.N.)

All Scholars Must Complete The Following:

G. Physical Education — Scholars must satisfy the same physical education requirements stipulated by the College for all students.

H. 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.

I. Senior Project — In the 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.

J. Major — Scholars must complete a major and 32 units, 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 Management Scholars Program is designed for the academically talented student who has a major or minor in accounting, economics or business administration, and who is a member of the Institute for Management Studies (a student who is accepted into the Management Scholars Program automatically becomes a member of the Institute for Management Studies). The student participates in special management seminars, has internship and/or independent study experiences, and gives a formal presentation in the senior year.

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

1. The student has a major in accounting, business administration, or economics and has completed three courses in one of these departments or the student has a minor in accounting, business administration or economics and has completed two courses in one of these departments.
2. The student has at least sophomore status.
3. The student has a GPA of 3.25 or higher.
4. The student has successfully participated in three or more semesters of the Lycoming

Scholars Program or the student has been recommended by the Director of the Management Scholars Program.

Management scholars are required to complete two Management Scholar Seminars and to complete an appropriate internship, practicum and/or independent study which results in a major paper and a public presentation of their findings. To graduate as a Management Scholar, the student must also complete a major or minor in one of the three departments and maintain a GPA of 3.25 or higher.

Students who are currently Lycoming College Scholars are welcomed to 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. 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 re-registered 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 and programs and with personal adjustment by helping the student discover life and career goals. In addition, the advisor will refer students to other campus resources whenever the need is apparent.

During the sophomore year, the student will 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 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

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 elementary education or one or more of the following secondary areas: art (K-12), biology, chemistry, English, French, general science (with biology or astronomy/physics tracks),

German, mathematics, music (K-12), physics, social studies, and Spanish. 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. See the Education Department listing on page 92.

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) 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. (See also descriptions of the nursing program and of the cooperative programs in podiatric medicine, optometry, and medical technology.)

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) upon entering Lycoming 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 —

The Theological Professions Advisory Committee (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. Upon entering Lycoming, students should register with TPAC if they plan to investigate the religious vocations.

In general, students preparing to attend a theological seminary should examine the suggestions set down by the Association of Theological Schools (available from TPAC). Recommended is a broad program in the liberal arts, 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), and a variety of electives. 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.

ACADEMIC SUPPORT SERVICES

Academic Resource Center (ARC)

The Academic Resource Center, located on the second floor of the Fine Arts Building, provides a variety of free services to the campus community.

Writing Center — Working one-on-one, Writing Tutors use questioning techniques to help others improve individual papers while developing confidence and independence as writers. Other services include the Paper File, a file of graded essays maintained by course; the Writing Room, a quiet place for writers to work; self-paced, computer assisted typing instruction; and the Documentation Style Manual for use when citing sources on research projects.

Tutoring Center — The ARC provides one-on-one peer tutoring in math, foreign languages, and sciences on a walk-in basis and peer tutoring by arrangement in other subjects. Tutors assist students with homework assignments and exam review.

Survival Skills Program — The ARC and volunteer faculty conduct a group of study skills workshops on time management, note-taking from lectures, reading textbooks, successful study techniques and WordPerfect.

Freshman Seminar/Office of Assistant

Dean for Freshmen — The Freshman Seminar, *Crossing Thresholds*, occurs the weekend before classes begin. Working in small groups with faculty and upperclass student leaders, freshmen become accustomed to classroom discussion, group process and service learning. Readings for the discussion are mailed to the freshmen in early August. A variety of academic and social activities are integrated into this weekend, which is designed to facilitate the student's transition to college.

The Office of Assistant Dean for Freshmen develops the Seminar in cooperation with the Office of Student Affairs and works with the freshmen throughout the year on individual academic needs.

SPECIAL ACADEMIC OPPORTUNITIES

May Term — The May term is a four-week voluntary session 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 term. Some courses are offered on campus; others involve travel. A number offer interdisciplinary credit. Examples of the types of courses offered during the May term are:

STUDY-TRAVEL: Cultural tours of Germany, Spain, and France; Archaeological expeditions to study tricultural communities in New Mexico; Utopian Communities; Revolutionary and Civil War Sites; Colonial America on Tour; Art on the East Coast; The New Kingdom in Ancient Egypt.

ON-CAMPUS: Field Geology, Field Ornithology, Energy Economics, Writer's Seminar, Psychology of Group Processes, Collective Bargaining, Aquatic Biology, Medical Genetics, Energy Alternatives, White Collar Crime, Lasers and their Applications, Selected Short Story Writers and their Works, Popular Forms of Contemporary Fiction, Administrative and

Organizational Behavior of Police, Plant and Greenhouse Management and Street Law.

In addition to the courses themselves, attractions include less formal classes and reduced tuition rates.

Summer Sessions I and II — These two successive 6-week academic terms offer the opportunity for students to complete two-semester sequences of courses as well as additional opportunities to complete internships, independent studies and semester courses.

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. Studies projects which duplicate catalog courses are subject to the same provisions which apply to all studies projects. In order for a student to be registered in an 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, with the exception of those which duplicate catalog courses, is subject to the following:

- 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. At least one-half of the effort expended by the intern should consist of academic work related to agency situations. 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 the Internship Program.

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.

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 education or one or more of the following secondary areas: art, biology chemistry, English, French, general science (with biology or astronomy/physics tracks), German, mathematics, music, physics, social studies, and Spanish.

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 positions. (See Education Department on page 92 for course listing.)

The Philadelphia Urban Semester — A full semester liberal arts program for professional

development and field study is now available to Lycoming students. The program is open to juniors majoring in any discipline or program. The Philadelphia Urban Semester is sponsored and administered by the Great Lakes Colleges Association.

Washington Semester — With the consent of the Department of Political Science, 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, 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.

London Semesters — The London Semester programs of Drew University and The American University emphasize European history, politics, and culture. Interested students may participate with the consent of either the Departments of History or Political Science.

Westminster College, Oxford — In a special cooperative program between Lycoming College and Westminster College, students can participate in a semester abroad at this Oxford University college and receive Lycoming College credit. Interested students should contact the Dean for specific eligibility.

Capitol Semester Internship Program — This program is available to eligible students on a competitive basis. The program is co-sponsored 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 Development Center for additional information.

Study Abroad — Students have the opportunity to study abroad under the auspices of approved universities and agencies. While study abroad is particularly attractive to students majoring in foreign languages and literatures, this opportunity is open to all students in good academic standing. Mastery of a foreign language is desirable but not required in all programs. Dr. Ernest Giglio, professor of political science, serves as coordinator for the Study Abroad Program. Interested students may contact her about opportunities available and procedural questions.

Student Teaching Abroad — Lycoming College has established a cooperative program with Moorhead State University enabling teacher education students to do all or part of their student teaching in a foreign country.

This program offers exceptional students the opportunity to student teach in nearly any country in the world. Students are placed in independent international schools where English is the instructional language. An effort is made to assign students to geographical areas that will enrich their backgrounds, serve their special interests and expand their cultural horizons.

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.

THE 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

Courses not in sequence are listed separately, as:

Drawing Art 111

Color Theory Art 212

Courses which imply a sequence are indicated with a dash between, meaning that the first semester must be taken prior to the second, as:

Intermediate French

French 111-112

All students have the right of access to all courses.

ACCOUNTING (ACCT)

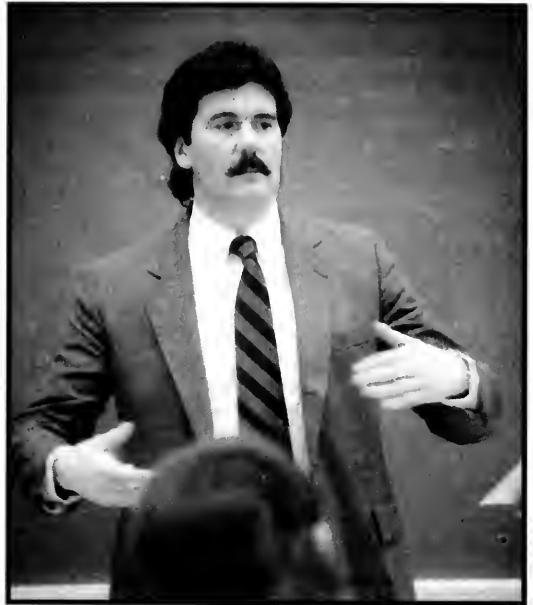
Associate Professor: Kuhns
 Assistant Professor: Wienecke (Chairperson)
 Instructor: Loukinen
 Part-time Instructor: Crossley

The purpose of the accounting major is to help prepare the student for a career within the accounting profession. The major has two tracks. Track I is designed for students whose primary interests lie in the financial area of public accounting and provides preparation for the Certified Public Accountant Examination; Track II is designed for students with an interest in management accounting and provides preparation for the Certified Management Accountant Examination.

Track I — Financial Accounting requires: Accounting 110, 220, 221, 222, 330, 440, 441, 443, 445, Mathematics 103, Computer Science 108, and one unit to be selected from Business 345, Philosophy 216, Accounting 226, 331, 442, 447, and 448 or 449.

Additional courses available for students seeking entry into the public accounting profession may include Accounting 226, 331, 442, 447, and 449, Economics 110, 111, 220, 337, and Business 340, 345. Students should investigate the professional requirements for certification in the state in which they intend to practice so that they may select the necessary courses to meet all educational requirements.

Track II — Management Accounting requires: Accounting 110, 220, 330-331, 444, and 449; Mathematics 103; Computer Science 108; and Business 338, 339, and 440. All Track II majors are advised to enroll in Economics 110 and 111 and Business 335 and 336. Students planning to sit for the Certified Management Accountant Examination are advised to enroll in Accounting 440, 441, 442, and 443.



The following course has been approved to be offered as a writing intensive course and may be offered as such: Accounting 331. Students must check semester class schedules to determine if the course is offered as a "W" course for that semester.

Minors

Three minors are offered by the Department of Accounting. The following courses are required to complete a minor in Financial Accounting: Accounting 110, 220, 221, 443, 447 and any other accounting course or independent study. A minor in Managerial Accounting requires the completion of Accounting 110, 220, 330-331 and 444. To obtain a minor in Federal Income Tax, a student must complete Accounting 110, 220-221, 441, and 442.

The Department of Accounting is a member of the Institute for Management Studies. See page 111.

110

ELEMENTARY ACCOUNTING THEORY
 An introductory course in recording, classify-

ing, summarizing, and interpreting the basic business transaction. Problems of classification and interpretation of accounts and preparation of financial statements are studied. *Prerequisite: Second-semester freshman or consent of instructor.*

111**MANAGERIAL ACCOUNTING**

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: Accounting 110.*

220-221-222**INTERMEDIATE ACCOUNTING THEORY**

An intensive study of accounting statements and analytical procedures with an emphasis upon corporate accounts, various decision models, price-level models, earnings per share, pension accounting, accounting for leases, and financial statement analysis. *Prerequisite: Accounting 110.*

226**GOVERNMENT AND FUND ACCOUNTING**

This course is designed to introduce accounting for not-for-profit organizations. Municipal accounting and reporting are studied. *Prerequisite: Accounting 110.*

330-331**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. Application of cost account-

ing and budgetary theory to decision making in the area of make or buy, expansion of production and sales, and accounting for control are dealt with. *Prerequisite: Accounting 220 and Mathematics 103 or 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. *Prerequisite: Accounting 221, Mathematics 103, and Computer Science 108.*

441**FEDERAL INCOME TAX**

Analysis of the provisions of the Internal Revenue Code relating to income, deductions, inventories, and accounting methods. Practical problems involving determination of income and deductions, capital gains and losses, computation and payment of taxes through withholding at the source and through declaration are considered. Planning transactions so that a minimum amount of tax will result is emphasized. *Prerequisite: Accounting 110 or consent of instructor.*

- 442**
FEDERAL INCOME TAX
ADMINISTRATION AND PLANNING
 An analysis of the provisions of the Internal Revenue Code relating to partnerships, estates, trusts, and corporations. An extensive series of problems is considered, and effective tax planning is emphasized. *Prerequisite: Accounting 441.*
- 443**
ADVANCED ACCOUNTING I
 Certain areas of advanced accounting theory, including business combinations and consolidated financial statements. *Prerequisite: Accounting 221. One-half unit of credit.*
- 444**
CONTROLLERSHIP
 Control process in the organization. General systems theory, financial control systems, centralization-decentralization, performance measurement and evaluation, forecasts and budgets, and marketing, production and finance models for control purposes. *Prerequisite: Accounting 331 or consent of instructor.*
- 445**
AUDITING PRACTICE
 An audit project is presented, solved and the auditor's report written. *This course is limited to students who have either completed or are enrolled in Accounting 440. One-half unit of credit. Grade will be recorded as "P" or "F."*
- 447**
ADVANCED ACCOUNTING II
 An intensive study of partnerships, installment and consignment sales, branch accounting, bankruptcy and reorganization, estates and trusts, government entities, and non-profit organizations. *Prerequisite: Accounting 221. One-half unit of credit.*

- 448**
CONTEMPORARY PROBLEMS
FOR C.P.A. CANDIDATES
 Problems from the Accounting Practice sections of past C.P.A. examinations, which require a thorough knowledge of the core courses in their solution, are assigned. The course is intended to meet the needs of those interested in public accounting and preparation for the Certified Public Accountant's examination. *Prerequisite: Accounting 330 or consent of instructor. One-half unit of credit. Grade will be recorded as "P" or "F."*
- 449**
PRACTICUM IN ACCOUNTING
 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.
- 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)



ACCOUNTING - MATHEMATICAL SCIENCES

Associate Professor: Kuhns (Coordinator)

The accounting-mathematical sciences interdisciplinary major is designed to offer, within a liberal arts framework, courses which will aid in constructing mathematical models for business decision-making. Students obtain the necessary substantial background in both mathematical sciences and accounting.

Required accounting courses are: Accounting 110, 220-221, 330-331, 441, 442. In mathematical sciences, required courses are: Computer Science 125 and 321 and Mathematics 112, 128, 129, 338 and either 103 or 332. Recommended courses include: Mathematics 130, 238, 333; Business 223, 335, 336, 338, 339; Computer Science 108, 246; Economics 110, 111; Psychology 224, 225; and Sociology-Anthropology 110.

AMERICAN STUDIES (AM ST)

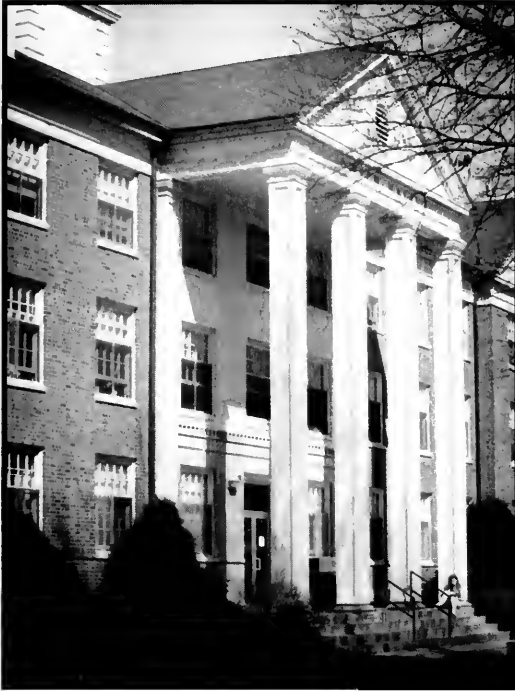
Professor: Piper (Coordinator)

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. Thirteen courses are included.

Four Course Requirements

The primary integrating units of the major, these courses—some team-taught—will encourage students to consider ideas from different points of view and help them to correlate information and methods from various disciplines:

1. America as a Civilization: American Studies 200 (First semester of major study)
2. American Tradition in the Arts and Literature: American Studies 220



3. Research and Methodology: History 449 or Sociology/Anthro 447 (junior or senior year)
4. Internship or Independent Study (junior or senior year)

Concentration Areas

Six courses in one option and three in the other are needed. Six primary concentration-option courses in American Arts or American Society build around the insights gained in the core courses. They focus particular attention on areas most germane to academic and vocational interests. The three additional courses from the other option give further breadth to an understanding of America. Students also will be encouraged to take elective courses relating to other cultures.

Students should design their American Studies major in consultation with the program coordinator.

American Arts Concentration Option

- ART 332 — American Art of the 20th Century
 ENGLISH 222 — American Literature I
 ENGLISH 223 — American Literature II
 MUSIC 128 — American Music
 MUSIC — Studies in American Music
 THEATRE N 80 — Studies in American Theatre

American Society Concentration Option

- ECONOMICS 224 — Urban Problems
 HISTORY 442 — U.S. Social and Intellectual History to 1877
 HISTORY 443 — U.S. Social and Intellectual History since 1877
 POLITICAL SCIENCE 331 — Civil Rights and Liberties
 POLITICAL SCIENCE 335 — Law and Society
 SOCIOLOGY 334 — Racial and Cultural Minorities

200

AMERICA AS A CIVILIZATION

An analysis of the historical, sociocultural, economic, and political perspectives of American civilization with special attention to the interrelationships between these various orientations. May be taken for either one-half unit (Section 200A) or full unit (Section B); declared majors and prospective majors should take the full-unit course, 200B.

Alternate years.

220

AMERICAN TRADITION IN THE ARTS AND LITERATURE

The relationship of the arts and literature to the various historical periods of American life.

470-479 INTERNSHIP

N80-N89 INDEPENDENT STUDY

490-491 INDEPENDENT STUDY FOR DEPARTMENTAL HONORS



ART (ART)

Professors: Bogle (Chairperson), Shipley
 Associate Professor: Golahny
 Assistant Professor: Estomin
 Adjunct Faculty at Johnson Atelier: Bartons,
 Barrie, Lash, Pitynski

The Art Department offers two majors in the B.A. Degree (Studio Art and Art History) and a second degree program, a B.F.A. Degree in Sculpture.

THE B.A. DEGREE - STUDIO ART

To complete a Bachelor of Arts Degree with a major in studio art, the students must complete the seven-course foundation program and the requirements for an area of

specialization, participate in each semester's colloquium (while a declared major), and satisfactorily participate in the senior exhibition. *Exception to participation in the colloquium may be made by the art faculty.*

Foundation Program

- ART 111 — Drawing I
- ART 115 — Two-Dimensional Design
- ART 116 — Figure Modeling
- ART 212 — Color Theory
- ART 222 — Survey of Art: Pre-History Through The Middle Ages
- ART 223 — Survey of Art: From the Renaissance through the Modern Age
- ART 227 — Introduction to Photography
- ART 148, 248, 348, 448 — Art Colloquium

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 — Figure Modeling II
 - 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 343 — Computer Graphics for
 Print Media
 ART 344 — Computer Graphics for
 Electronic Media
 ART 442 — Special Projects with
 Commercial Design
 ART 470 — Internship

A student is encouraged to take the following courses: Advertising (Business 332), Writing for Special Audiences (Mass Communication 323), Introduction to Mass Communication (Mass Communication 110), Social Psychology (Psychology 224).

V. Generalist Art Major

To be taken by those students who are seeking teaching certification in Art:

- ART 119 — Ceramics I
 ART 220 — Painting I
 ART 225 — Sculpture I
 ART 228 — Printmaking I

and two art history courses numbered 300 or above. In addition to Art Department courses, under the generalist major, the student must complete the art certification program in the Education Department.

VI. Photography/Electronic Art

- ART 337 -- Photography II
 ART 342 -- Photography III
 ART 343 -- Computer Graphics for Print
 Media

ART 446 - Studio Research
 and two Art History courses numbered 300 or above. Students are also encourage to take ART 344 - Computer Graphics for Electronic Media and to complete an Internship.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Art 222, 223, 331, 333 and 334. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

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 history and/or religion. A student majoring in art history is advised to take a foreign language. Art History majors (once declared) are required to participate in each semester's art colloquium.

Required of all students:

- ART 222 — Survey of Art: Pre-History
 through the Middle Ages
 ART 223 — Survey of Art: From Renaissance
 through the Modern Age
 ART 447 — Art History Research
 ART 148, 248, 348, 448 -- Art Colloquium

Choose four of the following:

- ART 331 — 20th Century European Art
 ART 332 — American Art of the 20th Century
 ART 333 — 19th Century European and
 American Art
 ART 334 — Art of the Renaissance
 ART 336 — Art of the Baroque
 ART 339 — Women in Art

Choose two of the following:

- ART 111 — Drawing I
 ART 115 — Two-Dimensional Design
 ART 116 — Figure Modeling I
 ART 227 — Introduction to Photography

Choose two of the following:

- HISTORY 210 — Ancient History
 HISTORY 212 — Medieval Europe and
 its Neighbors
 HISTORY 418 — History of Renaissance
 Thought
 RELIGION 113 — Old Testament Faith
 and History
 RELIGION 114 — New Testament Faith
 and History
 RELIGION 226 — Biblical Archaeology

It is further suggested that the student choose electives in other departments that may complement the study of art history. Among these recommended electives are: FRENCH 412 — French Literature of the 19th Century

ENGLISH 336 — Shakespeare

MUSIC 117 — Survey of Western Music

MUSIC 335 — History of Western Music I

MUSIC 336 — History of Western Music II

THEATRE 332 — History of Theatre I

THEATRE 333 — History of Theatre II

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Art 222, 223, 331, 333 and 334. Students must check semester class schedules to determine which courses are offered as “W” courses for that semester.

Minors

Five minors are offered by the Art Department. Requirements for each follow: Commercial Design: Art 111, 115, 212, 223, 227 and 343; Painting: Art 111, 115, 220, 330 and 221 or 223; Photography: Art 111, 212, 223, 227, 337 and 340 or 341; Sculpture: Art 116, 225, 226, 335, and 111, 119 or 445; Art History: Art 222, 223 and two advanced art history courses. Art majors who minor in art history must take two additional upper level courses beyond the two required for the minor intended for students who major in other disciplines (i.e., Art 222, 223 and four upper level courses).

THE B.F.A. DEGREE IN SCULPTURE

The student completes a specified course of study in the Art Department, the Lycoming College distribution requirements, and one of the field specialization apprenticeship programs at the Johnson Atelier in Mercerville, New Jersey.

The Art Department course of study consists of 12 courses in studio and art

history: Figure Modeling I and II (Art 116 and 226), Sculpture I and II (Art 225 and 335), Drawing I and II (Art 111 and 221), Introduction to Photography (Art 227), 2-D Design (Art 115), Survey of Art (Art 222 and 223), and two additional courses in Art History (Art 331, 332, 333, 334, 336 or 339).

Twelve additional course units are required of the student. The student must meet the requirements of the distribution program within these courses.

In order to complete the B.F.A. degree the student must participate in the art colloquium every semester while taking course work at Lycoming (as a declared major) and must participate in a senior exhibition. *Exception to participation in the colloquium may be made by the art faculty.*

The student must also complete one of the field specialization apprenticeships at the Johnson Atelier Technical Institute of Sculpture in Mercerville, New Jersey. This requires the student to be at the Johnson Atelier for a period of between 16 and 23 1/2 months. The student receives eight course units of credit at Lycoming College for successfully completing the field specialization apprenticeship at Johnson Atelier. It is expected that the work for the apprenticeship component will be completed during the summers and the junior year.

Admission to the B.F.A. degree program is on the basis of meeting the admission standards of Lycoming College, and passing a portfolio review and interview by members of the Lycoming College Art Department.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Art 222, 223, and 334. Students must check semester class schedules to determine which courses are offered as “W” courses for that semester.

111 DRAWING I

Study of the human figure with gesture and proportion stressed. Student is made familiar



with different drawing techniques and media. Some drawings from nature. Offered in alternate semesters with Drawing II and III.

115 TWO-DIMENSIONAL DESIGN

The basic fundamentals found in the two-dimensional arts: line, shape, form, space, color, and composition are taught in relationship to the other two-dimensional arts. Perceptual theories and their relationships to what and why we see what we see in art are discussed with each problem.

116 FIGURE MODELING I

Understanding the figure will be approached through learning the basic structures and proportions of the figure. The course is conceived as a three-dimensional drawing class. At least one figure will be cast by each student.

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 THEORY

A study of the physical and emotional aspects of color. Emphasis will be placed on the study of color as an aesthetic agent for the artist. The color theories of Johannes Itten will form the base for this course with some study of the theories of Albert Munsell, Faber Birren, and Wilhelm Ostwald.

220 PAINTING I

An introduction of painting techniques and materials. Coordination of color, value, and

design within the painting is taught. Some painting from the figure. No limitations as to painting media, subject matter, or style.

Prerequisite: Art 115 or consent of instructor.

221

DRAWING II

Continued study of the human figure. Emphasis is placed on realism and figure-ground coordination with the use of value and design. *Prerequisite: Art 111.*

222

SURVEY OF ART: PRE-HISTORY THROUGH THE MIDDLE AGES

A survey of Western architecture, sculpture, and painting. Emphasis is on the interrelation of form and content and on the relatedness of the visual arts to their cultural environment: Paleolithic Art, Near East, Egypt, Greece, Rome, and Medieval Europe.

223

SURVEY OF ART: FROM THE RENAISSANCE THROUGH THE MODERN AGE

A survey of Western architecture, sculpture, and painting. Emphasis is on the interrelation of form and content and on the relatedness of the visual arts to their cultural environment: 14th-20th centuries.

225

SCULPTURE I

An introduction to the techniques, materials, and ideas of sculpture. Clay, plaster, wax, wood, and other materials will be used. The course will be concerned with ideas about sculpture as expression, and with giving material form to ideas.

226

FIGURE MODELING II

Will exploit the structures and understandings learned in Figure Modeling I to produce larger, more complex figurative works. There

will be a requirement to cast one of the works in plaster. *Prerequisite: Art 116 and consent of instructor.*

227

INTRODUCTION TO PHOTOGRAPHY

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 or 115 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.*

330

PAINTING II

Emphasis is placed on individual style and technique. Artists and movements in art are studied. No limitations as to painting media, subject matter, or style. *Prerequisite: Art 220.*

331

20TH CENTURY EUROPEAN AND AMERICAN ART

Developments in European and American Art from about 1880 to the present, including Cubism, Dada, Surrealism, Abstraction, Abstract Expressionism, Photorealism, and Post-Modernism.

333
19TH CENTURY EUROPEAN AND AMERICAN ART
 The art of Western Europe and the United States from 1780-1900, with emphasis on painting in France. Those artists to be studied include David, Goya, Delacroix, Courbet, the Impressionists, Turner, Homer, Cole and Eakins.

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 Durer, the sculptors Ghiberti, Donatello and Michelangelo, and the architects Brunelleschi and Alberti.

