

1980

## University of Southern Maine Catalog 1980-1981

University of Southern Maine

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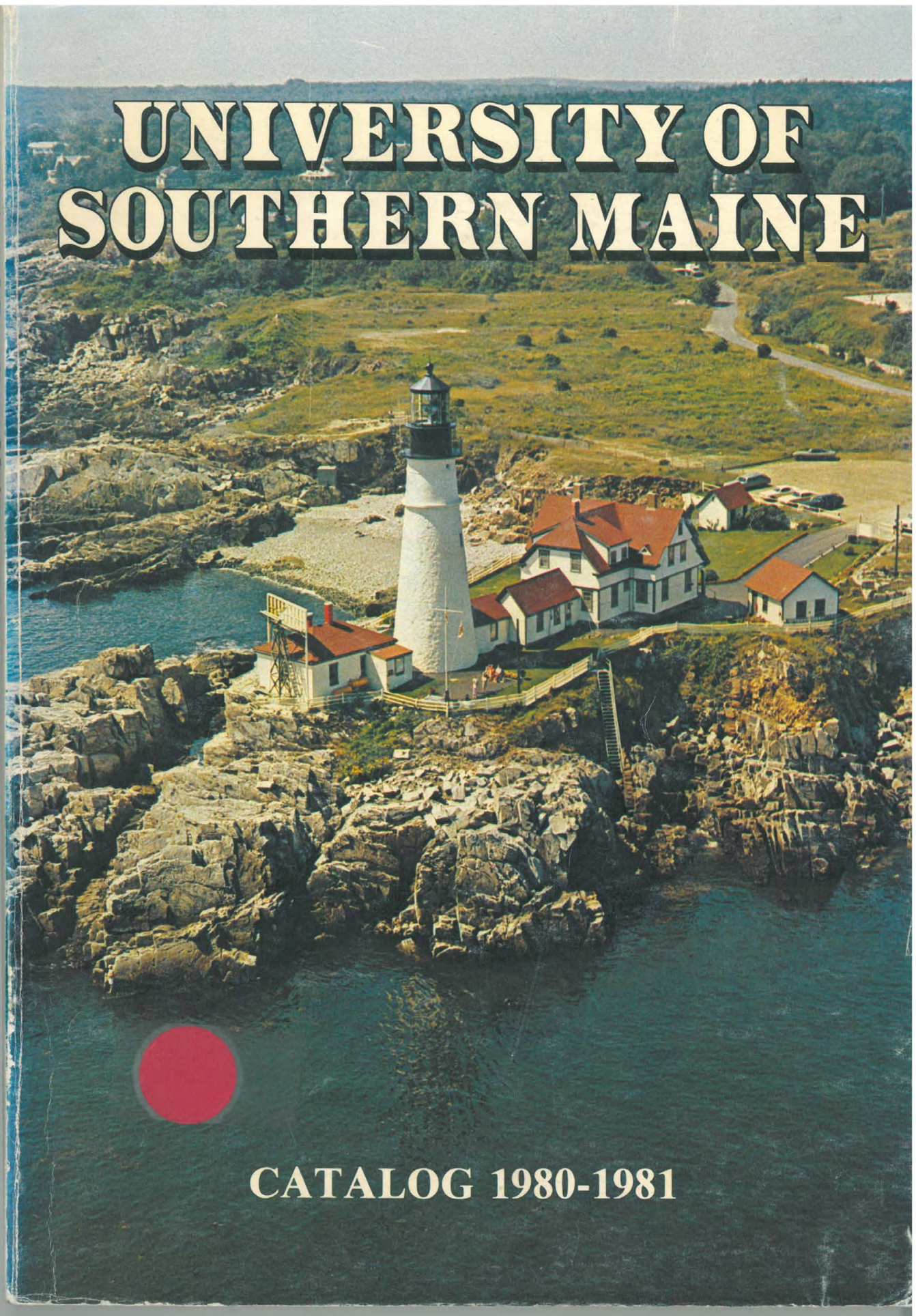
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# UNIVERSITY OF SOUTHERN MAINE



CATALOG 1980-1981



# **University of Southern Maine**

**A unit of the University of Maine**



## **Undergraduate Catalog**

**1980-1981**

Prepared for the USM Office of Admissions by the Office of Publications and Public Information. Please address mail requests for catalogs and other printed admissions material to:

**ADMISSIONS OFFICE, USM  
37 College Avenue  
Gorham, Maine 04038**

The University of Southern Maine is fully accredited by the New England Association of Schools and Colleges.

# ACADEMIC CALENDAR

1980-1981

## FALL SEMESTER

**Monday, September 8** ..... **First Day of Classes**  
**November 26 through 30** ..... **Thanksgiving Recess (starts following close of classes on Wednesday, November 26)**  
**Thursday, December 18** ..... **Last Day of Classes**  
**December 19, 20, 22, 23** ..... **Final Exams**

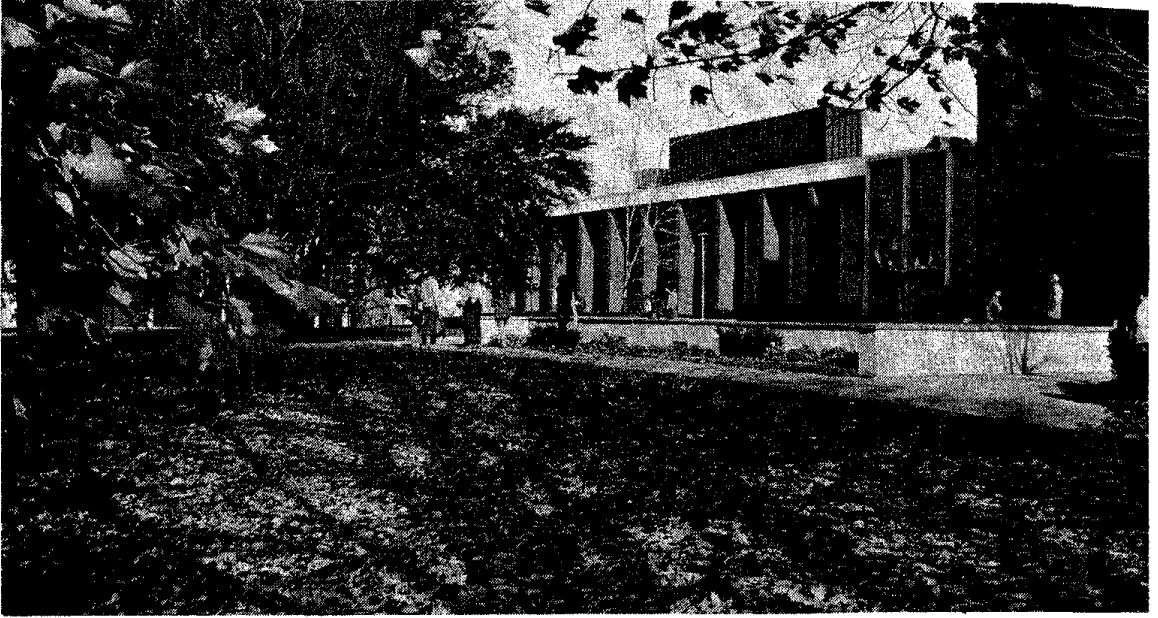
## SPRING SEMESTER

**Monday, January 5** ..... **Registration**  
**Tuesday, January 6** ..... **First Day of Classes**  
**February 18 through 22** ..... **Spring Recess (starts following close of classes on Wednesday, February 18)**  
**Monday, April 13** ..... **Last Day of Classes**  
**April 14, 15, 16, 17** ..... **Final Exams**  
**April 18** ..... **Commencement**

The University of Southern Maine does not discriminate on the basis of race, color, creed, sex, national origin, handicap, or age in the recruitment and admission of students, the recruitment and employment of faculty and staff, and the operation of any of its programs and activities, as specified by Federal and State laws and regulations. The designated coordinator for University compliance with these laws is Eleanor W. Law, acting director of Equal Employment Opportunity/Affirmative Action.

The University of Southern Maine reserves the right to revise, amend or change items set forth in this catalog from time to time. Accordingly, readers of this catalog should inquire as to whether any such revisions, amendments or changes have been made since the date of publication. The University reserves the right to cancel course offerings, to set minimum and maximum size of classes, to change designated instructors in courses, and to make decisions affecting the academic standing of anyone participating in a course or program offered by the University of Southern Maine.

**Cover: Portland Head Light**  
**Photo by Don Johnson**



The University of Southern Maine, with a campus in the city of Portland and another ten miles away in the town of Gorham, offers students the best of city and rural living. The campuses are interconnected by a free shuttlebus service leaving each campus on a regular basis throughout the day and evening, Monday through Friday.

Several schools and colleges comprise the University offering Southern Maine excellent opportunities for liberal arts, professional, and specialized education.

The College of Arts and Sciences, the largest unit at USM, offers degree programs in over 24 disciplines. The College of Education provides undergraduate degrees in early childhood, elementary and secondary education, industrial arts and vocational occupational education. Programs leading to a master of science degree in education are also available. The School of Business, Economics and Management has programs in business administration, accounting, and economics, plus an MBA program.

Programs in nursing and law are also located at USM.

USM has a very active summer program. Approximately 3000 students enroll in over 275 courses arranged in three-week, six-week, and eight-week sessions, beginning in mid-May and ending the last week of August. Many special programs and conferences which do not carry academic credit are also offered during USM's summer term.

USM is accredited by the New England Association of Schools and Colleges. Additional accreditations have been earned by individual units within the University. The School of Nursing is accredited by the National League for Nursing. The College of Education is accredited by the National Council for Accreditation of Teacher Education. Several departments within the College of Arts and Sciences are approved by appropriate accrediting bodies.

USM was founded under the name of University of Maine at Portland-Gorham in 1970 by the merger of Gorham State College and the University of Maine in Portland. The two institutions brought to the merger rich and varied histories. UMPG was renamed the University of Southern Maine in 1978.

The Gorham campus began as Western Maine Normal School, established in 1878, on the site of the former Gorham Female Seminary. The original Gorham Academy Building (1807) and Town Hall (1821) are now part of the campus which includes McLellan House (1772); the oldest brick house in Maine.

The Portland campus began as Portland Junior College, a community college developed by local businessmen during the Depression of the thirties when higher education had to be within commuting distance. The land was originally part of the Deering Estate, home of one of Portland's most prominent citizens when the city enjoyed its heyday as a shipping port.

# Admissions

## Undergraduate Studies

DIRECTOR OF ADMISSIONS  
William J. Munsey

ASSOCIATE DIRECTOR OF ADMISSIONS  
Edwin C. Horne

ASSISTANT DIRECTOR OF ADMISSIONS  
Marjorie J. Rodgers

Admissions Office  
Corthell Hall, Gorham, Maine 04038

Telephone: (207) 780-5215

The University of Southern Maine is pleased to know of your interest in the University and invites your review of the information contained in this catalog. If the Admissions Office can be of further assistance, please contact the office by phone or in writing. We welcome visitors to our campus and urge that you contact the Admissions Office should you desire an appointment to tour the University facilities. The approval of candidates seeking admission to the

University is on a selective basis. The University seeks candidates whose preparatory program, scholastic achievement, interest, motivation, and personal recommendations are indicative of success with University studies. Applications are accepted for entering freshmen and transfer students in most programs for either the fall or spring semesters. The following is a list of Schools and Colleges, with academic majors to which students may apply.

## PROGRAMS OF STUDY

### BACCALAUREATE DEGREE PROGRAMS

#### College of Arts and Sciences

Applied Chemistry (B.A. degree or B.S. degree)  
Applied Music  
Art (B.A. degree)  
Art (B.F.A. degree)  
Biology, including Pre-Med, Pre-Dental and Pre-Vet.  
Communication  
Computer Science  
Criminal Justice  
Earth Science  
Economics  
English  
French  
Geography-Anthropology  
History  
Liberal Studies\*  
Mathematics  
Mathematics and Computer Science  
Music  
Philosophy  
Political Science  
Psychology  
Self-Designed major\*\*  
Social Science  
Social Welfare  
Sociology  
Theatre

\*Liberal Studies: Declaration of the major is normally done at the end of the sophomore year, with the approval of the Liberal Studies Major Board.

\*\*Self-Designed major: Approval of this program must be made by the Committee on Self-Designed majors after students have enrolled at the University.

#### Engineering

This University offers the first year of the four-year program common to all engineering majors, and the first and second years in engineering physics. These offerings meet the general requirements of the corresponding programs at the University of Maine at Orono. Preferred transfer consideration to UMO is extended to Maine residents.

#### College of Education

The College of Education currently offers four-year programs leading to the degree of Bachelor of Science.

Programs of the College of Education:

Art Education (certification, K-12)  
Early Childhood  
Elementary Education  
Industrial Arts Education (certification, K-12)  
Industrial Technology (non-teaching program)  
Music Education (certification, K-12)  
Therapeutic Recreation (non-teaching program)

Vocational/Occupational Education  
 (teaching program)  
 Vocational Technology (non-teaching program)  
 Secondary Education Mathematics\*

For more information refer to the College of Education section of this catalog.

\*See Mathematics and Computer Science information under College of Arts and Sciences.

### School of Nursing

The School of Nursing offers a baccalaureate program with an upper division major in nursing. The program leads to the degree of Bachelor of Science with a major in nursing. For more information refer to the School of Nursing section of this catalog.

### School of Business, Economics and Management

The School of Business, Economics and Management offers a four-year program leading to the degree of Bachelor of Science in Business Administration with majors available in Business Administration and Accounting. The Bachelor of Science degree with a major in Economics is also available. The School also offers a Master of Business Administration degree.

For more information refer to the School of Business, Economics and Management section of this catalog.

## ASSOCIATE DEGREE PROGRAMS

### Business Administration

The School of Business, Economics and Management offers a two-year program leading to the degree of

Associate of Science in Business Administration. Students in this program may pursue a Management/Accounting option, a Hotel, Motel, Restaurant Management option, or a Real Estate option.

### Therapeutic Recreation

The College of Education, through the Department of Recreation and Leisure Studies, offers a two-year program leading to the Associate Degree in Therapeutic Recreation. Candidates who successfully complete this program have opportunities for employment in nursing homes, homes for the elderly, agencies for the handicapped, rehabilitation centers, and appropriate programs offered by human service agencies, camps, parks, and playgrounds.

### Division of Basic Studies

#### (YORK COUNTY COMMUNITY COLLEGE SERVICES)

York County Community College is the cooperative effort of USM and SMVTI (Southern Maine Vocational Technical Institute). It is designed as an outreach off-campus program to extend associate degree programs to the citizens of Southern Maine. With centers located in Biddeford, Sanford, York, and a newly established In-Town Learning Center in the City of Portland, the Division of Basic Studies offers a variety of associate degree programs, and is an integral part of the academic units of USM.

For further information refer to the Division of Basic Studies section of this catalog.

## NEW ENGLAND REGIONAL PROGRAM

In cooperation with the New England Board of Higher Education the University offers undergraduate programs of study to qualified candidates from the New England states. Tuition rates for regional candidates approved by the Board of Trustees will be that of in-state tuition plus a surcharge of twenty-five percent. Because the listing of programs varies from year to year, candidates should check the most-up-to-date listings. The following schedule represents the fields of study available in the New England Regional Student Program for 1980-81. The 1981-82 listing will be available from the New England Board of Higher Education during the fall of 1980. Check with your guidance counselor or the Board at 68 Walnut Road, Wenham, Massachusetts 01984.

#### PROGRAM:

##### Two-Year Majors

Business Administration

Therapeutic Recreation

##### Four-Year Majors

Art Education

Criminal Justice

Industrial Technology

Industrial Arts Education

Social Welfare

#### OPEN IN 1980 TO STUDENTS FROM:

Conn., Vt., R.I.

Conn., Mass., N.H., R.I., Vt.

Conn., R.I.

Conn., N.H., R.I., Vt.

Conn., R.I.

Conn., R.I.

Conn., Mass., R.I.



# REQUIREMENTS FOR ADMISSION

## SECONDARY SCHOOL PREPARATION

Requirements for admission to the University are established by each school and college within the University. The requirements indicated below are in keeping with the degree programs currently offered.

An Early Admission Program, described on this page, is available for selected students who have completed their junior year of high school and who display both the intellectual capacity and social maturity to succeed in a university program of the College of Arts and Sciences.

### College of Arts and Sciences

English	4 Units†
*Mathematics 3 Units (Algebra I, II & Geometry)	
**Sciences	2 Lab Units
History/Social Science	2 Units
***Foreign Language	2 Units (one language)
*Mathematics Majors	4 Units
**Biology Majors	3 Lab Units
***Foreign Language Majors	3 Units

†Units = one year of study

### School of Business, Economics and Management

#### Four-Year Baccalaureate Program

English	4 Units
Algebra I, II	2 Units
Geometry	1 Unit
Elective	9 Units

### College of Education

English	4 Units
*Mathematics 3 Units (Algebra I, II & Geometry)	
Sciences	2 Lab Units
History/Social Science	2 Units
Foreign Language	Optional

\*Mathematics majors in Secondary Education 4 Units

### School of Nursing

English	4 Units
Mathematics 3 Units (Algebra I, II, Geometry)	
Sciences 2 Lab Units (Biology, Chemistry)	
History/Social Science	2 Units
Foreign Language	Optional

### Associate Degree Programs

#### BUSINESS ADMINISTRATION

Candidates applying to this program of study may have either a college preparatory or a commercial business background. It should be noted that candidates with commercial business backgrounds must have records of strong academic achievement to be considered. English and mathematics are the basic prerequisites for this program. All other work in high school would be elective course study.

#### THERAPEUTIC RECREATION

Candidates applying for admission to this program may have either a college preparatory or a general education background. Candidates with general subject backgrounds must have records of strong academic achievement to be considered. English and biological sciences are the basic prerequisites for the program.

#### DIVISION OF BASIC STUDIES

Admission requirements vary from program to program within the Division of Basic Studies. Candidates are urged to review the Division of Basic Studies section of this catalog for the requirements of individual programs.

### COLLEGE OF ARTS AND SCIENCES EARLY ADMISSION PROGRAM

The Early Admission Program in the College of Arts and Sciences provides the opportunity for selected students who have completed their junior year of high school to enter the University as fully matriculated University freshmen. The Early Admission Program has been designed for students who display both the intellectual capacity and social maturity to succeed in a university program.

Students who are desirous of receiving their high school diploma after the completion of one year in the Early Admission Program must obtain the prior approval of their high school guidance director or principal. Students expecting to receive the high school diploma must arrange with the University Registrar to have an official transcript of grades forwarded to the secondary school at the completion of the academic year.

To be eligible for admission, the applicant should have at least a B average and/or rank in the top twenty percent of his/her high school class at the end of the junior year. Course work normally expected to be completed by the end of the junior year includes: three years of English, three years of mathematics beginning at the introductory algebra level; one year of social science/history, one year of biology, chemistry, or physics, and two years of one foreign language. In addition, the applicant should register for and take the Scholastic Aptitude Test (SAT) at the earliest possible date and arrange to have the scores forwarded to the Director of Admissions at the University. The American College Test (ACT) may be submitted in lieu of the SAT for admission purposes.

Interested applicants should confer with their high school guidance counselor or principal regarding eligibility to participate in the Early Admission Program. The student and the principal/counselor should complete the University application, and along with an official transcript, submit it to the Admissions Office, 37 College Avenue, Gorham, Maine 04038.

The Admissions Office in cooperation with the Academic Dean's Office in the College of Arts and Sciences will review each Early Admission Applica-

tion. Students thus admitted under this program are accorded all the rights and privileges of entering freshmen. Academic advising can be arranged upon request through the CAS Dean's office prior to and during the first year of the program.

It is expected that most Early Admission Program applicants will apply for the fall semester. Application forms must be submitted as early as possible. For fall semester, all Early Admissions applications should be received by April 15.

## COLLEGE BOARD AND ACT TESTING INFORMATION

1. **STUDENT DESCRIPTIVE QUESTIONNAIRE/ADMISSION TESTING PROGRAM.** As a member institution of the College Entrance Examination Board the University of Southern Maine endorses and strongly urges all applicants to provide complete information on the *Student Descriptive Questionnaire of the Admission Testing Program*. Applicants for admission to USM must have all test results reported directly from either the Educational Testing Service or the American College Testing program. The College Board code number for USM is 3691.

2. The University of Southern Maine Admissions Office will accept either the Scholastic Aptitude Test or the American College test scores in support of candidates seeking admission.

3. Test dates used by applicants after the January test date will cause delay in the processing of an application for fall admission.

4. Applicants seeking admission as pre-nursing candidates must submit test scores from the Scholastic Aptitude Test (SAT).

## Reporting Test Results

For equal consideration candidates are required to submit all test results no later than the January test date of the SAT/ACT test battery. Scores must be submitted directly to the University Admissions Office from the Educational Testing Service, Box 592, Princeton, New Jersey 08540 or Box 1025, Berkeley, California 97401, or The American College Testing Program, P.O. Box 451, Iowa City, Iowa 52240.

Test Date	Registration Deadline
October 11, 12, 1980 SAT ONLY (CA, FL, GA, TX, N.C. ONLY)	September 19, 1980
November 1, 1980	September 26, 1980
December 6, 1980	October 31, 1980
January 24, 1981	December 19, 1980
April 4, 1981 SAT ONLY	February 27, 1981
May 2, 1981	March 27, 1981
June 6, 1981	May 1, 1981

# SEEKING ADMISSION TO THE UNIVERSITY

## APPLICATION PROCEDURE

1. The University maintains a rolling admission policy which allows candidates to apply and be considered throughout the year. Certain academic programs have strict enrollment quotas which require advanced planning and earlier applications. Students seeking financial assistance from the University and those planning to live on campus are urged to arrange adequate time to complete all admissions requirements in advance of the semester in which they plan to enter the University.

We urge all candidates to have completed admission files by December 15 for January admission and June 1 or earlier for September admission.

2. Obtain a copy of the University brochure and application form from the Office of Admissions or from the high school principal or guidance counselor.

3. Select the program which promises fulfillment of personal ideals, interests and abilities. Be ready to take specific entrance examinations upon request of the Music Department, or the Department of Industrial Education and Technology if you are applying to one of these programs.

4. Mail the completed application and application fee of \$10.00 (non-refundable) to the Director of Admis-

sions, University of Southern Maine, 37 College Avenue, Gorham, Maine 04038.

5. Your high school guidance department should forward to the Admissions Office a transcript of academic work completed to date along with recommendations. Student copies cannot be accepted for evaluation.

6. Transfer applicants must have official transcripts sent to the Admissions Office for all post high school work attempted. This includes college, technical school, nursing school and military school programs. Student copies cannot be accepted for evaluation.

7. All required test results (SAT's or ACT scores) must be sent directly from the testing service to the University Admissions Office.

8. Candidates are urged to contact the Admissions Office to determine if all required materials have been received. This should be done by mid-December for January admission and by mid-June for September admission. The Admissions Office will endeavor to contact students when documents are missing from files. However, our work load during peak periods of the year oftentimes delays correspondence to individual candidates.

## ADMISSION PROCEDURE

1. Applicants seeking admission to the University are judged on the following criteria:
  - a. Academic curriculum pursued in high school; or, college work, for transfer candidates.
  - b. Over-all academic achievement as determined by grades earned.
  - c. Class standing based on academic performance.
  - d. Evaluations and recommendations from faculty and guidance personnel.
  - e. Review of required entrance examination results (SAT or ACT examination scores).
  - f. Review of information provided by candidate in the application for admission to the University.
  - g. Department recommendations for music, industrial arts and vocational technology candidates.
2. Upon review and evaluation of your application and supporting credentials the Director of Admissions will notify you of the appropriate decision. Since USM operates with a rolling admission program, notification to students takes place on the first and fifteenth of each month between mid December to early summer for fall semester enrollment, and mid October to early January for spring semester enrollment. A confirmation deposit will be requested of all students accepted in addition to a deposit required of students planning to live on campus. These deposits are refundable to June 1 for September admission and January 1 for January admission, if the request is received in writing by the Director of Admissions and the Coordinator of Residence Halls, for new degree students who submitted a dorm deposit.
3. Admission to the University is not final until the student has satisfactorily completed all Admissions Office requirements. The University reserves the right to cancel the acceptance of any application it deems necessary for academic or personal reasons.
4. Physical and mental health are basic considerations in admitting any applicant to the University, but a physical handicap, such as confinement to a wheelchair or visual impairment, is not in itself a necessary barrier to admission. All classroom buildings and two dormitories are equipped with ramps for wheelchair access. Most elevator buttons are coded in braille. An applicant reporting a physical handicap will be advised to schedule an interview with the University Coordinator of Handicapped Student Services.
5. In consultation with other University offices, the University Admissions Office reserves the right to terminate the application process of an applicant when the capacity of the University to provide adequate assistance and services to a student has been reached.
6. Interview: With the exception of candidates applying to the music, industrial arts and vocational-technical programs, interviews are optional unless requested by the Admissions Office. The Admissions Office strongly encourages candidates to visit the campus and request interviews to investigate University programs and become acquainted with the University facilities and surrounding area. Campus tours during the academic year must be arranged in advance.

## DEPARTMENTAL REQUIREMENTS FOR ADMISSION

### Art

**FRESHMEN** — Candidates applying as freshmen to the Department of Art do not submit a portfolio. In their freshman year they are considered ART CANDIDATES and must complete the ART CORE courses (Design I & II, Drawing I & II, History of Art I & II). During the semester, while completing the ART CORE courses, ART CANDIDATES will be asked to submit a portfolio to be formally accepted as matriculated art students in the Department of Art. If your art portfolio is approved by the department and you successfully complete the ART CORE, you will then be approved for the subsequent semester to continue as an art major.

**TRANSFERS** — Transfer students from other colleges who have not completed the ART CORE courses (or equivalent) should follow the instructions outlined above for freshmen. Transfer students who have completed the ART CORE courses are required to submit a portfolio in conjunction with their application. Portfolio dates for these students who have completed the ART CORE courses are:

- Fall Semester — Friday, November 14, 1980  
(for applicants planning to enter January, 1981)
- Spring Semester — Friday, February 27, 1981  
(for applicants planning to enter September, 1981)

### Music

All candidates for the Music Major will be asked to appear before the faculty of the Music Department for an instrumental or vocal audition. A written music achievement test will also be administered. Students will be notified by the Music Department of the appropriate procedure to follow and the dates available for on-campus visitations. Candidates are invited to attend classes with the department and to discuss the music curriculum with faculty and students.

### Industrial Arts

Applicants for the Industrial Arts program will be invited to the Industrial Education Center for a tour of the facility, interviews with the faculty and testing of mechanical comprehension. Students will be notified by the Industrial Arts coordinator of the appropriate procedure to follow and the dates available for on-campus visits.

### Vocational-Occupational Education/Technology

Applicants for the vocational-occupational education or vocational technology programs are required to submit affidavits of a minimum of three years of occupational experience and appear for a personal interview. Candidates should contact Dr. Arthur Berry at the University for an appointment to discuss the evaluation of prior work experience in the vocational/technical field.

### Nursing

Please refer to the School of Nursing section of this catalog for admissions information.

# ADDITIONAL ADMISSIONS INFORMATION

## PHYSICALLY HANDICAPPED STUDENTS

Traditionally, the handicapped student has been denied many educational opportunities due to physical barriers and discriminatory attitudes. The University is committed to maximizing the educational potential of handicapped students by providing the opportunity and support to fulfill their aspirations of higher learning.

For detailed information, handicapped students should contact the Coordinator for Handicapped Student Services at the University or the undergraduate Admissions Office.

## FOREIGN STUDENTS (Undergraduates)

Financial assistance for foreign students applying to the University is extremely limited. It is, therefore, regrettable that the University cannot encourage greater numbers of foreign applications. Foreign students who have met academic requirements and require no financial assistance from the University may expect more favorable consideration. It is essential that all foreign applicants submit a Declaration and Certification of Finances Statement. This form asks the student to declare his/her family's financial status (income, assets, liabilities) and may be obtained from the Admissions Office. The statement must be fully documented and notarized and should accompany the application.

Candidates applying for degree status at the University are required to submit official school and college transcripts to the Director of Admissions. Candidates from foreign countries whose native language is not English are required to submit test results of the TOEFL examination (Test of English as a Foreign Language). In addition, candidates must submit test results of the Scholastic Aptitude Test (SAT).

Candidates applying who have completed at least one year of University studies at an English-speaking University with acceptable grades are not required to take the SAT examination. They must, however, take the TOEFL examination if English is not the native language. For September 1981 admission, all foreign student admission credentials must be filed with the Admissions Office no later than April 15, 1981.

## FINANCIAL AID

Students seeking information concerning financial aid opportunities at the University are referred to the section of this catalog under Student Financial Aid.

## LEAVE OF ABSENCE/READMISSION

Matriculated degree candidates who withdraw from all course work in a given semester maintain their matriculated status for one year from the fifth school day of the next regular academic term. Matriculated degree candidates who do not register for a given semester

maintain their matriculated status for one year from the fifth school day of the semester for which they did not register. If a student resumes attendance during the time period specified above, no readmission process is required. The student must contact the Registrar's Office for registration instruction.

If a student wishes to resume studies as a degree candidate after the time period specified above, an application for readmission must be filed with the Admissions Office.

## READMISSION AFTER ACADEMIC SUSPENSION

Matriculated degree candidates may apply for readmission to the University in accordance with the stipulations specified in the suspension action. If readmission is requested within one year from the fifth school day of the next regular academic term following suspension the student must receive the approval of the academic dean in the school or college the student plans to enter.

If a student wishes to resume studies as a degree candidate after the time period specified above, an application for readmission must be filed with the Admissions Office.

## SPECIAL STUDENTS (Non-Degree)

The University of Southern Maine encourages the community population located in this area of the state to take advantage of the many diverse course offerings of the University. Regular academic courses for self interest and enrichment are available through a student classification called the special student. By University definition a special student is one not enrolled in a degree program of study.

Special students are enrolled each semester on a space available basis. Candidates interested in pursuing course work at the University as special students are required to contact the Advising and Information Department, Payson Smith Hall, on the Portland campus for an appointment to discuss appropriate course selection and scheduling. Special students enrolled at the University are ineligible to be considered for campus-based financial aid. However, bank loans for educational purposes based on at least half-time University enrollment (6 credits) may be investigated by interested applicants.

## ADMISSION TO ADVANCED STANDING (Transfer Students)

Admission to the University of Southern Maine as a transfer student is on a selective basis and is controlled by classroom, dormitory, and quota space. A student who has attended any institution of education beyond high school and attempted a minimum of 12 credits of college work is classified as a transfer candidate. Students accepted for admission from a region-

ally accredited institution will receive advanced standing credit when the work is "C" grade or better in courses corresponding to those offered by the University of Southern Maine and if applicable to the student's program of study.

Students applying for admission from any institution which is not accredited by the New England Association of Schools and Colleges or any other regional accrediting agency must have a 2.75 average (on a 4.0 scale) to be considered for admission. The Admissions Office, in conjunction with the Dean of a particular school or college within the University may defer for one semester acceptance of credit from a non-accredited institution.

Credit accepted from regionally non-accredited institutions must be "B" grades or better and applicable to the student's program of study. In the final analysis, the decision to accept transfer credits will rest with the Academic Dean of each individual school or college at USM.

Applicants for admission to advanced standing must complete the same forms as an incoming freshman and request that official transcripts be mailed to the Director of Admissions from any previous colleges attended. Student copies are not acceptable. Copies of catalogs including course descriptions must accompany all transcripts for evaluation.

Transfer applicants at the time of submission of an application who have earned less than 30 semester hours of credit must provide the Admissions Office with an official high school record which should include college entrance test results.

### **ADMISSION TO ADVANCED STANDING WITHIN THE UNIVERSITY OF MAINE SYSTEM**

Applications may be procured at the Admissions Office of any University of Maine campus. Transcripts are sent from the sending campus to the Admissions Office at no cost to the student; however, students must request that the transcript be sent.

Students must have a minimum of 2.0 in a parallel degree program on a 4.0 scale for transfer consideration to this campus.

Transfer credit will be awarded for all courses in Liberal Studies or a University parallel program. A grade of "B" or better must be earned in General Studies or nonparallel programs.

Students from within the University of Maine system are given preference over all other transfer applicants but are subject to the same requirements and policies described in this catalog.

### **CONDITIONAL ADMISSION**

Most USM associate and baccalaureate degree programs offer students with incomplete or deficient academic credentials, but who reflect significant academic promise, the opportunity to be admitted with conditions. Conditionally admitted students are offered the opportunity to matriculate with a number of stipulations, including the fact that specified courses

will be completed with a grade point average placing the student in good academic standing before regular admission status is achieved.

Conditionally admitted students will be assigned, upon admission, to an academic counselor in the Advising and Information Department whose responsibility it will be to assist the student in meeting all imposed admissions conditions including approval of course schedules each semester. In all cases, close contact between the conditionally admitted student and the assigned academic counselor will be required.

Candidates who have filed an application with the Admissions Office will be notified by the staff concerning an appropriate recommendation to the conditional admission program.

Interested and prospective candidates may contact the Advising and Information Department or the USM Admissions Office for additional information. Counseling and academic advising for conditionally admitted students will be the responsibility of the Advising and Information Department.



## CREDIT BY EXAMINATION

### Advanced Placement

It shall be the policy of the University of Southern Maine to grant credit for the introductory course in a subject field to an enrolled student who presents evidence of competency in that field by completing the appropriate Advanced Placement Examination of the College Entrance Examination Board. A score of three or better is required by the University for advanced placement credit.

### College Level Examination Program (CLEP)

#### 1. General Examination

The schools and colleges at the University of Southern Maine will grant credit for the general College Level Examination Program (CLEP) examinations as follows:

<i>Title of Examination</i>	<i>Credit For</i>	<i>Credit Hours</i>
English	ENG 100	3
Humanities	General Education	6
Social Science	General Education	6
Mathematics	General Education	6
Science	General Education	6

A score of 500 or better will be necessary to receive credit.

The five general examinations are designed and intended primarily for incoming freshmen rather than for typical transfer students with advanced standing credit at the introductory level.

#### 2. Subject Examination (CLEP)

**COLLEGE OF ARTS AND SCIENCES** — The following departments, Biology, Economics, English, History, Mathematics/Computer Science, Political Science, Psychology, and Sociology, have established policies relative to the acceptance of CLEP subject credit. Interested candidates should contact the Dean of the College of Arts and Sciences for detailed information.

**SCHOOL OF BUSINESS, ECONOMICS AND MANAGEMENT** — The School of Business, Economics and Management will accept satisfactory completion of CLEP subject examinations and allow credit toward the completion of degree requirements. Interested candidates should discuss their eligibility for taking these examinations with the Dean of the School of Business, Economics and Management.

**SCHOOL OF NURSING** — Available for advanced placement is credit earned for any prerequisite courses for the upper division nursing major in subject examinations offered through CLEP. For more information candidates should contact the Office of Counseling and Career Development.

**COLLEGE OF EDUCATION** — The College of Education will accept satisfactory completion of CLEP subject examinations and allow credit toward the completion of degree requirements. Interested candidates should discuss their eligibility for taking these examinations with the Dean of the College of Education.

# Financial Information

## STUDENT EXPENSES: Academic year of 1980-81

The financial requirements of the University, changing costs, state and legislative action, and other matters may require an adjustment of these charges and expenses. The University reserves the right to make adjustments to the estimated charges and expenses as may from time to time be necessary in the opinion of the Board of Trustees up to the date of Final Registration for a given academic term. The applicant acknowledges this reservation by the submission of an application for admission or by registration.

**APPLICATION FEE** — An Application Fee must accompany each application at each campus unless the student has previously matriculated at this campus . . . . . \$ 10.00

**MATRICULATION FEE** — A one-time fee for each student who elects to pursue a degree program within the University of Maine . . . . . 15.00

**COMMENCEMENT FEE** — A one-time fee for each degree candidate, to be paid 6 weeks prior to the commencement . . . . . 10.00

**ANNUAL EXPENSES: FULL-TIME UNDERGRADUATE STUDENTS (12 credit hours or more)**  
*Undergraduate Tuition for a Resident of Maine* . . . . . 990.00  
*Undergraduate Tuition for New England Regional Program* . . . . . 1,237.50  
*Undergraduate Tuition for Non-Residents, as defined below* . . . . . 2,900.00  
*Student Activity Fee*  
(required of all undergraduates taking twelve hours or more) . . . . . 24.00  
*Books and Supplies* — Textbooks, personal laboratory equipment, etc., are not furnished by the University.  
Annual costs vary from \$150 to . . . . . 220.00  
*Voluntary Health Insurance* — Optional but strongly recommended . . . . . 72.00

**ADDED EXPENSES FOR DORMITORY RESIDENTS**  
Board and Room for Dormitory Residents (per academic year) -double room . . . . . 1,885.00  
single room . . . . . 2,030.00

**ORIENTATION FEE**  
— All incoming full-time day Freshmen - Fall Semester . . . . . 10.00  
Spring Semester . . . . . 5.00  
— All incoming full-time day transfer students . . . . . 5.00

**OPTIONAL MEALS FOR OFF-CAMPUS RESIDENTS: \$930.00**

**LATE FEE**  
A *Late Fee* of \$25.00 is charged a student who registers after the prescribed day of registration or who fails to satisfy his/her financial obligation with the business office when due and payable. *Students must register each semester, one semester at a time.*

**TUITION FOR OTHER CLASSIFICATIONS OF STUDENTS**  
*Summer Session* — Summer Session students are charged \$37 per credit hour (no maximum) for courses carrying degree credit, plus a \$5 registration fee.

*Graduate School* — Registration fee of \$5 per semester, plus tuition for residents of Maine of \$39 per credit hour up to 12 credit hours per semester, or tuition for non-residents of Maine of \$102 per credit hour up to 12 credit hours per semester. At 12 credit hours and above the tuition charge for residents of Maine is \$1,140 per year; tuition for non-residents is \$3,190 per year.

*School of Law* — Tuition for residents of Maine is \$1,450 per year; tuition for non-residents is \$3,190 per year. The \$15 Application Fee and \$15 Matriculation Fee are also charged. For other expenses, see the School of Law catalog.

*Part-time Students* — Registration fee of \$5 per semester, plus tuition for residents of Maine of \$37 per credit hour up to 12 credit hours per semester, or tuition for non-residents of Maine of \$102 per credit hour up to 12 credit hours per semester, or tuition for New England Regional Program students of \$46.25 per credit hour up to 12 credit hours per semester.

*Auditing of Courses* — Tuition and Registration Fees are charged for audited courses at the usual hourly rate, except for a student who is already paying the maximum tuition.

**Adding Courses** — All “adds” must be paid for at the time of the “add” if it results in an additional tuition charge. The late fee will apply if not done so.