335
SCULPTURE II
 A continuation of Sculpture I (Art 225). Emphasis is on advanced technical process. Casting of bronze and aluminum sculpture will be done in the school foundry. *Prerequisite: Art 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.*

338
PRINTMAKING II
 Further study of the techniques of silkscreen, intaglio, monotype, and lithography printing with emphasis on multi-plate and viscosity printing. Two editions of at least six prints must be completed in each of two areas. *Prerequisite: Art 228.*

339
WOMEN IN ART
 A survey of women artists from a variety of viewpoints — aesthetic, historical, social, political and economic — which seeks to understand and integrate the contributions of women artists into the mainstream of the history of art.

342
PHOTOGRAPHY III
 Study of techniques and aesthetics of color photography using color negatives and/or slides, advanced imaging techniques utilizing the computer to enhance and manipulate students' original photographs, and introduction to large format view cameras. Integration of tools to students' own artistic process emphasized. A portfolio including examples of color, image processing and large format work will be produced. *Prerequisites: Art 227, 337, and 343.*

343
COMPUTER GRAPHICS FOR PRINT MEDIA
 Use of computers as an artist's and designer's tool. Concentrated, hands-on study of image manipulation, illustration and layout programs. Content of course includes fundamentals of vector and raster imaging, typography, design, layout, color separation, and manipulating computer images obtained from scanners, video sources, and the students' own original production using computer paint software.

344

COMPUTER GRAPHICS FOR ELECTRONIC MEDIA

Use of the computer as a tool to create, manipulate and edit video for artistic and commercial purposes. Content of course includes computer animation, multi-media program production and computer interfaced video production. *Prerequisite: Art 343 or consent of instructor.*

440

PAINTING III

Professional quality is stressed. There is some experimentation with new painting techniques and styles.

441

DRAWING III

Continued study of human figure, individual style, and professional control of drawing techniques and media are now emphasized.

442

SPECIAL PROJECT IN COMMERCIAL DESIGN

Concentrated research, preparation and execution of a series of projects in commercial design utilizing both traditional studio tools - including airbrush, water-based mediums, markers, colored pencils and pen and ink - and computer graphics software - including paint, draw, image manipulation and page layout programs. The following skills are involved: illustration, design, typesetting, lettering, layout, overlays, scanning and color separation. *Prerequisites: Art 343 or consent of the instructor.*

445

SCULPTURE III

In Sculpture III the student is expected to produce a series of sculptures that follow a conceptual and technical line of development. *Prerequisite: Art 116, 225, and 335.*

446

STUDIO RESEARCH

Independent research in an elective studio area, conducted under the supervision of the appropriate faculty member, includes creation of work which may be incorporated in the senior group exhibition. Student works in private studio assigned by the department.

447

ART HISTORY RESEARCH

Independent research, conducted under the supervision of the appropriate faculty member, includes the research and writing of a thesis, to be presented to a committee of Art Department faculty. *This course may be repeated for credit.*

148, 248, 348 and 448

ART COLLOQUIUM

A non-credit seminar in which faculty, students and invited professionals discuss and critique specific art projects. *Required of all students majoring in art. Taken each semester. Meets 2-4 times each semester. Pass/Fail. Non-credit seminar.*

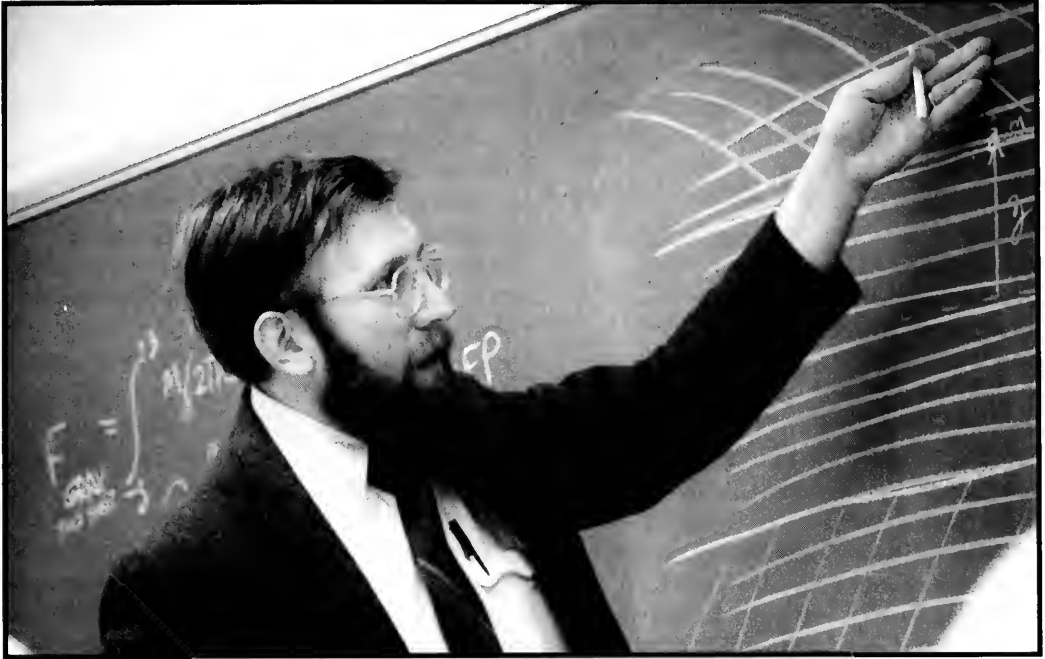
470-479

INTERNSHIP (See index)

Recent studies in anatomy. Aspects of the art nouveau, lithography, photography, pottery, problems in illustration, and water-color.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)



ASTRONOMY AND PHYSICS

Associate Professors: Erickson, Fisher
(Chairperson)

Assistant Professor: Wolfe

The department offers two majors. The major in astronomy is specifically designed to train students in the field of planetarium education; it also may serve as a basis for earning state certification as a secondary school teacher of general science. The major in physics can prepare students for graduate work in physics, astronomy, and related physical sciences, for the cooperative program in engineering, for state certification as secondary school teachers of physics, or for technical positions in industry.

ASTRONOMY (ASTR)

The major in astronomy requires courses in astronomy, physics, chemistry and mathematics. The astronomy courses include Astronomy 111 and five additional courses numbered Astronomy 112 or higher; at least four of these five additional courses must be numbered Astronomy 230 or higher. Other required courses are Physics 225-226, Chemistry 110-111 or 330-331, and Mathematics 128-129. Astronomy majors are also required to register for four semesters of Astronomy 349 and 449 (non-credit colloquia). The following courses are recommended: Philosophy 223 and 333, Physics 333, and Art 227.

The following course has been approved to be offered as a writing intensive course and may be offered as such: Astronomy 230. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

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

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.*

101

PRINCIPLES OF ASTRONOMY

111

PRINCIPLES OF ASTRONOMY

A summary of current concepts of the universe from the solar system to distant galaxies. Describes the techniques and instruments used in astronomical research. Presents not only what is reasonably well known about the universe, but also considers some of the major unsolved problems. *Astronomy 101 and 111 share the same three hours of lecture and two hours of laboratory each week. Astronomy 111 has one additional hour each week for more advanced mathematical treatment of the material. Credit may not be earned for both 101 and 111. Corequisite for 111: Mathematics 127 or consent of instructor.*

102

PRINCIPLES OF GEOLOGY

112

PRINCIPLES OF GEOLOGY

A study of the surface processes and internal structure of the planet Earth. Shows how past events and lifeforms can be reconstructed from preserved evidence to reveal the geologic history of our planet from its origin to the present. Describes the ways geology influences our environment. *Astronomy 102 and 112 share the same three hours of lecture and two hours of laboratory each week. 112 has one additional hour each week for more advanced mathematical treatment of the material. Credit may not be earned for both 102 and 112. Corequisite for 112: Mathematics 127 or consent of instructor. Alternate years.*

114

MANNED SPACE FLIGHT I

Traces the beginnings of rocketry and spaceflight capability from Sputnik (1957) through the conclusion of the Apollo moon landings (1972). Extensive use of NASA video and other audio-visual aids. Examination of scientific, engineering and political motivations. *When taken in May term, must be scheduled with Astronomy 115. Not for distribution. Alternate years. Half unit.*

115

MANNED SPACE FLIGHT II

Examines manned spaceflight from Skylab missions (1973-74) through Apollo-Soyuz Test Project, early Space Shuttle missions, to current U.S. and Soviet space efforts. Extensive use of NASA video. Examination of scientific, engineering, and political motivations. *When taken in May Term, must be scheduled with Astronomy 114. Not for distribution. Alternate years. Half unit.*

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 Astronomy 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 Astronomy 111 or Astronomy 112 or Physics 225. Alternate years.*

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: Astronomy 111 and Physics 225. Alternate years. Cross-listed as Physics 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: Astronomy 111 (Principles of Astronomy A) and Physics 226 (Introductory Physics with Calculus II). 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: Astronomy 111 (Principles of Astronomy A) and Physics 225 (Introductory Physics with Calculus I). Alternate years.*

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. Students in the Cooperative Program in Liberal Arts and Engineering are required to attend two semesters and present one lecture during their junior year. Non-credit course. *One hour per week. Cross-listed as Physics 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)

PHYSICS (PHYS)

The major in physics requires courses in physics, chemistry and mathematics. The required physics courses must include Physics 225, 226, 331, 332 and four additional courses numbered Physics 333 or higher. Up to two courses chosen from Astronomy 111, 112, 243, 445 and 446 may substitute for two of the four physics electives. Other required courses are Chemistry 110-111 or 330-331, and Mathematics 128-129. Physics majors are also required to register for four semesters of Physics 349 and 449 (non-credit colloquia). The following courses are recommended: Mathematics 231 and 238, Computer Science 125 (all three required for the cooperative engineering program and by many graduate schools), and Philosophy 223 and 333.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Physics 338, and 447. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

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

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. *May or summer term only.*

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 will be 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.*

225-226

FUNDAMENTALS OF PHYSICS I-II

A mathematically rigorous introduction to physics designed for majors in physics, astronomy, chemistry and mathematics. Topics include mechanics, thermodynamics, electricity and magnetism, waves, optics, and modern physics. *Five hours of lecture and recitation and one three-hour laboratory per week. Corequisite: Math 128-129 (Calculus I and II). With consent of department, Math*

109 may substitute for Math 128-129 as a prerequisite.

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: Mathematics 129 and a grade of C or better in Physics 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. Prerequisite: Math 129 and a grade of C or better in Physics 226.*

333

OPTICS

Geometrical optics, optical systems, physical optics, interference, Fraunhofer and Fresnel diffraction, and coherence and lasers will be covered. *Three hours of lecture and three hours of laboratory per week. Prerequisites: Physics 226 and Mathematics 128 or consent of instructor. Alternate years.*

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. *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 a 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 recitation per week. Prerequisites: Physics 226 (Introductory Physics with Calculus II) and Mathematics 129 (Calculus II). 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 Schrodinger equation. *Four hours of lecture and one-three hour laboratory per week. Prerequisites: Mathematics 129 and a grade of C or better in Physics 226.*

339

SOLID STATE PHYSICS

Topics include crystalline structures, periodic potentials, band structure, free electron model, semiconductor physics, electromagnetic and thermal properties of solids, superconductivity, and superfluidity. *Four hours of lecture and three hours of*

laboratory per week. Prerequisites: Physics 332 and Math 129 or consent of instructor. Alternate years.

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: Astronomy 111 and Physics 225. Alternate years. Cross-listed as Astronomy 344.*

439

INTRODUCTION TO QUANTUM MECHANICS

Basic concepts and formulation of quantum theory. The free particle, the simple harmonic oscillator, the hydrogen atom, and central force problems will be discussed. Both time-independent and time-dependent perturbation theory will be covered. *Four hours of lecture and recitation. Prerequisite: Either Physics 226 (Introductory Physics with Calculus II) or Chemistry 331 (Physical Chemistry II), and Mathematics 231 (Differential Equations). Cross-listed as Chemistry 439.*

447

NUCLEAR AND PARTICLE PHYSICS

The course will consider 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 will be 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 two hours of laboratory per week. Prerequisites:*

Physics 226 (Introductory Physics with Calculus II), Mathematics 129, and either Physics 338 (Modern Physics) or Chemistry 110. Alternate years.

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. Students in the Cooperative Program in Liberal Arts and Engineering are required to attend two semesters and present one lecture during their junior year. Non-credit course. *One hour per week. Cross-listed as Astronomy 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)

Professors: Angstadt, Diehl

Associate Professors: Gabriel,
Zaccaria (Chairperson), Zimmerman

Assistant Professor: Briggs

Visting Assistant Professor: Brown

A major consists of eight biology courses, including 110-111, 221, 222, 223, 224, and 225. In addition, juniors and seniors majoring in Biology are required to register for Biology 349/449 (non-credit colloquium) during all semesters on campus. With departmental consent, Biology 226 may be substituted for Biology 221. Only two courses numbered below 200 may count toward the major. Departmental internships cannot be used to fulfill the eighth required course. In addition, three units of chemistry and two units of mathematical science are required. The chemistry requirement must include at least one unit of organic chemistry chosen from Chemistry 115, 220, or 221. The mathematical sciences courses must be chosen from Computer Science 108, 125 and/or Mathematics 103, 109, 127, 128 or above. Certain specific exceptions to the core program will be made for three-year students enrolled in cooperative programs. Such exceptions are noted under the particular cooperative program described in the Academic Program chapter of the catalog. Students interested in these programs should contact the program director before finalizing their individual programs. Consent of instructor may replace Biology 110-111 as a prerequisite for all biology courses.

The following courses have been approved to be offered as Writing Intensive courses and may be offered as such: Biology 222 and 224. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

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 200 series of courses. A minor in Environmental Science consists of two introductory biology courses, Biology 224 Ecology, two additional courses in biology (200 or higher), one course in economics (recommend Economics 225 - Environmental Economics), and Astronomy 112 Earth Science.

101-102

PRINCIPLES OF BIOLOGY

An investigation of biological principles, including ecological systems, form and function in selected representative organisms (especially man), cell theory, molecular biology, reproduction, inheritance, adaption, and evolution. The course is designed primarily for students not planning to major in the biological sciences. *Credit may not be earned for both Biology 101 and 110 or for both Biology 102 and 111. Three hours of lecture and one two-hour laboratory per week.*

110-111

INTRODUCTION TO BIOLOGY

An introduction to the study of biology designed for students planning to major in the biological sciences. Major topics considered include the origin of life, cellular respiration and photosynthesis, genetics, development, anatomy and physiology, ecology, behavior, and evolution. *Credit may not be earned for both Biology 101 and 110 or for both Biology*

102 and 111. *Three hours of lecture and one three-hour laboratory per week.*

113-114**HUMAN ANATOMY AND PHYSIOLOGY**

Using the organ-systems approach, the course is an introduction to the human body — its anatomy, physiology, and normal development — with particular attention to structure and function at all levels of its biological organization (molecular through organismal). *Three hours of lecture, and one three-hour laboratory per week. Prerequisite: Chemistry 115 or Chemistry 220 or consent of instructor.*

130**ENVIRONMENTAL SCIENCE**

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. This course is designed primarily for students not planning to major in the biological sciences. *Three hours of lecture and one three-hour laboratory per week. Pre-requisite: Biology 101 or Biology 110. This course is not a substitute for Biology 111 for majors.*

221**MICROBIOLOGY**

A study of microorganisms. Emphasis is given to the identification and physiology of microorganisms as well as to their role in disease, their economic importance, and industrial applications. *Three hours of lecture and two two-hour laboratory periods per week. Prerequisite: Biology 110-111. Not open to students who have received credit for Biology 226.*

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. Prerequisite: Biology 110-111.

223**ANIMAL PHYSIOLOGY**

The mechanisms and functions of animal systems, including the autonomic, endocrine, digestive, cardiovascular, respiratory, renal, nervous, and reproductive systems. Mammalian physiology is stressed. *Three hours of lecture and one three-hour laboratory per week. Prerequisite: Biology 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 will be field studies of local habitats as well as laboratory experimentation. *Three hours of lecture and one three-hour laboratory per week. Prerequisite: Biology 110-111.*

225**PLANT SCIENCES**

A survey of the structure, development, function, classification, and use of plants and related organisms. The study will comprise four general topic areas: form, including morphology and anatomy of plants in growth and reproduction; function, concentrating on nutrition and metabolism peculiar to photosynthetic organisms; classification systems and plant identification, and human uses of plants. *Three hours of lecture and one three hour laboratory per week. Prerequisite: Biology 110-111.*

226**MICROBIOLOGY FOR THE HEALTH SCIENCES**

A study of microorganisms with emphasis given to their taxonomy and their role in various aspects of human infectious disease. Mecha-

nisms for treating and preventing infectious diseases will be presented. Laboratory to include diagnostic culture procedures, antibiotic sensitivity testing, serology, anaerobic techniques and a study of hemolytic reactions. *Three hours of lecture and four hours of laboratory per week. Prerequisite: One year of introductory level biology, one year of chemistry or consent of instructor. Not open to students who have received credit for Biology 221.*

328 AQUATIC BIOLOGY

A field-oriented course dealing with freshwater ecosystems. Studies will 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 will familiarize students with the diversity of habitats and techniques of limnologists. *Alternate years. Prerequisites: Biology 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 will include survey of plankton, invertebrates, and fish as well as the physical and chemical characteristics that influence their distribution. *Prerequisite: Biology 110-111. Alternate May terms.*

330 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. Prerequisite: Biology 110-111. Alternate years.*

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. Prerequisite: Biology 110-111. Alternate years.*

336 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, co-evolution, and the evolution of man. *Four hours of lecture per week. Prerequisite: Biology 110-111 or consent of the instructor. Alternate years.*

339 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 will offer practical experiences in genetic diagnostic techniques. *Prerequisite: Biology 101-102 or 110-111. May term only.*

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. Prerequisite: Biology 110-111. Alternate years.*

346 VIROLOGY

An introduction to the study of viruses. The course will cover virus anatomy and reproduc-

tion, diseases caused by viruses, modern treatments of viral infections and viral vaccines produced by recombinant DNA and other technologies. Course content will also include 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. Prerequisite: Biology 110-111 or consent of instructor. Alternate years.*

347**IMMUNOLOGY**

The course introduces concepts concerning how pathogens cause disease and host defense mechanisms against infectious diseases. Characterization of and relationships between antigens, haptens, and antibodies are presented. Serological assays will include: agglutination, precipitations, immunofluorescence, immunoelectrophoresis, and complement fixation. Other topics are: immediate and delayed hypersensitivities (i.e. allergies such as hay fever and poison ivy), immunological renal diseases, immunohematology (blood groups, etc), hybridoma technology, the chemistry and function of complement, autoimmunity, and organ graft rejection phenomena. *Three hours of lecture, one three-hour laboratory, and one hour of arranged work per week. Prerequisite: Biology 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 will spend 10-12 hours per week at the sponsoring agency. Academic work will include, but is not limited to: a log, readings, recitation and an assigned research paper related to the specific agency's activities.

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. Prerequisite: Biology 110-111. Alternate years.*

433**MEDICINAL AND POISONOUS PLANTS**

An overview of plants that produce physiologically active substances that are important to humans and animals. Major themes include: Mechanisms and symptoms of poisoning, and plant chemicals with useful physiological effects. Laboratory topics include plant classification and techniques for compound identification. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: Biology 110-111 or consent of instructor. Alternate years.*

435**CELL BIOLOGY**

An intensive study of the cell as the basic unit of life. Topics will 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. *Prerequisites: Biology 110-111 and one semester of organic chemistry. 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 will 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. Prerequisite: Biology 110-111. Alternate years.*

441

VERTEBRATE EMBRYOLOGY

A study of the development of vertebrates from fertilization to the fully formed fetus. Particular attention is given to the chick and human as representative organisms. *Two three-hour lecture/laboratory periods per week. Prerequisite: Biology 110-111. Alternate years.*

444

BIOCHEMISTRY

Emphasis is given to the metabolism of carbohydrates, lipids, amino acids, proteins, and nucleic acids; integration of metabolism; and biochemical control mechanisms, including allosteric control, induction, repression, signal transduction as well as the various types of inhibitive control mechanisms. *Three hours of lecture, one three-hour laboratory and one hour of arranged work per week. Prerequisite: Chemistry 220-221 or Chemistry 115, or consent of instructor. Cross-listed as Chemistry 444. Alternate years.*

445

RADIATION BIOLOGY

A study of the effects of ionizing and nonionizing radiations on cells, tissues and organisms. Consideration will be given to repair mechanisms and how repair deficiencies elucidate the nature of radiation damage. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: Biology 110-111, one year of chemistry. Alternate years.*

446

PLANT ANATOMY AND PHYSIOLOGY

A study of plant physiology as a function of plant anatomy. Metabolic relationships and environmental factors will be examined from a background of the structure and development of cells, tissues, organs, and whole plants. *Three hours of lecture and one three-hour laboratory per week. Prerequisites: Biology 110-111, Biology 225. Alternate years.*

448

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. Prerequisite: Biology 110-111. Alternate years.*

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 will be required to read and analyze specific papers, actively participate in discussions. Students majoring in this department are required to enroll during all semesters spent on campus in the junior and senior years. The grade will be P/F. Non-credit course. *One hour per week. Prerequisites: 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 Professor: Weaver (Chairperson)
 Assistant Professor: Sterngold
 Instructors: Henninger, Toncar
 Part-Time Instructor: A. Alexander

This major is designed to educate students in the functions of today's profit and non-profit organizations. The program provides a well-balanced preparation for a wide variety of careers, including finance management, marketing, sales, commercial banking, investments and portfolio management, advertising and retail merchandising.

The major has three tracks: (1) general management, (2) financial management and (3) marketing management. All business administration students are required to take the following six courses: Accounting 110, Business Administration 223, 228, 338,

440, and Mathematics 103.

Track 1 - General Management Students must also complete Accounting 111, Business Administration 329, 441, and either 339 or 341.

Track 2 - Financial Management Students must also complete Accounting 111, Business Administration 339, 441, and either 340 or 341.

Track 3 - Marketing Management Students must also complete Business Administration 329, 332, 445, and either 341 or 443.

All majors are encouraged to complete a selection of the following courses:

- Business Administration 335 Legal Principles I
- Economics 110 Principles of Macroeconomics and 111 Principles of Microeconomics
- Mass Communications 211 Principles of Oral Communications, 323 Writing for Special Audiences and 325 Writing for Business and Public Relations
- Philosophy 216 Ethical Issues in Business
- Political Science 110 Government and Politics in the United States

Given the growing importance of international business and competition, majors are also encouraged to study a foreign language and other courses that will expose them to global issues and foreign cultures.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Business 440, and 441. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Internships

The department offers a wide variety of challenging internships with businesses, government agencies and nonprofit organizations in financial management, marketing, advertising, sales, general management, commercial banking, insurance, advertising and other fields.

Minors

The Business Administration Department offers two minors: Marketing and Finance. Marketing minors are required to complete Business 228, 329, 332, 445, and either Business 443, 448, or 341. Finance minors are required to complete Business 338, 339, 340, Economics 220, and either Economics 441 or Business 345.

The Department of Business Administration is a member of the Institute for Management Studies. See page 111.

223 QUANTITATIVE BUSINESS ANALYSIS

Techniques of quantitative analysis useful in making business decisions. Topics include: decision theory, inventory models, network models, forecasting, and other selected applications. Students will be introduced to computer applications of the quantitative models. *Prerequisite: Mathematics 103 or consent of instructor.*

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. Readings, case studies, library assignments and team research projects.

329 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, business demographics and marketing-related financial analysis. Readings, case studies, library assignments and computer exercises. *Prerequisites: Business 228 and Math 103, or consent of instructor.*

332 ADVERTISING

Nature, scope, methods, and effects of promotion. Techniques of analysis and control in the use of advertising and publicity as tools in developing business strategy. *Prerequisite: Business 228 or consent of instructor.*

335 LEGAL PRINCIPLES I

Lectures and analysis of cases on the nature, sources, and fundamentals of the law in general, and particularly as relating to contracts, agency, and negotiable instruments. *Open only to juniors and seniors.*

336 LEGAL PRINCIPLES II

Lectures on the fundamentals and history of the law relating to legal association, real property, wills, and estates. *Open only to juniors and seniors.*

338 FINANCIAL MANAGEMENT I

An introduction to working capital management and financial analysis and planning. Topics are covered through readings, cases and problem-solving in the areas of decisions on current asset and liability structures, cash and marketable securities, accounts receivables, inventory management and control, spontaneous financing, short-term borrowing, ratio and financial statement analysis, source and use statements, cash flow forecasting, and financial statements forecasting. *Prerequisites: Mathematics 103, Accounting 110, and Business 223; or consent of instructor.*

339 FINANCIAL MANAGEMENT II

A study of capital asset structure and long-term financial decisions. Topics are covered through readings, cases, and problem-solving in the areas of capital budgeting, including risk and required rates of return, leveraging in the

firm, concepts of capital structures, dividend policy, external financing, term and lease financing, long-term debt, equity securities, convertible securities and warrants. *Prerequisite: Business 338 or consent of instructor.*

340
INVESTMENTS

An introduction to the financial sector of the economy and the structure and functions of financial markets and the agencies involved; brokerage houses and stock exchanges; the various types of investments available. Techniques used to evaluate financial securities. Also covered are recent developments in investment theory. *Prerequisite: Business 338 or consent of instructor.*

341
INTERNATIONAL BUSINESS

This course is designed to familiarize students with the environment and institutional framework in which international firms operate. Through readings, case studies and discussions, students will investigate the primary problems confronting international businesses, including cross-cultural conflicts, trade and payment systems, "multinationalization" of business enterprises, the changing relationship between former communist East and capitalist West, and the role of the business manager in that environment. *Prerequisite: Business 228 or consent of instructor.*

345
FINANCIAL STATEMENT ANALYSIS

Deals with the analysis of financial statements as an aid to decision making. The theme of the course is understanding the financial data which are analyzed as well as the methods by which they are analyzed and interpreted. This course should prove of value to all who need a thorough understanding of the uses to which financial statements are put as well as to those who must know how to use them intelligently and effectively. This includes accountants, security analysts, lending

officers, credit analysts, managers, and all others who make decisions on the basis of financial data. *Prerequisite: Accounting 110.*

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. *Majors only and consent of instructor.*

440
MANAGEMENT CONCEPTS

Structural characteristics and functional relationships of a business organization as well as the problems encountered in coordinating the internal resources of a firm. Emphasis on administrative efficiency and procedures.

441
BUSINESS POLICIES

Planning, organization, and control of business operations; setting of goals; coordination of resources, development of policies. Analysis of strategic decisions encompassing all areas of a business, and the use and analysis of control measures. Emphasis on both the internal relationship of various elements of production, finance, marketing, and personnel, and the relationship of the business entity to external stimuli. Readings, cases, and games. *Prerequisite: Business 223, 228, 338, and 440, or consent of instructor. Seniors only.*

442
PERSONNEL MANAGEMENT

An introduction to the managerial problems of recruiting, selecting, training, and retraining the human resources of the firm. Emphasis is placed on the interrelationship of

personnel policies with management objectives and philosophies in such areas as fringe benefits, wage and salary policies, union activities, and health and safety.