**Tuition and Fee Grants** — Tuition and fee grants will be restricted to those specifically authorized by the Board of Trustees and will include tuition grants for Maine residents age sixty-five or over who wish to register for undergraduate courses at any campus of the University of Maine.

## DEPOSITS

A deposit of \$25 is due when the applicant is notified of acceptance by the Director of Admissions. If a residence hall room is requested, an additional \$50 is due. These deposits will be applied toward the student’s account when the student registers, and are subject to the refund policy listed below.

The deposits are forfeited if an applicant withdraws after June 1 for the fall semester or after January 1 for the spring semester. If a freshman, transfer, or readmission applicant notifies the Director of Admissions of withdrawal prior to June 1 for September enrollment or January 1 for spring semester, the deposits will be refunded. Notification must be in writing.

Students desiring to live in a residence hall must pay a room deposit of \$50 during the spring in order to assure that rooms will be reserved for them in the fall. The deposit will be applied to the fall semester bill. If it is found that residence hall accommodations are not desired, the deposit will be refunded if the Office of Residence Life is notified by June 1. After June 1, the \$50 is non-refundable.

## PAYMENT OF BILLS

Students who preregister may receive a bill through the mail. However, the University is not obligated to send out such a bill. The student is responsible for paying fees in full by the appropriate due date stated in this catalog or registration instructions. Failure to do so will result in the student being assessed the \$25.00 late fee.

All University bills, including those for room and board in University buildings, are due and payable on or before September 8 for the fall semester and on or before January 5 for the spring semester. Bills may be paid at the business office at either campus by mail or in person. Checks should be made payable to University of Maine.

**Returned Check:** A \$5.00 penalty is imposed if any institutional charges are paid by check which is returned because of an irregularity for which the person submitting it is responsible.

Scholarships and grants, *other than University awards*, which are to be used for tuition payments, should be confirmed with the Business Office on or before the first day of classes in order to receive proper credit against outstanding bills.

Students not on an authorized deferred payment of fees plan and who have not paid their tuition and fees in full by the due date, may have their registration for that semester cancelled. This means specifically that a student will receive no credit for any courses taken during that semester. Students who are allowed to register in error may have their registrations cancelled. Any fees paid by that student will be refunded to the student or credited against other charges due the University by that student.

Diplomas, transcripts of records, or permission to register for succeeding semesters will be withheld from students who have not paid all bills and all loans due the University or who have not made arrangements for proper settlement. Included among these bills are damage to University property, charges or fines owed for violation of the University Motor Vehicle Regulations, and library fines.

## INSTALLMENT PROGRAM

Students whose circumstances are such that payments of their semester bill in full at the time prescribed would work a real hardship, will be permitted to use the installment program.

The program requires that one half of the semester bill, plus previous balances and the \$6.00 **FINANCE CHARGE**, be paid at the time prescribed above. The balance is to be paid in three consecutive monthly installments commencing 30 days after the first day of semester classes.

The privilege of using this program will be withdrawn and the full balance will be immediately due and payable if payments are not made promptly as scheduled. A student must be registered for a minimum of six credit hours in order to use this plan.

## REFUND POLICY

Student charges will be refunded to students *who are withdrawing from the University of Maine* in accordance with the schedules and provisions set forth below.



## A. TUITION REFUNDS

For purposes of calculating tuition refunds, the attendance period begins on the opening day of scheduled campus classes, includes weekends and holidays, and ends on the date the student notifies the Registrar in writing.

### 1. SCHEDULES

#### a. ACADEMIC YEAR (Fall & Spring Terms)

	<i>Refund Percentage</i>
Cancellation prior to First Day of Class	100%
Withdrawal prior to End of First Week	100%
Withdrawal prior to End of Second Week	75%
Withdrawal prior to End of Third Week	50%
Withdrawal prior to End of Fourth Week	25%
Withdrawal after Fourth Week	0%

#### b. OTHER SESSIONS

	<i>Refund Percentage</i>
(1) Sessions which are more than three weeks	
Cancellation prior to First Day of Class	100%
Withdrawal prior to End of First Week	75%
Withdrawal prior to End of Second Week	50%
Withdrawal prior to End of Third Week	25%
Withdrawal after Third Week	0%
(2) Sessions which are three weeks or less	
Cancellation prior to First Day of Class	100%
Withdrawal prior to End of First Week	50%
Withdrawal after First Week	0%

### 2. PROVISIONS

- No part of an advance deposit is refundable after June 1. Although such deposits are applicable to tuition charges for students who remain enrolled, they are forfeited by students who withdraw.
- In no case will tuition be reduced or refunded because of voluntary absence from classes.
- Refunds for involuntary withdrawals, e.g., extended illness or military service, will be considered by the campus on a case-by-case basis.
- University fees are not refunded, including the Student Activity Fee.

## B. ROOM REFUNDS

For purposes of calculating room refunds the attendance period begins on the opening day of scheduled campus classes, includes weekends and holidays, and ends on the date the student provides written notification.

### 1. SCHEDULES

#### a. ACADEMIC YEAR (Fall & Spring Terms)

	<i>Refund Percentage</i>
Cancellation prior to First Day of Class	100%
Withdrawal prior to End of First Week	100%
Withdrawal prior to End of Second Week	75%
Withdrawal prior to End of Third Week	50%
Withdrawal prior to End of Fourth Week	25%
Withdrawal after Fourth Week	0%

#### b. OTHER SESSIONS

	<i>Refund Percentage</i>
(1) Sessions which are more than three weeks	
Cancellation prior to First Day of Class	100%
Withdrawal prior to End of First Week	75%
Withdrawal prior to End of Second Week	50%
Withdrawal prior to End of Third Week	25%
Withdrawal after Third Week	0%
(2) Sessions which are three weeks or less	
Cancellation prior to First Day of Class	100%
Withdrawal prior to End of First Week	50%
Withdrawal after First Week	0%

## 2. PROVISIONS

- a. No part of an advance deposit is refundable after June 1. Although such deposits are applicable to room charges for students who remain in the dormitory, they are forfeited for students who withdraw.
- b. This room refund policy pertains to students who are withdrawing from the University of Maine. Refunds, if any, for students who remain enrolled but vacate a dormitory room will be governed by the terms and conditions of campus residence hall contracts.
- c. Refunds for involuntary withdrawals, e.g., extended illness or military service, will be considered by the campus on a case-by-case basis.

## C. BOARD REFUNDS

Students who withdraw from the University will be charged for meals at the established daily rate through the date of clearance.

### ADD/DROP

Students may drop courses during the first two weeks of classes\* without incurring any financial obligation for tuition charges. However, students will be responsible for any non-refundable fees which may include, but not limited to, registration fee, activity fee and lab fee(s). After this time, no adjustment to tuition charges for courses dropped will be made. For students who withdraw from the University, the "Refund Policy" is applicable.

All courses added must be paid for at the time of the add unless the maximum charge is applicable or the tuition charge is offset by a drop during the first two weeks of classes in order to avoid a \$25 late fee.

\*For purposes of calculation of tuition refunds, the attendance period begins on the opening day of scheduled campus classes, includes weekends and holidays, and ends on the date the student notifies the Registrar in writing.

## RULES GOVERNING RESIDENCE

A student is classified as a resident or a non-resident for tuition purposes at time of admission to the University. The decision, made by the appropriate campus Business Manager, is based upon information furnished by the student's application and any other relevant information. No student once having registered as an out-of-state student is eligible for resident classification in the University, or in any college thereof, unless the student has been a bona fide domiciliary of the state for at least a year immediately prior to registration for the term for which resident status is claimed. This requirement does not prejudice the right of a student admitted on a non-resident basis to be placed thereafter on a resident basis provided the student has acquired a bona fide domicile of a year's duration within the state. Attendance at the University neither constitutes nor necessarily precludes the acquisition of such a domicile. For University purposes, a student does not acquire a domicile in Maine until the student has been here for at least a year primarily as a permanent resident and not merely as a student; this involves the probability of a student's remaining in Maine beyond the student's completion of school. In general, members of the Armed Forces and their dependents are normally granted in-state tuition rates during the period when they are on active duty within the State of Maine.

Subject to the provisions of the preceding paragraph, the domicile of an unmarried minor follows that of the parents or legally appointed guardian. The bona fide year-round domicile of the father, if living, otherwise that of the mother, is the domicile of such a minor; but if the father and the mother have separate places of residence, the minor takes the domicile of the parent with whom the minor lives or to whom the minor has

been assigned by court order. If neither of the parents is living, the unmarried minor takes the domicile of the legally appointed guardian.

Subject to the provisions of the first paragraph above, an adult student, defined for the purposes of these rules as one who is either married or eighteen years of age or older, will be classified as a resident of Maine if the student has completed twelve continuous months of domicile in Maine immediately preceding registration for the term for which resident status is claimed.

Subject to the provisions of the first paragraph above, if a non-resident student has a spouse who has a residence in Maine, the student shall be deemed to have a residence in Maine.

To change resident status, the following procedures are to be followed:

- A. Submit "Request for Change of Residence Status" form to the Business Manager. If the Business Manager's decision is considered incorrect:
- B. The student may appeal the Business Manager's decision in the following order:
  1. Vice President for Finance and Administration
  2. President
  3. Vice Chancellor for Business and Financial Affairs, University of Maine, Chancellor's Office (This decision must be considered final)

In the event that the campus Business Manager possesses facts or information indicating a change of status from resident to non-resident, the student shall

be informed in writing of the change of status and will be given an opportunity to present facts in opposition to the change. The student may appeal the Business Manager's decision as set forth in the preceding paragraph.

No applications will be considered for changes after September 1 for the fall semester and January 15 for the spring semester.

All changes approved during a semester will be effective at the beginning of the next semester; none are retroactive.

In all cases, the University reserves the right to make the final decision as to resident status for tuition purposes.

## STUDENT FINANCIAL ASSISTANCE

The basic premise of the student financial aid program at USM is that the student's parents are primarily responsible for meeting expenses related to that student's education. Additionally, the student is expected to contribute from summer earnings and/or savings. The amount of money a student is assumed to have available is determined in accordance with the College Scholarship Service system of need analysis (Uniform Methodology), as approved by the United States Office of Education.

USM recognizes that many students are financially emancipated from parents and, provided they meet standards of independence established by the U.S. Office of Education, will consider them without regard to the parent's financial situation.

It is important, therefore, that students and, when appropriate, their parents work out a financial plan in advance of University attendance. When such a plan indicates that there is need for financial aid, the University may assist with counseling directed toward improved management of family resources and, if needed, supplement those resources with some combination of loans, scholarships, and part-time employment.

## WHEN AND HOW TO APPLY

Although the University has no deadline for financial aid applications, students are encouraged to apply as early as possible. Most find it convenient to apply for financial assistance at the same time they apply for admission or as soon as possible thereafter. The University subscribes to and uses the services and research of the College Scholarship Service (CSS), a division of the College Entrance Examination Board, to determine student's resources. A CSS Financial Aid Form (FAF), which must be completed by all aid applicants, may be obtained through any high school guidance office or a University of Maine Student Financial Aid Office.

All undergraduate students who do not hold a baccalaureate degree must apply for a Basic Educational Opportunity Grant. Application procedures for this specific program are contained in the FAF.

## ADDITIONAL INFORMATION

Applications and additional information may be obtained by contacting the Office of Student Financial Aid, USM, Corthell Hall-2nd floor, College Avenue, Gorham, Maine 04038; tel. (207) 780-5250.

# Academic Policies

## GENERAL EDUCATION REQUIREMENT FOR ALL BACCALAUREATE CANDIDATES

**NOTE:** the General Education Requirements of the University of Southern Maine for all baccalaureate students are currently under review. Changes in these requirements are expected to be ready for implementation in the fall of 1981, and, therefore, would be applicable to students who are admitted to a degree program beginning with the fall semester of 1981. In that event, these students will receive by mail the new University requirements prior to their first registration.

The General Education Requirement of the University consists of 30 semester hours, 24 hours of which consist of four 6-hour groups of courses, each group either interdisciplinary or chosen from a different one of the four areas of (1) Humanities, (2) Fine and Applied Arts, (3) Science and Mathematics, and (4) Social Sciences. The prefix-codes of acceptable course selections are listed below.

The remaining six hours, designated Area-5 General, shall be selected from one, or a combination of the four academic groupings, CAS designation, or when school or college requirements permit, PE and REC activity courses.

General Education Requirements may be applied to the development of a concentration or minor in Early Childhood and Elementary Education. In all University departments, courses completed in the student's major may not be applied toward the fulfillment of these requirements.

### AREA 1: HUMANITIES —

6 credits from:  
CLS (Classics)  
CPEN (Comparative Literature)  
ENG (English)  
FRE (French)  
GMN (German)  
GRK (Greek)  
LAT (Latin)  
PLY (Philosophy)  
SPN (Spanish)

### AREA 2: FINE AND APPLIED ARTS —

6 credits from:  
ARTH (Art History and Appreciation)  
ARTS (Art Studio Courses)  
DNCE (Dance)  
MUS (Music)  
THE (Theatre)

### AREA 3: SCIENCE AND MATHEMATICS —

6 credits from:

ASTR	(Astronomy)
BIO	(Biology)
CHEM	(Chemistry)
CS	(Computer Science)
ESCI	(Earth Science)
GEO	(Geology)
GSCI	(General Science)
MET	(Meteorology)
MS	(Mathematics)
OCN	(Oceanography)
PHYS	(Physics)
PSCI	(Physical Science)

NOTE: Upon applying to the upper division nursing major, pre-nursing candidates must have completed their science requirements within the last eight (8) years.

### AREA 4: SOCIAL SCIENCES —

6 credits from:

ANY	(Anthropology)
COM	(Communication)
CJ	(Criminal Justice)
ECON	(Economics)
GEOG	(Geography)
HIST	(History)
POL	(Political Science)
PSY	(Psychology)
SOC	(Sociology)
SWE	(Social Welfare)

### AREA 5: GENERAL —

6 credits from:

Any courses from the above academic groupings College of Arts and Sciences (CAS) courses

\*Physical Education (PE) or Recreation/Leisure (RSL) courses

*\*The College of Arts and Sciences and the School of Nursing require no physical education courses but accept optional PE or RLS credits in Area 5. The School of Nursing accepts no more than 3 PE or RLS credits in Area 5. School of Business, Economics and Management requires no PE courses but accepts optional PE or RLS credits in Area 5 for 4-year Business Administration and Accounting majors only. The College of Education requires a year of Physical Education but accepts no PE credits as applicable to Area 5. (Certain students in the College of Education may be exempted from all PE requirements under criteria described in this catalog having to do with the College of Education.)*

## USM SYSTEM OF COURSE NUMBERING

001-009	No degree credit
010-099	Associate Degree program
100-199	Introductory level
200-299	Intermediate level
300-399	Intermediate level
400-499	Senior level, others by permission
500-599	Graduate level
600-699	Professional graduate level as in the School of Law

### NOTE:

1. All courses with number 100 or greater carry credit and quality points toward both Associate Degrees (A.A. and A.S.) and baccalaureate degrees (B.S., B.A., B.F.A.).
2. All courses carrying number 010-099 carry credit and quality points toward an Associate Degree.
3. Matriculated baccalaureate students should not register for courses with numbers less than 100.
4. Associate degree students who wish to transfer to a baccalaureate program should see their prospective Dean for a transcript evaluation and complete a Change of Major form. Some programs require a minimum QPA for transfer into a four-year program. Generally up to 60 credits (but not quality points) of courses numbered 010-099 with grades C or better may be included towards a baccalaureate degree at the discretion of the Dean.

## ATTENDANCE POLICY

The attendance policy is left to the discretion of the individual faculty member. Each semester, it is the responsibility of the faculty member to inform the students in each class of the attendance requirements for the class.

## EXAMINATION POLICY

The examination policy is left to the discretion of the individual faculty member to inform the students in each class of the examination requirements for the class.

Usually, two to four preliminary examinations are administered in each course and count heavily on the final grade. Final examinations are normally scheduled at the end of each semester according to a regular schedule. Finals cannot be given before the regularly scheduled examination period.

## ABSENCE FROM A FINAL EXAMINATION

Students who miss a final examination and are failing the course at the time may be given the grade of F instead of being marked "I" for the semester grade. A student who misses a final examination should immediately contact the instructor to apply for a special examination.

## GRADE REPORTS

Grade reports are mailed to all students at their home address of record approximately two weeks after the end of each semester. Final grades cannot be secured in advance from the Registrar.

## REGISTRATION

Registration is conducted by the Office of the Registrar and includes course selection and payment of University charges. Newly admitted undergraduate degree candidates are notified by the Office of Admissions or the Registrar of their scheduled time of registration. Continuing students register in priority order based on the number of credits earned through the previous semester. Registration for the spring semester is conducted near the end of the fall semester and registration for the fall semester is conducted near the end of the spring semester. Special (non-matricu-

lated) students register only after all degree candidates have had the opportunity to register. No student may register for more than 18 credit hours in one semester without the permission of the advisor and Dean. No registration is complete without the satisfaction of the related financial obligation to the University.

## THE GRADING SYSTEM

Grades at the University are given in terms of letters, with the option of a + or - designation, representing levels of achievement. The basis for determining a grade is the relative extent to which the student has achieved the objectives of the course. The student's work in each course is graded as follows:

- A— High honors.
- B— Honors.
- C— Satisfactory, successful, and respectable meeting of the course objectives.
- D— Low-level work, below the average required for graduation for an undergraduate, and a failing grade for a graduate student. In addition, individual departments may limit the number of D grades accepted, as stated in the departmental sections of this catalog. The paragraph on "Minimum Grade Policy" and "Repeating Courses" should also be noted.
- F— Failure to meet the course objectives.
- P— Pass: given only for certain courses open to the pass-fail option.
- I— Incomplete: a temporary grade given when the student because of extraordinary circumstances has failed to complete course requirements. Required work must be completed by arrangement with the instructor with a maximum time limit of one calendar year. At that time the I must be replaced by a grade of A, B, C, D, F, P, or INC as determined by the instructor or the Dean as appropriate.

At the end of each semester the Registrar shall notify faculty members involved and their department chairmen of students who have carried unresolved I's on their transcripts for one year. The I grade will be resolved by their department chairman and Dean in special cases where the faculty member has not resolved the I.

- INC—Permanent Incomplete: when a temporary incomplete (I) grade is not resolved to a normal letter grade, a permanent incomplete may be assigned in extraordinary circumstances as determined by the instructor or the Dean.
- W— Withdrawal after the second week through the sixth week of a semester. If a student has not officially withdrawn by the end of the sixth week of the course, one of the above regular grades, normally F, will be assigned. The W notation may be obtained after the sixth week under unusual circumstances if so determined by the instructor and the Dean.
- Y— Satisfactory progress after one semester of a two-semester course: grade and credits to be given upon completion of second semester.
- AU—Student attended courses on a non-credit basis.

## ACADEMIC RECORD CHANGES

Considerable care is taken to insure that course registration and grades entered on a student's permanent record are accurate. Any student who suspects an

error has been made should take the matter up immediately with the Registrar's Office. Records are assumed to be correct if a student does not report to the Registrar's Office within one year of the completion of a course. At that time, the record becomes permanent and cannot be changed.

## GRADE-POINT AVERAGES

The academic standing of each student is computed by the Registrar at the end of every semester. The following table represents the rating scale:

A	4.00 grade points per credit hour
A-	3.67 grade points per credit hour
B+	3.33 grade points per credit hour
B	3.00 grade points per credit hour
B-	2.67 grade points per credit hour
C+	2.33 grade points per credit hour
C	2.00 grade points per credit hour
C-	1.67 grade points per credit hour
D+	1.33 grade points per credit hour
D	1.00 grade points per credit hour
F	0.00 grade points per credit hour

To compute the grade-point average for a semester, first multiply the grade points earned in each course by the number of credit hours assigned to that course. The resulting product is the number of quality points for that course. Then divide the total number of quality points earned during the semester by the total number of credits carried in that semester. The result is carried out to four decimal places to produce the grade-point average for that semester.

To compute the cumulative grade-point average, divide the total quality points earned by the total credits attempted in all semesters.

At the end of each semester, full-time students with grade-point averages of 3.2 or better are placed on the Dean's list.

## REPEAT COURSE POLICY

When a student repeats a course and earns a grade of A, B, C, D, F or P the initial grade remains on the transcript but only the later grade is used in computing the grade-point average or for credit. No course in which one of the above grades has been earned may be repeated more than once without written permission of the Dean or Director of the appropriate school, college, or division. This policy does not apply to courses specifically designed to be repeated.

## ADD-DROP

During the first week of a semester, students may add courses and select or reverse the Pass-Fail Option. A period of two weeks is permitted to drop courses with no grade notation. This procedure enables the student to make the necessary changes in the planned curriculum. A student dropping a course after the second week through the sixth week of courses will receive the grade notation of W. If a student has not officially withdrawn by the end of the sixth week of the course, he or she will be assigned a regular grade, normally F. The W notation may be assigned after the sixth week under unusual circumstances if so determined by the instructor and the Dean. All students who register for a course and neither complete the course objectives nor

officially withdraw in any one of the procedures described above will be graded F in that course and must assume all financial obligations associated with it.

withdraws (W) from more than 2 courses during a semester may be placed on academic probation or suspended by the Dean of the college, school or division.

### UNSATISFACTORY PROGRESS POLICY

A student who is a degree candidate is expected to complete and pass the courses for which he/she is registered during a given semester. A student who fails or

### AUDIT POLICY

Students who register to audit a course receive no credit for the course but will have an Audit grade recorded on their transcripts. Audit courses must be declared at registration.

### MINIMUM GRADE POLICY

Minimum cumulative grade-point averages for all undergraduate programs at the University are as follows:

	<i>Cumulative Minimum Grade-Point Averages</i>	
	<i>For Good Standing</i>	<i>For Probationary Standing</i>
Associate Degree Programs		
Completion of 15 credit hours	1.60	1.35
Completion of 30 credit hours	1.80	1.60
Completion of 45 credit hours	2.00	1.80
Freshmen: end of 1st semester	1.35	1.15
Freshmen: end of 2nd semester	1.60	1.35
Sophomores: end of 1st semester	1.80	1.60
Sophomores: end of 2nd semester	2.00	1.80
Juniors and Seniors: end of each semester	2.00	1.80

Students with repeated semesters of probationary standing may be suspended at the discretion of the Dean. Students are removed from probation when their cumulative grade-point average meets the above indicated minimum standard.

Students with majors or minors in English, History, Political Science, or Psychology in the baccalaureate program of the College of Arts and Sciences, or the Secondary Education Mathematics program of the College of Education must achieve at least six credits with grades of B or better in their major or minor requirements. No grades of D will count toward fulfillment of the major or minor requirements in these programs.

School of Nursing — Please refer to the sections entitled Prerequisites to the Nursing Major and Academic Policies — Upper Division Nursing Major in the School of Nursing portion of this catalog.

Industrial Arts Education majors must maintain a 2.5 cumulative index prior to and throughout the professional sequence, i.e., IAED 380, IAED 381, and EDU 324. No more than one D grade will be accepted in the technical and professional courses required of Industrial Arts majors.

### CLASS MEMBERSHIP

Since a minimum of 120 credit-hours is required for graduation in most four-year programs, at least 30 credit-hours should be earned each year. To progress satisfactorily through college, a student is expected to carry at least 15 credit-hours each semester. Permission must be obtained from the advisor and the appropriate Dean if a student wishes to carry more than 18 credit-hours.

For standing as a sophomore, a student shall have completed at least 19 percent of the hours required for graduation, for junior standing 44 percent, and for senior standing 69 percent. Exceptions are the Industrial Arts Education and Industrial Arts Technology programs with respective percentages of 20 percent and 53 percent.

The requirements by classes, schools and colleges are:

<i>School or College</i>	<i>Required Number of Credit-Hours</i>			
	<i>Sophomore</i>	<i>Junior</i>	<i>Senior</i>	<i>Total to Graduate</i>
Arts and Sciences	23	53	83	120
Business, Economics and Management				
Baccalaureate Programs	23	53	83	120
Two-Year Business	23	—	—	62
Education				
Music Education	26	60	94	137
Industrial Arts Education	33	65	94	124
Industrial Arts Technology	33	65	94	124
All Other Programs	23	53	83	120

## PASS-FAIL OPTION

The purpose of the pass-fail grade option is to encourage students to broaden their educational experiences with a reduced possibility of harming their grade point averages. The student's choice is kept confidential and the instructor grades the student in the same manner as the rest of the class. The Registrar will retain the instructor's submitted grade on file. If the grade is A, B, C, or D it will be converted to a P. Grades of F or I will be handled in the normal sense.

Courses taken to satisfy General Education, Major or Minor Requirements may not be taken pass-fail. Undergraduate degree candidates may register for a maximum of six hours of pass-fail credits in any one semester, up to a maximum of 18 hours of the total credit hours required for graduation.

Students may exercise the Pass-Fail Option only during the registration period or during the add period each semester. The Pass-Fail Option, once contracted, may be reversed only during the add period.

## SCHEDULE CHANGES

Once a semester commences, a period of one week is permitted to add courses and select or reverse the Pass-Fail Option. A period of two weeks is permitted to drop courses with no grade notation. This procedure enables the student to make the necessary changes in the planned curriculum. A student dropping a course after the second week through the sixth week of classes will receive the grade notation of W. If a student has not officially withdrawn by the end of the sixth week of the course, he or she will be assigned a regular grade, normally F. The W notation may be assigned after the sixth week under unusual circumstances if so determined by the instructor and the Dean. All students who register for a course and neither complete the course objectives nor officially withdraw in any one of the procedures described above will be graded F in that course and must assume all financial obligations associated with it.

Students who find that their names are not in the instructor's official list should check immediately with the Registrar's Office to make necessary corrections in the registration records.

## MATRICULATION STATUS (Leave of Absence)

Matriculated degree candidates who withdraw from all course work in a given semester maintain their matriculated status for one year from the fifth school day of the next regular academic term. Matriculated degree candidates who do not register for a given semester maintain their matriculated status for one year from the fifth school day of the semester for which they did not register. If a student resumes attendance during the time period specified above, no readmission process is required. The student should contact the Registrar's Office for registration instructions.

If a student wishes to resume studies as a degree candidate after the time period specified above, an application for readmission must be filed with the Admissions Office.

## SUSPENSION

Students may be suspended from the University either by the Dean of the appropriate academic unit or by the University Disciplinary Committee. Academic suspension is automatic when a student receives a semester average below 1.0. Other standards vary from college to college and from class to class. Students are urged to consult advisors to learn the standards that apply to them. For details about disciplinary suspension and dismissal, consult the "Disciplinary Code" which is published in the Student Handbook.

## READMISSION AFTER ACADEMIC SUSPENSION

Matriculated degree candidates may apply for readmission to the University in accordance with the stipulations specified in the suspension action. If readmission is requested within one year from the fifth school day of the next regular academic term following suspension, the student must receive the approval of the Dean.

If a student wishes to resume studies as a degree candidate after the time period specified above, an application for readmission must be filed with the Admissions Office.

## WITHDRAWAL FROM THE UNIVERSITY

The procedure for withdrawal from the University is to secure an official withdrawal slip from the Registrar's Office and complete an exit interview with a member of the Educational Services' staff.

If a student withdraws from the University during the first two weeks of the semester, there will be no courses or grades recorded. Students withdrawing after the second week through the sixth week will receive a W grade for each course in which the student was enrolled. Students withdrawing after the sixth week will receive regular grade designations as determined by the instructors. Under unusual circumstances, grades of W can be assigned after the sixth week if approved by both the instructor and the Dean.

Withdrawn students, in good standing with the University, who wish to return to school at a future date, should follow the instructions given under Matriculation Status (Leave of Absence).

## RESIDENCE REQUIREMENT

In all undergraduate divisions at the University, a minimum of 30 credit-hours, including at least 9 hours in the major field, must be completed while registered in the school or college from which the degree is sought. A student may earn 6 of these 30 credit-hours at another campus of the University of Maine. Unless special permission is granted by the Dean of the school or college concerned to pursue work elsewhere, the work of the senior or final year must be completed at this University.

## INDEPENDENT STUDY

Junior and senior students may elect independent study in their major for one to six credits. Normally, no more than three credits may be earned in a semester.

The student submits an independent study application which includes a detailed description of the proposed program of study. Permission of the instructor and approval by the department chairman and the Dean are required.

The approved independent-study form is filed with the Registrar during the registration period.

## INDEPENDENT STUDY TERM

Information regarding an independent-study term is provided in the section of the catalog dealing with the College of Arts and Sciences.

## DOUBLE MAJORS

When a student completes the basic requirements for graduation from schools or colleges and the course requirements for two majors, the student should request the Dean to notify the Registrar, who will record the double major on the student's transcript.

## POST-BACCALAUREATE STUDY FOR SECOND DEGREE

A second Bachelor's Degree may not be granted a student until he has completed an additional year of college work, as represented by a minimum of thirty (30) semester hours above the requirements for the first degree. Such work must be completed in accordance with all other University regulations.

It is the responsibility of the Office of the Dean of the school or college in which the second degree is sought to provide the approval for undertaking the second degree and certifying the completion of all requirements prior to receipt of the second degree.

## CHANGE OF MAJOR WITH A SCHOOL OR COLLEGE

Permission to change from one major to another is granted only by the Office of the Dean and the head of the department in which the student expects to major. A form for the change may be obtained from the Registrar's Office. A change-of-major form must be filed with the Registrar's Office.

## CHANGE OF COLLEGE OR SCHOOL

Information on the procedure for change of college or school may be obtained from the Registrar's Office.

## COURSE WORK AT OTHER INSTITUTIONS

Matriculated students at the University are expected to secure written approval from the appropriate Dean prior to taking course work at another institution. Such credits outside the University of Maine system count towards the total degree hours required but are not figured in the cumulative grade-point averages.

## THE PERMANENT ACADEMIC RECORD

The permanent academic record is maintained by the Office of the Registrar for all students of the University. While the grade report is the unofficial notification to the student, academic dean and advisor of that student's academic achievements for a given semester, the only true and valid documentation of academic work and student status is an official transcript of the academic record, stamped with the Registrar's signature and embossed with the seal of the University of Maine. The transcript is available only with the signature of the student and will be released to that student or a designee only if there are no outstanding charges against his or her account with the Business Office. There is a charge of two dollars for a single transcript and one dollar for each additional copy ordered at the same time. Other types of transcripts are: Unofficial — Issued Directly to Student, available at no charge to an active student, but limited to one per semester and only after grades are posted for that semester; Placement Transcript provided for the student's placement folder. This is unofficial, but may be reproduced by the Placement Office for prospective employers at no additional cost.

## CONFIDENTIALITY POLICY

The University complies totally with the Family Rights and Privacy Act of 1974 (The Buckley amendment). For the complete University Confidentiality Policy, consult the Office of the Registrar on either campus.

## GRADUATION REQUIREMENTS

A candidate for a bachelor's degree must (a) receive passing grades in courses required by the University, the school or college, and the major department; (b) accumulate the number of credit-hours required by the school or college in which the student is registered; (c) achieve an accumulative average of not less than 2.00; (d) meet the requirements of the major department; (e) complete an Application for Degree with the Office of the Registrar at the beginning of the semester of graduation.

## GRADUATION WITH DISTINCTION

Graduating seniors are cited for graduation honors on the diploma and on the transcript. Students who have achieved a cumulative index of 3.50 or higher graduate summa cum laude; those with a cumulative index of 3.25 to 3.49 inclusive graduate magna cum laude; and those with a cumulative index of 3.00 to 3.24 inclusive graduate cum laude. The cumulative index for the purpose of graduation with distinction is based on the student's total college record.

Transfer students (including those transferring within this University from a two-year to a four-year program) must maintain an accumulative average of 3.0 or above for course work in the baccalaureate program, and must earn at least 30 credits, normally the final 30 credits, at the University.



# College of Arts and Sciences

DEAN

Robert J. Hatala

The College of Arts and Sciences offers a wide variety of courses, majors and programs leading to graduate and professional study, careers, and intellectual enrichment. The College offers courses and programs of study to students in all schools of the University.

## DEPARTMENTAL ORGANIZATION

The College of Arts and Sciences is composed of the following departments:

Art  
Biology  
Chemistry  
Communication  
Earth Sciences, Physics, and Engineering  
English  
Foreign Languages and Classics  
Geography-Anthropology  
History  
Mathematics and Computer Science  
Music  
Philosophy  
Political Science  
Psychology  
Social Welfare  
Sociology  
Theatre

## BACCALAUREATE DEGREE PROGRAMS

Programs of study leading to a Bachelor of Arts (B.A.) degree are available in the areas listed below. In addition, Bachelor of Fine Arts (B.F.A.) is offered by the Art Department and Bachelor of Science (B.S.) is offered by the Chemistry Department.

Applied Chemistry (also B.S. degree)  
Applied Music  
Art (also B.F.A. degree)  
Biology  
Communication  
Computer Science  
Criminal Justice  
Earth Science  
Economics  
English  
French  
Geography-Anthropology  
History  
Liberal Studies  
Mathematics  
Music  
Philosophy  
Political Science  
Psychology  
Self-Designed  
Social Science

Sociology  
Social Welfare  
Theatre

## REQUIREMENTS FOR BACCALAUREATE DEGREE PROGRAMS

To qualify for a baccalaureate degree, each student must fulfill University requirements, College of Arts and Sciences requirements, and Departmental (or program) requirements.

### University Requirements

All students must fulfill the General Education Requirement in order to graduate. This requirement, consisting of 30 credit hours, is described in the Academic Policies section of this catalog. Courses in the student's major may not be applied toward fulfillment of the General Education Requirement. Students are encouraged to complete this requirement by the end of the sophomore year.

### College Requirements

All College of Arts and Sciences students must pass a composition requirement, a writing proficiency requirement, and a mathematics proficiency requirement.

### COMPOSITION REQUIREMENT

All CAS students must pass a three-credit course in college-level writing (ENG 100 or ENG 101). The requirement may be waived in one of three ways:

1. Scoring 55 or better on the Test of Standard Written English (TSWE).
2. Demonstrating to the English Department a strong record of success in writing in previous college-level courses.
3. Scoring 500 in the C.L.E.P. English test and thereby gaining three credits.

By the end of the sophomore year all students must either have fulfilled the composition requirement or have qualified for ENG 100/101.

### WRITING PROFICIENCY REQUIREMENT

In order to demonstrate writing proficiency and thereby to qualify for Junior Class standing, students must do one of the following:

1. Score 42-54 on the TSWE.
2. Demonstrate to the English Department adequate success in previous college-level courses.
3. Pass ENG 009.

Incoming students will be placed in English composition courses as follows:

1. TSWE score below 42 — ENG 009
2. TSWE score 42-54 — ENG 100/101
3. TSWE score 55 or above — composition requirement waived.

**MATHEMATICS PROFICIENCY REQUIREMENT**  
All CAS students must have a minimum mathematics proficiency. This proficiency can be demonstrated in one of three ways:

1. By achieving a score of above 450 on the mathematics subtest of the Scholastic Aptitude Test (SAT).
2. By passing an equivalent test administered by the Department of Mathematics and Computer Science.
3. By passing MS 011, a remedial algebra course.

No student will be admitted to Junior Class standing who has not demonstrated minimum mathematics skills.

### Departmental or Program Requirements

The College requires that each student fulfill the requirements of a program and that each student formally declare a major prior to completing 53 credit hours. Fine Arts students, however (especially in art and music), usually must begin their program earlier because of portfolio and audition requirements. Students planning to major in a science are advised to obtain an adviser in the appropriate department and begin the required course sequences as soon as possible. Selecting a major is an important and often difficult decision. Students undecided about a major should take courses in the various programs which interest them before making a final decision. Undecided students are also encouraged to consult the Office of Counseling and Career Development as well as the departments which interest them prior to formally declaring a major.

Individual program requirements are described in the pages that follow.

### ASSOCIATE OF ARTS DEGREE PROGRAM IN LIBERAL ARTS

A two year program leading to the Associate of Arts degree (A.A.) in Liberal Arts is available in conjunction with the Division of Basic Studies. Graduates of this program may transfer into a baccalaureate degree program.

#### Requirements

<i>Courses</i>	<i>Credit Hours</i>
College Writing (ENG 100) or Composition (ENG 010)	3
Humanities	6
Fine and Applied Arts	6
Science and Mathematics	6
Social Sciences	6

General (Any of the above, CAS, PE or RLS)	6
Electives	<u>27</u>
TOTAL	60

Students in this program may select electives from courses carrying numbers of 010 or greater, depending on their interest. Students interested in transferring into a baccalaureate degree program should restrict their choices to courses carrying numbers 100 or greater (see section on Academic Policies) and should consult the baccalaureate program requirements.

### ACADEMIC MAJORS AND MINORS FOR THE COLLEGE OF EDUCATION

The College of Arts and Sciences provides programs which enable students in the College of Education to concentrate in various subject areas. Major and Minor programs in CAS available to Education students include:

#### Art

Art Education

#### Mathematics

Mathematics Major and Minor

(Secondary Education)

Area Major of Mathematics and Computer Science

(Secondary Education)

#### Music

Music Education

For information on other majors and minors, students should consult the Departments in their area of interest.

### OTHER EDUCATIONAL OPPORTUNITIES

#### CAS Courses

The College of Arts and Sciences offers courses on a variety of topics and themes which are not sponsored by individual departments. These courses (listed as "CAS") are described in the course schedule each semester.

#### Independent Study Term

Students who have an academic project which they feel would contribute significantly to their program may, with the approval of a faculty sponsor and the department involved, apply for a semester of independent study. General guidelines for the Independent Study Term may be obtained from departments or the office of the Dean of CAS.

#### Double Majors

Although there are no minors for the students in the College of Arts and Sciences, it is possible for CAS students to declare a major in two departments. Students interested in a double major should consult the appropriate departments and obtain a declaration of major form from the Registrar's Office.

# ART

Chairman of the Department: Michael Moore, Ground Floor, Robie Hall, Gorham.

Associate Professors Bearce, Franklin, Moore, Rakovan, Ubans; Assistant Professor Hewitt.

## PROGRAMS

In the College of Arts and Sciences, the Department of Art offers programs leading to both a Bachelor of Arts degree (B.A.) and a Bachelor of Fine Arts degree (B.F.A.). Through the College of Education, the Department offers an Art Education program leading to a Bachelor of Science degree (B.S.), which qualifies graduates to teach or supervise art in all grades of the public schools.

## DEPARTMENT OF ART

If you wish to apply for admission to the Department of Art at USM please use the following procedures:

Make formal application to the Director of Admissions, Admissions Office, USM, Portland Campus, Portland, Maine. This procedure also serves non-matriculated candidates at USM. If you are a degree candidate currently enrolled at USM who wishes to transfer from your current discipline into the Department of Art, you must obtain a change of major form and submit this form with your up-to-date transcript to the Chairman, Department of Art.