443**RETAIL MANAGEMENT I**

Planning, organization, and control of the retailing firm. Competitive strategy development through store location, layout, administration organization, buying, and pricing. Cases, reading, and papers. *Prerequisite: Business 228 or consent of instructor.*

445**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 studies. Topics covered include selection of a research design, project planning and scheduling, data specification and gathering, quantitative methods to analyze data, interpretation of data, and research report writing. Reading, cases, and research project. *Mathematics 103 and Business 228 or consent of instructor.*

446**PRODUCTION MANAGEMENT**

An introduction to the planning, organization, and controlling of operations in a production facility. The course also incorporates quantitative techniques and computer applications used in the production and operations management environment. Topics include capacity and layout planning, facility location analysis, job design and work measurement, production scheduling, materials requirement planning models, and quality controls. Students will engage in the actual design of an inventory status file and MRP system. *Prerequisite: Business 223 or consent of instructor.*

447**CREATIVE ADVERTISING**

A workshop concerned with theme, copy and effective presentation of advertisements for print

media, radio, and direct mail. Primarily an exploration of creativity through analysis of works of artists and writers with application to practical advertising, and tailored to the interests of individual students. *May term. Prerequisite: Business 332 or consent of instructor.*

448**SALES SEMINAR**

The role of selling in the economy. The art of creative selling; application of theories from the behavioral sciences to selling through the analysis of sales situations and techniques. *Prerequisite: Business 228 or consent of instructor.*

449**MANAGING THE SMALL BUSINESS**

How the potential businessman proceeds in establishing, operating, and profiting from a small business operation. Considered and analyzed are such aspects as marketing, managing, financing, promoting, insuring, establishing, developing, and staffing the small retail, wholesale service, and manufacturing firm. *May term. Prerequisite: Accounting 111, and Business 228, 338 or consent of instructor.*

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

Typical examples are marketing analysis for a paper products firm, planning a branch store, hotel and real estate management, banking and insurance.

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

Examples of recent studies are: the economic impact of a college on a community and marketing strategy for a local firm entering the consumer market.

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

A recent project was a study of the evolution of anti-trust legislation in the United States.



CHEMISTRY (CHEM)

Professor: Franz

Associate Professor: McDonald (Chairperson)

Assistant Professors: Berkheimer, Wolfskill

Part-time Instructors: Baggett, Miller

A major in chemistry consists of Chemistry 110-111, 220-221, 330-331, 332 and 333; Physics 225-226; Mathematics 128, 129 and one of the following courses: Mathematics 103, 231, 238, 332, or Computer Science 125. Mathematics 231 and 238 and French or German are strongly recommended for students planning on graduate study in chemistry. To be certified in secondary education, chemistry majors must also pass two biology courses numbered 110 or higher.

The Department is approved by the American Chemical Society (ACS) to certify those students whose programs meet or exceed requirements established by the ACS.

Students who wish to earn ACS certification must complete the major described above, as well as Chemistry 443 and two courses from Chemistry 440, 442, 447, and 480 (or 490). Students who complete the ACS-certified degree are eligible for admission as members to the American Chemical Society following graduation.

The following courses have been approved to be offered as Writing Intensive courses and may be offered as such: Chemistry 330 and 332. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in chemistry requires completion of four courses numbered 220 or higher; at least one must be taken from each of the following groups: Group A (220-221, 440, 442, 444, 447) and Group B (226 or 332, 330-

331, 333, 439, 443). Named minors in specialized areas may be designed by students with departmental approval.

108

CHEMICAL PRINCIPLES

An introduction to the principles of inorganic chemistry. Topics include atomic and molecular structure, nomenclature, gases, solutions, acids and bases, kinetics, equilibrium, oxidation-reduction, and stoichiometry. The approach is primarily descriptive with illustrations drawn mostly from the health sciences. Along with Chemistry 115, this course is designed for those students who require only two semesters of chemistry, and is not intended for students planning to enroll in chemistry courses numbered 200 or above. *Three hours of lecture, one hour of discussion, and one three-hour laboratory period each week. Prerequisite: Math 100 or consent of the Chemistry Department. Not open for credit to students who have received credit for Chemistry 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: 110 Prerequisite: Math 100 or consent of the Chemistry Department. Not open for credit to students who have received credit for Chemistry 108, except by permission of the Chemistry Department.*

111

GENERAL CHEMISTRY II

A continuation of Chemistry 110, with emphasis placed on the foundations of analytical, inorganic, and physical chemistry. Topics include kinetics, general and ionic 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: Chemistry 110 or consent of the Chemistry Department.*

115

BRIEF ORGANIC CHEMISTRY

A descriptive study of the compounds of carbon. This course will illustrate the principles of organic chemistry with material relevant to students in medical technology, biology, nursing, forestry, education and the humanities. Topics include nomenclature, alkanes, arenes, functional derivatives, amino acids and proteins, carbohydrates and other naturally occurring compounds. This course is designed for students who require only one semester of organic chemistry. *Three hours of lecture, one hour of discussion, and one three-hour laboratory period each week. Prerequisite: Chemistry 108 or 110. Not open for credit to students who have received credit for Chemistry 220.*

220-221

ORGANIC CHEMISTRY

A systematic study of the compounds of carbon, including both aliphatic and aromatic series. The laboratory work introduces the student to simple fundamental methods of organic synthesis, isolation, and analysis. *Three hours of lecture and one four-hour laboratory period each week. Prerequisite: Chemistry 111.*

226

CLINICAL ANALYSIS

A presentation of selected wet-chemical and instrumental methods of quantitative analysis with an orientation toward clinical applications in medical technology. Topics include: general methods and calculations; solutions; titrations; photometric analyses (colorimetric, atomic absorption, flame emission); electrochemical methods (ion-selective electrodes, coulometry); automation. *Lecture, recitation, and laboratory daily. Prerequisite: Chemistry 110-111 or consent of instructor. May not be taken for credit following Chemistry 332. May term only.*

330-331**PHYSICAL CHEMISTRY**

A study of the fundamental principles of theoretical chemistry and their applications. The laboratory work includes techniques in physiochemical measurements. *Three hours of lecture and one four-hour laboratory period each week. Prerequisite: Chemistry 111, Mathematics 129, and one year of physics or consent of instructor.*

332**ANALYTICAL CHEMISTRY**

A study of the fundamental methods of gravimetric, volumetric and elementary instrumental analysis together with practice in laboratory techniques and calculations of these methods. *Two hours of lecture and two three-hour laboratory periods each week. Prerequisite: Chemistry 111 or consent of instructor.*

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.

Prerequisite: Chemistry 330, Mathematics 129, and one year of physics or consent of instructor.

439**INTRODUCTION TO QUANTUM MECHANICS**

After presenting the origin, basic concepts, and formulation of quantum mechanics with emphasis on its physical meaning, the course will investigate the free particle, simple harmonic oscillator, and central-force problems. Both time-independent and time-dependent perturbation theory will be covered. The elegant operator formalism of quantum mechanics will conclude the course. *Four hours of lecture and recitation. Prerequisites: Mathematics 231, either Chemistry 331 or Physics 226, and consent of instructor. Cross-listed as Physics 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: Chemistry 221.*

442**SPECTROSCOPY AND MOLECULAR STRUCTURE**

Theory and application of the identification of organic compounds. Special emphasis will be placed 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. Prerequisites: Chemistry 221, Chemis-*

try 331, or consent of instructor.

443 ADVANCED ANALYTICAL CHEMISTRY

A study of advanced analytical methods with emphasis on chromatographic, electrochemical, and spectroscopic methods of instrumental analysis. *Three hours lecture and one four-hour laboratory period each week. Prerequisite: Chemistry 331 and 332 or consent of instructor.*

444 BIOCHEMISTRY

Emphasis is given to the metabolism of carbohydrates, lipids, amino acids, proteins, and nucleic acids; integration of metabolism; and biochemical control mechanisms, including allosteric control, induction, repression, signal transduction as well as the various types of inhibitive control mechanisms. *Prerequisite: Chemistry 221 or 115 or consent of instructor. Cross-listed as Biology 444.*

447 POLYMER CHEMISTRY

An introduction to the synthesis, characterization, and applications of high molecular weight materials, i.e., macro-molecules. Special emphasis will be given to synthetic polymer systems. *Three hours of lecture, one four-hour lab per week. Prerequisites: Chemistry 221 and 330, or consent of instructor.*

348 & 448 CHEMISTRY COLLOQUIUM

A seminar in which faculty, students and invited professional chemists discuss their own research activities or those of others which have appeared in recent chemical literature. *Prerequisite: Three semesters of non-credit Chemistry Colloquium taken*

during the junior and senior years.

470-479 INTERNSHIP (See index)

The student will ordinarily work under supervision in an industrial laboratory and submit a written report on the project.

N80-N89 INDEPENDENT STUDY (See index)

The student will ordinarily work on a laboratory research project and will write a thesis on the work.

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

The student will ordinarily work on a laboratory research project with emphasis on showing initiative and making a scholarly contribution. A thesis will be written.





CRIMINAL JUSTICE

Assistant Professor: Strauser (Coordinator)

This major is designed to acquaint students with the American criminal justice system and to provide an understanding of the social, psychological, philosophical, and political contexts within which the system of criminal justice functions. Its aim is to develop students' intellectual and scientific skills in raising and attempting to answer important questions about the system of justice and its place in society. The program offers opportunity for intern experience in the field, and prepares for careers in the areas of law enforcement, probation and parole, prisons, and treatment services.

The major has two tracks. Track I prepares for careers in law enforcement. Track II prepares for careers in corrections.

Track I - Law Enforcement.

The major consists of 10 courses, distributed as follows:

- A. Professional courses in criminal justice (three courses):
 - Introduction to the Criminal Justice System (Sociology and Anthropology 115);
 - Introduction to Law Enforcement (Sociology and Anthropology 223);
 - The American Prison System (Sociology and Anthropology 339)
- B. Courses in the social, psychological, philosophical, and political context of the justice system (seven courses):
 - Criminology (Sociology and Anthropology 300) and either Juvenile Delinquency (Sociology and Anthropology 221) or Racial and Cultural Minorities (Sociology and Anthropology 334) (two courses);
 - Abnormal Psychology (Psychology 116) (one course);
 - America as a Civilization (American Studies 200), Afro-American History (History 230) or United States Social and Intellectual History Since 1877 (History 443) (one course);
 - Law and Society (Political Science 335) and Civil Rights and Liberties (Political Science 331) (two courses);
 - Philosophical Issues in Criminal Justice (Philosophy 218) (one course)
- C. Internship/practicum in law enforcement (recommended but not required for the major).

Track II - Corrections.

The major consists of 10 courses, distributed as follows:

- A. Professional courses in criminal justice (three courses):
 - Introduction to the Criminal Justice System (Sociology and Anthropology 115);
 - The American Prison System (Sociology and Anthropology 339);
 - Introduction to Human Services (Sociology and Anthropology 222)

- B. Courses in the social, psychological, philosophical, and political context of the justice system (seven courses):
 Criminology (Sociology and Anthropology 300) and either Juvenile Delinquency (Sociology and Anthropology 221) or Racial and Cultural Minorities (Sociology and Anthropology 334) (two courses);
 Abnormal Psychology (Psychology 116) (one course);
 America as a Civilization (American Studies 200), Afro-American History (History 230) or United States Social and Intellectual History Since 1877 (History 443) (one course);
 Law and Society (Political Science 335) and Civil Rights and Liberties (Political Science 331) (two courses);
 Philosophical Issues in Criminal Justice (Philosophy 218) (One course)
- C. Internship or practicum in corrections (recommended but not required for the major). *Prerequisite: Mathematics 103, Psychology 431, and Psychology 239.* These prerequisites may be waived in certain cases by the coordinating committee.

Majors should seek advice concerning course selection from members of the coordinating committee and should note course prerequisites in planning their programs.

Minor

A minor in criminal justice consists of five courses. Required courses include: Sociology 115 Introduction to Criminal Justice and any four other courses in the Criminal Justice major listed above, at least three of which must be numbered 200 or above. To receive credit for a minor in Criminal Justice, a student must maintain a minimum 2.0 cumulative average in courses completed for the minor.



ECONOMICS (ECON)

Shangraw Professor: Opdahl (Chairperson)

Associate Professor: Madresehee

Assistant Professor: Sprunger

The major has two tracks. Track I is designed for the student whose primary interest lies in business management; Track II 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 I - Managerial Economics requires Economics 110, 111, 220, 332 and either 330 or 441; Accounting 110 and either Accounting 111 or Business 329; Business 338; and two other economics courses numbered 200 or above, excluding Economics 349.

Track II - General Economics requires Economics 110 and 111, 331, 440, 330 or 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.

In addition, the following courses are recommended: all majors - Math 103 and Business 223; majors planning graduate work - Math 112 and 128; Track II majors - Accounting 110 and either 111 or 220.

The following courses have been approved to be offered as Writing Intensive courses and may be offered as such: Economics 337 and 440. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in economics requires the completion of Economics 110 and 111 and three other economics courses numbered 200 or above, or any four economics courses numbered 200 or above.

The Department of Economics is a member of the Institute for Management Studies. See page 111.

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: Economics 110.*

221

COMPARATIVE ECONOMIC SYSTEMS

A comparative analysis of the underlying ideologies, the basic institutions, and the performance of selected economic systems. *Alternate years.*

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. *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.

229

BUSINESS CYCLES AND FORECASTING

An introduction to the nature and history of business fluctuations, the tools used in

aggregate analysis, theories that seek to explain the cycle, and techniques used in forecasting economic activity. *Prerequisite: Economics 110 or permission of the instructor. Alternate years.*

230 ECONOMETRICS

Econometric models provide one of the most useful and necessary sets of tools for decision-making. By using a variety of modern statistical methods, econometrics helps us to estimate economic relationships, test different economic behaviors, and forecast different economic variables. *Prerequisites: Mathematic 103, Economics 110 and 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. *Prerequisites: Economics 110 and 111. 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. *Prerequisites: Economics 110 and 111. 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 and via means of regulatory commissions, and to encourage or restrain various types of private economic activities.

Prerequisites: Economics 110 and 111 or consent of instructor.

335 LABOR PROBLEMS

The history of organized labor in the United States, including the structure of unions, employers' opposition to unions, the role of government in labor-management relations and the economic impact of unions. *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. *Prerequisite: Economics 110 and 111 or consent of 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: Economics 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 will 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. *Prerequisites: Economics 110 and 111 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: Economics 110 and 111. Some understanding of differential calculus is recommended.*

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: Blair,
Conrad (Chairperson), Hungerford
Visiting Instructor: Bossert
Part-time Instructors: Grove, Mosser,
Salvatori, Straub, Little, Zalonis

The Education Department offers Pennsylvania-approved teacher certification programs in elementary and secondary education, as well as a school nurse certification program.

Students seeking secondary certification must complete Education 200 and Psychology 338 as prerequisites to the professional semester (Education 446, 447, 449) as well as the necessary subject area courses. Students must have the required 14 1/2 day observations with their assigned cooperating teacher during the semester prior to their professional semester. Students may earn secondary certification in one or more of the following areas: art (K-12), biology, chemistry, English, French (K-12), general science, German (K-12), mathematics, music (K-12), physics, school nurse (K-12), social studies, and Spanish (K-12).

Students seeking elementary certification must complete Education 200, Psychology 338, Mathematics 205, Education 000, 341, 342, 343, and 344 as prerequisites to the professional semester (Education 445, 447, 448). Students must have the required 14 1/2 day observations with their assigned cooperating teacher during the semester prior to their professional semester.

Students interested in the teacher education program should refer to the *Teacher Education Handbook*, which specifies the current requirements for certification. Early consultation with a member of the Education Department is strongly recommended. Application for the professional semester must be made during the spring semester of the junior year. The Department of Education admits to the professional semester only those applicants who are in good academic standing, have satisfactorily completed the participation requirements, have paid the student teaching fee, and have received a positive evaluation based upon: (a) recommendation from the student's major department; (b) a screening interview conducted by the Education Department; and (c) a writing sample from the student. Major departments have different criteria for their recommendations. Therefore, the student should consult with the chairperson of the major department about those requirements.

Additional teacher intern program information can be found on page 54.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Education 343 and 344. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

000 SEMINAR IN ART, MUSIC, PHYSICAL EDUCATION, and MATH ACTIVITIES

Each elementary student teacher attends a series of 24 seminars, conducted prior to

student teaching, during the fall semester of the senior year. These seminars, conducted by certified public school personnel, emphasize activities and knowledge which are helpful in the self-contained elementary classroom. *Non-credit course.*

200 INTRODUCTION TO THE STUDY OF EDUCATION

A study of teaching as a profession with emphasis on the economic, social, political, and religious conditions which influence American schools and teachers. Consideration is given to the school environment, the curriculum, and the children with the intention that students will examine more rationally their own motives for entering the profession.

232 INSTRUCTIONAL MEDIA AND COMMUNICATIONS

A study of the value, design, construction, and application of the visual and auditory aids to learning. Practical experience in the handling of audio-visual equipment and materials is provided. Application of audio-visual techniques. Application of the visual and auditory aids to learning. Students will plan and carry out actual teaching assignments utilizing various A-V devices.

239 PUBLIC SCHOOL CURRICULUM

An examination of the various curricula of the public schools and their relationship to current practices. Special attention will be given to the meaning and nature of the curriculum, the desirable outcomes of the curriculum, conflicting and variant conceptions of curricula content, modern techniques of curricular construction, criteria for the evaluation of curricula, the curriculum as a teaching instrument. Emphasis will be placed upon the curriculum work within the teaching field of each individual.

341
TEACHING THE SOCIAL STUDIES IN
THE ELEMENTARY SCHOOL

Studies and experiences to develop a basic understanding of the structure, concepts, and processes of anthropology, economics, geography, history, political science, and sociology as they relate to the elementary school social science curriculum. Practical applications, demonstrations of methods, and the development of integrated teaching units using tests, reference books, films, and other teaching materials. Observation and participation in Lycoming County elementary schools. *Prerequisites: Education 200 and Psychology 338 or consent of instructor.*

342
TEACHING SCIENCE IN
THE ELEMENTARY SCHOOL

Science methods and materials interpreting children's science experiences and guiding the development of the scientific concepts. A study of the science content of the curriculum, its material and use. Observation and participation in Lycoming County elementary schools. *Prerequisite: Education 200 and Psychology 338 or consent of instructor.*

343
TEACHING LANGUAGE ARTS AND
CHILDREN'S LITERATURE IN THE
ELEMENTARY SCHOOL.

A course designed to consider the principal means of communication, oral and written, including both practical and creative uses. Attention will be given to listening, speaking, written expression, linguistics and grammar, and spelling. Stress will be placed upon the interrelatedness of the language arts. Children's literature will be explored as a vehicle for developing creative characteristics in children and for ensuring an appreciation of the creative writing of others. Observation and participation in Lycoming County

elementary schools. *Prerequisite: Education 200 and Psychology 338 or consent of instructor.*

344
TEACHING READING IN
THE ELEMENTARY SCHOOL

A basic course in the philosophy and rationale for the implementation of an elementary reading program from kindergarten through sixth grade. Emphasis is upon designing a reading instructional program which reflects the nature of the learning process and recognizes principles of child development through examination of the principles, problems, methods, and materials used in elementary reading programs. *Prerequisite: Psychology 338, Education 200, or consent of instructor.*

The Elementary Professional Semester

The following courses comprise the Elementary Professional Semester:

EDUCATION 445 — Methods of Teaching in the Elementary School

EDUCATION 447 — Problems in Contemporary American Education

EDUCATION 448 — Student Teaching in the Elementary School

445
METHODS OF TEACHING IN THE
ELEMENTARY SCHOOL (PART OF THE
PROFESSIONAL SEMESTER)

The course emphasizes the relationship between the theoretical studies of physical, social and cognitive development and the elementary classroom environment. Particular consideration will be given to the appropriate age and developmental level of the students with an emphasis upon selection and utilization of methods in all the elementary subject areas, including art and music.

Specific attention is given to the development of strategies for structuring lesson plans, for maintaining classroom control, and for overall classroom management. Direct application is made to the individual student teaching experience. *Prerequisites: Mathematics 205, Education 000, 341, 342, 343, and 344, and pre-student teaching participation.*

447
PROBLEMS IN CONTEMPORARY AMERICAN EDUCATION (PART OF THE PROFESSIONAL SEMESTER)

Seminar on the issues, problems, and challenges encountered by teachers in the American public schools, especially those related to the student teaching experience.

448
STUDENT TEACHING IN THE ELEMENTARY SCHOOL (PART OF THE PROFESSIONAL SEMESTER)

Professional experience under the supervision of a selected cooperating teacher in a public elementary school in Lycoming County. Student teachers are required to follow the calendar of the school district to which they are assigned. *Two units maximum.*

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 Secondary Professional Semester

The following courses comprise the Secondary Professional Semester:

- EDUCATION 446 — Methods of Teaching
in the Secondary School
EDUCATION 447 — Problems in
Contemporary
American Education
EDUCATION 449 — Student Teaching in
the Secondary School

446
METHODS OF TEACHING IN THE SECONDARY SCHOOL (PART OF THE PROFESSIONAL SEMESTER)

A study of materials, methods, and techniques with emphasis on the student's major. Stress is placed on the selection and utilization of visual and auditory aids to learning. Students teach demonstration lessons in the presence of the instructor and the members of the class and observe superior teachers in Lycoming County secondary schools. *Prerequisite: Education 200, Psychology 338, and pre-student teaching participation.*

447
PROBLEMS IN CONTEMPORARY AMERICAN EDUCATION (PART OF THE PROFESSIONAL SEMESTER)

Seminar on the issues, problems, and challenges encountered by teachers in the American public schools, especially those related to the student teaching experience.

449
STUDENT TEACHING IN THE SECONDARY SCHOOL (PART OF THE PROFESSIONAL SEMESTER)

Professional laboratory experience under the supervision of a selected cooperating teacher in a public secondary school in Lycoming County. Student teachers are required to follow the calendar of the school district to which they are assigned. Two units maximum.

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.



ENGLISH (ENGL)

Professors: Jensen, Rife

Associate Professor: Moses (Chairperson)

Assistant Professors: Austin, Hawkes,
Lewes, Hafer

Part-time Instructors: Keller, Logue

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 elementary 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 English 217,

220, 221, 222, and 223; two courses selected from English 311, 312, 313, 314, and 315; one from English 335 and 336; and two electives from among courses numbered 215 and above.

Students who wish to earn secondary certification must complete a minimum of twelve courses in English. Required courses in English are 217, 220, 221, 222, 223, 335, 336, and 338; three courses selected from 311, 312, 313, 314, and 315; and one elective from among courses numbered 215 and above. Required courses outside English are Education 200, 446, 447, and 449; Psychology 110 and 338; and Theatre 100.

Students who intend to pursue graduate study in British or American literature should complete the twelve English courses specified for secondary certification.

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 eleven courses is required for Track II. Required courses are English 225 and 240; three courses selected from English 220, 221, 222, and 223; one from English 311, 312, 313, 314 and 315; one from English 331 and 332; one from English 335 and 336; two from English 341, 342, 441, and 442 (note prerequisites); and one from English 411 and 412.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: English 331, 334, 335, 336, and 420. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

The department offers two minors in English:

Literature: Five courses in literature at the 200 level or above, at least three of which must be numbered 300 or above.

Writing: Five courses, four of which are chosen from English 217, 240, 321, 322, and 338; plus one writing-intensive course in literature at the 300 level.

105

INTRODUCTION TO COLLEGE WRITING

A review of grammar and an introduction to college-level reading and writing. A skills lab complements classroom instruction. One unit grade of "P" will be assigned when the student has successfully completed all of the work in the course. Required of, and limited to, those who have not been exempted from English 105.

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.

215

INTRODUCTION TO LITERARY INTERPRETATION

Practice in the methods of close reading and formal analysis. Identification of primary elements and structures of literary representation. Literature chosen for study will vary. *Prerequisite: English 106 or consent of instructor.*

217

CRITICAL WRITING SEMINAR

Brief introduction to criticism as a discipline, followed by workshop training in writing critical papers on the major literary genres. *Prerequisite: Grade of C + or better in English 106 or consent of instructor.*

220

BRITISH LITERATURE I

Literary forms, themes, and authors from the Anglo-Saxon period through the 18th century. Emphasis on such writers as Chaucer, Spenser, Shakespeare, Milton, Swift, Pope, and Johnson; representative works from *Beowulf* to Burney's *Evelina*. *Prerequisite: English 106 or consent of 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: English 106 or consent of instructor.*

222

AMERICAN LITERATURE I

Survey of American literature from the beginning to the Civil War, with major emphasis on the writers of the Romantic period: Poe, Emerson, Thoreau, Hawthorne, Melville, Dickinson, and Whitman. *Prerequisite: English 106 or consent of instructor.*

223**AMERICAN LITERATURE II**

Survey of American literature from the Civil War to the present, emphasizing such authors as Twain, James, Crane, Hemingway, Faulkner, Frost, Eliot, Stevens, O'Neill, and Williams.