By following these procedures you identify yourself as a CANDIDATE for matriculation in the Department of Art. All CANDIDATES must complete the ART CORE (consisting of FUNDAMENTAL DESIGN I & II, FUNDAMENTAL DRAWING I & II, and HISTORY OF ART I & II) before matriculating as an art major in the Department of Art.

Next you must submit a portfolio of your own original works of art to the Department for evaluation. The portfolio should consist of twelve (12) works in varying media, including one self-portrait drawn from life. The entire portfolio should indicate the applicant's current interest and may include prints, drawings, paintings, posters, photographs, and films, but 35mm slides or photographs of three-dimensional work should be submitted rather than the work itself. The Department cannot accept responsibility for damage or loss, and asks that no glass, three-dimensional work or work larger than 20" x 24" be submitted.

Portfolio deadlines and application forms may be obtained from the USM Admissions Office or the Department of Art.

Applicants and their parents are cordially invited to visit the University and become acquainted with our facilities when portfolios are returned.

Final notification of a decision will come from the Office of Admissions when the admission folder is com-

pleted. Students already enrolled in the University who wish to change their major to art must follow the departmental admission procedures concerning submission of portfolio, as described above, and will be notified of acceptance by the Department of Art.

## RECOMMENDED ART COURSES

### To Meet General Education Requirements of Students Majoring in Other Programs

For students outside the art major who seek to meet the General Education Requirement in Fine and Applied Arts, the following courses are recommended by the Department of Art:

ARTH 101 Introduction to Art  
ARTH 111 History of Art I  
ARTH 112 History of Art II  
ARTH 273 Film as Image and Idea  
ARTS 141 Design I (space permitting)  
ARTS 151 Drawing I (space permitting)

## GENERAL EDUCATION REQUIREMENTS FOR ART MAJORS

All students are reminded that, in addition to their meeting departmental requirements for a major leading to a Baccalaureate Degree, they must also meet the requirements of the school or college involved, as well as the University's General Education Requirements.

All art majors must satisfy the General Education Requirement in Area 2 (Fine and Applied Arts) by acquiring six credits in courses outside the art program. Acceptable courses are coded DNCE, MUS or THE.

## REQUIREMENTS FOR ART MAJORS

### Requirements for Bachelor of Arts (B.A.) Degree\*

ART CORE (18 credits)  
ARTS 141 Design I  
ARTS 142 Design II  
ARTS 151 Drawing I  
ARTS 152 Drawing II  
ARTH 111 History of Art I  
ARTH 112 History of Art II

### ART HISTORY REQUIREMENT (9 credits)

ARTH 411 Philosophy of Art  
(may substitute PLY 220)  
ARTH Elective  
ARTH Elective

### STUDIO ART REQUIREMENT (18 credits of ARTS Electives)

### GENERAL EDUCATION REQUIREMENT (30 credits)

**ELECTIVES\* (45 credits)**

\*No more than 60 credit hours with ART designation may be used to fulfill 120 credit-hours degree requirement.

**Requirements for Bachelor of Fine Arts  
(B.F.A.) Degree†**

**ART CORE (18 credits)**

- ARTS 141 Design I
- ARTS 142 Design II
- ARTS 151 Drawing I
- ARTS 152 Drawing II
- ARTH 111 History of Art I
- ARTH 112 History of Art II

**STUDIO ART REQUIREMENT†**

45 Credits of Electives

**ART HISTORY REQUIREMENT (9 credits)**

- ARTH 411 Philosophy of Art  
(may substitute PLY 220)
- ARTH Elective
- ARTH Elective

**GENERAL EDUCATION REQUIREMENT**

(30 credits)

**ELECTIVES (18 credits)**

†A concentration of 12 credits in Painting, Printmaking, Ceramics, Drawing or Other (specified by the department) area is required. In addition, B.F.A. candidates are required to have an exhibit of their work during their senior year.

**Art Education Program Requirements for  
Bachelor of Science (B.S. Degree)**

**ART CORE (18 credits)**

- ARTS 141 Design I
- ARTS 142 Design II
- ARTS 151 Drawing I
- ARTS 152 Drawing II
- ARTH 111 History of Art I
- ARTH 112 History of Art II

**ART HISTORY REQUIREMENT (9 credits)**

- ARTH 411 Philosophy of Art  
(may substitute PLY 220)
- ARTH Elective
- ARTH Elective

**STUDIO ART REQUIREMENT (27 credits)**

- ARTS 232 Ceramics I
- ARTS 261 Painting I
- ARTS 271 Photography I
- ARTS 281 Printmaking
- ARTS 291 Sculpture I
- ARTS Elective
- ARTS Elective
- ARTS Elective
- ARTS Elective

**PROFESSIONAL EDUCATION REQUIREMENT  
(24 credits)**

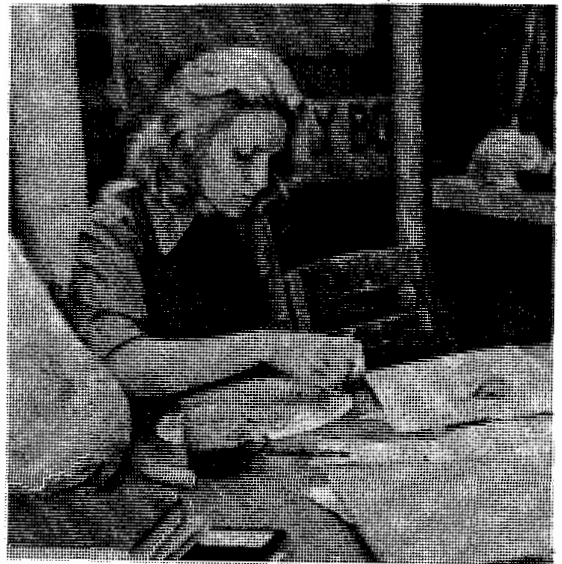
- ARTE 221 Practicum in Art Education
- ARTE 321 Principles and Procedures  
in Art Education
- EDU 350 Modern Philosophies of Education
- EDPY 333 Human Growth and Development

EDU 324 Student Teaching (6-cr. course)

EDU 324 Student Teaching (6-cr. course)

**GENERAL EDUCATION REQUIREMENT**

(30 credits)

**ELECTIVES (12 credits)****COURSES IN ART****Art History****ARTH 101 Introduction to Art**

Selected experiences using original works, lecture, panel discussion, slides, films, and other means to confront the student with the significance of the visual arts in human history. The aim of the course is to involve students in direct experiences affecting their own perception of visual form. Cr 3.

**ARTH 111 History of Art I**

Examination and discussion of the early epochs of art from prehistoric cultures through the Renaissance. Special attention is directed to the relationships of historical and theoretical knowledge to creative expression. Divergent viewpoints of the art historian, the critic, and the artist are explored. The first half of an overview of the visual arts emphasizing the interrelationships of cultural values and the forms of art. Prerequisite: preference given candidates for matriculation in the Department of Art, or those with permission of the instructor. Cr 3.

**ARTH 112 History of Art II**

A continuation of ARTH 111 from the Renaissance through the 20th Century. In both semesters of the course examples of architecture and sculpture, paintings, etc. are used as the basis of inquiry. Prerequisite: preference given candidates for matriculation in the Department of Art, or those with permission of the instructor. Cr 3.

**ARTH 211 History of Architecture and the Urban Environment**

A study of the European-American tradition of architectural design with emphasis upon the basic styles which influence American architecture and their utilization in urban America. Consideration of aesthetic

and social interplay of architectural design throughout history, especially as it is manifest in urban design. Prerequisite: ARTH 112. Cr 3.

**ARTH 212 Classical Art**

A survey of ancient art and architecture with special emphasis on discussing the key monuments of Greek and Roman art and their influence on later artistic periods. Prerequisite: ARTH 111. Cr 3.

**ARTH 214 Renaissance Art**

An examination of the art and architecture of the fifteenth and sixteenth centuries both north and south of the Alps. Emphasis will be given to the cultural traditions, historical events and theoretical foundations which contributed to the development of Renaissance art. Prerequisite: ARTH 112. Cr 3.

**ARTH 215 17th & 18th Century Art**

The course will survey the Baroque and Rococo movements in painting, sculpture, and architecture. The impact of the Academies and academic art and the enlightenment will be given special attention. Prerequisite: ARTH 112. Cr 3.

**ARTH 216 19th & 20th Century Art**

This course will survey the many "isms" of the 19th and 20th century in art and architecture. The key figures in these movements (e.g. Romanticism, Classicism, Cubism, Expressionism), their major works and some of the underlying philosophies and circumstances motivating these movements will be discussed. Prerequisite: ARTH 112. Cr 3.

**ARTH 218 Women in Art**

A focus on women in the arts; their images, ideals, dialogues, politics, and history through contemporary trends. The course will be enhanced with slides, films, video, tapes, papers, panels and discussions. Prerequisite: permission of instructor. Cr 3.

**ARTH 273 Film as Image and Idea**

An approach to the appreciation of motion pictures and allied arts through the understanding and analysis of the context, range, and resources of this, the only major form of creative expression conceived and developed entirely within the industrial age. Principles of evaluation, illustrated through the development of motion pictures to their present state. Prerequisite: permission of the instructor. Cr 3.

**ARTH 312 History and Appreciation of the Graphic Arts**

An explanation of the graphic techniques: woodcut, engraving, etching, aquatint, lithography, etc. A study of the graphic arts as they have evolved throughout the history of art with emphasis upon the important graphic artists of Europe, America, and the Orient. Prerequisite: ARTH 112. Cr 3.

**ARTH 313 Renaissance Art - Italian**

This course will deal with painting and sculpture in the lands south of the Alps (primarily Italy). The student will investigate questions regarding chronology, attributions, and iconography associated with the various artists of the Italian Renaissance. Prerequisite: ARTH 214. Cr 3.

**ARTH 314 Renaissance Art - Northern**

This course deals with painting and sculpture in the lands north of the Alps. The student will explore the problems with chronology, iconography, and style, associated with each individual artist of the Northern Renaissance. Prerequisite: ARTH 214. Cr 3.

**ARTH 315 Western Art 1790-1880**

A study of the major movements of the first half of the modern era covering the period between 1780-1880. Prerequisite: ARTH 112. Cr 3.

**ARTH 316 Modern Art**

A continuation of ARTH 315 covering the period from 1880-1950 and including the growth and development of the modern "isms." Prerequisite: ARTH 112. Cr 3.

**ARTH 317 Contemporary Art**

Contemporary Art: 1950 to ?. An examination and discussion of developments in the visual arts since 1950. Prerequisite: ARTH 112. Cr 3.

**ARTH 379 Topics in Film**

A selection of courses, dealing with film, but varying in content from semester to semester. Each current course will have a course description on file in the Department of Art. Courses may concern national industries (*The American Cinema, The Russian Film, The German Film, etc.*); directors (Renoir, Brunuel, Dreyer, etc.); genre (*The Documentary, The Gangster Film, The Western, etc.*); or similar topics. Prerequisite: ARTH 273. Cr 3.

**ARTH 411 Philosophy of Art**

An investigation into the theories of art and beauty found in the writings of philosophers, painters, writers, and critics which form the basis of understanding of the fine arts. Readings and discussion of writers from ancient to modern times. Prerequisite: ARTH 112. Cr 3.

**ARTH 416 Exhibitions & Gallery Management**

Problems in the operation of an art gallery. Various exhibition, installation and handling techniques; design and distribution of promotional material. Practical experience in connection with the operation of the USM Art Gallery. Prerequisite: art core courses. Cr 3.

**ARTH 418 Independent Study in Art History**

An opportunity for the student who has demonstrated competence in a specific area of study to work independently with scheduled tutoring from a faculty member of the student's choice. Prerequisite: permission of instructor and Art Department chairman. Cr 1 to 6.

## Studio Art Courses

**ARTS 141 Fundamental Design I**

A coordinated series of experiments with basic design problems directed toward developing an awareness of the design potential, and the confidence, imagination, and skill to realize this potential. Prerequisite: preference given candidates for matriculation in the Department of Art, or those with permission of the instructor. Cr 3.

**ARTS 142 Fundamental Design II**

A continuation of Fundamental Design I towards the completion of a foundation in the understanding and use of the basic elements of design. The course will consist of projects which relate form, space, color, and imagination as elements of a complete composition. Prerequisite: ARTS 141. Cr 3.

**ARTS 151 Fundamental Drawing I**

The craft and concepts of making drawings, stimulated by the forms, spaces, and images of the tangible world, an introduction to marking tools and surfaces. Exposure to places, events, and objects with the purpose of stimulating the need to draw. Prerequisite: preference given candidates for matriculation in the

Department of Art, or those with permission of the instructor. Cr 3.

**ARTS 152 Fundamental Drawing II**  
Continuation of Fundamental Drawing I with drawing from the model. Prerequisite: ARTS 151. Cr 3.

**ARTS 231 Ceramics**  
An introduction to methods and processes of clay forming, including modeling, pressing, handbuilding, and the potter's wheel. Emphasis of form and texture, with aspects of glaze composition and firing procedures. Prerequisite: art core courses.

**ARTS 233 Textiles**  
Introductory exercises with elementary weaves, the harness loom, backstrap, and inkle looms, and tapestry weaving. The student is encouraged to experiment with fibre construction. The emphasis is on fundamentals. Prerequisite: art core courses. Cr 3.

**ARTS 241 Design III**  
A coordinated series of experiments dealing with ways of organizing imagery. Simultaneity, sequence, and motion will be the concepts considered within a wide range of more advanced projects. Prerequisite: Arts 142. Cr 3.

**ARTS 251 Drawing III**  
Extensive combining of media. Stress on role of images, both object and model. Prerequisite: Arts 152. Cr 3.

**ARTS 261 Painting**  
An introduction to basic aspects of the painting process as related to visual perception and technique. Prerequisite: art core courses. Cr 3.

**ARTS 271 Photography**  
Photography as a creative medium. Provision of basic skills in the use of the camera and laboratory equipment. Investigation and practice in the fundamental techniques and processes of black and white photography as an art form. Prerequisite: art core courses. Cr 3.

**ARTS 281 Printmaking**  
Introduction to the rudimentary materials and methods of basic printmaking media such as intaglio, lithography, relief and serigraphy. Prerequisite: art core courses. Cr 3.

**ARTS 291 Sculpture**  
A foundation course directed towards the developing awareness of basic elements of sculptural form and the discipline of making objects. Prerequisite: art core courses. Cr 3.

**ARTS 331/332 Intermediate Ceramics**  
Application of design principles in production of ceramicware with a concentration on advanced problems in wheel-thrown forms and hand-building sculptures. Prerequisite: ARTS 231. Cr 3/3.

**ARTS 333/334 Intermediate Textiles**  
Students may choose to concentrate on harness loom weaving or tapestry weaving. Exercises with basic weaves, pattern matching, etc., using standard yarn with emphasis on appropriate use of materials and techniques leading to individual experiment action and design. Free fibre construction and natural dyeing are encouraged. Prerequisite: ARTS 233. Cr 3/3.

**ARTS 341/342 Intermediate Design**  
Advanced investigation of design problems. Prerequisite: ARTS 241. Cr 3/3.

**ARTS 351/352 Intermediate Drawing**  
Continued drawing with emphasis on independent direction. Prerequisite: ARTS 251. Cr 3/3.

**ARTS 361/362 Intermediate Painting**  
Continued investigation of the painting process using both assigned problems and arrangements of the student's own invention. Use of a variety of media. Prerequisite: ARTS 261. Cr 3/3.

**ARTS 363 Painting/Watercolor**  
Watercolor, wash, dry-brush, ink and wash, gouache, and other techniques in watermedia. Emphasis on individual concepts and personal expression. Prerequisite: ARTS 261. Cr 3.

**ARTS 364 Painting/Materials and Techniques**  
An introduction to materials, methods, and techniques for the professional artist-craftsman. Examination, comparison, and testing of materials, both traditional and experimental. Prerequisite: ARTS 261. Cr 3.

**ARTS 365/366 Intermediate Watercolor**  
Continuation of painting/watercolor with emphasis on personal expression. Prerequisite: ARTS 363. Cr 3/3.

**ARTS 371/372 Intermediate Photography**  
Exploration of concepts and techniques of photography with emphasis on individual forms of expression. Prerequisite: ARTS 271. Cr 3/3.

**ARTS 381/382 Intermediate Printmaking**  
Application of the basic knowledge of printmaking as it concerns image making, with an emphasis on at least two of the media studied in ARTS 281, Printmaking. Prerequisite: ARTS 281. Cr 3/3.

**ARTS 391/392 Intermediate Sculpture**  
The theory and practice of sculptural composition using a variety of techniques with traditional and new materials. Prerequisite: ARTS 291. Cr 3/3.

**ARTS 407 Advanced Problems in Art**  
An opportunity for the student to do advanced work in the discipline of his/her choice, culminating in a related project. Prerequisite: permission of instructor and Art Department chairman. Cr 1 to 6.

**ARTS 408 Independent Study in Art**  
An opportunity for the student who has demonstrated competence in a specific area of study to work independently with scheduled tutoring from a faculty member of the student's choice. Prerequisite: permission of instructor and Art Department chairman. Cr 1 to 6.

**ARTS 431/432 Advanced Ceramics**  
Investigation and realization of advanced ceramics projects with an emphasis on personal development and professional attitudes. Prerequisite: ARTS 331 and 332. Cr 3/3.

**ARTS 451/452 Advanced Drawing**  
Making personal and complete drawings and series of drawings. Emphasis on individual concepts and personal expression. Prerequisite: ARTS 351 and 352. Cr 3/3.

**ARTS 461/462 Advanced Painting**  
Continuation of intermediate painting. Emphasis on individual concepts and personal expression. Prerequisite: ARTS 361 and 362. Cr 3/3.

**ARTS 481/482 Advanced Printmaking**  
Study and realization of personally-developed imagery through advanced investigation of preferred printmaking media. Prerequisite: ARTS 381 or ARTS 382. Cr 3/3.

**ARTS 491/492 Advanced Sculpture**

Continuation of intermediate sculpture with emphasis on the pursuit of personal imagery. Prerequisite: ARTS 391 and 392. Cr 3/3.

**Art Education**

**ARTE 121 Introduction to Art Education**

A study of growth and development in the creative abilities of children; how to utilize art to projects to foster initiative, imagination, cooperation, and appreciation in the classroom. Prerequisite: permission of instructor; not for students accepted as art education majors. Cr 3.

**ARTE 122 Handcrafts**

An introduction to the general handcrafts, including macrame; leatherwork; batik; tie-dye; decoupage; stitcher; candlemaking; rugmaking; mosaics; string art; textile, metal, and wood painting; refinishing furniture; glass etching; paper mache; sandcastings, etc. Cr 3.