Prerequisite: English 106 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: English 106 or consent of instructor.*

240**INTRODUCTION TO CREATIVE WRITING**

Workshop discussions, structured exercises, and readings in contemporary literature to provide practice and basic instruction in the writing and evaluation of poetry and fiction. *Prerequisite: English 106 or consent of 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: English 106 or consent of instructor. Alternate years.*

312**RENAISSANCE LITERATURE**

An examination of themes and literary forms of the Renaissance. Authors studied will include Donne, Marlowe, More, Shakespeare, Sidney, Spenser, and Surrey. *Prerequisite: English 106 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: English 106 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: English 106 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: English 106 or consent of instructor. Alternate years.*

321**ADVANCED WRITING: TECHNICAL AND PROFESSIONAL**

A course providing practice in report and technical writing, proposals, and other areas where competence will be expected in the business and scientific worlds. *Prerequisite: English 106 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 will include essayists from Montaigne to Gould. *Prerequisite: Grade of C+ or better in English 106 or consent of instructor. Alternate years.*

331**20TH-CENTURY 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: English 106 or consent of instructor.*

332**20TH-CENTURY POETRY**

Studies in the themes and visions of modern and contemporary poets including Yeats, Eliot, Stevens, Frost, Moore, Lowell, Bishop, and Rich. *Prerequisite: English 106 or consent of instructor.*

333**THE NOVEL**

An examination 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: English 106 or consent of instructor. Alternate years.*

334**WOMEN AND LITERATURE**

An examination — literary, social, and historical — of selected British and American literature by women, designed to identify those elements which distinguish women's particular contribution to the literary canon. *Prerequisite: English 106 or consent of instructor. Alternate years.*

335**CHAUCER**

A study of the major works with emphasis on *The Canterbury Tales* and *Troilus and Criseyde*. Some attention to language study and to the traditions out of which Chaucer's works arose. *Prerequisite: English 106 or consent of instructor. Alternate years.*

336**SHAKESPEARE**

A study of representative plays in the context of Shakespeare's life and times. *Prerequisite: English 106 or consent of instructor. Alternate years.*

338**LINGUISTICS AND THE ANALYSIS OF THE ENGLISH LANGUAGE**

Introduction to methods of analyzing spoken and written English. Classroom work supported by weekly tutorials, in which the student gains practical experience in identifying, diagnosing, and correcting basic communications problems. *Prerequisite: English 106 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 English 240 or consent of instructor. Alternate years.*

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 English 240 or consent of instructor. Alternate years.*

411**FORM AND THEORY: POETRY**

Principles of meter, rhyme, formal structure, and traditional and contemporary poetic forms will be studied through readings, discussion, and exercises. Designed to enhance skills in both practical criticism and in creative writing, this course will pay particular attention to theories concerned with the relationship between form and content in poetry. *Prerequisite: English 240 or consent of instructor. Alternate years.*

412

FORM AND THEORY: FICTION

An exploration of such fictional forms as drama, short story, novella, tale, yarn, novel and essay. Serious attention will be given to aesthetics and the role and responsibility of the writer in society. *Prerequisite: English 240 or consent of instructor. Alternate years.*

420

SELECTED WRITERS

An intensive study of no more than three writers, selected on the basis of student and faculty interest. Possible combinations include: Frost, Hemingway, and Faulkner; O'Connor, Welty, and Porter; Spenser and Milton; Hawthorne, Melville, and Dickens; Woolf, Forster, and Lawrence; Joyce and Yeats. *Prerequisite: English 106 or consent of instructor. Alternate years.*

421

TOPICS IN LITERATURE

Examination of a literary theme, idea, or movement as it appears in one or more types of literature and as it cuts across various epochs. Possible topics include: American Novelists and Poets of the Jazz Age and Depression; The Bible and Literature; Gothic Tradition in American Literature; Mystery and Detective Fiction; The Hero in Literature. *Prerequisite: English 106 or consent of instructor. Alternate years.*

441

POETRY WORKSHOP II

An advanced workshop in the writing of poetry. Students will receive intensive analysis of their own work and acquire experience in evaluating the work of their peers. *Prerequisite: English 341. Alternate years.*

442

FICTION WORKSHOP II

An advanced course in the writing of short fiction. Emphasis on the complexities of voice and tone. The student will be encouraged to develop and control his or her individual style and produce publishable fiction. *Prerequisite: English 342. Alternate years.*

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: English 106 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."



FOREIGN LANGUAGES AND LITERATURES

Associate Professors: Buedel (on leave), MacKenzie (Chairperson), Maples
 Assistant Professor: G. Clark
 Visiting Instructor: Kingery
 Part-time Instructors: A. Falk, Boring

Study of foreign languages and literatures offers opportunity to explore broadly the varieties of human experience and thought. It contributes both to personal and to international understanding by providing competence in a foreign language and a critical acquaintance with the literature and culture of foreign peoples. A major can serve as entrée 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.

French, German, and Spanish are offered as major fields of study. The major consists

of at least eight courses numbered 111 or above. Majors seeking teacher certification and students planning to enter graduate school are advised to begin study of a second foreign language. The department encourages students to consider allied courses from related fields or a second major, and also individual or established interdisciplinary majors combining interest in several literatures or area or cross-cultural studies; for example, International Studies, 20th Century Studies, the Major in Literature. Majors, teacher certification candidates, and all students are encouraged to spend at least a semester of study abroad by applying to one of the many programs available. The department maintains a file of such programs.

Courses taught in English: Foreign Languages and Literatures 225 and 338.

FOREIGN LANGUAGES AND LITERATURES (FLL)

225

CONTINENTAL LITERATURE

A study of such major continental authors as Cervantes, Dostoevsky, Chekhov, Dante, Ibsen, Proust, Gide, Kafka, Hesse, Goethe, Sartre, Camus, Brecht, and Ionesco. Works read in English translation will vary and be organized around a different theme or topic; recent topics have been existentialism, modernism, drama, the Weimar era, and 20th century Scandinavian and German prose writers. *Prerequisite: None. May be repeated for credit with consent of instructor. May be accepted toward the English major with consent of the Department of English.*

338

FOREIGN LANGUAGE: SYSTEMS AND PROCESS

Study of basic linguistic concepts as a tool for language learning and teaching. Discussion and application of language teaching techniques, including work in the language laboratory.

Designed for future teachers of one or more languages and normally taken in the junior year. Students should arrange through the Department of Education to fulfill in the same semester the requirements of a participation experience in area schools. *Prerequisite: Consent of instructor. Does not count toward majors in French, German, and Spanish.*

FRENCH (FRN)

A major consists of a minimum of eight courses numbered 111 or above, including at least two from 402, 412, 423, and 427. In addition, all majors who wish to be certified for teaching must pass courses 221-222, and Foreign Languages and Literatures 338 (the latter course with a C or better).

The following course has been approved to be offered as a writing intensive course and may be offered as such: French 441. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in French consists of at least four courses numbered 221 and above. Courses 111 and 112 may be counted toward the minor, but then the minor must consist of at least five courses, three of which must be numbered 200 and above.

101-102

ELEMENTARY FRENCH

The aim of this sequence of courses is to acquire the fundamentals of the language with a view to using them. Regular practice in speaking, understanding, and reading.

111-112

INTERMEDIATE FRENCH

Review and development of the fundamentals of the language for immediate use in speaking, understanding, and reading, with a view to building confidence in self-expression. *Prerequisite: French 102 or equivalent.*

221-222

FRENCH LANGUAGE PRACTICE

Further training in speaking, listening comprehension, reading, and writing. Includes extensive work in grammar. *Prerequisite: French 112 or equivalent.*

228

MODERN FRANCE

A course designed to familiarize students with political and social structures and cultural attitudes in contemporary French society. Material studied may include such documents as newspaper articles, interviews and sociological surveys, and readings in history, religion, anthropology, and the arts. Some attention to the changing education system and the family and to events and ideas which have shaped French society. May include some comparative study of France and the United States. *Prerequisite: French 221 or consent of instructor.*

402

FRENCH LITERATURE TO 1800

Major authors and movements from the Medieval, Renaissance, Classical and Enlightenment periods. Includes the *chanson de geste*, Villon, Montaigne, Corneille, Racine, Molière, Voltaire, and Rousseau. *Prerequisite: French 222 or 228 or consent of instructor. Alternate years.*

412

FRENCH LITERATURE OF THE 19TH CENTURY

The dimensions of the Romantic sensibility: Musset, Hugo, Vigny, Balzac, Stendhal. Realism and Naturalism in the novels of Flaubert and Zola. Reaction in the poetry of Baudelaire, Rimbaud, Verlaine, and Mallarmé. *Prerequisite: French 222 or 228 or consent of instructor. Alternate years.*

423

MODERN FRENCH THEATRE

Major trends in French drama from the turn of the century to Existentialism and the

Theatre of the Absurd, Giraudoux, Anouilh, Sartre, Camus, Beckett, Ionesco, Genet, Adamov, and others. *Prerequisite: French 222 or 228 or consent of instructor.*

427**FRENCH LITERATURE OF THE 20TH CENTURY**

Representative poets and novelists of modern France. Readings selected from the works of authors such as Proust, Gide, Aragon, Giono, Mauriac, Céline, Malraux, Saint-Exupéry, Camus, the "new novelists" (Robbe-Grillet, Butor, Sarraute, Le Clézio), and the poetry of Apollinaire, Valéry, the Surrealists (Breton, Reverdy, Eluard, Char), Saint-John Perse, Supervielle, Prévert, and others. Some attention to works of French-speaking African writers. *Prerequisite: French 222 or 228 or consent of instructor. Alternate years.*

441**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, oral and written composition, and translation. *Prerequisite: One course from French 402, 412, 423, 427 or consent of instructor.*

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-Exupéry.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

GERMAN (GERM)

A major consists of a minimum of eight courses numbered 111 or above. One unit of Foreign Languages and Literatures 225 may be included in the major with permission. German 431 or German 441 is required of all majors.

All majors who wish to be certified for teaching must pass German 323 and 325. In addition to the eight courses for the major they must also pass Foreign Languages and Literatures 338 with a grade of C or better. All majors are urged to enroll in History 416, Music 336, Political Science 220 and Theatre 335.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: German 431 and 441. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in German consists of at least four courses numbered 200 and above. Courses 111 and 112 may be counted toward the minor, but then the minor must consist of at least five courses, three of which must be numbered 200 and above.

101-102**ELEMENTARY GERMAN**

The aim of this sequence of courses is to acquire the fundamentals of the language with a view to using them. Regular practice in speaking, understanding, and reading.

111-112**INTERMEDIATE GERMAN**

This sequence of courses reviews and develops the fundamentals of the language for immediate use in speaking, understanding, and reading with a view to building confidence in self-expression. *Prerequisite: German 102 or equivalent.*

221-222**COMPREHENSIVE REVIEW
AND LANGUAGE PRACTICE**

This sequence of courses is designed to review and develop skills in speaking, listening, writing and reading. Grammar and vocabulary building are stressed with intensive review, writing practice and some reading on contemporary issues in German-speaking countries. Some attention is given to the development of the language and its relationship to English. *Prerequisite: German 112 or equivalent.*

323**SURVEY OF GERMAN
LITERATURE AND CIVILIZATION I**

Designed to acquaint the student with important periods of German literature, representative authors, and major cultural developments in Germany, Austria, and Switzerland. The course deals with literature and culture from the Early Middle Ages through the 18th century. *Prerequisite: German 222 or consent of instructor.*

325**SURVEY OF GERMAN
LITERATURE AND CIVILIZATION II**

Designed to acquaint the student with important periods of German literature, representative authors, and major cultural developments in Germany, Austria, and Switzerland. The course deals with literature and culture from the 19th century to the present. *Prerequisite: German 222 or consent of instructor.*

411**THE NOVELLE**

The German Novelle as a genre relating to various literary periods. *Prerequisite: German 323 or 325 or consent of instructor.*

421**GERMAN POETRY**

A study of selected poets or the poetry of various literary periods. Possible topics include: Romantic poetry, Heine, Rilke, and

Benn. *Prerequisite: German 323 or 325 or consent of instructor.*

431**GOETHE**

A study of the life and works of Goethe. Goethe's significance in the Classical period and later. Readings in the major works.

Prerequisite: German 323 or 325 or consent of instructor.

433**CLASSICAL GERMAN DRAMA**

The development of *das klassische Drama* with emphasis on works of Lessing, Goethe, Kleist, and Schiller. *Prerequisite: German 323 or 325 or consent of instructor.*

441**CONTEMPORARY
GERMAN LITERATURE**

Representative poets, novelists and dramatists of contemporary Germany, Switzerland and Austria covering the period from 1945 to the present. Readings selected from writers such as: Borchert, Böll, Brecht, Benn, Frisch, Dürrenmatt, Bichsel, Handke, Walser, Grass and others. *Prerequisite: German 323 or 325 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)

Greek is not offered as a major. An interdisciplinary minor in Biblical Languages requires the completion of Greek 221, 222 and Hebrew 221 and 222.

101-102

NEW TESTAMENT GRAMMAR AND READINGS

Fundamentals of New Testament Greek grammar and readings of selected passages of the Greek text. *Alternate years.*

221

READINGS IN THE SYNOPTIC GOSPELS

A comparative study of the synoptic tradition in Greek. *Prerequisite: Greek 102 or equivalent. Alternate years.*

222

READINGS IN THE PAULINE EPISTLES

Selected readings from the letters of Paul in Greek. *Prerequisite: Greek 221 or equivalent. Alternate years.*

HEBREW (HEBR)

Hebrew is not offered as a major. An interdisciplinary minor in Biblical Languages requires the completion of Greek 221, 222 and Hebrew 221 and 222.

101-102

OLD TESTAMENT GRAMMAR AND READINGS

Fundamentals of Old Testament Hebrew grammar and readings of selected passages of the Hebrew text. *Alternate years.*

221

READINGS IN OLD TESTAMENT 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 text read varies from year to year. *Prerequisite: Hebrew 102 or equivalent. 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 exegetical questions. The text read varies from year to year. *Prerequisite: Hebrew 221 or equivalent. Alternate years.*

SPANISH (SPAN)

A major consists of eight courses numbered 111 or above. Foreign Languages and Literatures 338 does not count toward the major.

All majors who wish to be certified for teaching in secondary school must pass Foreign Languages and Literatures 338 (grade of C or better) and Spanish 418.

The following course has been approved to be offered as a writing intensive course and may be offered as such: Spanish 418.

Minor

A minor in Spanish consists of at least four courses numbered 200 and above. Courses 111 and 112 may be counted toward the minor, but then the minor must consist of at least five courses, three of which must be numbered 200 and above.

101-102

ELEMENTARY SPANISH

The aim of this sequence of courses is to acquire the fundamentals of the language with a view to using them. Regular practice in speaking, understanding, and reading.

111-112

INTERMEDIATE SPANISH

This sequence of courses reviews and develops the fundamentals of the language for

immediate use in speaking, understanding, reading and writing with a view to building confidence in self-expression. *Prerequisite: Spanish 102 or equivalent.*

221-222**COMPREHENSIVE REVIEW AND LANGUAGE PRACTICE**

This sequence of courses consists of a thorough review of grammar, drills for oral comprehension and expression, discussion of readings and the writing of compositions. It is designed to develop the student's ability to read, write and converse in Spanish with confidence. *Prerequisite: Spanish 112 or equivalent.*

311**HISPANIC CULTURE**

To introduce students to the Spanish-speaking people—their values, customs and institutions, with reference to the geographic and historical forces governing present-day Spain and Spanish America. *Prerequisite: Spanish 222 or consent of instructor. Alternate years.*

323**SURVEY OF SPANISH LITERATURE AND CIVILIZATION**

Designed to acquaint the student with important periods of Spanish literature, representative authors, and major socio-economic developments. The course deals with the literature from the Middle Ages to the present. *Prerequisite: Spanish 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: Spanish 222 or consent of instructor. Alternate years.*

418**ADVANCED LANGUAGE PRACTICE**

Intensive practice for advanced students who wish to improve further their spoken and written Spanish. Includes work in oral comprehension, pronunciation, oral and written composition, and translation. *Prerequisite: One Spanish course at the 300's level or consent of instructor. Alternate years.*

424**SPANISH LITERATURE OF THE GOLDEN AGE**

A study of representative works and principal literary figures in the poetry, prose, and drama of the 16th and 17th centuries. *Prerequisite: Spanish 323, 325, or consent of instructor.*

426**MODERN HISPANIC LITERATURE**

Readings of important works of drama, poetry, and prose from the major periods of the 19th and 20th century Spanish and Latin-American literature. *Prerequisite: Spanish 323, 325, or 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)**



HISTORY (HIST)

Professors: Larson, Piper
Associate Professor: Morris (Chairperson)
Visiting Instructor: Witwer

A major consists of 10 courses, including 110, 111, and 449. At least seven courses must be taken in the department. The following courses may be counted toward fulfilling the major requirements: American Studies 200, Political Science 439, Religion 226 and 228. 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. Special courses recently taught and anticipated include a biographical study of European Monarchs, the European Left, the Industrialization and Urbanization of Modern Europe, Utopian Movements in America, the Peace Movement in America, The Vietnam War, and American Legal History. History majors are encouraged to participate in the internship program.

The following courses have been approved to be offered as Writing Intensive courses and may be offered as such: History 218, 230, 443, and 449. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

Three minors are offered by the Department of History. The following courses are required to complete a minor in American History: History 125, 126, and three courses in American history numbered 200 and above. A minor in European History requires the completion of History 110, 111 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 history 110, 111, 125, and 126 and three must be history courses numbered 200 and above.

105

SELECTED THEMES IN WESTERN CIVILIZATION

A survey of the political, economic, social, and cultural values and institutions in Western Civilization from the time of classical Greece to the present. *One-half unit of credit. (Not open to students who have had History 110 and 111).*

110

EUROPE 1500-1815

An examination of the political, social, cultural, and intellectual history of Europe and its relations with other areas of the world from 1500 to 1815.

111

EUROPE 1815-PRESENT

An examination of the political, social, cultural, and intellectual history of Europe and its relations with other areas of the world from 1815 to the present.

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 men, 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 men, 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.

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 will focus on the social and intellectual life of Greece and Rome as well as political and economic changes. *Alternate years.*

212
MEDIEVAL EUROPE AND ITS NEIGHBORS

The history of Europe from the dissolution of the Roman Empire to the mid-15th century. The course will deal 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.*

216
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: History 110 or consent of instructor. 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: History 111 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, and the flowering of the welfare state. *Prerequisite: History 111 or consent of instructor.*

222
HISTORY OF WORLD WAR II

A comprehensive examination of World War II, emphasizing the effects of ideological, economic, and political forces on the formulation of military strategy and the conduct of operation; the nature and extent of the expansion of government powers; and the experience of war from the perspective of ordinary civilians and military alike. *Does not count toward distribution.*

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

AFRO-AMERICAN HISTORY

A study of the experiences and participation of Afro-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.*

244

20TH CENTURY UNITED STATES

This course begins with the Progressive Era and includes the political, economic, and social developments in the 20th century. Emphasis will be placed on the domestic and international demands which have faced the United States in the period following World War II.

310

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. May be taken for either one-half unit (section 310A) or full unit (section 310B); declared majors and prospective majors should take the full-unit course, 310B.

316

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 will be

placed on the role of war in the development of the modern nation state and the origins and nature of total war. *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: History 111 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.*

328

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. *Alternate years.*

332

CIVIL WAR AND RECONSTRUCTION

The problems and events leading to war, the political and military history of the war, and the bitter aftermath to the Compromise of 1877.

340
20TH CENTURY

UNITED STATES RELIGION

The study of historical and cultural developments in American society which relate to religion or what is commonly called religion. This involves consideration of the institutional and intellectual development of several faith groups as well as discussion of certain problems, such as the persistence of religious bigotry and the changing modes of church-state relationships. *Alternate years.*

416
HISTORY OF REFORMATION THOUGHT

A study of the ideas and systems of ideas propounded prior to the Reformation, but which are historically related to its inception, and of the ideas and systems of ideas involved in the formulation of the major Reformation Protestant traditions, and in the Catholic Reformation. Included are the ideas of the humanists of the Reformation Era. *Alternate years.*

418
HISTORY OF RENAISSANCE THOUGHT

A study of the classical, humanist, and scholastic elements involved in the development of the Renaissance outlook on views and values, both in Italy and in Northern Europe. The various combinations of social and political circumstances which constitute the historical context of these intellectual developments will be noted. *Alternate years.*

442
UNITED STATES SOCIAL AND INTELLECTUAL HISTORY TO 1877

A study of the social and intellectual experience of the United States from its colonial antecedents through reconstruction. Among the topics considered are Puritanism, Transcendentalism, community life and organization, education, and social reform

movements. *Prerequisites: Two courses from History 125, 126, 230, or consent of instructor.*

443
UNITED STATES SOCIAL AND INTELLECTUAL HISTORY SINCE 1877

A study of the social and intellectual experience of the United States from reconstruction to the present day. Among the topics considered are social Darwinism, pragmatism, community life and organization, education and social reform movements. *Prerequisite: Two courses from History 125, 126, 230, or consent of instructor.*

449
HISTORICAL METHODS

This course focuses on the nature and meaning of history. It will open to the student different historical approaches and will provide 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. The course is open to other students who have two courses in history or consent of instructor.

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

Assistant Professor: Sterngold (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.

To become a member of the Institute for Management Studies, a student must meet the following criteria:

1. The student has a major in accounting, business administration, or economics and has completed three courses in one of these departments, or the student has a minor in accounting, business administration, or economics and has completed two courses in one of these departments.
2. The student has at least sophomore status.
3. The student has a GPA of 2.5 or higher.

To graduate as a member of the IMS, the student must complete an appropriate practicum, internship, or independent study which results in a major paper; participate in designated IMS seminars and events; and maintain a GPA of 2.5 or higher.



Management Scholars Program

The Management Scholars Program is designed for academically talented students who have a major or minor in accounting, business administration, or economics and who are members of the Institute for Management Studies (students who are accepted into the Management Scholars Program automatically become members of the Institute for Management Studies). The students participate in special management seminars, have internships and/or independent study experiences, and give formal presentations in the senior year.

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

1. The student meets the requirements for becoming a member of the Institute for Management Studies (described above).



INTERNATIONAL STUDIES (IN ST)

Professor: Larson (Coordinator)

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 a student 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.

By completing six to eight additional courses in the social sciences (which include those courses needed to complete a major in

2. The student has a GPA of 3.25 or higher.
3. The student has successfully participated in three or more semesters of the Lycoming Scholars Program, or the student has been approved by the Director of the Management Scholars Program.

Management scholars are required to complete two Management Scholar Seminars and to complete an appropriate internship, practicum, and/or independent study which results in a major paper and a public presentation of their findings. To graduate as a Management Scholar, the student must also complete a major or minor in one of the three departments and maintain a GPA of 3.25 or higher.

Students who are currently Lycoming College Scholars are welcome to become Management Scholars and participate in both programs.

economics, history, political science, or sociology/anthropology) and the required program in education, students can be certified for the teacher education program in social studies. By completing a major in the foreign language (five or more courses) and the education program, students can be certified to teach that language. The International Studies program also encourages participation in study-abroad programs, as well as the Washington and United Nations semesters.

The following course has been approved to be offered as a writing intensive course and may be offered as such: International Studies 449. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

The major includes 11 courses selected as follows:

International Relations Courses - Four or two courses (if two, then four must be taken from Area Courses). Courses within this group are designed to provide a basic understanding of the international system and of Europe's relations with the rest of the world. Political Science 225 is required.

POLITICAL SCIENCE 225: World Politics
ECONOMICS 343: International Trade
HISTORY 320: European Diplomatic History
POLITICAL SCIENCE 439: American Foreign Policy

Area Courses - Four or two courses (if two, then four must be taken from International Relations Courses). Courses within this group are designed to provide a basic understanding of the European political, social, and economic environment. History 111 and Economics 221 are required.

HISTORY 111: Europe 1815-Present
ECONOMICS 221: Comparative Economic Systems
POLITICAL SCIENCE 220: European Politics

HISTORY 218: Europe in the Era of the World Wars

HISTORY 219: Contemporary Europe

National Courses

Language - Two courses in one language.

FRENCH 221, plus one course numbered 222 or above (except 228)

GERMAN 221, plus one course numbered 222 or above

SPANISH 221, plus one course numbered 222 or above (except 311)

Country - One course. The student must select, according to his or her language preparation, one European country which will serve as a social interest area throughout the program. The country selected will serve as the base for individual projects in the major courses wherever possible.

France - French 228: Modern France

Germany - History N80: Topics in German History

Spain - Spanish 311: Hispanic Culture

Elective Course - One course which should involve further study of some aspect of the program. Appropriate courses are any area or international relations courses not yet taken; History 110, 316; Political Science 326, 327, 438; related foreign literature courses counting toward the fine arts requirement and internships.

449

SENIOR SEMINAR

A one-semester seminar, taken in the senior year, in which students and several faculty members will pursue an integrative topic in the field of international studies. Students will work to some extent independently. Guest speakers will be invited. The seminar will be open to qualified persons from outside the major and the College.

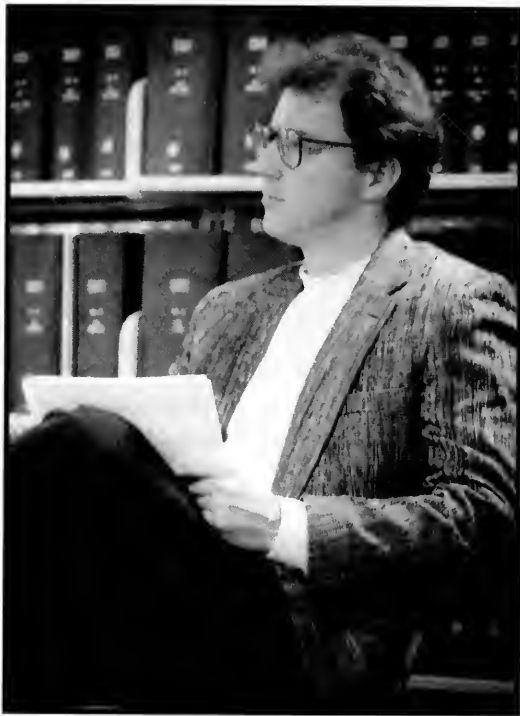
Prerequisite: Consent of instructor.

LITERATURE (LIT)

Associate Professor: Maples (Coordinator)

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: English 106, French 221-222 or 228, German 221-222, Spanish 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.



MASS COMMUNICATION (COMM)

Assistant Professors: Nason (Chairperson), Smith, Wild

The major in mass communication recognizes the need for a liberal arts foundation and includes selected courses from the Departments of Art, Business Administration, Economics, History, Philosophy, Political Science, Psychology, and Sociology/Anthropology. The major combines a core of mass communication courses with one of two tracks. Emphasis is placed on developing an understanding of the cultural and historical roles of the mass media and on developing the communication skills necessary for careers in the media.

Students majoring in mass communication must complete the Core Curriculum and one

track. Each track requires a combination of theory, production, and writing courses.

Both tracks enable qualified students to pursue graduate studies in fields such as mass communication, journalism, professional writing, market research, and media research and administration.

Majors in both tracks are encouraged to take a foreign language and to consider these additional liberal arts electives: Art 222, Art 223, Theatre 110, Psychology 110, History 110, History 111, Philosophy 335, and literature courses from the Departments of English and Foreign Languages and Literatures.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Mass Communication 226 and 330. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in mass communication consists of Mass Communication 110, 211, 215 and three of the following courses: Mass Communication 224, 329, 330, 470 and Political Science 436.

CORE CURRICULUM REQUIRED OF ALL STUDENTS

COMM 110 — Introduction to Mass Media
 COMM 115 — Basic Media Production
 COMM 211 — Principles of Oral
 Communication
 COMM 215 — Introduction to Media Writing
 COMM 226 — Literature, Film and Television
 COMM 330 — Theories and Research in
 Mass Communication
 PSCI 436 — Mass Media Law and Regulation

STUDENTS MUST COMPLETE THE REQUIREMENTS OF ONE OF THE FOLLOWING TRACKS:

I. Track I is designed to develop skills in research, newsgathering, and reporting for work in fields such as print journalism,

broadcast journalism, communications research, public affairs, teaching, and writing and editing for private and public agencies.