**ARTE 221 Practicum in Art Education**

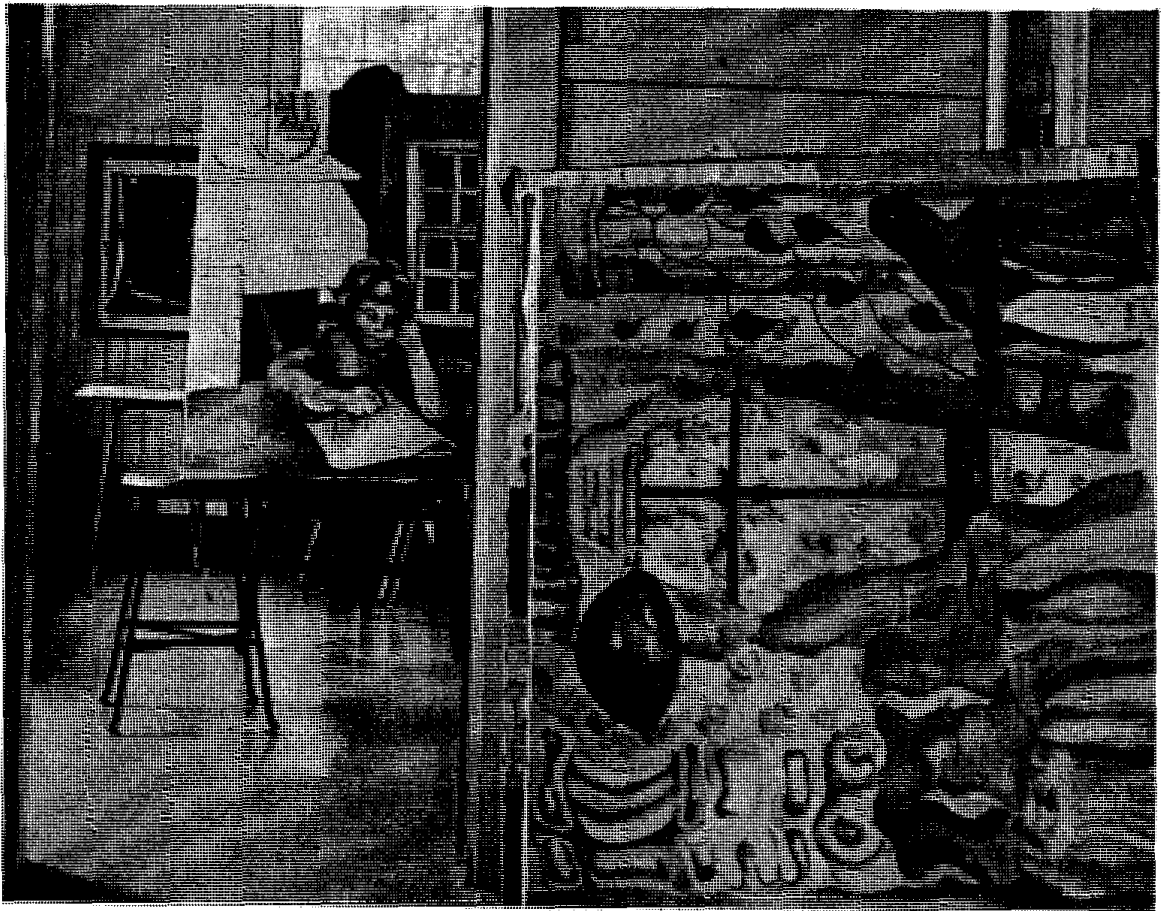
Designed to give the art major student an early first-hand experience with children and the professional aspects of teaching. The student will work with children in elementary and secondary schools in the area. Prerequisite: art core courses.

**ARTE 321 Principles and Procedures in Art Education**

This course endeavors to help the prospective art teacher arrive at a workable philosophy of art education through readings, discussions, and projects in basic instructional techniques for the elementary and secondary grades. Prerequisite: ARTE 221. Cr 3.

**ARTE 428 Independent Study in Art Education**

An opportunity for the student who has demonstrated competence in a specific area of study to work independently with scheduled tutoring from a faculty member of the student's choice. Prerequisite: permission of instructor and Art Department chairman. Cr 1 to 6.



# BIOLOGY

Chairman of Biology Department: Helen L. Greenwood, 314 Science Building, Portland.

Professors Kormondy, Najarian; Associate Professors Greenwood, Holmes, Mazurkiewicz, Riciputi, Schwinck; Assistant Professors Dorsey, Gainey, O'Mahoney.

## PROGRAMS

A four-year program is offered in biology. This program provides students with a Liberal Arts education emphasizing the sciences. Graduates of this program have found careers in biological and medical research laboratories, field biology and pharmaceutical sales, or have furthered their education by entering graduate, medical, dental, optometry and law schools, as well as schools for allied health professions. The required biology courses expose the student to an examination of life from the molecular level to the biotic community. Other biology courses may be elected to suit individual interests and needs. The required courses in chemistry and physics reflect the interdisciplinary status of biology today.

## REQUIREMENTS FOR A BIOLOGY MAJOR IN ARTS AND SCIENCES

Course no.	Course title	Credit hours
*MS 152	Calculus A	4
PHYS 121 and 122 or 111 and 112	General Physics or Elements of Physics	8-10
CHEM 113	Qualitative Principles of Chemistry I	3
CHEM 114	Qualitative Laboratory Techniques I	2
CHEM 115	Qualitative Principles of Chemistry II	3
CHEM 116	Qualitative Laboratory Techniques II	2
CHEM 251 and 253	Organic Chemistry I and II	6
CHEM 252 and 254	Organic Chemistry Laboratory I and II	5

Foreign Language through Intermediate Level (Arts and Sciences only), or a passing grade in French 106 or German 106. Credits to be earned depend upon the language proficiency of the student. Challenge examinations are available . . . . . 0-6

'BIO 101 and '102	Biological Principles (3 credits) plus Biological Experiences (1 credit)	4
BIO 103 and 104	Biological Diversity (3 credits) plus Survey of Animals and Plants (1.5 credits)	4.5
BIO 201	Principles of Genetics	3
BIO 203, 204 or 205, 206	Comparative Vertebrate Embryology (2 credits), plus Comparative Vertebrate Embryology Laboratory or Comparative Vertebrate Anatomy (2 credits) plus Comparative Vertebrate Anatomy Laboratory	4
BIO 311 and 312	Microbiology (3 credits) plus Microbiological Laboratory (2 credits)	5
BIO 331 and 332	Ecological Principles (3 credits) plus Field Ecology (2 credits)	5
BIO 401 and 402	General Physiology (3 credits) plus General Physiology Laboratory (2 credits)	5
†BIO 421	Biology Seminar I	1
†BIO 431	Biology Seminar II	1

\*Students not prepared for MS 152 should precede this course with MS 140, Pre-Calculus Mathematics (3 credits).

<sup>1</sup>  
A grade of "C" or higher in BIO 101 is required for all other laboratory courses in biology in addition to other prerequisites as listed for individual courses.

<sup>2</sup>  
A grade of "C" or higher in BIO 102 is required for all other laboratory courses in biology in addition to other prerequisites as listed for individual courses.

†Optional, but strongly recommended.

NOTE: Students interested in preparation for medical technology, or medical or dental schools, should take the same chemistry courses as required for a major in biology. All students are reminded that, in addition to departmental requirements, they must also meet the requirements of the College of Arts and Sciences.



## COURSES IN BIOLOGICAL SCIENCES

### **BIO 019 Biological Basis of Human Activity**

A course designed to elucidate the basic biological constraints of human performance. This course does not serve as a prerequisite for BIO 103 or BIO 111. Associate Degree Credit only. Cr 3.

### **BIO 101 Biological Principles**

An introduction to the structure and function of animal and plant systems in terms of cells, molecules, energy, and heredity. Offered fall and spring semesters. Cr 3.

### **BIO 102 Biological Experiences**

Laboratory studies of the structure, function, and reproduction of cells and examination of representative animals and plants. Offered fall and spring semesters. Cr 1.

### **BIO 103 Biological Diversity**

The origin, evolution and diversity of life. Must be taken with BIO 104. Prerequisite: grade of "C" or higher in BIO 101. Cr 3.

### **BIO 104 Survey of Plants and Animals**

Comparative laboratory studies of structural and reproductive adaptations of organisms. Must be taken with BIO 103. Prerequisite: grade of "C" or higher in BIO 102. Cr 1.5.

### **BIO 111 Human Anatomy and Physiology**

The study of functional anatomy and physiology of the human. Prerequisite: grade of "C" or higher in BIO 101. Spring semester only. Cr 3.

### **BIO 112 Practical Human Anatomy and Physiology**

Laboratory studies of the structure and functions of the human body including histology and physiological experiments. Not open to those who have completed BIO 206. Prerequisite: grade of "C" or higher in BIO 102; BIO 111 or concurrent with BIO 111. Cr 1.5.

### **BIO 151 History of Biology**

A chronological survey of developments in biological investigations from earliest records to the present day. Prerequisite: grade of "C" or higher in BIO 101. Cr 3.

### **BIO 175 Animal Reproduction**

A comparative analysis of both asexual and sexual methods of reproduction. Intent of course is to place in perspective the variety of reproductive styles and behavior of this prime property of life. Prerequisite: grade of "C" or higher in BIO 101, or permission of instructor. Cr 3.

### **BIO 200 Human Heredity and Embryology**

This course presents the fundamental principles of genetics and embryology as they apply to humans. The influence of nutrition, drugs, viruses and physical agents on development will be discussed. Prerequisite: grade of "C" or higher in BIO 101. NOT open to students who have passed BIO 203. Cr 3.

### **BIO 201 Principles of Genetics**

A study of heredity through a discussion of the mechanism and control of gene action. Current research on the nature of mutations and the role of genes in development, behavior, and populations will be examined. Prerequisite: grade of "C" or higher in BIO 101. Fall semester. Cr 3.

### **BIO 202 Experimental Genetics**

Practical laboratory experience in techniques used in genetics. Prerequisite: BIO 201. Cr 2.

### **BIO 203 Comparative Vertebrate Embryology**

The embryonic origin and evolutionary relationships of vertebrate structure. Prerequisite: grade of "C" or higher in BIO 103. Spring semester. Cr 2.

### **BIO 204 Comparative Vertebrate Embryology**

**Laboratory**  
Laboratory experiments and observations on amphibian, chick, and mammalian embryos. Prerequisite: BIO 203 or concurrent with BIO 203. Spring semester. Cr 2.

### **BIO 205 Comparative Vertebrate Anatomy**

The structure, embryology and evolution of vertebrate organ systems. Prerequisite: grade "C" or higher in BIO 103, 104. Spring semester. Cr 2.

### **BIO 206 Comparative Vertebrate Anatomy**

**Laboratory**  
A comparison of the anatomy of vertebrates by dissection of adults and demonstration of embryological development. Prerequisites: BIO 104, BIO 205 or concurrent with BIO 205. Spring semester. Cr 2.

### **BIO 217 Evolution**

A study of the processes and evidences of organic evolution. Prerequisite: grade of "C" or higher in BIO 101. Cr 3.

### **BIO 220 Natural History of Lower Vertebrates**

The evolution, taxonomy, structure, and natural histories of fishes, amphibians, and reptiles, with major emphasis on the fauna of the Northeastern states. 2 hours of lecture and 4 hours of lab/week. Prerequisites: grade of "C" or higher in BIO 103, 104. Fall semester. Cr 4.

### **BIO 222 Natural History of Higher Vertebrates**

The evolution, taxonomy, structure, and natural histories of birds and mammals, with major emphasis on the fauna of the Northeastern states. 2 hours of lecture and 4 hours of lab/week. Prerequisites: grade "C" or higher in BIO 103, 104. Spring semester. Cr 4.

### **BIO 231 Botany**

A study of structure, function, development, reproduction, and environmental adaptations of representative non-vascular and vascular plants. Prerequisite: grade "C" or higher in BIO 101 and BIO 102. Cr 3.

### **BIO 232 Botany Laboratory**

Laboratory examination of topics discussed in BIO 231. Prerequisite: Concurrent with BIO 231. Cr 1.5.

### **BIO 241 Plant Physiology**

A study of the physiological activities of plants, and their growth and development as influenced by internal and external factors. Prerequisites: BIO 103, and BIO 104, one year of college chemistry or permission of the instructor. Cr 3.

### **BIO 242 Plant Physiology Laboratory**

Laboratory examination of phenomena in plant physiology. Prerequisite: concurrent with BIO 241. Cr 1.5.

### **BIO 281 Microbiology and Human Disease**

Fundamentals of microbiology with emphasis on infectious diseases of people, including bacteria, rickettsia, fungi, viruses, protozoa and helminths. Prerequisites: grade "C" or higher in BIO 101, and college chemistry. Cr 3.

**BIO 282 Microbiology and Human Disease Laboratory**  
Laboratory techniques in the cultivation, identifica-

tion and control of microorganisms. Prerequisites: BIO 281 or concurrently. Cr 2.

### **BIO 292 Ornithology**

The basic biology of birds: life histories, migration, behavior, and economic importance, with emphasis on species found in eastern North America. (Students supply their own binoculars or spotting scopes.) Prerequisite: grade "C" or higher in BIO 101. Spring semester only. Cr 3.

### **BIO 311 Microbiology**

A consideration of protozoa, fungi, bacteria, and viruses of medical and biological importance. Prerequisites: grade "C" or higher in BIO 101, one year of college chemistry. Cr 3.

### **BIO 312 Microbiological Laboratory**

The laboratory isolation and examination of microorganisms by various techniques. Prerequisites: grade of "C" or higher in BIO 102, BIO 311 or concurrent with BIO 311. Cr 2.

### **BIO 321 Histology**

A lecture and laboratory course in which the microscopic anatomy of animal tissues is studied. Slide preparation is not included. Two hours of lecture and 4 hours of lab. Prerequisites: grade of "C" or higher in BIO 101 and BIO 102. Cr 3.

### **BIO 331 Ecological Principles**

The interrelationships of living organisms and their environments, including man's impact on ecosystems. Prerequisite: grade of "C" or higher in BIO 103. Fall semester only. Cr 2.

### **BIO 332 Field Ecology**

Field and laboratory studies demonstrating basic concepts of ecology. (Numerous field trips.) Prerequisites: BIO 331 or concurrent with BIO 331. Cr 2.

### **BIO 335 Entomology**

Integrated lecture-laboratory course on the biology of insects and their impact on man. Prerequisite: grade of "C" or higher in BIO 103. Cr 3.

### **BIO 351 Invertebrate Zoology**

The morphology, physiology, and phylogenetic relationship of non-backboned animals. Prerequisite: grade of "C" or higher in BIO 101. Cr 2.

### **BIO 352 Survey of Invertebrates**

Laboratory experience on the anatomy, physiology, and behavior of invertebrate animals. Prerequisite: BIO 351, or concurrent with BIO 351. Cr 2.

### **BIO 361 Parasitology**

The life histories and host-parasite relationships of animal parasites, with emphasis on those of humans. Prerequisite: grade of "C" or higher in BIO 101. Cr 2.

### **BIO 362 Parasitological Laboratory**

The morphology and life cycles of parasitic protozoa, helminths, and arthropods. Prerequisite: BIO 361, or concurrent with BIO 361. Cr 2.

### **BIO 371 Fishery Biology**

A study of the principles, theories, and methods used in fishery biology; historic and contemporary fish culture practices, and environmental modifications affecting fishery resource production. Freshwater, estuarine, and marine fisheries will be considered.

Prerequisites: grade of "C" or higher in BIO 103, 104. Fall semester only. Cr 3.

### **BIO 372 Fishery Biology: Lab and Field**

Practical laboratory and field experiences of methods and techniques used in fishery biology. Prerequisites: BIO 371 or concurrent with BIO 371. Fall semester only. Cr 2.

### **BIO 381 Cell Biology**

Structure and function of cells in the cellular, sub-cellular and molecular levels. Prerequisites: grade of "C" or higher in BIO 101, 102; one year of college chemistry. Cr 3.

### **BIO 401 General Physiology**

A study of physiological processes and their regulation in animals. Prerequisites: grade of "C" or higher in BIO 101; one year of college chemistry; one semester of physics. Spring semester only. Cr 3.

### **BIO 402 General Physiology Laboratory**

Laboratory examination of physiological mechanisms in animals. Prerequisites: BIO 401 or concurrently. Cr 2.

### **BIO 407 Comparative Animal Behavior**

The physiological, genetic, evolutionary and environmental basis of behavior will be studied in invertebrates and vertebrates. Emphasis will be placed on the neurophysiological and hormonal controls of behavior. Prerequisites: grade of "C" or higher in BIO 101; BIO 201 or BIO 111. Fall semester of odd-numbered years. Cr 3.

### **BIO 415 Histochemistry**

A laboratory course offering practical experience in histological and histochemical techniques. Prerequisites: grade of "C" or higher in BIO 101, 102, CHEM 251. Cr 3.

### **BIO 421 Biology Seminar I**

Weekly oral reports and discussions by students and staff, on biological topics of current interest. Prerequisite: 16 hours of biology or permission of instructor. Cr 1.

### **BIO 431 Biology Seminar II**

A continuation of BIO 421. Prerequisite: 16 hours of biology or permission of instructor. Cr 1.

### **BIO 441 Problems in Biology**

Independent library or laboratory studies on a special topic, as mutually arranged by instructor and student. Prerequisite: by arrangement. Credit arranged.

### **BIO 451 Comparative Physiology**

Physiological and biochemical basis of environmental adaptation. Prerequisite: one year college biology with grade of "C" or higher, one year college chemistry, Junior standing. Cr 3.

### **BIO 452 Comparative Physiology Laboratory**

Laboratory experiments on the physiological basis of environmental adaptation. Prerequisite: BIO 451 or concurrently. Cr 2.

### **BIO 491 Biochemistry**

A lecture course in which the biological strategies for synthesis, energy utilization, information transfer, and control systems are examined at the molecular level. Prerequisites: CHEM 253 or permission of instructor. Cr 3.

# CHEMISTRY

Chairman of Chemistry Department: Alan G. Smith, 363-A Science Building, Portland.

Professors Hatala, Smith, Sottery, M. Whitten; Associate Professor Provencher;  
Laboratory Demonstrator Wigglesworth.

## PROGRAMS

The field of chemistry is concerned with the structure of matter and its transformation. The Department of Chemistry offers a four-year program leading to a Baccalaureate degree (either B.S. or B.A.) in Applied Chemistry. The principal objectives of this program are to provide students with (1) knowledge of both the theoretical and practical aspects of the science of chemistry and (2) the opportunity to explore a practical application of chemistry of their own choosing. Thus, students will be equipped upon graduation to enter a variety of occupations which require knowledge and practice of chemistry.

As a general rule, candidates for the B.S. degree in Applied Chemistry should complete the majority of their formal course work at the University by the end of the first three years of their studies. (Please see the sample schedules which are printed later in this section.) The fourth year in the B.S. program will consist mainly of intensive independent study and field experience in a specific application of chemistry. After a reasonable orientation period, the student will participate actively in the day-by-day operations of a laboratory (or alternative facility) as a functioning member of the staff. Supervision of the Applied Chemistry major during this period will be provided by a suitably qualified staff member of the host facility and by a member of the chemistry faculty, who will also supervise the independent study. Students will thus learn the practical techniques at first hand, and will gain experience in approaches to the solution of real problems.

The curriculum for Applied Chemistry majors is designed to teach both practice and theory, rather than just theory, as is usual for those programs whose only immediate interest is the preparation of students for graduate study.

Elective and required courses in computer science and mathematics are intended to develop understanding of the applications of computers to such operations as the statistical analysis of laboratory data and the interfacing of mini-computers to laboratory instrumentation. Students who are interested in the Applied Chemistry major program are urged to consult with a member of the chemistry faculty to discuss the various options. Those who plan a career in an applied field of chemistry are advised to consider the B.S. option. In this program, they will have the opportunity for field experience with a practical application of chemistry. Students who prefer to retain a wider range of career options, especially in other disciplines which make extensive use of applications of chemistry, should consider the B.A. option. This program allows students to explore a somewhat broader set of elective courses. Even greater flexibility is afforded by the Self-Designed and Liberal Studies Major programs which

are administered by the office of the Dean of Arts and Sciences. It is the intention of the chemistry faculty to prepare graduates of the Applied Chemistry program for productive effort in a society in which chemistry plays a vital role.