One course from each of the following groups:

Cultural Issues

AMST 200B — America as a Civilization
 ECON 224 — Urban Problems
 SOC 227 — Social Problems
 HIST 230 — Afro-American History
 HIST 310 — Women in History

U.S. Government and History

PSCI 110 — Government and Politics
 PSCI 111 — State and Local Government
 PHIL 115 — Philosophy and Public
 Policy
 HIST 126 — U.S. History, 1877-Present
 HIST 244 — 20th Century United States

Two writing courses:

COMM 329 — Broadcast Journalism or
 COMM 327 — Print Journalism and
 COMM 434 — Advanced Reporting

One* of the following advanced production courses:

COMM 218 — Radio Programming and
 Production
 COMM 224 — Television Programming
 and Production: EFP

*Students may substitute Art 115 and Art 227 for one of the advanced production courses.

II. Track II is designed to develop skills necessary to identify and communicate with defined audiences. It prepares students for work in fields such as public relations, corporate communications, advertising, marketing, and creative media production.

Bus 228, Marketing Principles, and one of the following methods courses:

- BUS 329 — Marketing Strategy
- BUS 332 — Advertising
- BUS 445 — Marketing Research
- ECON 229 — Business Cycles and Forecasting
- PSCI 448 — Public Opinion and Polling
- PSY 224 — Social Psychology
- SOC 224 — Rural and Urban Communities

Two writing courses:

- COMM 323 — Writing for Special Audiences
- COMM 325 — Writing for Business and Public Relations
- ENGL 321 — Advanced Writing: Technical and Professional

One* of the following advanced production courses:

- COMM 218 — Radio Programming and Production
- COMM 224 — Television Programming and Production: Studio

*Students may substitute Art 115 and Art 227 for one of the advanced production courses.

**110
INTRODUCTION TO MASS MEDIA**

A survey course that emphasizes the organizational structure and historical development of the mass media. Analysis of the mass media's impact on society; emphasis will be placed on the social, psychological, and political implications of the media's shaping influence on individuals and institutions.

**115
BASIC MEDIA PRODUCTION**

An introduction to the fundamentals of production for electronic and print media. Emphasis on understanding the techniques used in creating messages for a variety of forms for both news and persuasive communication. Application of techniques through campus media.

**211
PRINCIPLES OF ORAL COMMUNICATION**

Study of rhetorical theory and the relationship between speaker, message, and audience. Practice in applying this theory in a variety of oral communication activities including interviewing, public speaking, and interpersonal and multicultural communication. *Prerequisite: English 106.*

**215
INTRODUCTION TO MEDIA WRITING**

Analysis of and practice in the basic forms of media writing: the elements of lead, style, and structure as applied to print and broadcast news and advertising and public relations. Frequent workshop sessions for detailed critiques and discussion of student writing. *Prerequisite: English 106.*

**218
RADIO PROGRAMMING AND PRODUCTION**

Study of contemporary radio programming formats. Consideration given to program development and station management. Emphasis on producing various programming forms including news, public service announcements, the interview, radio drama, and the live show. Students serve on the staff of WRLC. *Prerequisites: Mass Communication 115 and 215.*

224

TELEVISION PROGRAMMING AND PRODUCTION: STUDIO/EFP

Training in the process of designing, producing, and evaluating programs for television. Readings, lectures, demonstrations, and hands-on assignments.

Studio: Study of dramatic and informational programming formats requiring multi-camera production and the use of studio equipment. Emphasis on producing forms such as the commercial, the music video, and television drama as well as the studio interview and the instructional program.

Electronic Field Production (EFP): The elements of non-dramatic story construction, scripting, and single-camera shooting as applied to feature stories about people, places, and events on campus and in the Williamsport community. *Prerequisites: Mass Communication 115 and 215 or consent of the instructor. Taught alternately as Studio or EFP; may be repeated once as an elective.*

226

LITERATURE, FILM AND TELEVISION

Comparative study of the ways in which the media portray individuals, social conflicts, and human aspirations. Content analysis and examination of the formats and conventions associated with each medium to reveal the problems of adaptation. Particular emphasis on multicultural film and television. *Prerequisite: English 106.*

323

WRITING FOR SPECIAL AUDIENCES

Feature writing and persuasive writing to targeted audiences on topics related to the writer's interests and goals. Stories on special interest topics and writing for advertising and promotion will be covered. Fundamental methods of

analyzing the needs and interests of publications and readers will be considered. Readings, peer review, and training in how to develop ideas using primary and secondary research. *Prerequisite: Mass Communication 215 or another writing course numbered 200 or above.*

325

WRITING FOR BUSINESS AND PUBLIC RELATIONS

Using writing to handle communication and public relations problems that commonly occur in business. Emphasis on internal and external communications, including international relations. Readings, case studies, library research, oral reports, and group projects. *Prerequisite: Mass Communication 215 or senior standing.*

327

PRINT JOURNALISM

Study of, and practical experience in, the newsgathering process for print media. Emphasis on beat reporting, copy editing, interviewing, and reporting and writing conventional news stories. Students will submit work to *The Lycourier*. The course also considers ethical issues of news reporting. *Prerequisite: Mass Communication 215.*

329

BROADCAST JOURNALISM

Study of, and practical experience in, the newsgathering process for electronic media. Emphasis on covering the local story from the small-station perspective. Students in the course are responsible for writing, producing, editing, and broadcasting newscasts for WRLC-FM. The course also looks at the special ethical problems of electronic news coverage. *Prerequisites: Mass Communication 115 and Mass Communication 215.*

330
THEORIES AND RESEARCH
IN MASS COMMUNICATION

An analysis of current theories dealing with mass communication systems and the behavior and attitudes of, and effects on, their audiences. Special emphasis on the interdisciplinary roots of the field and on an examination of the current research methods. Students conduct original research. *Prerequisite: Mass Communication 110 and Mass Communication 226.*

434
ADVANCED REPORTING:
ELECTRONIC/PRINT

A workshop course with an emphasis on public affairs reporting at the local level. The course will investigate the process of reporting on institutions. Emphasis on the use of documents and records in news-gathering and

on in-depth reporting. Taught alternately with an electronic or print focus. *Prerequisites: Mass Communication 327 or Mass Communication 329.*

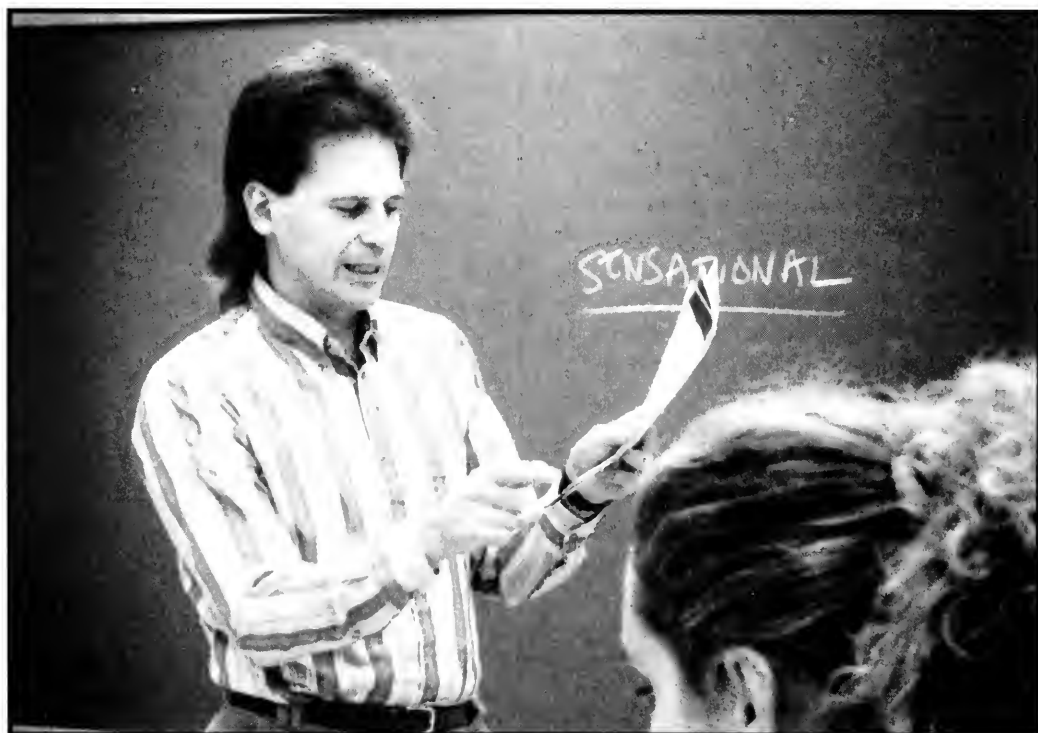
470-479
INTERNSHIP (See index)

Interns usually work off-campus in a field related to their mass communication track. *Prerequisite: junior or senior standing.*

N80-N89
INDEPENDENT STUDY (See index)

Studies involve research related to the mass communication track of the student.

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



MATHEMATICAL SCIENCES

Associate Professors: Haley, Sprechini (Chairperson)
 Assistant Professors: DeSilva, Golshan, Weida
 Visiting Assistant Professor: Spickler
 Visiting Instructor: Schweinsberg
 Part-time Instructors: Davis, Abercrombie, Collins

The Department of Mathematical Sciences offers major and minor programs in computer science and mathematics.

COMPUTER SCIENCE (CPTR)

A major in computer science consists of 11 courses: Mathematics 116, 128, and 129, Computer Science 125, 246, 247, 321, 344, 445, and two other computer science courses numbered 320 or above. Recommended extradepartmental courses: Philosophy 225 and Psychology 337. In addition to the regular courses listed below, special courses are occasionally available.

The recommended schedule to enable a student to complete the computer science major in four years is as follows:

FRESHMAN YEAR

Fall
 CPTR 125
 MATH 127, 128, or 129
 ENGL 106 *

Spring
 CPTR 246*
 MATH 127, 128, or 129

* CPTR 246 is often offered as a writing intensive course, and ENGL 106 is a prerequisite to all writing intensive courses.

SOPHOMORE YEAR

Fall
 CPTR 247
 MATH 116
 MATH 128 or 129



Spring
 CPTR elective
 MATH 129

JUNIOR YEAR

Fall
 CPTR 344 or CPTR elective
 (MATH 130 recommended)

Spring
 CPTR 445 or CPTR elective
 CPTR 321 or CPTR elective

SENIOR YEAR

Fall
 CPTR 344 or CPTR elective
 (MATH 130 recommended)

Spring
 CPTR 445 or CPTR elective
 CPTR 321 or CPTR elective

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Computer Science 246 and 344. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in computer science consists of Math 116, Computer Science 125, 246, 247, and two other computer science courses numbered 220 or above.

101
MICROCOMPUTER FILE MANAGEMENT

An introduction to a file-management system, i.e. a database system that uses a single file, in the MS-DOS environment. *One-half unit. This course may not be used to meet distribution requirements.*

108
MATHEMATICAL PROBLEM-SOLVING WITH MICROCOMPUTERS

An introduction to the use of microcomputer-based, integrated software in solving problems from mathematics and related areas. Included are uses of spreadsheet, database and graphics functions to analyze, solve, and display solutions to problems from the areas of number theory, algebra, geometry, statistics, and the mathematics of business and finance. Emphasis is given to the processes involved in mathematical modeling. Laboratory experience is included using current software. *Prerequisite: Credit for or exemption from Mathematics 100.*

125
INTRODUCTION TO COMPUTER SCIENCE

Introduction to programming. Topics include algorithms, program structure, and computer configuration. Laboratory experience is included, most recently using Pascal. *Prerequisite: Credit for or exemption from Mathematics 100.*

246
PRINCIPLES OF ADVANCED PROGRAMMING

Principles of effective programming, including structured programming, stepwise refinement, assertion proving, style, debugging, control structures, decision tables, finite state machines, recursion, and encoding. Utilities most recently used include SVS Pascal, the UNIX operating system, C, and Shell programming. *Prerequisite: A grade of C or better in Computer Science 125.*

247
DATA STRUCTURES

Representation of data and algorithms associated with data structures. Topics include representation of lists, trees, graphs and strings, algorithms for searching and sorting. *Prerequisite: A grade of C or better in Computer Science 246 or consent of instructor. Corequisite: Mathematics 116.*

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. *Prerequisite: Computer Science 125 and Mathematics 129; Mathematics 130 strongly recommended. Cross-listed as Mathematics 321.*

344
MACHINE LANGUAGE

Principles of machine language programming; computer organization and representation of numbers, strings, arrays, and list structures at the machine level; interrupt programming, relocatable code, linking loaders; interfacing with operating systems. *Prerequisite: A grade of C or better in Computer Science 246, Computer Science 247 strongly recommended.*

345
INTRODUCTION TO COMPUTER GRAPHICS

An introduction to graphics hardware and software with emphasis on the mathematics necessary to represent, transform, and display images of two- and three-dimensional objects. Laboratory exercises will be designed to explore the capabilities of the graphics system and to test the students' understanding of the principles discussed in class. *Prerequisite: Computer Science 246*

and either Computer Science 247 or permission of the instructor; Mathematics 130 recommended. Alternate years.

349
DATABASE SYSTEMS

External storage structures, hashed files, indexed files; relational, network, and hierarchical data models; relational algebra and the relational calculus; design theory for relational databases; query optimization; concurrent operations; database protection. *Prerequisite: Computer Science 247.* Alternate years.

445
SYSTEMS PROGRAMMING

The emphasis in this course is on the algorithms used in programming the various parts of a computer system. These parts include assemblers, loaders, editors, interrupt processors, input/output schedulers, processor and job schedulers, and memory managers. *Prerequisite: Computer Science 247 and 344.*

446
COMPILER CONSTRUCTION

The emphasis in this course is on the construction of translators for programming languages. Topics include lexical analysis, block structure, grammars, parsing, program representation, and run-time organization. *Prerequisite: Computer Science 247.* Alternate years.

470-479
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 10 unit courses in the mathematical sciences and four semesters of non-credit colloquia: Computer Science 125, Mathematics 128, 129, 130, 234, 238, 432, 434, and two other mathematics courses numbered 220 or above, one of which may be replaced by Mathematics 112, 116, or 214; four semesters of Mathematics 339 or 449 taken during the junior and senior years.

The recommended schedule to enable a student to complete the mathematics major in four years is as follows:

FRESHMAN YEAR

Fall
MATH 127, 128, or 129
(possibly CPTR 125)

Spring
MATH 128 or 129
CPTR 125

SOPHOMORE YEAR

Fall
MATH 129 or 238
MATH 130

Spring
MATH 234
MATH 238

JUNIOR YEAR

Fall
MATH 432 or 434
(possibly MATH elective *)
MATH 339

Spring
MATH elective *
if needed, CPTR 125
MATH 339

SENIOR YEAR

Fall

MATH 432 or 434

(possibly MATH elective *)

MATH 339

Spring

if needed, MATH elective *

if needed, CPTR 125

MATH 339

* Candidates for secondary certification in Mathematics must complete MATH 330 and MATH 336 as MATH electives.

Majors are required to attend the colloquia during their junior and senior years (339 and 449 respectively). See the course description of Mathematics 339-449 for further information regarding the colloquium requirement.

Students seeking secondary certification in mathematics are required to complete Mathematics 330, 336, and either 103 or 332, and are advised to enroll in Philosophy 217. Also, all majors are advised to elect Philosophy 225 and 333, Physics 225 and 226.

In addition to the regular courses listed below, special courses are occasionally available.

The following course has been approved to be offered as a writing intensive course and may be offered as such: Mathematics 234. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in mathematics consists of Mathematics 128, 129, 234, 238, and two additional courses numbered 200 or above, one of which may be replaced with Mathematics 130.

100

INDIVIDUALIZED LABORATORY INSTRUCTION IN BASIC ALGEBRA

A self-paced study of 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.*

103

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, chisquared 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 Mathematics 100.*

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 Mathematics 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 Mathematics 128. *Prerequisite: Credit for or exemption from Mathematics 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 will include 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 Mathematics 100.*

116**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, groups, lattices, Boolean algebras, graphs, and trees. *Prerequisite: Computer Science 125 or consent of instructor.*

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), those in the Scholars Program, or those whose major specifically requires Precalculus. *Prerequisite: Credit for or exemption from Mathematics 100.*

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 Mathematics 127. Prerequisite for 129: exemption from or a grade of C or better in Mathematics 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: Mathematics 127 or its equivalent.*

205**MATHEMATICS IN
ELEMENTARY EDUCATION**

This course is intended for prospective elementary school teachers and is required of all those seeking elementary certification. Topics include systems of numbers and numeration, computational algorithms, environmental and transformation geometry, measurement, and mathematical concept formation. Observation and participation in Greater Williamsport elementary schools. *Prerequisite: Psychology 338 and credit for or exemption from Mathematics 100. Corequisite: Any education course numbered 341 or above which is specifically required for elementary certification.*

214**MULTIVARIABLE STATISTICS**

The study of statistical techniques involving several variables. Topics include multiple regression and correlation, one- and two-way analysis of variance, analysis of covariance, analysis of two- and three-way contingency tables, and discriminant analysis. Other topics

may include 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 BMDP). *Prerequisite: A grade of C or better in Mathematics 103 or its equivalent.*

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 Mathematics 129; Mathematics 130 recommended.*

233
COMPLEX VARIABLES

Complex numbers, analytic functions, complex integration, Cauchy's theorems and their applications. *Corequisite: Mathematics 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 Mathematics 129 or 130; both courses recommended.*

238
MULTIVARIABLE CALCULUS

Algebra, geometry, and calculus in multidimensional Euclidean space; n-tuples, matrices; lines, planes, curves, surfaces; vector functions of a single variable, accelera-

tion, 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 Mathematics 129, and either Mathematics 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. *Prerequisite: Computer Science 125 and Mathematics 129; Mathematics 130 strongly recommended. Cross-listed as Computer Science 321.*

330
TOPICS IN GEOMETRY

An axiomatic treatment of Euclidean geometry, and an introduction to other geometries. *Prerequisite: Mathematics 234. 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: Mathematics 238. Alternate years.*

336
CONCEPTS OF MATHEMATICS
IN SECONDARY EDUCATION

A course designed for mathematics majors who are planning to teach at the secondary level. Emphasis will be placed on the mathematics that form the foundation of secondary mathematics. Ideas will be presented to

familiarize the student with the various curriculum proposals, to provide for innovation within the existing curriculum, and to expand the boundaries of the existing curriculum. *Prerequisite: A grade of C or better in Mathematics 129; student must be junior or senior mathematics major enrolled in the secondary certification program.*

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: Mathematics 112 or Mathematics 130. Alternate years.*

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. *Prerequisite: Mathematics 238 and a grade of C or better in Mathematics 234.*

434
ABSTRACT ALGEBRA
 An integrated approach to groups, rings, fields, and vector spaces and functions which preserve their structure. *Prerequisite: Mathematics 130 and a grade of C or better in Mathematics 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.*

339 & 449
MATHEMATICS COLLOQUIA
 This non-credit but required course for junior and senior mathematics majors offers students a chance to hear presentations on topics related to, but not directly covered in formal mathematics courses. Students are required to attend colloquia each semester of their junior (339) and senior (449) years. Mathematics majors must present two lectures, one during the junior year and one during the senior year. A letter grade will be given in semesters in which the student gives a presentation, otherwise the grade will be P/F. Seniors are strongly encouraged to give their presentations during the fall semester. Students applying for the professional semester in education are required to give the first presentation before the eighth week of the fall semester of their junior year, and the second presentation before the eighth week of the fall semester of their senior year. With Departmental approval, students will be required to take three semesters of 339 or 449; such approval is granted only in extraordinary circumstances and will require the student to give one presentation in each of the three semesters. Noncredit course. One hour per week.

470-479
INTERNSHIP (See index)

N80-N89
INDEPENDENT STUDY (See index)

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



MILITARY SCIENCE (ML SC)

The U.S. Army Reserve Officer Training Corps (ROTC) program is offered to Lycoming College students in cooperation with Bucknell University. The introductory courses are taught on Lycoming's campus and the program provides transportation to Bucknell University for the advanced courses. Details of the ROTC program can be found on page 47.

011 INTRODUCTION TO ROTC

The course is designed to acquaint the student with the ROTC program and with the Army as a potential employer after graduation. Students will learn about the Army's history, organization, equipment, and role in the nation. Students will also learn some fundamental military skills, customs, and traditions. No credit.

012 INDIVIDUAL MILITARY SKILLS

The course expands upon the skills learned in the previous semester. Several classes will be held at the rifle range to develop marksmanship skills. There will also be training in radio communication and first aid skills. No credit.

021 LAND NAVIGATION

Students will learn how to use military topographic maps and reference systems. The course includes theory and practical exercises in navigating using compass, map terrain association. There will also be some instruction and practice in military writing and briefing skills. No credit.

022 LEADERSHIP THEORY

The focus is on leading a small group of individuals. The course examines the role of the leader, military leadership concept, personal character, decision-making, imple-

menting decisions, motivation and supervision. The course also includes instruction and practice on conducting performance-oriented training. No credit.

031
APPLIED LEADERSHIP

The student serves as a small unit leader in the ROTC organization. Student leadership is evaluated and developed. The student has some responsibilities to care for and train younger cadets. Instruction on small (infantry) unit tactics is used as a vehicle to provide students a variety of leadership challenges. No credit.

032
SMALL UNIT TACTICS

The course requires planning and practicing tactical operations at small unit level. Students continue to apply/develop leadership skills in increasingly complex situations. Topics include preparation of orders, offense, defense, reconnaissance, patrolling, fire support, and airmobile operations. No credit.

041
MENTORING AND MANAGING

The student serves as a cadet officer in the ROTC organization and plans and organizes several major training activities. Course work includes delegating and controlling, setting objectives, making leadership assessments, counseling, supervising, and evaluating. No credit.

042
PROFESSIONALISM AND ETHICS

The student serves in a different leadership position and continues to develop and apply the skills learned in the previous semester. The course also examines military officership as a profession and the ethical behavior expected of an officer. The course also serves to prepare the student for an initial assignment as an Army lieutenant. No credit.



MUSIC (MUS)

Associate Professors: Boerckel (Chairperson), Thayer

Assistant Professor: Janda

Part-time Instructors: Bailey, Bertrand, Campbell, J. Clark, Degillio, Fairchild, Flanagan, Gallup, Grube, Horrax, Lakey, Lassiter, Leidhecker, Mitchell, Muzzo, Russell

The music major 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 Music 110, 111, 220, 221, 335, and 336. Each major must participate in an ensemble (Music 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 Music 160-169). The major must include at least one-half hour of piano in the applied

program unless a piano proficiency test is requested and passed. Anyone declaring music as a second major must do so by the beginning of the junior year.

Music majors seeking certification in music education (K-12) must also take Psychology 110 and 338; Education 200 and the Professional Semester; Music 261-7, 332, 333, 334, 446, and pass the piano proficiency examination. Students who wish to obtain certification in music education should consult with the department as soon as possible, preferably before scheduling classes for the freshman year.

The Music Department recommends that non-majors select courses from the following list to meet distribution requirements: Music 116, 117, 128, 135-8, 224, and 234. 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 course has been approved to be offered as a writing intensive course and may be offered as such: Music 336. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

110-111

MUSIC THEORY I AND II

A two-semester 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 Music 111: Music 110.*

116

INTRODUCTION TO MUSIC

A basic course in the materials and techniques of music. Examples drawn from various periods and 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.

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.*

135-136

INTRODUCTION TO DANCE I AND II

An introduction to the techniques of basic movement and interpretation in ballet, jazz, and modern dance. Classes include improvisation and choreography. *Prerequisite for Music 136: Music 135 or consent of instructor. One-half unit of credit each. Not open to students who have received credit for Theatre 135-136 or Theatre 235-236.*

137

HISTORY OF THE DANCE I

A survey of classical ballet from the *Ballets de cour* of 17th century France to the present with emphasis on the contributions of Petipa, Fokien, Cecchetti, and Balanchine. *One-half unit of credit. Not open to students who have received credit for Theatre 137 or 138.*

138

HISTORY OF THE DANCE II

A survey of the forms of dance, excluding classical ballet, as independent works of art and as they have reflected the history of civilization from primitive times to the present. *Prerequisite: Music 137 or consent*

of instructor. One-half unit of credit. Not open to students who have received credit for Theatre 137 or 138.

220-221

MUSIC THEORY III AND IV

A continuation of the integrated theory course moving toward newer uses of music materials. *Prerequisite: Music 111.*

224

ELECTRONIC MUSIC I

A non-technical 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 digital synthesizers in combination with sequencing computers.

225

ELECTRONIC MUSIC II

Further consideration of recording techniques. Use of microphones, multi-track recording, mixing, special effects devices, and synchronization will be introduced. Students will take part in live recording of concerts and rehearsals of a variety of ensembles. Student projects will include complete recording sessions and the production of electronic music compositions utilizing classical studio techniques and real-time networks. *Prerequisite: Music 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.

235-236

INTERMEDIATE DANCE I AND II

Studies of the techniques of basic movement and interpretation in ballet, jazz and modern dance at the intermediate level. Classes include improvisation and choreography. *Prerequisite for Music 235: Music 136 or consent of instructor. Prerequisite for Music 236: Music 235 or consent of instructor. One-half unit of credit each. Not open to students who have received credit for Theatre 135-136 or Theatre 235-236.*

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 century. *Prerequisite: Music 111 or consent of instructor.*

332

TEACHING MUSIC IN THE SCHOOLS

Methods and materials of teaching music in the schools with emphasis on curriculum development and procedures for choral and instrumental ensembles at the elementary and secondary levels. Course work will include observation of music classes in elementary and secondary schools in the Greater Williamsport area. *Alternate years.*

333

CHORAL CONDUCTING

A study of choral conducting with frequent opportunity for practical experience. Emphasis will be placed upon technical development, rehearsal technique, and stylistic integrity. *Prerequisite: Music 110-111 or consent of instructor. Alternate years.*

334**INSTRUMENTAL CONDUCTING**

A study of instrumental conducting with an emphasis on acquiring skills for self-analysis. 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 will be addressed on a continual basis. *Prerequisite: Music 110-111 or consent of instructor. Alternate years.*

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.

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. *Prerequisite: Music 110-111 or consent of instructor. 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 century repertory. *Prerequisite: Music 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: Music 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. Music 446 may substitute for one hour of applied music (Music 160-166). *Prerequisite: Approval by the department. May be repeated for credit.*

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, and percussion is designed to develop sound technique and a knowledge of the appropriate literature for the instrument. Student recitals offer opportunities to gain experience in public performance.

Credit for applied music courses (private lessons) and ensemble (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.

Extra fees apply for private lessons (Music 160-166) as follows: \$175 per semester for a half-hour lesson per week. \$350 per semester for a one hour lesson per week. Private lessons are given for 13 weeks. 160 Piano or Harpsichord, 161 Voice, 162 Strings or Guitar, 163 Organ, 164 Brass, 165 Woodwinds, 166 Percussion.

167 ORCHESTRAL ENSEMBLE

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 Music 167B (one hour credit). A student may belong to two ensembles, choosing either Choir or Concert Band as the second group. Such a student will then register for Music 167A (1/2 hour credit) plus either Music 168A (1/2 hour credit) or Music 169A (1/2 hour credit).