Students who apply for admission to the Applied Chemistry program are required to have completed college preparatory courses in chemistry, physics, and mathematics. At least two years of high school algebra and a semester each of geometry and trigonometry are recommended as part of the students' high school program. (Freshmen in the applied chemistry program who lack this preparation in mathematics are required to take MS 140, pre-calculus mathematics.) To be retained in the Applied Chemistry program, a student must maintain a minimum overall grade average (GPA) of 2.0; a GPA of 2.5 in required nonchemistry courses; and a GPA of 3.0 in required chemistry courses. Applied Chemistry majors who are candidates for the B.S. degree are required to complete the following courses:

CHEM 113 & 114, 115 (or 215) & 116; 231 & 232; 251 & 252; 253 & 254 (or 255 & 256); 321 & 322; 371 & 372; 400(\*).  
GEE 101  
MS 152  
PHYS 121, 122

\*Candidates for the B.A. degree are not required to take the CHEM 400 series independent study.

In addition, all applied chemistry majors will be required either to demonstrate proficiency in technical writing or to pass satisfactorily a one-credit course in the topic. Students interested in the Applied Chemistry program are urged to consult the chairman of the Department of Chemistry for additional information.

## OPPORTUNITIES

Among the industrial positions for which a B.S. in chemistry is appropriate are research and development, process control, technical sales and management training. Industries in such fields as drugs, electronics, plastics, petroleum, paper and metals require chemists.

Teaching in elementary and high schools is an extremely valuable calling for which a university degree is essential.

For one who has initiative and imagination but also patience, caution, and meticulous accuracy, a vast new realm governed by laws as yet undiscovered waits to be explored. Research is a challenging field and laboratories devoted to it are found throughout the country,

in universities, in private or public research institutes or foundations and in industry. While the discoveries resulting from fundamental research may, and probably will, find practical application, the driving energy that actuates the research chemist is love of chemistry for its own sake. For some forms of research or for university teaching, graduate degrees are important (M.S. or Ph.D.).

A degree in chemistry provides excellent preparation for dentistry or medicine, and may provide a powerful combination with business, law (patents), writing and library work (for technical journals and libraries) and languages (for translating).

## PERSONAL QUALIFICATIONS

A chemist must be objective and capable of self-discipline in accepting results of experiments with complete honesty of observation, thought, and judgment. However, your interest, dedication, and enthusiasm in pursuing chemistry for its own sake are required if you are to do well in your courses and succeed in your vocation.

## WHAT DO CHEMISTS STUDY?

What is produced when two substances are brought into contact in a reaction vessel? What forces hold the invisible atoms together? What are the shapes of the molecules of reactants and products? Is shape important? Is energy released or consumed during the reaction? How much?

These are a few of the kinds of questions asked by chemists. The methods for obtaining answers to these questions and some of the answers are dealt with in the chemistry courses which prepare a student for a career in chemistry. Many of the questions have not yet been adequately answered. Therein lies part of the excitement of chemistry. The subject, just like all branches of science, is open-ended and leaves scope for discovery, curiosity, and imagination.

## SCOPE

It is apparent from the diversity of questions that chemists ask that there are many aspects to the subject — synthesis, analysis, energetics, rate of reaction, mechanism, structure, instrumentation, theory-application. Because it is not possible for a person to be thoroughly knowledgeable in all branches of chemistry, it is convenient (though artificial) to divide chemistry along the following lines.

## ANALYTICAL

In all branches of science and technology it is essential to know the amounts of each element in the sample. The responsibilities of the Analytical Chemist include devising methods of analysis and developing automated procedures.

## INORGANIC

Inorganic materials have skyrocketed into industrial importance with the development of solid state physics (such as for transistors and similar electronic devices) and space research. Inorganic Chemists observe chemical properties of elements and compounds, relate these properties to sizes, shapes, and structures of molecules and to forces holding them together, and synthesize

compounds with desired properties on the basis of this knowledge.

## ORGANIC

New organic substances — synthetic rubbers, plastics, textiles, drugs, hormones, dyes, insecticides, etc. — have appeared in every home, community, and industry. Thousands of new compounds are invented by Organic Chemists every year, and the properties of these compounds are studied.

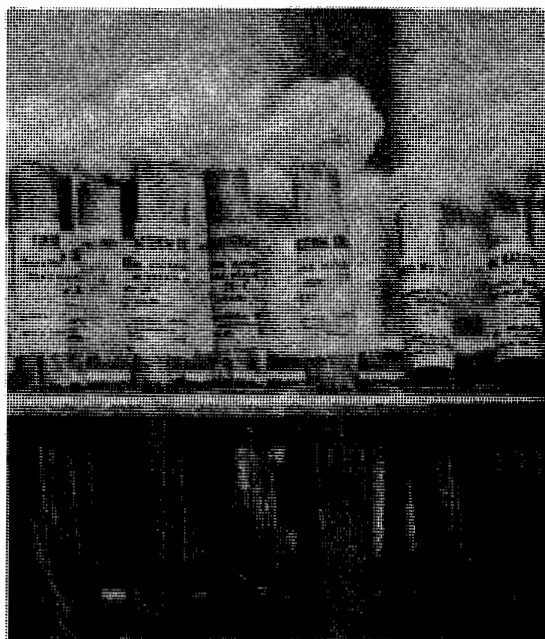
## BIOCHEMISTRY

Biochemists strive for a greater understanding of the chemical processes occurring in humans, animals, and plants. Their activities include preparing and testing drugs and hormones, investigating the chemical basis of mental and physical illness, and studying the role of substances such as enzymes, DNA, RNA, and chlorophyll in life processes.

## PHYSICAL

Physical Chemists like to discover mathematical equations to describe quantitatively how substances behave in different situations. For example, the behavior of electrons which bind atoms together or the conductance of electricity by ions in solution can be explored both experimentally and theoretically. Spectroscopy, thermodynamics, catalysis and high-speed reactions are but some of their interests.

Today more than ever before the traditional divisions (as enumerated above) are less distinct and the interdisciplinary areas of science have become very exciting. The molecular basis for life involves chemistry, biology, and physics. Nuclear chemistry and physics, geochemistry, the physics and chemistry of solids and the mathematical treatment of the forces that hold atoms together are areas where it is clearly difficult to distinguish between different branches of science and **mathematics.**



## SAMPLE SCHEDULE

### 1. For a Bachelor of Science degree in Applied Chemistry

FALL		SPRING	
<b>FRESHMAN YEAR</b>			
CHEM 113, 114 (Qual. Principles I)	5	CHEM 115, 116 (Qual. Principles II)	5
PHYS 121 (General Physics)(G)	5	PHYS 122 (General Physics)(G)	5
*MS 152 (Calculus A)	4	ENG 100 or 120 (G)(S)	3
CS 160 (Intro. Computer Programming) or MS 120 (Intro. to Statistics)	3	ELECTIVE	<u>3</u>
	<u>17</u>		16
<b>SOPHOMORE YEAR</b>			
CHEM 251, 252 (Organic Chem. I)	5.5	CHEM 215 (S)	3
CHEM 231, 232 (Analytical Chem.)	6	CHEM 253, 254 (Organic Chem. II) or 255, 256 (Structural Chem.)	5.5
GEE 101 (Engineering Design I)	2	MS 153 (Calculus B)(S)	4
ELECTIVE	2-3	GEE 102 (Engineering Design II)(S)	2
	<u>15.5-16.5</u>	ELECTIVES	<u>0-2</u>
			14.5-16.5
<b>JUNIOR YEAR</b>			
CHEM 371, 372 (Physical Chemistry)	5.5	CHEM 321, 322 (Inorg. Chemistry) or CHEM 361, 362 (Biochem.)	5.5
ELECTIVES	9-10	ELECTIVES	10
	<u>14.5-15.5</u>		<u>15.5</u>
<b>SENIOR YEAR</b>			
INDEPENDENT STUDY (one or two semesters)	15		
ELECTIVES	<u>10-12</u>		
	25-27		

#### MINIMUM TOTAL HOURS FOR GRADUATION 120

\*MS 152 is a pre- or corequisite for PHYS 121, and for CHEM 215. Students lacking the necessary background for MS 152 (i.e., two years of high school algebra plus geometry and trigonometry) should plan to enroll in MS 140, Precalculus Mathematics, 3 credits, and defer PHYS 121, 122 until their sophomore year.

(G): Course fulfills a General Education requirement

(S): Course suggested for chemistry majors

## SAMPLE SCHEDULE

### 2. For a Bachelor of Arts degree in Applied Chemistry

FALL		SPRING	
<b>FRESHMAN YEAR</b>			
CHEM 113, 114 (Qual. Principles I)	5	CHEM 115, 116 (Qual. Principles II)	5
GEE 101 (Engineering Design I)	2	*MS 152 (Calculus A)	4
CS 160 (Intro. Computer Programming) or MS 120 (Intro. to Statistics)	3	GEE 102 (Engineering Design II)(S)	2
ENG 100 or 120 (G)(S)	3	ELECTIVES	4-5
ELECTIVE	3		<u>15-16</u>
	<u>16</u>		
<b>SOPHOMORE YEAR</b>			
CHEM 251, 252 (Organic Chem. I)	5.5	CHEM 215 (Quant. Principles)(S)	3
PHYS 121 (General Physics)(G)	5	CHEM 253, 254 (Org. Chem. II) or 255, 256 (Structural Chem.)	5.5
CHEM 231, 232 (Analytical Chem.)	5	PHYS 122 (General Physics)(G)	5
	<u>15.5</u>	ELECTIVES	<u>3</u>
			16.5

**JUNIOR YEAR**

MS 153 (Calculus B)(S)	5	†CHEM 321, 322 (Inorganic Chem.)	5.5
†CHEM 371, 372 (Physical Chem.)	5.5	or CHEM 361, 362 (Biochem.)	
ELECTIVES	5-6	ELECTIVES	10-11
	15.5-16.5		15.5-16.5

**SENIOR YEAR  
ELECTIVES**

15-16	ELECTIVES	15-16
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**MINIMUM TOTAL HOURS FOR GRADUATION 120**

\*MS 152 is a pre- or corequisite for PHYS 121 and CHEM 215. Students lacking the necessary background for MS 152 (i.e., two years of high school algebra plus geometry and trigonometry) should plan to enroll in MS 140, Precalculus Mathematics, 3 credits, in the fall semester of their freshman year.

†May be postponed until the senior year.

(G): Course fulfills a General Education Requirement

(S): Course suggested for chemistry majors

**COURSES IN CHEMISTRY****CHEM 010 Prerequisites for College Chemistry**

This is a remedial, non-credit course, designed to aid students who do not have an adequate background for CHEM 113 because they have never had high school chemistry. This course will provide an introduction to: definitions of terms and empirical and molecular formulas, chemical equations, gases and kinetic theory, atomic structure, bonding, oxidation-state and rules of nomenclature. In addition, a portion of the course will be devoted to a review of the basic mathematical techniques needed for freshman chemistry. Since CHEM 113 is offered in the fall semester, a student who completes CHEM 010 in the summer would be able to start freshman chemistry work the following fall. This course has no prerequisites and carries no college credit. Offered each summer. Cr 0.

**CHEM 101 Chemistry for Health Sciences**

Smith or Whitten

A presentation of those general topics in chemistry which are pertinent to students in health-related areas. Included are introductory units on matter and its properties; measurement; elements and compounds; atomic structure; solutions, dispersions, and water; osmotic pressure; chemical bonds; chemical nomenclature; stoichiometry; radiochemistry; gases; acids, bases and buffers; and energy relationships in chemical processes. Two lectures and one recitation per week (usually concurrent with CHEM 102). Offered each fall semester. Not appropriate for applied chemistry or biology majors. Cr 3.

**CHEM 102 Introduction to Laboratory Measurement**  
Wigglesworth or Whitten or Smith

Experiments will be designed to teach students how to perform accurate and reliable measurements using the major parameters of mass and volume. Topics to be covered include: physical and chemical changes; separation of a mixture; analysis of an ionic solution; properties of water; gases; acids, bases and buffers; titration. One recitation and two laboratory hours per week. Offered each fall semester. Corequisite: CHEM 101. Not appropriate for applied chemistry or biology majors. Cr 1.

**Chem 103 Introduction to Organic and Biochemistry**  
Smith or Whitten

Stress will be placed upon those aspects of the subject matter which are of special importance for students of the health sciences. Topics to be covered include: nomenclature of organic compounds; electron distribution in organic molecules; structural features of organic molecules; substitution, elimination, and addition reactions; oxidation-reduction reactions; carbohydrates; lipids; proteins and amino acids; enzymes; nucleic acids; metabolism; summary of some aspects of nutrition; pharmaceuticals; medical applications of radiochemistry. Two lectures and one recitation period per week (usually concurrent with CHEM 104). Offered each spring semester. Prerequisite: CHEM 101. Not appropriate for applied chemistry or biology majors. Cr 3.

**CHEM 104 Introductory Organic and Biochemistry**

Laboratory

Wigglesworth or Whitten or Smith  
Students will perform experiments intended to illustrate those aspects of organic chemistry of importance to living systems, as well as elementary principles of biochemistry. Topics to be included comprise the separation and identification of organic compounds; qualitative reactions of lipids, proteins, and nucleic acids; introduction to enzyme chemistry. One recitation and two laboratory hours per week. Offered each spring semester. Corequisite: CHEM 103. Not appropriate for applied chemistry or biology majors. Cr 1.

**CHEM 107 Chemistry for Technology**

Whitten

A one-semester course intended to illustrate the connections between chemical theory and practical problems in the Industrial Arts. Two hours of lecture and one two-hour laboratory per week. Offered spring semester only. Not suitable for chemistry majors. Cr 3.

**CHEM 109 General Chemistry I**

Whitten

A study of selected fundamental concepts and theories of chemistry: atomic structure, periodic classification, electronic structure, chemical bonding, molecular

structure, chemical reactions, chemical equations and quantitative relations, gases, kinetic theory, changes of state, solutions, acids and bases are discussed. Three lectures per week. No prerequisites. Cr 3.

#### **CHEM 110 General Chemistry I Laboratory**

Whitten

Study in the laboratory of experiments selected to illustrate the material presented in CHEM 109 lectures. One hour of recitation and two hours of laboratory per week. Corequisite: CHEM 109. Cr 2.

#### **CHEM 111 General Chemistry II**

Whitten

A continuance of CHEM 109. Topics include thermochemistry, nuclear chemistry, selected materials in metallurgy, organic compounds, selected biological compounds, and synthetic materials. Three lectures per week. Prerequisite: CHEM 109 or permission of the instructor. Cr 3.

#### **CHEM 112 General Chemistry II Laboratory**

Whitten

Study in the laboratory of experiments selected to illustrate the material presented in CHEM 111 lectures. One hour of recitation and two hours of laboratory per week. Corequisite: CHEM 111. Cr 2.

#### **CHEM 113 Qualitative Principles of Chemistry I**

Sottery or Whitten

A presentation of selected fundamental principles of chemical science. These principles will be presented in qualitative terms and illustrated by concrete examples of their applications in working laboratories and in ordinary non-laboratory experience. This course and CHEM 114 (normally taken concurrently) provide the basis for courses involving further applications of chemistry for all students except those in health sciences. Three lectures per week. Cr 3.

#### **CHEM 114 Qualitative Laboratory Techniques I**

Whitten or Wigglesworth or Sottery

A study in the laboratory of experiments specifically designed to illustrate the principles which are presented in CHEM 113 lectures. One recitation and two laboratory hours per week. Corequisite: CHEM 113. Cr 2.

#### **CHEM 115 Qualitative Principles of Chemistry II**

Sottery or Whitten

A presentation of topics of chemistry additional to those presented in CHEM 113. This course is designed to provide a solid foundation for all further studies in chemistry and is a prerequisite for all upper level chemistry courses.\* Prerequisite: grade of C or better in CHEM 113. Cr 3.

\*Students who achieve a grade of A or B in CHEM 113 may, with instructor's permission, elect CHEM 215 in place of CHEM 115.

#### **CHEM 116 Qualitative Laboratory Techniques II**

Whitten or Wigglesworth or Sottery

A study in the laboratory of experiments designed to illustrate the principles presented in CHEM 115 lectures. One recitation and two laboratory hours per week. Prerequisite: grade of C or better in CHEM 114. Corequisite: CHEM 115 or CHEM 215. Cr 2.

#### **CHEM 140 Energy, Man and Environment**

Sottery

This course presents a study of man's energy needs, and the alternative energy sources available. In addition,

the impact on the environment of the utilization of various energy sources will be considered. No prerequisite. Offered each semester. Cr 3.

#### **CHEM 141 Environmental Chemistry**

Whitten

The role of chemistry and the chemical industry in creating many environmental problems; the application of chemistry to aid in the solution of environmental problems. Prerequisite: one semester of an introductory college-level chemistry course or one year of high school chemistry completed within the last three years. Cr 3.

#### **CHEM 215 Quantitative Principles of Chemistry**

Sottery

A quantitative presentation of selected chemical principles introduced in CHEM 113 and 115. Problem solving by dimensional analysis is stressed. Techniques are introduced for determining the uncertainty of computational results based on the precision of the data. This course may be elected by applied chemistry majors, and by others who plan to enroll in CHEM 371 (Physical Chemistry). Prerequisite: a grade of C or better in CHEM 115.\* Corequisite: MS 152 or equivalent. Three recitations per week.

\*Students who receive a grade of A or B in CHEM 113 may, with instructor's permission, elect CHEM 215 instead of CHEM 115. Cr 3.

#### **CHEM 231 Fundamentals of Analytical Chemistry**

Provencher

A survey of modern analytical principles and instrumental techniques with emphasis on environmental, clinical, and industrial applications. Two lectures per week. Prerequisite: a grade of C or better in CHEM 115 or CHEM 215. Offered each fall semester. Cr 2.

#### **CHEM 232 Basic Laboratory Techniques of Analytical Chemistry**

Provencher

Quantitative experimental determination by means of gravimetric, volumetric, and instrumental methods. Classical procedures and modern instrumentation, including mass, optical, and particle resonance spectrometry, spectrophotometry, electroanalysis and chromatography. One recitation and six laboratory hours per week. Prerequisite: a grade of C or better in CHEM 116. Corequisite: CHEM 231. Offered each fall semester. Cr 4.

#### **CHEM 251 Fundamentals of Organic Chemistry**

Smith

An intensive treatment of the subject within the framework of the headings: nomenclature; structure and stereochemistry; reaction types: substitution, addition, elimination and oxidation-reduction; reaction mechanisms and factors influencing them; spectroscopic techniques of structure determination (mass, nuclear magnetic resonance, ultraviolet-visible and infrared). One recitation and two lecture hours per week. Prerequisite: a grade of C or better in CHEM 115 or 215. Offered each fall semester. Cr 3.

#### **CHEM 252 Basic Laboratory Techniques of Organic**

Chemistry

Smith

Experiments will be performed to illustrate the basic laboratory skills of crystallisation, extraction, distillation, and melting and boiling point determinations. The preparation and isolation of compounds by the

Friedel-Crafts and Grignard reactions will be performed. The latter part of the semester will comprise an introduction to organic qualitative analysis. One recitation and three laboratory hours per week. Offered each fall semester. Prerequisite: a grade of C or better in CHEM 116. Prerequisite or corequisite: CHEM 251. Cr 2.5.

#### **CHEM 253 Organic Chemistry II**

Smith

A continuation of CHEM 251, but with a more extensive (and intensive) investigation of the principal categories of organic reactions. Extensive problem-solving in such areas as structure determination, spectroscopy, and stereochemistry. The structures and fundamental chemical reactions of lipids, carbohydrates, proteins and nucleic acids will be presented. Three lectures per week. Offered each spring semester. Prerequisite: a grade of C or better in CHEM 251. Cr 3.