168 CHORAL ENSEMBLE (CHOIR)

Participation in the College Choir is designed to enable any student possessing at least average talent an opportunity to study choral technique. Emphasis is placed upon acquaintance with choral literature, tone production, diction, and phrasing. Students are allowed a maximum of one hour of Ensemble credit per semester. A student who is enrolled in Choir only should register for Music 168B (one hour credit). A student may belong to two ensembles, choosing either Orchestra or Concert Band as the second group. Such a student will

then register for Music 168A (1/2 hour credit) plus either Music 167A (1/2 hour credit) or Music 169A (1/2 hour credit). If a student has auditioned and been selected for the twenty-voice Chamber Choir (no credit available), he/she should register for Music 168C.

169 CONCERT 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. Students are allowed a maximum of one hour of Ensemble credit per semester. A student who is enrolled in Band only should register for Music 169B (one hour credit). A student may belong to two ensembles, choosing either Orchestra or Choir as the second group. Such a student will then register for Music 169A (1/2 hour credit) plus either Music 167A (1/2 hour credit) or Music 168A (1/2 hour credit).

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.

- MUSIC 261 — Brass Methods
(one hour credit)
- MUSIC 262 — Percussion Methods
(one hour credit)
- MUSIC 263, 264 — String Methods I and II
(one hour credit each)
- Music 265 — Vocal Methods
(one hour credit)
- MUSIC 266, 267 — Woodwind Methods I
and II (one hour credit
each)



NEAR EAST CULTURE AND ARCHAEOLOGY

Professor: Guerra (Coordinator)

The Near East culture and archaeology interdisciplinary major is designed to acquaint students with the "cradle of Western civilization," both in its ancient and modern aspects. Majors will complete a minimum of eight to ten courses related to the Near East.

Required courses are described in their departmental sections and include:

1. Four courses in language and culture from:
 - History and Culture of the Ancient Near East (Religion 228)
 - History of Art (Art 222)
 - Ancient History (History 210)
 - Old Testament Faith and History (Religion 113)
 - Judaism and Islam (Religion 224)
 - Two semesters of foreign language (Hebrew 101-102, or Greek 101-102)

2. Two courses in archaeology from: Biblical Archaeology (Religion 226) special archaeology courses, such as independent studies or May or summer terms in the Near East.
3. Two courses in the cooperating departments (art, history, political science, religion and sociology-anthropology) or related departments. These two courses, usually taken in the junior or senior years, can be independent study. Topics should be related either to the ancient or the modern Near East and must be approved in advance by the committee supervising the interdisciplinary program. The study of modern Arabic or Hebrew is encouraged.

Other courses may be suggested by the supervisory committee within the limits of a 10-course major. The number of courses taken within this program applicable toward fulfilling the College distribution requirements will vary according to the selection of courses.

NURSING (NURS)

Associate Professors: Parrish (Chairperson),
Pagana

Assistant Professors: Ficca, Gray-Vickrey,
Instructor: Ingram

Part-time Instructors: Doyle, McKeegan, Miller,
Roberson, Hepburn-Smith, Turkewitz,
Wenzler, Wilgar-Jones, Zbornay-Watts

Students wishing to major in nursing will be admitted to the College under the usual admission procedures. Freshmen should follow the nursing curriculum plan for the freshman year in the sequence designated. To be considered for continuation in nursing, a minimum GPA of 2.5 is required at completion of the freshman year. A supplementary application should be submitted to the Department of Nursing by January 30 of the freshman year.

Registered Nurses

The Department of Nursing offers an alternative curriculum for registered nurses within the existing B.S.N. program. The goals of this alternative curriculum are to provide registered nurses with the opportunity to earn an educationally sound B.S.N. degree while completing the degree requirements in as short a time period as possible, and to meet the unique needs of registered nurses. Nursing 300 and 310 are open only to registered nurses and are required as part of the alternative curriculum. Registered nurses may challenge for credit the following nursing courses: Nursing 220, the skills component of Nursing 221, the obstetrical component of Nursing 330, 331, 332, 333, 337, 338 and 440. For successful challenge of any clinical nursing course by registered nurses, a grade of C- or better is required; that is, 70% or 1.67 is required in both the theoretical and clinical components of the course.

In addition, registered nurses in this program may challenge for credit any required non-nursing course provided that they obtain the



permission of both the Department of Nursing and the department in which that course is offered. These examinations may not be available for every required course.

Additional information for registered nurses seeking the B.S.N. is available from the Department of Nursing. Individual advising is offered to all registered nurses.

Second Degree Students

The Department of Nursing offers a unique opportunity for individuals who have already earned a baccalaureate degree in another discipline to complete the requirements for a B.S.N. in 18 months. Students interested in pursuing this *fastrack* program must complete the liberal arts and general science requirements prior to beginning this 18 month clinical track.

Applications are accepted throughout the academic year with clinical nursing courses beginning in Summer Session II. Individualized advisement is available on an ongoing basis through the Department of Nursing.

Clinical Learning Resources

In addition to the College's modern, well-equipped Nursing Skills Lab complete with Critical Care Unit and interactive video technology, opportunity for self-learning is provided in the adjacent Learning Center

which is equipped with electronic study carrels and audio-visual materials.

A wide variety of health-care agencies in the surrounding area is utilized for clinical experiences. Cooperating hospitals and agencies include: Divine Providence Hospital, Williamsport Hospital and Medical Center, Evangelical Hospital, Geisinger Medical Center, Leader Nursing Home and Rehabilitation Center, Danville State Hospital, Pennsylvania Department of Health, Regional Home Health Services, Rose View Manor, and The Williamsport Home.

Expenses of the Nursing Program

Students are responsible for their own transportation to assigned clinical areas. The student of nursing assumes all financial obligations listed in the section on fees in this bulletin including a \$40 lab fee for each of the clinical nursing courses (Nursing 221, 310, 330, 331, 332, 333, 440, and 441). Additional expenses include uniforms, name pin, watch with second hand, bandage scissors, stethoscope, blood pressure cuff, liability insurance, annual health examinations, and standardized achievement tests.

Students must also maintain annual Health Provider CPR certification as offered by the American Heart Association or American Red Cross.

Major in Nursing

The major in nursing consists of: Nursing 220, 221, 330, 331, 332, 333, 336, 337, 338, 435, 440, 441, 442, and nursing elective (422, 424, 430, or 443) or N80-N89. In addition, the following are prerequisites for specific nursing courses: Chemistry 108, 115; Biology 113-114, 226; Psychology 110, 117; Mathematics 103, and Computer Science elective CPTR 108, 125, or Math 214. The religion/philosophy distribution requirement is met by the required courses: Philosophy 219 and Religion 120. The history/social

science distribution requirement is met by the required courses: Psychology 110 and 117. In addition, the student is required to take one course from among Sociology/Anthropology 110, 114, 220, 222, 224, 227, 228, 229, 331, 334, and 335. The fine arts/foreign language distribution requirement can be met by two courses in one department from among art, literature, music, or theatre; or by two courses in foreign language on the intermediate or higher course level.

The following course has been approved to be offered as a writing intensive course and may be offered as such: Nursing 435. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

School Nurse Certification

The Department of Nursing, in collaboration with the Department of Education, offers an additional curriculum for the Registered Nurse with a Bachelor's degree (or a Lycoming College nursing student) who wishes to be certified as a school nurse. The goal of this program is to provide the RN with a Bachelor's degree an opportunity for career mobility. Courses required for completion of the certification program consist of: Education 200 and 239, Philosophy 217, Psychology 338, and Nursing 422, 424, 430, and 431. In addition, the following are prerequisites for specific courses: Psychology 110 and 117, Sociology****, and Nursing 220.

Additional information for registered nurses seeking School Nurse Certification is available from the Department of Nursing. Individualized advising is offered to all prospective School Nurse candidates.

Policies Specific to Nursing

In addition to the Lycoming College continuance policies, the following policies are specific to all declared majors in the Department of Nursing:

1. A grade of C- or better is required in all clinical nursing courses to continue in the nursing program. These courses are Nursing 221, 310, 330, 331, 332, 333, 440, and 441. Students who earn a grade of less than 70 percent or 1.67 in either the theoretical or clinical component of a nursing course will be required to repeat both components of the course before being permitted to continue in the nursing sequence.

2. Policies regarding absence from classes or from the clinical portion of nursing courses are determined by the instructor(s) responsible for the course. No absence from the clinical portion of the course will be excused other than for illness or family emergency. In individual cases, students may make arrangements with instructors to be excused for extracurricular activities. Excessive absence for any reason will necessitate repeating the entire course.

Typical Plan of Study for B.S.N.

FRESHMAN YEAR

Units

Fall

CHEM 108* Inorganic Chemistry	1
ENGL 106 Composition	1
PSY 110* Intro to Psych.	1
Fine Arts/Lang.	1
PH ED.	0
	<hr/>
	4

Spring

CHEM 115* Brief Organic Chemistry	1
ENGL Elective.	1
PSY 117* Developmental Psych.	1
Fine Arts/Lang.	1
PH ED.	0
	<hr/>
	4

SOPHOMORE YEAR

Fall

BIO 113 Anatomy and Physiology	1
Computer Science Elective**	1
NURS 220 Concepts of Nutrition in Family Health	0.75
REL 120 Death and Dying	1
	<hr/>
	3.75

Spring

Units

BIO 114 Anatomy and Physiology	1
MATH 103 Intro. to Statistics	1
BIO 226 Microbiology for Health Sciences	1
NURS 221 Foundations of Professional Practice	1.25
	<hr/>
	4.25

JUNIOR YEAR

Fall

NURS 330 Nursing Care of the Developing Family I	1.5
NURS 332 Nursing Care of the Adult I	1.5
NURS 337 Basic Concepts of Pharmacology and Therapeutics I.5
	<hr/>
	3.5

Spring

NURS 331 Nursing Care of the Developing Family I	1.5
NURS 333 Nursing Care of the Adult II	1.5
NURS 338 Pharmacology and Therapeutics II5
	<hr/>
	3.5

May Term

NURS 336 The Nurse in the Social System	1
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SENIOR YEAR

Fall

NURS 435 Nursing Research	1
NURS 440 Nursing Care of the Emotionally Troubled Individual & Family	1.5
Nursing Elective***	0.5
Guided Elective****	1
	<hr/>
	4

Spring

NURS 441 Comprehensive Nursing Care	1.5
NURS 442 Professional Issues	0.5
PHIL 219 Ethical Issues in Biology and Medicine	1
Elective.	1
	<hr/>
	4

*Prerequisite to Sophomore year.

**Student must select one course from CPTR 108, 125, or Math 214.

***Student must select one course from NURS 422, 424, 430, 443, or N80-89.

****Student must select one course from SOC 110, 114, 220, 222, 224, 227, 228, 229, 331, 334, or 335. Other courses may be approved on an individual basis.

Requirement for graduation is 32 units (128 credits). The student may take additional units for electives, independent study, and/or honors.

220 CONCEPTS OF NUTRITION IN FAMILY HEALTH

Essentials of normal nutrition and their relationship to the health of individuals and families. These concepts serve as a basis for the development of an understanding of therapeutic application of dietary principles and the health professional's role and responsibility in this facet of client care. *Three hours of lecture. 3/4 unit. Prerequisites: Chemistry 108, 115, or consent of instructor. Open to non-nursing majors.*

221 FOUNDATIONS OF PROFESSIONAL NURSING PRACTICE

Introduction of major theoretical elements underlying professional nursing practice. Focus on the concept of health and common health problems recognizing the multi-directional influence of the individual, family, and environment. In this first clinical course, the student will utilize the nursing process in assisting clients to attain a maximum level of functioning. *Three hours of lecture and five hours clinical laboratory. 1 1/4 units. Prerequisites: Chemistry 108, 115, Nursing 220, and Biology 113. Open to nursing majors only.*

300 THEORETICAL FOUNDATIONS OF PROFESSIONAL NURSING

Theoretical concepts underlying professional practice. Additional focus on health and common health problems, recognition of multi-directional influence of the individual, family, and environment. *Two hour seminar.*

1/2 unit. Prerequisites: Successful completion of Nursing 221 challenge examination; CHEM 108, 115; PSYCH 110, 117; BIO 113. OPEN TO RNs ONLY.

310 PROCESSES ESSENTIAL TO NURSING PRACTICE

Clinical course focusing on the incorporation of nursing, group, interpersonal, and change processes; therapeutic communication, family, health promotion and community concepts, physical assessment, collaboration, and teaching/learning principles in the community setting. *3/4 unit. Prerequisites: Successful completion of Nursing 330 and Nursing 332 challenge exams, BIO 114, and BIO 226. OPEN TO RNs ONLY.*

330-331 NURSING CARE OF THE DEVELOPING FAMILY

Examination of health and nursing needs of beginning and developing families. Initial emphasis on nursing needs of mothers and infants within the family unit as well as the common health problems of children through adolescence. Subsequent emphasis on nursing needs of children and mothers with health problems of acute and long term nature, the influence of illness on their development and the effect of illness on the family. Emphasis placed on physical assessment skills throughout the lifespan with adequate practice time in the skills and clinical laboratories. *Three hours of lecture, 7 1/2 hours clinical laboratory, 1 hour for 330 and 2 hours for 331 health assessment content. 1 1/2 Units each. Prerequisite for Nursing 330: Nursing 221, Biology 114, 226. Corequisite: Nursing 337. Prerequisite for Nursing 331: Nursing 330 and 337. Corequisite: Nursing 338.*

332-333 NURSING CARE OF THE ADULT

Identification of adult health care needs and implementation of nursing activities based on an understanding of growth and development, pathophysiology, communica-

tion skills, interpersonal dynamics, and psychosocial interventions. *Three hours of lecture, 7 1/2 hours clinical laboratory, 1 hour for 332 and 2 hours for 333 health assessment content. 1 1/2 units each. Prerequisite for Nursing 332: Nursing 221, Biology 114 and 226. Corequisite: Nursing 337. Prerequisite for Nursing 333: Nursing 332 and 337. Corequisite: Nursing 338.*

336

THE NURSE IN THE SOCIAL SYSTEM

Seminar discussions and clinical laboratory using the hospital as a prototype. Theories of social systems. Examination of induction into the hospital system. Evaluation of standards of care. Focus on utilization of change theory. *Twelve hours of lecture and 96 hours of clinical laboratory. 1 unit. Prerequisites: Nursing 331, 333, 334. Required for the nursing major and offered only in May term.*

337-338

BASIC CONCEPTS OF PHARMACOLOGY AND THERAPEUTICS I and II

Fundamentals of pharmacology and therapeutics are presented for the various classes of drugs. Relationships of pharmacological mechanisms to the affected biochemical and physiological processes. Interactions and toxicological aspects of drug therapy are reviewed. Two hours of lecture. *One-half unit of credit each. Corequisite for Nursing 337: Nursing 330, 332 or consent of instructor. Corequisite for Nursing 338: Nursing 331, 333 or consent of instructor. Open to non-nursing majors with appropriate science background, corequisites waived for non-majors.*

422

HEALTH EDUCATION

Examination of learning theories appropriate to all age groups. Discussion of the concepts and techniques necessary for assessment, planning, implementation, and evaluation of the teaching/learning process. Emphasis will be placed on self care. *Two*

hour lecture for 1/2 unit. Required for school nurse candidates. Prerequisite: Senior standing or consent of instructor.

423

HEALTH EDUCATION CLINICAL

Clinical practice includes teaching experience in the public school system. This practice results in a culmination of the theoretical content contained in NURS 422. *Five hour clinical laboratory for 1/2 unit. Required for School Nurse Candidates. Prerequisites: Senior standing or consent of instructor.*

424

ADVANCED HEALTH ASSESSMENT

Identification and demonstration of advanced assessment techniques with an emphasis on abnormal findings. Learning experiences are provided to develop a systematic approach to physical assessment. Throughout the course, emphasis is placed on the wellness component of physical assessment with reference to major health deviations. *Two hours of lecture for 1/2 unit. Prerequisite: Senior standing or consent of instructor.*

425

ADVANCED HEALTH ASSESSMENT CLINICAL LABORATORY

A clinical laboratory that allows additional practice for the student enrolled in Nursing 424. *Five hours clinical laboratory for 1/2 unit. Prerequisite: Senior standing or consent of instructor.*

430

COMMUNITY HEALTH NURSING

Overview of the role of the community health nurse in a variety of settings, e.g., industries, state health clinics, MHRM, school systems. Discussion of wellness promotion, availability of community resources, environmental health, prevention and treatment of communicable diseases, and group process with emphasis on communication skills. *Two*

hour lecture for 1/2 unit. Two hour lecture and a 5 hour clinical laboratory for 1 unit. School Nurse candidates must take the equivalent of one unit course. Prerequisite: Senior standing or consent of the instructor.

431 SCHOOL NURSE PRACTICUM

Essentials of school health, school nursing, and health promotion. These concepts serve as a basis for the development of an understanding of the role of the school with the opportunity to function in the role of the school nurse. It is a course built on the culmination of knowledge obtained in previous nursing courses and nursing experiences. *210 hours clinical and seminar. Prerequisite: OPEN TO SCHOOL NURSE CANDIDATES who have met all other requirements for certification and have obtained departmental approval.*

435 RESEARCH IN NURSING

Expansion of theoretical basis of research methodology with emphasis on analyzing, criticizing, and interpreting nursing research. Development of a research proposal focusing on a nursing problem. *Four hours of lecture. 1 unit. Prerequisites: Mathematics 103, Computer Science elective, and Nursing 330 and 332 or consent of instructor. Open to non-nursing majors.*

440 NURSING CARE OF THE EMOTIONALLY TROUBLED INDIVIDUAL AND FAMILY

Examination of disturbed human relationships with focus on intrapsychic, interpersonal, and physiologic etiology. Emphasis on advanced therapeutic nurse-patient relationships within the context of family, community, and health care systems. *Three hours of lecture and 7 1/2 hours clinical laboratory. 1 1/2 units. Prerequisite: Nursing 331, 333, 336.*

441 COMPREHENSIVE NURSING CARE

Culminating nursing course with focus on leadership and management skills in a choice of clinical settings. Seminars provide opportunities for students to share commonalities and unique aspects of professional practice. *Three hours of lecture and 7 1/2 hours of clinical laboratory. 1 1/2 units. Prerequisite: Nursing 336, 440.*

442 PROFESSIONAL ISSUES

An analysis of nursing issues in the context of the historical background of the profession, the social forces which influence nursing, and nursing's impact upon society. *Two-hour seminar. 1/2 unit. Prerequisite: Senior standing or consent of instructor.*

443 TOPICS IN NURSING

Selected topic courses in nursing designed to permit students to pursue subjects which, because of their specialized nature, may not be offered on a regular basis. *1/2 unit. Prerequisite: Senior standing or consent of instructor.*

N80-N89 INDEPENDENT STUDY IN NURSING

An opportunity to develop and implement an individual plan of study under faculty guidance. *1/2 unit. Prerequisite: Senior standing or consent of chairperson.*

490-491 INDEPENDENT STUDIES FOR DEPARTMENTAL HONORS (See index)

PHILOSOPHY (PHIL)

Professor: Whelan

Associate Professor: Griffith

Assistant Professor: Herring (Chairperson)

The study of philosophy develops a critical understanding of the basic concepts and presuppositions around which we organize our thought in science, religion, education, morality, the arts, and other human enterprises.

A major in philosophy, together with appropriate other 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 consists of eight courses numbered 114 or above, including 301, 302, 449, and at least three other courses numbered 225 or above.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Philosophy 216, 219, 301, 332, and 333. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in philosophy consists of any four philosophy courses numbered 220 or above; or any five philosophy courses numbered 114 or above, three of which must be numbered 225 or above. Three more specialized minors are also available: a minor in the History of Philosophy consists of four courses from Philosophy 223, 224, 301, 302, 400, 449 and Independent Studies; a minor in Philosophy and Science consists of four courses from Philosophy 223, 225, 331, 333, 400, 449 and Independent Studies; a minor in Philosophy and Law consists of four courses from Philosophy 224, 225, 334, 335, 400, 449 and Independent Studies or five courses including any three courses from the preceding list and two courses from Philosophy 115, 216, 218, 219. Since



topics in Philosophy 400, 449 and Independent Study vary, these courses may be used to count toward a specialized minor only if they are approved by the department.

105

PRACTICAL REASONING

A general introduction to topics in logic and their application to practical reasoning, with primary emphasis on detecting fallacies, evaluating inductive reasoning, and understanding the rudiments of scientific method. *Not open to students who have completed two courses in philosophy.*

114

PHILOSOPHY AND PERSONAL CHOICE

An introductory philosophical examination of a number of contemporary moral issues which call for personal decision. Topics often investigated include: the "good" life, obligation to others, sexual ethics, abortion, suicide and death, violence and pacifism, obedience to the law, the relevance of personal beliefs to morality. Discussion centers on some of the suggestions philosophers have made about how to make such decisions. *Not open to students who have completed two courses in philosophy.*

115

PHILOSOPHY AND PUBLIC POLICY

An introductory philosophical examination of the moral and conceptual dimensions of various contemporary public issues, such as the relation of ethics to politics and the law, the enforcement of morals, the problems of fair distribution of goods and opportunities, the legitimacy of restricting the use of natural resources, and the application of ethics to business practice. Discussion centers on some of the suggestions philosophers have made about how to deal with these issues. *Not open to students who have completed two courses in philosophy.*

117

PHILOSOPHY AND SUPERNATURAL PHENOMENA

A critical examination of the philosophical issues raised by near-death and out-of-body experiences, ESP, time travel, reports of ghosts and spirits, astrology, prophecy, demon possession, faith healing, miracles, psychokinesis, and the like. *Offered May and Summer terms only.*

216

ETHICAL ISSUES IN BUSINESS

An introductory philosophical examination of a variety of moral problems that arise concerning the American business system. Included are a systematic consideration of typical moral problems faced by individuals and an examination of common moral criticisms of the business system itself.

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.*

218

PHILOSOPHICAL ISSUES IN CRIMINAL JUSTICE

An introductory examination of various philosophical issues and concepts which are of special importance in legal contexts. Discussion includes both general topics, such as the justification of punishment, and more specific topics, such as the insanity defense and the rights of the accused. Readings are arranged topically and include both classical and contemporary sources.

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.

220

CENTRAL PROBLEMS IN PHILOSOPHY

A study of several central philosophical problems, such as the problem of free will and determinism, the relationship between the mind and the body, the nature and limits of human knowledge, arguments about the existence of God, and the problem of personal identity.

223

HISTORY OF SCIENCE AND METAPHYSICS

An historical survey of the attempt to understand the physical universe. Particular attention is paid to common origins of philosophy and science in the works of the

ancient Greek philosophers, to the question of how scientific and philosophical thinking differs from mythological and technological thinking, to the rationalism-empiricism dispute in science and metaphysics, and to the interaction between philosophy and science in formulating fundamental questions about the physical universe and in developing and criticizing concepts designed to answer them. *Alternate years.*

224

HISTORY OF SOCIAL AND POLITICAL PHILOSOPHY

An historical survey of the most important social and political philosophers from Socrates to Marx. Special attention is paid to the relationship between ethics and politics as seen by Plato and Aristotle and to the social contract theories of Hobbes, Locke, and Rousseau. *Alternate years.*

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.*

301

ANCIENT GREEK PHILOSOPHY

A critical examination of the ancient Greek philosophers, with particular emphasis on Plato and Aristotle. *Prerequisite: Two courses in philosophy or consent of instructor.*

302

EARLY MODERN PHILOSOPHY

A critical examination of the Continental Rationalists (Descartes, Spinoza, Leibniz), the British Empiricists (Locke, Berkeley, Hume), and Kant. *Prerequisite: Two courses in philosophy or consent of instructor.*

331

PHILOSOPHY AND HUMAN NATURE

An examination of a variety of classical and contemporary philosophical questions about human nature. Among the questions typically considered are these: Is there such a thing as human nature? Are human beings different, in any fundamental way, from other animals? Are human beings free? Is human consciousness just a brain process? Are human beings inherently predisposed to evil? Are human beings biologically determined to be selfish or aggressive? Are the differences in achievement between men and women biologically based? *Prerequisite: Students without previous study in philosophy must have instructor's permission. Alternate years.*

332

PHILOSOPHY OF RELIGION

A philosophical examination of religion. Included are such topics as the nature of religious discourse, arguments for and against the existence of God, and the relation between religion and science. Readings from classical and contemporary sources. *Prerequisite: Students without previous study in philosophy must have instructor's permission. 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 without previous study in philosophy must have instructor's permission. Alternate years.*

334

CONTEMPORARY POLITICAL PHILOSOPHY

A systematic philosophical investigation of the relation between human nature and the proper social and political order. Topics studied include the purpose of government, the nature of legitimate authority, the foundation of human rights, and the limits of human freedom. Emphasis is placed on the logic of social and political thought and on the analysis of basic principles and concepts.

Prerequisite: Students without previous study in philosophy must have instructor's permission. Alternate years.

335

ETHICAL THEORY

An inquiry concerning the grounds which distinguish morally right from morally wrong actions. Central to the course is critical consideration of the proposals and the rationales of relativists, egoists, utilitarians, and other ethical theorists. Various topics in metaethics are also included. *Prerequisite: Students without previous study in philosophy must have instructor's permission.*

400

PHILOSOPHICAL RESEARCH

A course which instructs students in philosophical research and the preparation of papers suitable for reading at undergraduate conferences or submission to undergraduate philosophical journals. *Prerequisite: Consent of instructor. Offered May and Summer terms only.*

449

DEPARTMENTAL SEMINAR

An investigation carried on by discussions and papers, into one philosophical problem, text, philosopher, or movement. A different topic is selected each semester. Recent topics include artificial intelligence, the

ethics of research on human subjects, life after death, personal identity, and human rights.

This seminar is designed to provide junior and senior philosophy majors and other qualified students with more than the usual opportunity for concentrated and cooperative inquiry.

Prerequisite: Consent of instructor. This seminar may be repeated for credit.

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 (PH ED)

Instructor: Holmes (Chairperson)

ATHLETIC TRAINING INTERNSHIP (A T)

Lycoming College established an apprenticeship program in 1979 after recognizing two conditions: the importance of the care and prevention of athletic injuries by trained professionals, and the career's promising growth potential.

To complete the internship students are required to take the four courses below as well as Biology 113 & 114 and Nursing 220. Students also are required to undergo practical work under the supervision of Lycoming's certified athletic trainer. Students are officially accepted into the Internship program after successful completion of the first year of practical work and Athletic Training 110.

Students who finish the Internship program become eligible to participate in the National Athletic Trainers Association (N.A.T.A.) Certification examination to earn the status of an N.A.T.A. certified trainer. This Internship program also allows the passing students to qualify for the State examination to become Class B athletic trainers under Pennsylvania Act 63 P.S.S1310.1. Students interested in this program should contact the Physical Education Department.

Athletic training classes do not count toward fulfilling graduation requirements except as the physical education requirements of two courses.

110 BASIC ATHLETIC TRAINING

Covers the basics in prevention, evaluation, treatment, and rehabilitation of athletic injuries. *Two lectures, one lab per week. Three credit hours. Prerequisite: CPR certification and Basic First Aid certification.*

215 ANALYSIS OF HUMAN MOVEMENT

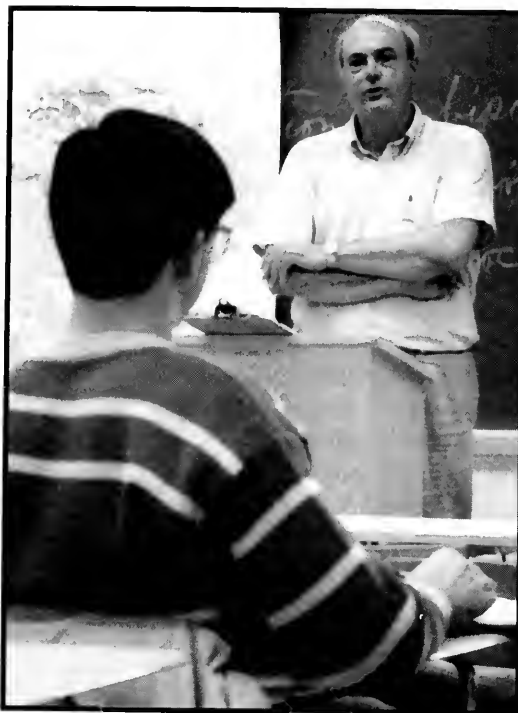
Basic concepts of Kinesiology, the study of human movement, and Biomechanics, the study of mechanical aspects of human movement. *Three lectures per week, project. Three credit hours. Prerequisite: Biology 113 & 114.*

310 ADVANCED ATHLETIC TRAINING

A more in-depth course in injury evaluation, rehabilitation, and therapeutic modalities. *Three lectures per week. Three credit hours. Prerequisite: A.T. 110.*

410 EXERCISE PHYSIOLOGY

The study of the effects of exercise on the human body. *Two lectures and one lab per week. Three credit hours. Prerequisite: Instructor approval. Alternate years.*



POLITICAL SCIENCE (PSCI)

Professors: Giglio, Roskin

Part-time Instructor: Wolf

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 provide the base for the study of law, or for graduate studies leading to administrative work in federal, state, or local governments, international organizations, or college teaching. Students seeking certification to teach secondary school social studies may major in political science but should consult their advisors and the education department.

A major consists of eight political science courses, including Political Science 106. Prospective majors are encouraged to register for this course during their freshmen year. An exemption will be granted only if it strengthens the student's program. In addition to 106, students must take at least one course in each of five areas (A to E), and at least one 400-level course taken during their last three semesters. The 400-level course may be one of the courses in the five areas or one of the two additional courses required to complete the major.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Political Science 223, 244. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

For non-majors, the department offers three minors: a minor in Political Science consists of

PHYSICAL EDUCATION (PH ED)

101

PHYSICAL EDUCATION

Coeducational physical education classes. Basic instructions in fundamentals, knowledge, and appreciation of sports that include swimming, tennis, volleyball, archery, soccer, golf, badminton, physical fitness, and other activities. Backpacking, cross-country and alpine skiing, jogging, modern dance, and cycling are offered on a contract basis. Students may select any activity offered. A reasonable degree of proficiency is required in the activities. Emphasis is on the potential use of activities as recreational and leisure-time interests. Two semesters of physical education (two hours per week) are required. All physical education classes are open to men and women.

any four courses numbered 200 or above from areas A to E; a minor in Foreign Affairs consists of four courses selected from Political Science 220, 225, 243, 326, 327, 438 and 439; and a minor in Legal Studies consists of Political Science 331, 335, 436 and one other course numbered 200 or above. Students are encouraged to consult with department members on the selection of a minor.

106**INTRODUCTION TO POLITICS**

An introductory course in political science that asks how and why people form political communities, what holds them together, and how political systems may either improve or damage themselves. Includes comparison of the U.S. with other countries and discussion of current political and public-policy issues.

A. American Politics**110****GOVERNMENT AND POLITICS IN THE UNITED STATES**

An introduction to American national government which emphasizes both structural-functional analysis and policy-making processes. In addition to the legislative, executive, and judicial branches of government, attention will be given to political parties and interest groups, elections and voting behavior, and constitutional rights. Recommended to all social science-education candidates and to those students who have had inadequate or insufficient preparation in American government.

111**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.

223**AMERICAN PRESIDENCY**

A study of the office and powers of the president with analysis of his major roles as

chief administrator, legislator, political leader, foreign policy maker, and commander-in-chief. Special attention is given to those presidents who led the nation boldly. *Subject to student demand, but offered at least once during a four-year cycle.*

B. Legal Studies**331****CIVIL RIGHTS AND LIBERTIES**

What are our rights and liberties as Americans? What should they be? A frank discussion of the nature and scope of the constitutional guarantees. First Amendment rights, the rights of criminal suspects and defendants, racial and sexual equality, and equal protection of the laws. Students will read and brief the more important Supreme Court decisions. *Prerequisite: junior or senior standing or consent of instructor.*

335**LAW AND SOCIETY**

An examination of the nature, sources, functions, and limits of law as an instrument of political and social control. Included for discussion are legal problems pertaining to the family, crime, deviant behavior, poverty, and minority groups. *Prerequisite: junior or senior standing or consent of instructor.*

436**MASS MEDIA LAW AND REGULATION**

An examination of the legal structure and the system by which mass communication is controlled in this society. The forces which shape, influence, and make policy will be considered. *Prerequisite: junior or senior standing or consent of instructor.*

C. Applied Politics**244****THE POLITICAL FILM**

The great and enduring political questions presented in fiction movies, for classroom discussion and papers. Course draws from a

library of cinema classics on videotape to probe political arrangements, power relationships, and the legal process. *Alternate years.*

333

BUREAUCRACY AND PUBLIC ADMINISTRATION

What is bureaucracy? Why and how do bureaucracies arise? What has been the political impact of growth of bureaucracy in government? These questions, among others, will be considered in this examination of public bureaucracies. This course is highly recommended to students planning to take an internship in city or county government through the political science department. *Subject to student demand, but offered at least once during a four-year cycle.*

347

WOMEN AND POLITICS

The historical, philosophical, and practical context and conduct of women in a variety of political roles. This course considers both elective and nonelective activities, and includes analyses of women's issues currently on legislative and court agendas. *Alternate years.*

448

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.

D. Comparative Politics

220

EUROPEAN POLITICS

A study of the political systems of Europe with emphasis on comparison and patterns of government. The course will review politics in Britain, France, Germany, the former Soviet republics, and other countries and attempt to find underlying similarities and differences.

326

POLITICAL CULTURES

An exploration of the "people" aspects of political life in several countries. The way people interact with each other and with government, what they expect from the system, how they acquire their political attitudes and styles, and how these contribute to the type of government. *Alternate years.*

438

POLITICS OF DEVELOPING AREAS

The causes and possible cures for socio-political backwardness in Asia, Africa, and Latin America. *Alternate years.*

E. International Relations

225

WORLD POLITICS

Why is there war? An introduction to international relations with emphasis on the varieties of conflicts which may grow into war.

237

POLITICAL GEOGRAPHY

The territorial dimension of politics as studied through questions of states, boundaries, subdivisions, regions, voting patterns, and strategies. Includes extensive map reviews for students taking state teacher examinations. *Alternate years.*

243

THE VIETNAM WAR

The background and context of the war, how the United States got involved, the military lessons, and the war's impact on U.S. society, politics, and economy. *Alternate years.*

327

CRISIS AREAS IN WORLD POLITICS

The study of several current areas of international tension and conflict, including relations among the United States, the former Soviet republics, and China, plus the Middle East and whatever new danger spots arise over time. *Alternate years.*



439

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. *Alternate years.*

F. Special Programs**470-479****INTERSHIPS** (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: Hancock

Associate Professors: Berthold
(Chairperson), Ryan

Assistant Professor: Olsen

Visiting Instructor: Cimini

Part-time Instructor: Marshall

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.

A major consists of 32 semester hours in psychology, including Psychology 110, 336, 431, and 432. Statistics also is required.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Psychology 225, 431, and 432. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in psychology consists of 20 semester hours in psychology including Psychology 110 and four other psychology courses (three of which must be numbered 200 or above) which must be approved by the department.

101**TOPICS**

Exploration of a specific basic or applied topic in psychology. Different topics will be 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. *No Prerequisites. 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, physiological, sensory, cognition, and developmental.

112
GROUP PROCESSES AND INTERPERSONAL COMMUNICATION

An introduction to research and theories on small group formation, structure, and performance. Topics include group communication, conformity, leadership, conflict, and decision-making. Emphasis will be placed upon applying principles of group dynamics to different types of groups. *Prerequisite: Psychology 110 or consent of instructor. May term only.*

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: Psychology 110.*

117
DEVELOPMENTAL PSYCHOLOGY

A study of the basic principles of human growth and development throughout the life span. *Prerequisite: Psychology 110.*

118
ADOLESCENT PSYCHOLOGY

The study areas will include theories of adolescence; current issues raised by as well as about the "generation of youth"; research findings bearing on theories and issues of

growth beyond childhood, and self-exploration. *Prerequisite: Psychology 110.*

224
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. *Prerequisites: Psychology 110.*

225
INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY

The application of the principles and methods of psychology to selected industrial and organizational situations. *Prerequisite: Psychology 110 or consent of instructor.*

239
BEHAVIOR MODIFICATION

A detailed examination of the applied analysis of behavior. Focus will be on the application of experimental method to the individual clinical case. The course will cover targeting behavior, base-rating, intervention strategies, and outcome evaluation. Learning-based modification techniques such as contingency management, counter-conditioning, extinction, discrimination training, aversive conditioning, and negative practice will be examined. *Prerequisite: Psychology 110 or consent of instructor.*

240
PSYCHOLOGY OF ADULT PERSONAL ADJUSTMENT

A study of psychological theories and research on coping with normal developmental changes and common problems of adulthood. Focus will be upon adult transitions, stress management, intimate relationships, sexuality, parenting skills, and work adjustment. *Prerequisite: Psychology 110.*

333**PHYSIOLOGICAL PSYCHOLOGY**

An introduction to the physiological 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. *Prerequisite: Psychology 110 or consent of instructor.*

334**PRINCIPLES OF MEASUREMENT**

Psychometric methods and theory, including scale transformation, norms, standardization, validation procedures, and estimation of reliability. *Prerequisites: Psychology 110 and statistics.*

335**HISTORY AND SYSTEMS OF PSYCHOLOGY**

The growth of scientific psychology and the theories and systems that have accompanied its development. *Prerequisite: Four courses in psychology.*

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 will be considered. *Prerequisite: Psychology 110.*

337**COGNITION**

An investigation of human mental processes along the two major dimensions: directed and undirected thought. Topic areas include recognition, attention, conceptualization, problem-solving, fantasy, language, dreaming, and creativity. *Prerequisite: Psychology 110.*

338**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: Psychology 110 or consent of instructor.*

341**PSYCHOLOGY OF WOMEN**

A review of contemporary theory and research on the psychology of gender differences. The major theories and basic research on gender differences will be covered. 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: Psychology 110.*

431**LEARNING EXPERIMENTAL PSYCHOLOGY**

Learning processes. The examination of the basic methods and principles of animal and human learning. *Prerequisites: Psychology 110 and statistics.*

432**SENSORY EXPERIMENTAL PSYCHOLOGY**

The examination of psychophysical methodology and basic neurophysiological methods as they are applied to the understanding of sensor processes. *Prerequisites: Psychology 110 and statistics.*

448-449

PRACTICUM IN PSYCHOLOGY

An off-campus experience in a community setting offering psychological services, supplemented with classroom instruction and discussion. Psychology 448 covers the basic counseling skills, while Psychology 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. Studies in the past have included child abuse, counseling of hospital patients, and research in the psychology of natural disasters.

490-491

INDEPENDENT STUDY FOR DEPARTMENTAL HONORS (See index)

Honors in psychology requires original contributions to the literature of psychology through independent study. The most recent honors project was a study of the effect of self-esteem on attitude-behavior consistency.



RELIGION (REL)

Professors: Guerra, Hughes (Chairperson)
Assistant Professor: Van Voorst

A major consists of 10 courses, including Religion 113, 114, and 120. At least seven courses must be taken in the department. The following courses may be counted toward fulfilling the major requirements: Greek 221 and 222, Hebrew 221 and 222, History 340 and 416, Philosophy 332, and Sociology 333.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Religion 230 and 331. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

A minor in religion consists of one course from Religion 110, 113, 114 and four religion courses numbered 200 or above.

An interdisciplinary minor in Biblical Languages requires the completion of Greek 221, 222 and Hebrew 221 and 222.

110**INTRODUCTION TO RELIGION**

Designed for the beginning student, this course examines what it means to be religious. Some of the issues are the definition of religion, the meaning of symbolism, concepts of God, ecstatic phenomena. Specific attention will be devoted to the current problem of cults and religious liberty.

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.

119**RELIGION AND POPULAR CULTURE**

An examination of the interaction of religion and culture in an historical perspective followed by a direct analysis of the ethical and religious issues raised by contemporary American popular culture. Readings include artistic and social-scientific as well as ethical and religious approaches to popular culture.

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 120-121 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. *Religion 120 is recommended but not required. Only one course from the combination 120-121 may be used for distribution.*

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 will be paid to the constant interaction between Protestantism and the world in which it finds itself.

223**THE BACKGROUNDS OF CHRISTIANITY**

A study of the historical, cultural, and religious background of the formation of Christianity and the antecedents of Christian belief and practice in post-exilic Judaism and in Hellenism.

224**JUDAISM AND ISLAM**

An examination of the rise, growth, and expansion of Judaism and Islam with special attention given to the theological contents of the literatures of these religions as far as they

are normative in matters of faith, practice, and organization. Also, a review of their contributions to the spiritual heritage of mankind.

225 ORIENTAL RELIGION

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.

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 HISTORY AND THEOLOGY OF THE EARLY CHURCH

An examination of the life and theology of the church from the close of the New Testament to the fifth century. Special attention will be given to the struggles of the church with heretical movements, the controversies concerning the person and nature of Christ, and the encounter of the church with the Roman Empire.

228 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 will be 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.

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 will be 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?

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.

332 CONTEMPORARY PROBLEMS IN CHRISTIAN SOCIAL ETHICS

An examination of the approach of religion and other disciplines to an issue of current concern; current topics include the theological significance of law, the ethics of love, and the Holocaust. *The course may be repeated for credit if the topic is different from one previously studied.*

337 BIBLICAL TOPICS

An in-depth study of Biblical topics related to the Old and New Testaments. Topics include prophecy, wisdom literature, the Dead Sea Scrolls, the teachings of Jesus, Pauline theology, Judaism and Christian origins, redaction criticism - the way the Synoptic

Gospels and John give final form to their message. *Course will vary from year to year and may be taken for credit a second time if the topic is different from one previously studied.*

341 CONTEMPORARY RELIGIOUS ISSUES

A study of the theological significance of some contemporary intellectual developments in Western culture. The content of this course will vary from year to year. Subjects studied in recent years include the theological significance of Freud, Marx, and Nietzsche; Christianity and existentialism; theology and depth psychology; the religious dimension of contemporary literature.

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.

470-479 INTERNSHIP (See index)

Interns in religion usually work in local churches under the supervision of the pastor 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)



SCHOLAR PROGRAM (SCHOL)

Associate Professor: Boerckel (Director)

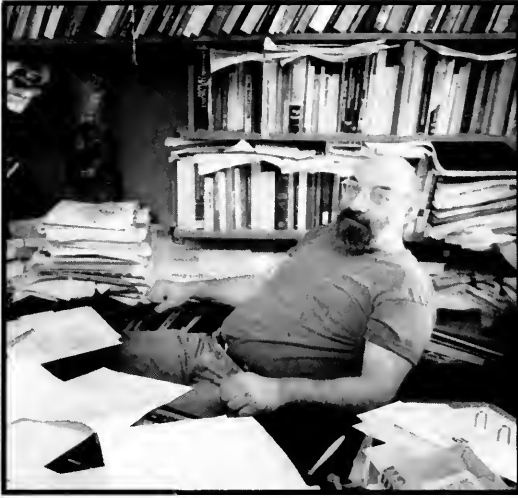
The Lycoming College Scholar Program is a special program designed to meet the needs and aspirations of highly motivated students of superior intellectual ability. The Lycoming Scholar satisfies the College distribution requirements, generally on a more exacting level and with more challenging courses than the average student. Lycoming Scholars also participate in special interdisciplinary seminars and in serious independent study culminating in a senior project.

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.*



SOCIOLOGY- ANTHROPOLOGY

(SOC)

Professor: Wilk (Chairperson)
Associate Professor: Jo
Assistant Professors: S. Alexander, Strauser

The Sociology/Anthropology Department offers two tracks in the major. Both tracks introduce the students to the fundamental concepts of the discipline, and both tracks prepare the student for graduate school.

Track I emphasizes the theoretical aspects of sociology and anthropology. Track II emphasizes the application of sociology and anthropology to human services.

Track I - Sociology-Anthropology requires the core course sequence 110, 114, 229, 444, and 447 and three other courses within the department with the exception of 115, 222, 223, 225, 440, and 443. Religion 226 may also be counted toward the major.

Track II - Human Services in a Socio-Cultural Perspective requires: Sociology-Anthropology 110, 222, 229, 443, 444, and 447. In addition, students must select two courses from among the following: Sociology-Anthropology 220, 221, 227, 228, 300, 334, and 335. Students are also required to choose two units from the following courses: Psychology 110, Psychology 224, Economics 224, and Political Science 333. Recommended courses: Accounting 110, Accounting 226, Spanish 111, Spanish 112, History 126, and Philosophy 334.

Majors in both tracks are encouraged to participate in the internship program.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Sociology-Anthropology 229 and 441. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

A minor in sociology and anthropology consists of Sociology-Anthropology 110 and four other sociology-anthropology courses (three of which must be numbered 220 or above) which must be approved by the department. Sociology-Anthropology courses 115, 223, 225, 339, and 440 cannot be counted toward this minor.

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.

114 INTRODUCTION TO ANTHROPOLOGY

An introduction to the subfields of anthropology; its subject matter, methodology, and goals, examination of biological and

cultural evolution, the fossil evidence for human evolution, and questions raised in relation to human evolution. Other topics include race, human nature, primate behavior, and prehistoric cultural development.

115 INTRODUCTION TO AMERICAN CRIMINAL JUSTICE SYSTEM

An introduction to the role of law enforcement, courts, and corrections in the administration of justice; the historical development of police, courts, and corrections; jurisdiction and procedures of courts; an introduction to the studies, literature, and research in criminal justice; careers in criminal justice.

220 MARRIAGE AND THE FAMILY

The history, structure, and functions of modern American family life, emphasizing dating, courtship, factors in marital adjustment, and the changing status of family members. *Prerequisite: Sociology-Anthropology 110 or consent of instructor.*

221 JUVENILE DELINQUENCY

A multidisciplinary approach to the study of the constellation of factors that relate to juvenile delinquency causation, handling the juvenile delinquent in the criminal justice system, treatment strategies, prevention, and community responsibility. *Prerequisite: Sociology-Anthropology 110 or consent of instructor. Alternate years.*

222 INTRODUCTION TO HUMAN SERVICES

The course is designed for students interested in learning about, or entering, the human services profession. It will review the history, the range, and the goals of human services together with a survey of various strategies and approaches to human problems. It will include practical discussions of social behavioral differences as they relate to stress

and conflict in people's lives. *Prerequisite: Sociology-Anthropology 110 and/or Psychology 110 or consent of instructor.*

223 INTRODUCTION TO LAW ENFORCEMENT

Principles, theories, and doctrines of the law of crimes, elements in crime, analysis of criminal investigation, important case law. *Prerequisite: Sociology-Anthropology 115 or consent of instructor.*

224 RURAL AND URBAN COMMUNITIES

The concept of community is treated as it operates and affects individual and group behavior in rural, suburban, and urban settings. Emphasis is placed upon characteristic institutions and problems of modern city life. *Prerequisite: Sociology-Anthropology 110 or consent of instructor.*

225 INTRODUCTION TO CRIMINAL INVESTIGATION

This course is designed for advanced criminal justice majors. Emphasis is placed on an in-depth study of detection and investigation of major crimes. Particular attention is placed on the use of criminalistics, legal parameters of evidence and interrogation, and prosecutory procedures. *Prerequisite: Sociology-Anthropology 223 or consent of instructor. Will not be counted toward the sociology/anthropology major.*

226 SOCIAL MOVEMENTS

An analysis of the dynamics, structure, and reactions to social movements with focus on contemporary social movements. *Prerequisite: Sociology-Anthropology 110 or consent of instructor.*

227

SOCIAL PROBLEMS

The course examines the causes, characteristics, and consequences of social problems in America from diverse socio-cultural perspectives. Topics discussed typically include crime, urban crises, family disorganization, poverty, race problems, drug abuse, and other related issues. *Prerequisite: Sociology-Anthropology 110 or consent of instructor.*

228

AGING AND SOCIETY

Analysis of cross-cultural characteristics of the aged as individuals and as members of groups. Emphasis is placed upon variables: health, housing, socio-economic status, personal adjustment, retirement, and social participation. Sociological, social psychological, and anthropological frames of reference utilized in analysis and description of aging and its relationship to society, culture, and personality, health, housing, socio-economic status, personal adjustment, retirement, and social participation.

229

CULTURAL ANTHROPOLOGY

An examination of cultural and social anthropology designed to familiarize the student with the analytical approaches to the diverse cultures of the world. The relevancy of cultural anthropology for an understanding of the human condition will be stressed. Topics to be covered include the nature of primitive societies in contrast to civilizations, the concept of culture and cultural relativism, the individual and culture, the social patterning of behavior and social control, an anthropological perspective on the culture of the United States.

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: Sociology-Anthropology 110 or consent of instructor.*

331

SOCIOLOGY OF WOMEN

A sociological examination of the role of women in American society through an analysis of the social institutions which affect their development. Role-analysis theory will be applied to the past, present, and future experience of women as it relates to the role options of society as a whole. Students will do an original research project on the role of women. *Prerequisite: Sociology-Anthropology 110.*

332

INSTITUTIONS

Introduces the student to the sociological concept of social institution, the types of social institutions to be found in all societies, and the interrelationships between the social institutions within a society. The course is divided into two basic parts: 1. That aspect which deals with the systematic organization of society in general, and 2. The concentration on a particular social institution: economic, political, educational, or social welfare. *Prerequisite: Sociology-Anthropology 110 or consent of instructor.*

333

SOCIOLOGY OF RELIGION

An examination of the major theories of the relationship of religion to society and a survey of sociological studies of religious behavior. *Prerequisite: Sociology-Anthropology 110 or consent of instructor.*

334
RACIAL AND CULTURAL MINORITIES

Study of racial, cultural, and national groups within the framework of American cultural values. An analysis will include historical, cultural, and social factors underlying ethnic and racial conflict. Field trips and individual reports are part of the requirements for the course. *Prerequisite: Sociology-Anthropology 110 or consent of instructor.*

335
CULTURE AND PERSONALITY

Introduction to psychological anthropology, its theories and methodologies. Emphasis will be placed on the relationship between individual and culture, national character, cognition and culture, culture and mental disorders, and cross-cultural considerations of the concept of self. *Prerequisite: Sociology-Anthropology 229 or consent of instructor.*

336
THE ANTHROPOLOGY OF PRIMITIVE RELIGIONS

The course will familiarize the student with the wealth of anthropological data on the religions and world views developed by primitive peoples. The functions of primitive religion in regard to the individual, society, and various cultural institutions will be examined. Subjects to be surveyed include myth, witchcraft, vision quests, spirit possession, the cultural use of dreams, and revitalization movements. Particular emphasis will be given to shamanism, transcultural religious experience, and the creation of cultural realities through religions. Both a social scientific and existential perspective will be employed. *Prerequisite: Sociology-Anthropology 229 or consent of instructor.*

337
THE ANTHROPOLOGY OF AMERICAN INDIANS

An ethnographic survey of native North American Indian and Eskimo cultures, such as the Iroquois, Plains Indians, Pueblo, Kwakiutl, and Netsilik. Changes in native lifeways due to European contacts and United States expansion will be considered. Recent cultural developments among American Indians will be placed in an anthropological perspective.

338
LEGAL AND POLITICAL ANTHROPOLOGY

The course is designed to familiarize the student with the techniques of conflict resolution and the utilization of public power in primitive society as well as the various theories of primitive law and government. The rise of the state and an anthropological perspective on modern law and government will be included. The concepts of self-regulation and social control, legitimacy, coercion, and exploitation will be the organizing focus. *Prerequisite: Sociology-Anthropology 229 or consent of instructor.*

339
THE AMERICAN PRISON SYSTEM

Nature and history of punishment, evolution of the prison and prison methods with emphasis on prison community, prison architecture, institutional programs, inmate rights, and sentences. Review of punishment versus treatment, detention facilities, jails, reformatories, prison organization and administration, custody, and discipline. *Prerequisite: Sociology-Anthropology 115.*

440
PROBATION AND PAROLE

A course designed for the advanced criminal justice major. While the course concerns the study of probation and parole as parts of the

criminal justice system and their impact on the system as a whole, the primary emphasis is the impact on the offender. Particular attention is given to diagnostic report writing on offenders, pre-sentence investigation, offender classification, and parole planning. *Prerequisites: Sociology-Anthropology 115 and 339.*

441
SOCIAL STRATIFICATION

An analysis of stratification systems with specific reference to American society. The course will include an analysis of poverty, wealth, and power in the United States. Particular attention will be given to factors which generate and maintain inequality, along with the impact of inequality on the lives of Americans. *Prerequisite: Sociology-Anthropology 110 or consent of instructor.*

443
HUMAN SERVICES IN HELPING INSTITUTIONS

The course examines the organizational and conceptual context within which human services are delivered in contemporary society. Subjects to be covered include ethnographic study of nursing homes, prisons, therapeutic communities, mental hospitals, and other human service institutions. The methodology of fieldwork will be explored so as to sensitize the student to the socio-cultural dimensions of helping environments and relationships. *Prerequisite: Sociology-Anthropology 110 or Sociology-Anthropology 229 or consent of instructor. Alternate years.*

444
SOCIAL THEORY

The history of the development of sociological thought from its earliest philosophical beginnings is treated through discussions and reports. Emphasis is placed upon sociological thought since the time of Comte. *Prerequisite: Sociology-Anthropology 110 or consent of instructor.*

445
ANTHROPOLOGICAL THEORY

The history of the development of anthropological thought from the 18th century to the present. Emphasis is placed upon anthropological thought since 1850. Topics include evolutionism, historical-particularism, cultural idealism, cultural materialism, functionalism, structuralism, and ethno-science. *Prerequisite: Sociology-Anthropology 229 or consent of instructor.*

447
RESEARCH METHODS IN SOCIOLOGY-ANTHROPOLOGY

Study of the research process in sociology-anthropology. Attention is given to the process of designing and administering research and the application of research. Different methodological skills are considered, including field work, questionnaire construction, and other methods of data gathering and the analysis of data. *Prerequisite: Sociology-Anthropology 110 and Mathematics 103 or consent of instructor.*

448-449
PRACTICUM IN SOCIOLOGY

Introduces the student to a practical work experience involving community agencies in order to effect a synthesis of the student's academic course work and its practical applications in a community agency. Specifics of the course to be worked out in conjunction with department, student and agency. *Prerequisite: Sociology-Anthropology 110 and consent of instructor.*

470-479
INTERNSHIP (See index)

Interns in sociology-anthropology typically work off campus with social service agencies under the supervision of administrators. However, other internship experiences, such as with the Lycoming County Historical Museum, are available. Interns in criminal



THEATRE (THEA)

Professor: R. Falk (Chairperson)
 Associate Professor: Allen
 Part-time Instructors: Clark, Denton
 Theatre Technician: Downing

The major consists of eight courses: Theatre 100 and seven others; a concentration in acting, directing, or design is possible. In addition to the course requirements, majors are expected to participate actively in Arena Theatre productions. Majors are urged to include courses in art, music, psychology, and English, or other areas of special interest.

The following courses have been approved to be offered as writing intensive courses and may be offered as such: Theatre 332 and 333. Students must check semester class schedules to determine which courses are offered as "W" courses for that semester.

Minor

Three minors are available in the Theatre department. A minor in Theatre History and Literature consists of Theatre 100, 332, 333, 335, and 400. The following courses are required to complete a minor in Performance: Theatre 100, 140, 226, 334, 336, and either 332 or 333. To obtain a minor in Technical Theatre, a student must complete Theatre 100, 148, 228, 338, and 420 or 430.

The fine arts distribution requirement may be satisfied by selecting any two of the following recommended courses: Theatre 100, 110, 140, 148, 332, 333, or other courses with the consent of the instructor.

100 INTRODUCTION TO THEATRE

Designed as a comprehensive introduction to the aesthetics of theatre. From the spectator's point of view, the nature of theatre will be explored, including dramatic literature and the integral functioning of acting, directing, and all production aspects.

justice work off campus in criminal justice agencies, such as penal institutions and probation and parole departments, under the supervision of administrative personnel.

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)

110**INTRODUCTION TO FILM**

A basic course in understanding the film medium. The class will investigate film technique through lectures and by viewing regular weekly films chosen from classic, contemporary, and experimental short films.

135-136**INTRODUCTION TO DANCE I AND II**

An introduction to the techniques of basic movement and interpretation in ballet, jazz, and modern dance. Classes include improvisation and choreography. *Prerequisite for Theatre 136: Theatre 135 or consent of instructor. One-half unit of credit each. Not open to students who have received credit for Music 135-136 or Music 235-236.*

137**HISTORY OF THE DANCE I**

A survey of classical ballet from the *Ballets de cour* of 17th-century France to the present with emphasis on the contributions of Petipa, Fokien, Cecchetti, and Balanchine. *One-half unit of credit. Not open to students who have received credit for Music 137 or 138.*

138**HISTORY OF THE DANCE II**

A survey of the forms of dance, excluding classical ballet, as independent works of art and as they have reflected the history of civilization from primitive times to the present. *Prerequisite: Theatre 137 or consent of instructor. One-half unit of credit. Not open to students who have received credit for Music 137 or 138.*

140**INTRODUCTION TO ACTING**

An introductory study of the actor's preparation with emphasis on developing the actor's creative imagination through improvisations and scene study. *Prerequisite: Theatre 100.*

148**INTRODUCTION TO PLAY PRODUCTION**

Stagecraft and the various other aspects of play production are introduced. Through material presented in the course and laboratory work on the Arena Theatre stage, the student will acquire experience to produce theatrical scenery, lighting, and costumes.

226**INTRODUCTION TO DIRECTING**

An introductory study of the function of the director in preparation, rehearsal, and performance. Emphasis is placed on developing the student's ability to analyze scripts, and on the development of the student's imagination. *Prerequisite: Theatre 140.*

228**INTRODUCTION TO SCENE DESIGN AND STAGECRAFT**

An introduction to the theatre with an emphasis on stagecraft. Productions each semester serve as the laboratory to provide the practical experience necessary to understand the material presented in the classroom. *Prerequisite: Theatre 148 or consent of instructor.*

231**ADVANCED TECHNIQUES OF PLAY PRODUCTION**

A detailed consideration of the interrelated problems and techniques of play analysis, production styles, and design. *Offered summer only.*

232**FUNDAMENTALS OF MAKEUP**

Essentials of stage makeup; straight, character, special types. Effects of light on makeup are included. *Prerequisite: Theatre 148. One-half unit. Alternate years.*

233

ADVANCED MAKEUP

Advanced techniques in makeup design. Three-dimensional and prosthetic makeups are included, with emphasis on nonrealistic and nonhuman forms. *Prerequisite: Theatre 232. One-half unit. Alternate years.*

235-236

INTERMEDIATE DANCE I AND II

Studies of the techniques of basic movement and interpretation in ballet, jazz, and modern dance at the intermediate level. Classes include improvisation and choreography. *Prerequisite for Theatre 235: Theatre 136 or consent of instructor. Prerequisite for Theatre 236: Theatre 235 or consent of instructor. One-half unit of credit each. Not open to students who have received credit for Music 135-136 or Music 235-236.*

332

HISTORY OF THEATRE I

A detailed study of the development of theatre from the Greeks to the Restoration. *Alternate years.*

333

HISTORY OF THEATRE II

The history of the theatre from 1660. *Alternate years.*

334

INTERMEDIATE STUDIO: ACTING

Instruction and practice in character analysis and projection with emphasis on vocal and body techniques. *Prerequisite: Theatre 140.*

335

THEORIES OF THE MODERN THEATRE

An advanced course exploring the philosophical roots of the modern theatre from the birth of realism to the present and the influences on modern theatre practice. Selected readings from Nietzsche, Marx, Jung, Freud, Whitehead, Kierkegaard, Sartre,

Camus, Antoine, Copeau, Stanislavski, Shaw, Meyerhold, Artaud, Brecht, Brook, Grotowski. *Alternate years.*

336

INTERMEDIATE STUDIO: DIRECTING

Emphasis is placed on the student's ability to function in preparation and rehearsal. Practical experience involves the directing of two one-act plays from the contemporary theatre. *Prerequisite: Theatre 226.*

337

**PLAYWRITING AND
DRAMATIC CRITICISM**

An investigation of the techniques of playwriting with an emphasis on creative writing, culminating in a written one-act play, plus an historical survey of dramatic criticism from Aristotle to the present with emphasis upon developing the student's ability to write reviews and criticism of theatrical productions and films. *Alternate years.*

338

**INTERMEDIATE STUDIO:
LIGHTING DESIGN**

The theory of stage and lighting design with emphasis on their practical application to the theatre. *Prerequisite: Theatre 148 or consent of instructor.*

400

MASTERS OF WORLD DRAMA

An intensive and detailed analysis of the plays and related works, including criticism of great authors, that have shaped world theatre. Authors to be selected on the basis of interest of students and faculty. At times, more than one author will be treated in a term. Ibsen, Brecht, Moliere, Williams, Albee. *Alternate years. May be accepted toward English major with consent of English Department.*

420

ADVANCED STUDIO: COSTUME DESIGN

The theory of costuming for the stage, elements of design, planning, production, and construction of costumes for the theatre. Students will participate in the design of a production. *Prerequisite: Theatre 148 or consent of instructor.*

430

**ADVANCED STUDIO:
PROPERTIES DESIGN**

The theory of properties design for the stage, including the production of specific properties for staging use. Elements of design, fabrication, and the construction of properties employing a variety of materials and the application of new theatrical technology. *Prerequisite: Theatre 148 or consent of instructor.*

440

ADVANCED STUDIO: ACTING

Preparation of monologues and two-character scenes, contemporary and classical. The student will appear in major campus productions. *Prerequisite: Theatre 334.*

446

ADVANCED STUDIO: DIRECTING

Emphasis will be placed on the student's ability to produce a major three-act play from the script to the stage for public performance. *Prerequisite: Theatre 336.*

448

ADVANCED STUDIO: DESIGN

Independent work in conceptual and practical design. The student will design one full production as his major project. *Prerequisites: Theatre 228 or 338 and consent of instructor.*

470-409

INTERNSHIP (See index)

Interns in theatre work off campus in theatres such as the Guthrie Theatre, Minnea-

polis, and the New Jersey Shakespeare Festival.

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

Some recent independent studies have been the roles of women as characters in drama, scene design, and lighting design for an Arena production.

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

A typical study could be the writing and production of an original play.

THEATRE PRACTICUM

Students may receive academic credit for supervised participation in the various aspects of technical production, rehearsal, and performance of the Theatre Department's major presentations in the Arena Theatre. Credit for Theatre Practicum is earned on a fractional basis. Students may register for one-half semester hour course credit for active participation in a major production in the designated areas of technology and performance, limited to one semester hour credit per semester and eight semester hours over four years. Theatre Practicum credit may not be used to satisfy distribution requirements in Fine Arts. Students may not register for Theatre Practicum while taking Theatre 100 (Introduction to Theatre) or Theatre 148 (Play Production) without permission of the instructor. When scheduling, students should register for Theater Practicum in addition to the normal four academic courses. *Because students may not be cast or assigned duties in time to meet the drop/add deadline, late registration for Theatre 160 (Technical Theatre) and 161 (Rehearsal and Performance) will be permitted without penalty.*



160 TECHNICAL THEATRE PRACTICUM

Participation in a major production of the Arena Theatre in one or more of the following technical areas: scene construction, scene painting, lighting, sound, properties, costume, makeup. A minimum of 50 hours is required. May be repeated for credit. One-half credit hour. *Prerequisite: Consent of instructor.*

161 REHEARSAL AND PERFORMANCE PRACTICUM

Participation in a major production of the Arena Theatre in one or more of the following rehearsal and performance areas: acting in a major or minor role, stage manager, director, assistant director, choreographer. A minimum of 50 hours is required. May be repeated for credit. One-half hour credit. *Prerequisite: Consent of instructor.*

WOMEN'S STUDIES

Steering Committee: Beidler, Briggs,
J. Hurlbert, Morris, Ryan (Coordinator)

Although a major in women's studies is available only under the policies regarding Individual Interdisciplinary Majors (see p.42), an established minor in women's studies is provided. Courses required for the minor are:

History 310: Women in History
English 334: Women and Literature
Psychology 341: Psychology of Women
Art 339: Women in Art

With the approval of the coordinator, one of the four courses may be satisfied with Political Science 347: Women in Politics, with an appropriate special course, or with an independent studies project. To receive credit for a minor in women's studies, a student must maintain at least a 2.0 average in courses taken for that minor.

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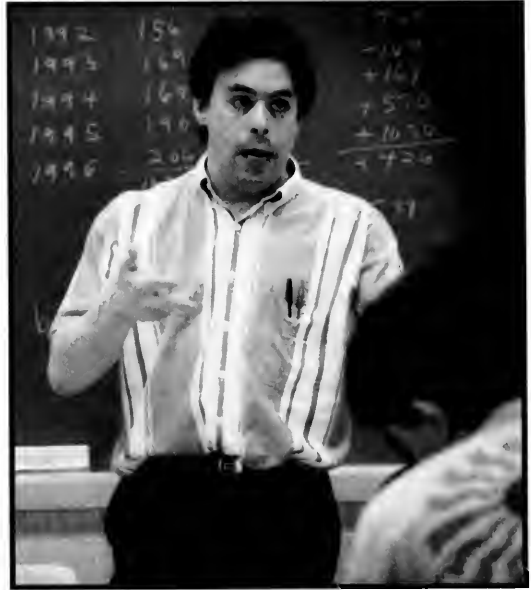


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Term expires 1995

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 1988 **John C. Schultz**
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ADMINISTRATIVE STAFF

James E. Douthat (1989)

President

A.B., The College of William and Mary
M.Div., Duke University
Ed.D., Duke University
John F. Piper, Jr. (1969)

Dean of the College

A.B., Lafayette College
B.D., Yale University
Ph.D., Duke University
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Treasurer

B.A., Lycoming College
M.B.A., Bucknell University
M. Ben Hogan (1992)

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B.A., St. Francis College
M.S., University of Southern Maine
Ed.D., Vanderbilt University
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Dean of Admissions & Financial Aid

B.A., Concordia College
Jeffrey Baird (1992)

Director of Safety & Security

B.A., Mansfield University
Dale V. Bower (1968)

Director of Planned Giving

B.S., Lycoming College
B.D., United Theological Seminary
Natasha Cooper (1993)

 Assistant Instructional Services Librarian and
 Assistant Professor

B.A., Colgate University
M.Ed., Pennsylvania State University
M.L.S., Syracuse University
Molly Costello (1991)

Director of College Relations

A.B., Mount Holyoke College
*M.B.A., Southeastern Massachusetts
 University*
Robert L. Curry (1969)

Associate Director of Athletics

B.A., Lycoming College
Jerry S. Falco (1990)

Director of Student Activities

B.S., Westminster College
M.A., Bowling Green State University
Robert F. Falk (1970)

Associate Dean of the College

A.B., Drew University
B.D., Drew Theological School
M.A., Wayne State University
Ph.D., Wayne State University
Kathy A. GaNung (1992)

Director of Alumni and Parent Programs

B.A., Lycoming College
Frank L. Girardi (1984)

Director of Athletics

B.S., West Chester State College
Murray J. Hanford (1991)

Publications Manager

Daniel J. Hartsock (1981)

 Director of Academic Resource Center and
 Coordinator of Advising

B.A., The Pennsylvania State University
M.A., Indiana University of Pennsylvania
Alice N. Heaps (1986)

Associate Director of Admissions

B.S., Shippensburg University
Mary Beth Heim (1990)

Admissions Counselor

B.A., Earlham College
Thomas J. Henninger (1966)

Director of Computer Services

B.S., Wake Forest College
M.A., University of Kansas
J. Marco Hunsberger (1989)

Campus Minister

B.A., Mercer University
M.Div., United Theological Seminary

John J. Killian (1990)

Admissions Counselor
B.A., Lycoming College

Wayne E. Kinley (1990)

Controller and Assistant Treasurer
B.A., Lycoming College

Joshua Kramon (1993)

Admissions Counselor
B.A., Gettysburg College

Allison Kreitz (1993)

Admissions Counselor
B.A., The Pennsylvania State University

James S. Lakis (1990)

Director of Financial Aid
B.A., Temple University

Christina E. MacGill (1985)

Director of Career Development Center
B.A., Lycoming College
M.S., Bucknell University

David J. Martin (1990)

Superintendent of Buildings & Grounds
B.S., Huntington College

Robert Mothersbaugh (1993)

Director of Development
B.S., The Pennsylvania State University

Karin Plummer (1993)

Admissions Counselor
B.A., Lycoming College

Karen M. Preamble (1992)

College Nurse
B.S.N., Bloomsburg University

H. Karen Ransdorf (1990)

Campus Store Manager

Barbara Riegel (1993)

Assistant Instructional Services Librarian and
 Assistant Professor
B.A., Gannon University
M.S.L.S., Clarion University

Nancy A. Robinson (1990)

Accountant
A.A.S., Pennsylvania College of Technology

Stephen M. Schierloh (1992)

Admissions Counselor
B.A., Juniata College

William C. Sherwood (1990)

Business Manager
B.S., Lycoming College
M.B.A., Michigan State University

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Director of Residence Life
B.S., University of Delaware
M.A., Trenton State College

Catherine E. Troelstra (1991)

Director of the Annual Fund
B.S., The Johns Hopkins University

Jeanne A. Wagner (1990)

Registrar
B.S., Syracuse University

Kenneth P. Weingartner (1992)

Sports Information Director
B.A., Lycoming College

Mary B. Wolf (1985)

Assistant Dean for Freshmen
B.A., St. Mary's College
M.P.A., University of Michigan

Ralph E. Zeigler, Jr. (1980)

Senior Development Officer
B.A., Lycoming College
M.A., The Pennsylvania State University

Emeriti**Jack C. Buckle**

Dean of Students Emeritus
A.B., Juniata College
M.S., Syracuse University

Harold H. Hutson

President Emeritus
B.A., LL.D., Wofford College
Ph.D., University of Chicago
L.H.D., Ohio Wesleyan University

FACULTY

Professors

Robert B. Angstadt (1967)

Biology

B.S., Ursinus College

M.S., Ph.D., Cornell University

Jon R. Bogle (1976)

Art

B.F.A., B.S., M.F.A., Tyler School of Art;

Temple University

Jack D. Diehl, Jr. (1971)

Biology

B.S., M.A., Sam Houston State University

M.S., Ph.D., University of Connecticut

Robert F. Falk (1970)

Theatre

Marshal of the College

Associate Dean

B.A., B.D., Drew University

M.A., Ph.D., Wayne State University

David A. Franz (1970)***

Chemistry

Marshal of the College

A.B., Princeton University

M.A.T., The Johns Hopkins University

Ph.D., University of Virginia

Ernest D. Giglio (1972)

Political Science

B.A., Queens College

M.A., SUNY at Albany

Ph.D., Syracuse University

Eduardo Guerra (1960)

Religion

B.D., Southern Methodist University

S.T.M., Ph.D., Union Theological Seminary

John G. Hancock (1967)

Psychology

B.S., M.S., Bucknell University

Ph.D., The Pennsylvania State University

Richard A. Hughes (1970)

Religion

B.A., University of Indianapolis

S.T.B., Ph.D., Boston University

Emily R. Jensen (1969)

English

B.A., Jamestown College

M.A., University of Denver

Ph.D., The Pennsylvania State University

Robert H. Larson (1969)***

History

B.A., The Citadel

M.A., Ph.D., University of Virginia

Roger W. Opdahl (1963)

Economics

A.B., Hofstra University

M.A., Columbia University

D. Ed., The Pennsylvania State University

John F. Piper, Jr. (1969)

History

Dean of the College

A.B., Lafayette College

B.D., Yale University

Ph.D., Duke University

David J. Rife (1970)

English

B.A., University of Florida

M.A., Ph.D., Southern Illinois University

Michael G. Roskin (1972)

Political Science

A.B., University of California at Berkeley

M.A., University of California at Los Angeles

Ph.D., The American University

Roger D. Shipley (1967)

Art

B.A., Otterbein College

M.F.A., Cranbrook Academy of Art

John M. Whelan, Jr. (1971)

Philosophy

*B.A., University of Notre Dame**Ph.D., The University of Texas at Austin***Stanley T. Wilk (1973)***

Anthropology

*B.A., Hunter College**Ph.D., University of Pittsburgh***Associate Professors****Jerry D. Allen (1984)**

Theatre

*B.F.A., M.F.A., Utah State University***Susan K. Beidler (1975)**

Collection Management Services Librarian

*B.A., University of Delaware**M.L.S., University of Pittsburgh***Howard C. Berthold, Jr. (1976)**

Psychology

*B.A., Franklin and Marshall College**M.A., University of Iowa**Ph.D., The University of Massachusetts***Gary M. Boerckel (1979)****

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Spanish

*B.A., University of Kentucky**M.A., M. Phil., Ph.D., Yale University***Richard R. Erickson (1973)**

Astronomy and Physics

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Physics

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Biology

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Philosophy

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Mathematics

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Director of Library Services

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Economics

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French

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Chemistry

B.S., Manchester College

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B.S., Wilkes College

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Music

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Business Administration

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B.A., Bridgewater College

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Biology

B.S., SUNY at Cortland

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Assistant Professors**Susan Alexander (1991)**

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B.A., M.A., Ph.D., American University

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Education

B.S., Bloomsburg University

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Michelle Briggs (1992)

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Foreign Languages

B.A., Lycoming College

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John H. Conrad (1959)

Education

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Santusht S. deSilva (1983)

Mathematics

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M.A., Ph.D., University of Pittsburgh

Michelle S. Ficca (1985)

Nursing

*B.S., Stroudsburg State University**M.S., The Pennsylvania State University***Bahram Golshan (1989)**

Mathematical Science

*B.S., Jundi Shapour University, Iran**M.S., Edinboro State University of
Pennsylvania**M.S., Kent State University**Ph.D., The Pennsylvania State University***Margaret Gray-Vickrey (1986)**

Nursing

*B.S.N., SUNY at Plattsburgh**M.S., Northern Illinois University**D.N.S., SUNY at Buffalo***Gary Hafer (1992)**

English

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English

*B.A., University of Washington-Seattle**M.A., Ph.D., SUNY-Binghamton***Thomas J. Henninger (1966)**

Director of Computer Services

Mathematics

*B.S., Wake Forest College**M.A., University of Kansas***Owen F. Herring (1965)**

Philosophy

*B.A., Wake Forest College***Rachael Hungerford (1989)**

Education

*A.A., Cayuga County Community College**B.S., State University of**New York at Plattsburgh**Ph.D., University of Massachusetts/Amherst***Janet Hurlbert (1985)****

Instructional Services Librarian

*B.A., M.A., University of Denver***Diane C. Janda (1988)**

Music

*B.M., University of Texas at Austin**M.M., D.M.A., University of Cincinnati,
College-Conservatory of Music***Darby Lewes (1993)**

English

*B.A., Saint Xavier College**M.A., Northwestern University**Ph.D., University of Chicago***Bradley Nason (1983)**

Mass Communication

*B.A., Lycoming College**M.A., The American University**Ph.D., The Pennsylvania State University***Kurt H. Olsen (1993)**

Psychology

*B.S., St. Lawrence University**M.S., Ph.D., University of Rochester***Michael R. Smith (1989)**

Mass Communication

*B.A., University of Maryland**M.S., Shippensburg University***Philip W. Sprunger (1993)**

Economics

*B.S., B.A., Bethel College**M.A., Ph.D., Indiana University***Arthur Sterngold (1988)**

Business Administration

*B.A., Princeton University**M.B.A., Northwestern University**Ph.D., The Pennsylvania State University***Larry R. Strauser (1973)**

Sociology

*B.A., Lycoming College**M.P.A., University of Arizona***Robert E. Van Voorst (1989)**

Religion

*B.A., Hope College**M.Div., Western Theological Seminary**S.T.M., Ph.D., Union Theological Seminary*

Richard Weida (1987)**

Mathematics

*B.S., Muhlenberg College**M.S., Ph.D., University of Delaware***Richard E. Wienecke (1982)**

Accounting

*B.A., Lycoming College**M.S., Bucknell University**M.B.A., Long Island University**C.P.A. (Pennsylvania and New York)***Fredric M. Wild, Jr. (1978)**

Mass Communication

*B.A., Emory University**M. Div., Yale Divinity School**M.A., Ph.D., Ohio State University***David H. Wolfe (1989)**

Physics

*B.S., Lock Haven State College**M.S., Pennsylvania State University**Ph.D., Kent State University***Troy A. Wolfskill (1989)**

Chemistry

*B.S., Albright College**Ph.D., University of Virginia*

* On Sabbatical Fall Semester 1994

** On Sabbatical Spring Semester 1995

*** On Sabbatical Calendar Year 1994

**** On Leave

Instructors**Edward Henninger (1988)**

Business Administration

*B.S., Shippensburg University**M.B.A., Shippensburg University***Deborah J. Holmes (1976)**

Physical Education

*B.S., M.S., The Pennsylvania State University***Sherril Ingram (1991)**

Nursing

*B.S. in Nursing, University of Pittsburgh**MS. in Nursing, Virginia**Commonwealth University***Mark Toncar (1994)**

Business Administration

*B.A., M.A., Kent State University***Visiting, Special, and
Part-time Appointments****Diane Abercrombie (1988)**

Mathematics

*B.Bus.Admin., Bernard M. Baruch College,
CUNY***Albert Alexander (1993)**

Business Administration

*B.S., M.S., Syracuse University***Mary Baggett (1977)**

Chemistry

*A.B., Regis College**M. A., Wellesley College***Henry Berkheimer (1988)**

Chemistry

*A.B., Dickinson College**M.S., Bucknell University**Ph.D., The Pennsylvania State University**Ph.D., University of Washington***Betsy Boring (1992)**

Spanish

*B.S., Bloomsburg State University***George Bossert (1991)**

Education

*B.S., Lock Haven University**M.S., Bucknell University***Peter Brown**

Biology

*B.S., University of Maine**M.S., The Pennsylvania State University***Katharine Cimini (1992)**

Psychology

*B.A., Lycoming College**M.A., College of William and Mary***Joan Moyer Clark (1987)**

Music/Theatre

Regina Collins (1991)

Mathematics

*B.A., Rosemont College***Natasha Cooper (1993)**

Library

*B.A., Colgate University**M.L.S., Syracuse University***Richard S. Coulter (1990)**

Music

*B.F.A., M.F.A., Carnegie-Mellon University***James Crossley (1988)**

Accounting

*B.S., Lycoming College**C.P.A., Pennsylvania***Roger Davis (1984)**

Mathematics

*B.S.Ed., Clarion State College**M.S.Ed., Bucknell University***James E. Denton, III (1982)**

Theatre

Marion Doyle (1994)

Nursing

*B.S.N., Lebanon Valley College**M.S., Villanova University***Lynn Estomin (1993)**

Art

*B.A., Antioch College**M.F.A., University of Cincinnati***Deborah Evans-Grove**

Education

*B.A., Lycoming College**M.Ed., Ph.D., The Pennsylvania State University***Amy Falk (1991)**

Spanish

*B.A., Lycoming College***Millie Hepburn-Smith (1994)**

Nursing

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Gregory Zelensky

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ALUMNI ASSOCIATION

The Alumni Association of Lycoming College has a membership of nearly 13,000 men and women. It is governed by an executive board consisting of 24 members-at-large. The board includes members representing various class years and geographic areas, the senior class president, the current student body president, and past presidents of the last graduating class and the Student Senate of Lycoming College. The Director of Alumni and Parent Programs directs the activities of the alumni office. The Alumni Association has the following purpose as stated in its constitution: "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."

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.

Acting as the representative of alumni on the campus and working also with undergraduates, the alumni office is responsible for keeping alumni informed and interested in the programs, growth, and activities of the College through regular publications mailed to all alumni on record. Arrangements for Homecoming, class reunions, club meetings, and similar activities are coordinated through this office. Through the Lycoming College Annual Fund, the alumni office is closely associated with the development program of the College. Communications to the alumni association should be addressed to the Office of Alumni and Parent Programs.

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