#### **CHEM 254 Organic Chemistry Laboratory II**

Smith

A continuation of the experiments begun in CHEM 252 on organic qualitative analysis, including solubility tests, classification tests, and preparation of derivatives. Interpretation of spectra will be introduced to assist in the process of identification of unknowns. One recitation and three laboratory hours per week. Offered each spring semester. Prerequisite: a grade of C or better in CHEM 252. Prerequisite or corequisite: CHEM 253. Cr 2.5.

#### **CHEM 255 Structural Chemistry**

Provencher

A general consideration of the importance of stereochemistry and molecular geometry in chemical reactions. Introductory group theory will be presented, with specific applications of the symmetry properties of both organic and inorganic species. The applications of such techniques as spectroscopy and optical rotary dispersion to the elucidation of steric relationships will be presented. Four lectures per week. Prerequisites: MS 140 and a grade of C or better in CHEM 251. Cr 4.

#### **CHEM 256 Structural Chemistry Laboratory**

Provencher

Elucidation of molecular structure by means of spectroscopic analysis. Mixtures of compounds of industrial, clinical or environmental importance will be separated chromatographically and subjected to spectroscopic techniques including flame emission, ultraviolet and infrared absorption spectroscopy. One recitation and three laboratory hours per week. Prerequisite: a grade of C or better in CHEM 232 and 252. Prerequisite or corequisite: CHEM 255. Cr 2.5.

#### **CHEM 321 Fundamentals of Inorganic Chemistry**

Provencher

Descriptive chemistry of the inorganic compounds, structure, bonding and ligand field theory. Three lectures per week. Prerequisite: grade of C or better in CHEM 231, 215 & 255. Not offered every year. Cr 3.

#### **CHEM 322 Basic Laboratory Techniques of Inorganic Chemistry**

Provencher

Preparation and characterization of inorganic compounds. Particular emphasis on those techniques employed in industry, research and quality control laboratories. One recitation and three laboratory hours per

week. Prerequisite: a grade of C or better in CHEM 232 & 256. Prerequisite or corequisite: CHEM 321. Not offered every year. Cr 2.5.

#### **CHEM 361 Fundamentals of Biochemistry**

Staff

A consideration of the structure, function, and transformations of the principal compounds of biological importance, and of the applications of chemical principles to these studies. Three lectures per week. Offered in the fall semester. Prerequisite: grade of C or better in CHEM 253. Cr 3.

#### **CHEM 362 Basic Laboratory Techniques of Biochemistry**

Staff

(This course will be offered upon completion of appropriate laboratory space.) Experiments will be performed to illustrate some of the material presented in CHEM 361. Offered in the fall semester. One recitation and three laboratory hours per week. Prerequisite or corequisite: CHEM 361. Cr 2.5.

#### **CHEM 371 Fundamental Principles of Physical Chemistry**

Provencher or Sottery

This course is designed to introduce majors in applied chemistry to the principles of theoretical chemistry: classical and statistical thermodynamics, molecular energetics, quantum phenomena and equilibrium. Candidates for the B.S. degree elect this course in the fall semester of the junior year. (B.A. candidates may postpone until the senior year.) Three recitations per week. Prerequisites: grade of C or better in CHEM 231 and MS 152. Offered each fall semester. Cr 3.

#### **CHEM 372 Physical Chemistry Laboratory**

Provencher or Sottery

Experiments illustrative of theoretical principles pertinent to chemical processes, such as thermochemistry, absorption phenomena, electrochemistry and physical properties of gases. One recitation and three laboratory hours per week. Prerequisite: grade of C or better in CHEM 232. Prerequisite or corequisite: CHEM 371. Offered each fall semester. Cr 2.5.

#### **CHEM 373 Physical Chemistry II**

Provencher or Sottery

This course is designed to present additional principles of theoretical chemistry (to those considered in CHEM 371) to majors in the applied chemistry program. The colloidal state, macromolecules, crystallinity reaction time, and the chemistry of surfaces and interfaces will be emphasized. Three recitations per week. Prerequisite: a grade of C or better in CHEM 371. Offered each spring semester. Cr 3.

#### **CHEM 375 Chemical Dynamics**

Provencher

Lecture topics include: measurement of reaction rates, elementary gas phase reactions, reactions in solution, in the solid state, and on surfaces, homogeneous catalysis, and reaction mechanisms. Three lectures per week. Offered in alternate years. Prerequisite: a grade of C or better in CHEM 371. Cr 3.

#### **CHEM 376 Chemical Dynamics Laboratory**

Provencher

Experiments will be performed in: solution kinetics (clock reactions), stopped-flow reactions, absorption on



solid surfaces, gas phase thermal decomposition, discharge flow-reactor studies, flash photolysis, single photon counting, and fluorescence quenching. Must be taken concurrently with CHEM 375. One hour of prelab recitation and three laboratory hours per week.

Cr 2.5.

#### **CHEM 377 Spectroscopy**

Provencher

The course topics will include a brief survey of quantum mechanics, introduction to atomic spectra, molecular spectroscopy, absorption, emission and luminescence spectroscopy, with descriptions of instrumentation, techniques, and spectral interpretation. Three lectures per week. Offered on an alternate-year basis with CHEM 375 and 376. Corequisite: CHEM 378. Prerequisite: a grade of C or better in CHEM 371. Cr 3.

#### **CHEM 378 Spectroscopy Laboratory**

Provencher

Experiments will be performed in low resolution ultraviolet and infrared absorption spectroscopy, flame and plasma spectroscopy, resonance fluorescence spectroscopy, atomic absorption and time-resolved spectroscopy. Must be taken concurrently with CHEM 377. Prerequisite: a grade of C or better in CHEM 371. One hour of prelab recitation and three laboratory hours per week. Offered at the same time as CHEM 377.

Cr 2.5.

#### **CHEM 400-498 Independent Study**

Independent study required of all B.S. majors in applied chemistry. An intensive exposure to a selected area of applied chemistry through an internship served in an appropriate clinical, industrial, government or research facility. The site and problem are to be selected by the student in conference with a faculty advisory committee and a representative of the training facility. Offered fall, spring and summer. Cr 1-15.

#### **PSCI 310 History of Science**

Whitten

A comprehensive survey of the historical development of science from earliest records to the present. Attention is given to the nature of science, methods of scientific discovery, the interrelations of science and technology, and the implications of science for society. Emphasis is on the physical sciences. Prerequisite: two years (minimum of 12 credit hours) of college science. Offered spring semester only. Cr 3.

#### **PSCI 400 Science and Society**

Sottery

Readings and discussions concerning the relationships between science and society. The tactics and strategy of science and the philosophical and social implications

of present scientific theories are considered with the aim of promoting understanding of the role of science in modern life. The interactions between scientists and society and the relationship between research and technology are also examined. Not offered every year. Senior students and others by instructor's permission.

Cr 3.

#### **PSCI 501 History of Science**

Whitten

A study of the historical development of the sciences from earliest records to the mid-twentieth century. The methods of scientific discovery; the role of controversy, institutions, and governments; the interrelationships of science and technology; and the interaction of science and society are examined. Prerequisite: undergraduate major or minor in science, others by permission of the instructor. Cr 3.

#### **CHEM 511, 512, 513 Modern Topics in Chemistry**

Sottery

These courses are designed to provide teachers of chemistry, physics and other sciences with new ideas for presentation and explanation of chemical topics including but not limited to: Thermodynamics, Energetics, Kinetics, Orbital Theory, and States of Matter. (The topics for presentation are selected according to the express wishes of each class.) The use of demonstration techniques and visual aids will be emphasized. Prerequisite: a year of college chemistry. Offered during summer session with a frequency determined by demand. Cr 3.

#### **CHEM 518 History of Chemistry**

Whitten

A study of the history of chemistry which examines the development of the theories and the applications of the science. Consideration is also given to the interrelationship of advances in chemistry with advances in other sciences. The course provides an opportunity to integrate one's knowledge of chemistry. Prerequisite: 1) undergraduate major or minor in chemistry or 2) high school chemistry teacher. Others by permission of the instructor. Not offered every year. Cr 3.

#### **CHEM 531 Instrumentation in General Chemistry**

Provencher

This course will deal with the design, construction, and operation of instruments useful and pertinent to general chemistry laboratories: fluorescence, absorption spectroscopy, gas chromatography, stopped-flow kinetics, strain gauge manometry and other techniques which can be demonstrated with relatively inexpensive and available components. Three lecture hours per week. Offered during summer session only. Cr 3.

# COMMUNICATION

Chairman of Communication Department: Leonard Shedletsky, 3 Washburn Avenue, Portland.  
Assistant Professors Henderson, Kivatsky, Sereno, Shedletsky.

The development of communication understanding and skills, like communication itself, is a continual process. The study of communication involves the examination and exploration of processes by which verbal and/or nonverbal information is transmitted from one information processing system to another, the physical and social-psychological factors which affect the transmission and reception of the messages, and the consequences of feedback on the systems. The systems could be individuals, groups, organizations, societies, cultures, or cybernetic mechanisms.

such as words and behaviors are transmitted and processed by the participants. Machine-based communication focuses on the transmission and processing of electronic data. At this time, the Department of Communication emphasizes the study of human transactions in its coursework. However, students may focus their degree programs on other areas of communication theory by supporting their program with courses from appropriate departments, schools, or colleges within the University.

In order to understand the interdependency of human communication, majors take courses in such departments as Anthropology, Philosophy, Sociology, Psychology, English, and Political Science. The Communication Internship Program allows majors to study a particular aspect of communication in the field. That is, applying knowledge acquired in the classroom in a practical setting. Since communication is essential to most forms of human endeavor, communication majors may prepare for employment or further study in such fields as education, government, business, law, health care, and the media.

Students desiring a Bachelor of Arts degree in Communication will be required to complete a total of forty-five credit hours. All students are reminded that, in addition to meeting departmental requirements for a major, they must also meet the University's General Education Requirements.

Communication majors will examine the different levels of communication analysis by completing the following courses:

COM 102 Introduction to Communication  
COM 171 Interpersonal Communication  
COM 290 Small Group Communication  
COM 390 Organizational Communication  
COM 490 Theories of Mass Communication

In addition, 15 credit hours must be selected from other departmental course offerings. These courses include the following:

COM 100 Research  
COM 150 Business Communication  
COM 190 Media and Children  
COM 272 Persuasion  
COM 280 Mass Media and Human Interaction  
COM 310 Nonverbal Communication  
COM 320 Intercultural Communication  
COM 420 Communication and Cognition  
COM 430 Communication Internship  
COM 491 Independent Study

Fifteen additional credit hours of coursework should be selected from departments which support the students' goals, and these must be approved by their advisors. Listed below are some examples of possible supportive coursework found in other departments within the College of Arts and Sciences. These courses have been categorized according to the eight divisions of the International Communication Association.

## DIVISION I INFORMATION SYSTEMS

CS 160 Computer Programming I  
CS 260 Computer Programming II  
PSY 360 Cognition Processes  
PLY 291 Philosophy of Language  
ANY 382 Introduction to Linguistics

## DIVISION II INTERPERSONAL COMMUNICATION

PLY 102 Introduction to Philosophy:  
The Quest for Certainty  
PLY 103 Introduction to Philosophy:  
Human Alienation  
PSY 320 Psychology of Personality  
PSY 330 Social Psychology  
PSY 360 Cognitive Processes

## DIVISION III MASS COMMUNICATION

SOC 310 Social Change  
ANY 101 Anthropology  
PSY 330 Social Psychology  
POL 258 Public Opinion  
SOC 353 Collective Behavior and  
Social Movements

## DIVISION IV ORGANIZATIONAL COMMUNICATION

BUS 340 Principles of Management  
SOC 315 Personality and Social Systems  
BUS 452 Dynamics of Organization and Behavior  
POL 253 Systems Analysis  
SOC 357 Bureaucracy in Modern Society

**DIVISION V  
INTERCULTURAL COMMUNICATION**

ANY	210	Culture Theory
SOC	371	Race and Culture Conflict
POL	104	Introduction to International Relations
POL	274	Current International Problems
POL	388	International Organization

**DIVISION VI  
POLITICAL COMMUNICATION**

POL	102	People and Politics
POL	257	Political Parties
POL	292	American Political Thought
PLY	240	Political Philosophy
SOC	355	Social Structure and Politics

**DIVISION VII  
INSTRUCTIONAL COMMUNICATION**

PSY	351	Psychology of Motivation
PSY	360	Cognitive Processes
PLY	102	Introduction to Philosophy: The Quest for Certainty
PLY	104	Introduction to Philosophy: Ways of Knowing
SOC	331	Sociology of Education

**DIVISION VIII  
HEALTH COMMUNICATION**

SWE	266	Concept of Self and the Handicapped Person
SWE	350	Social Problems and Social Welfare Policy
SWE	370	Human Development and Social Welfare
SOC	333	Sociology of Medicine
SOC	374	Sociology of Mental Health and Mental Illness

Those students who wish to enter graduate school will be advised, in addition to the above requirements, to take a sequence of research courses.

**COURSE DESCRIPTIONS**

**COM 100 Research**

A lecture course designed to acquaint students with the sources and methods of scholarly research. Course will provide students with basic knowledge to carry out projects in secondary and primary research, from conception to execution. Research project required.

**COM 102 Introduction to Communication**

Cr 3.

A lecture-discussion course designed to provide students with a conceptual framework of the basic elements of communication. Topics discussed will include communication theory, self-concept, language and perception, small group communication, and nonverbal behavior.

Cr 3.

**COM 150 Business Communication**

A lecture-discussion course in business communication, emphasizing industrial, managerial, and labor communication. Investigation of theory, models, nets, barriers to communication, and other topics, including basic methods and techniques of internal business communication.

Cr 3.

**COM 171 Interpersonal Communication**

A discussion-activities course designed to acquaint the student with the elements of interpersonal communication, its basic nature and function. The course involves a study of the potential of human communication; with applications to the problems of misunderstanding and their remedy.

Cr 3.

**COM 190 Media and Children**

This course will examine media designed for the child audience. The class will view the wide spectrum of children's media, and critically examine them in terms of their potential prosocial and antisocial effects. The readings and discussions will cover various theories and research models that address themselves to the impact of media on the young audience.

Cr 3.

**COM 272 Persuasion**

A lecture-discussion course focusing on the influencing of human persuasion as a means of defense against the multitude of persuasive messages to which a member of contemporary American society is subjected. This course will investigate such topics as the ethics of persuasion, attitudes, beliefs, values, and the persuasive impact of motivational appeals and other psychological factors.

Cr 3.

**COM 280 Mass Media and Human Interaction**

Mass Media and Human Interaction concentrates on the history and effects of mass communication in our society. Through readings and independent research, the student will explore the content and social consequences of our rapidly changing telecommunication technology. Media to be discussed include print, broadcasting, and cable.

Cr 3.

**COM 290 Small Group Communication**

A discussion-participation course designed to familiarize students with the theories and techniques of small-group communication. Students will examine role behavior, group norms, conflict, group development, problem solving, communication flow, and other relevant variables in actual small-group interactions.

Cr 3.

**COM 310 Nonverbal Communication**

A study of the effects of nonverbal factors on the process of human communication. Proxemics, body motion, paralanguage, metacommunication, and other specific areas of nonverbal behavior will be explored and examined. Each student will be required to either conduct a research project or prepare a scholarly paper related to a particular area of nonverbal communication. Prerequisite: COM 102 or permission of the instructor.

Cr 3.

**COM 320 Intercultural Communication**

A study of communication as an agent of cooperation/conflict between cultures, such as between nations, races, and societies. Focus is upon institutional agencies, such as the U.N., and upon simulations of intercultural communication, such as R. B. Fuller's *World Game*, the *Geophysical Year*, and others. Appropriate consideration is given to intercultural communication, such as cultural exchanges, diplomacy, performing groups, lecturers, consultants and similar cross-cultural relationships.

Cr 3.

**COM 390 Organizational Communication**

A lecture-discussion course with a practical field study required. The class will examine factors relevant to communication within organizations and will discuss

such topics as organizational roles, information flow, decisionmaking, leadership, and the nature of organizational change. Prerequisite: COM 290 or permission of the instructor. Cr 3.

**COM 420 Communication and Cognition**

A lecture-discussion course designed to explore the relationships and interactions of communication and thinking. Emphasis is upon rationality as it may be influenced by language. Discussion topics include language acquisition, the Whorfian hypothesis, grammatical structures, and cultural influences upon communication and cognition. Prerequisites: junior, senior or permission. Cr 3.

**COM 430 Communication Internship**

An in-depth study of and experiences in specific areas of communication conducted in the field. Students will focus their efforts in an area related to their choice of communication expertise (i.e. Organizational Commu-

ication, Mass Communication, Intercultural Communication). Prerequisite: a precise definition of the project, and advisor's consent. Cr var.

**COM 490 Theories of Mass Communication**

A discussion of significant factors related to communication theory. Contemporary theories of mass communication, the mass media, audience analysis, and the role of mass communication in society will be among the topics examined in the course. Students elect to examine an aspect of mass communication which is of interest to them, and present their findings in research papers and projects. Prerequisite: COM 280 or permission of the instructor. Cr 3.

**COM 491 Independent Study**

A concentrated program of research or study on a particular topic of the student's choice, with approval of a Communication faculty advisor. Periodic conferences with the advisor are required. Enrollment by permission. Cr 3-6.



# CRIMINAL JUSTICE

Coordinator of Criminal Justice: Peter M. Lehman, 120 Bedford Street, Portland.

The Criminal Justice Program is a four-year, multi-disciplinary program leading to a Bachelor of Arts degree. Located at 120 Bedford Street on the Portland campus, the program has grown rapidly, indicating strong student interest in this vital field, and strong University support for the program. Because course work consists of a liberal arts curriculum which focuses on the topic of criminal justice, students are provided a broad range of post-graduation employment opportunities, as well as a valid foundation for graduate study in the social sciences and law. Most students in the program are interested in law studies or in social service occupations related to criminal justice or juvenile justice.

## REQUIREMENTS

The criminal justice major requires 45 hours of course work: 15 hours in required criminal justice courses, 3 hours in research methods, and 27 hours in related

areas of philosophy, sociology, social welfare, political science, history, and psychology. Majors are required to satisfactorily complete:

- CJ 215 Criminology
- CJ 301 Occupations and Occupational Roles
- CJ 302 Criminal Law
- CJ 310 Comparative Justice Systems
- CJ 425 Senior Seminar

and:

Three (3) hours in a Methods of Research course approved by the program. (Presently approved courses are: SOC 205, PSY 205, PSY 355, SWE 455, GYAY 200)

and:

at least nine (9) hours in each of the three "units" of criminal justice:

## UNITS OF CRIMINAL JUSTICE

### 1) The Social Context of Criminal Justice Systems (9 hours required)\*

- POL 210 Power and Change in American Society
- POL 233 The American City
- POL 251 Public Administration
- POL 283 The American Judicial System
- POL 292 American Political Thought
- SOC 335 Sociology of Penology and Corrections
- SOC 337 Sociology of Juvenile Justice
- SOC 357 Bureaucracy in Modern Society
- SWE 351 Human Services and the Consumer
- SWE 364 Comparative Social Welfare Systems
- HIST 235-450 Up to three hours, except HIST 321 and 333.

### 2) Deviance (9 hours required)\*

- PLY 103 Introduction to Philosophy: Human Alienation\*\*
- PLY 109 Introduction to Philosophy: Law, Politics and Society\*\*
- PSY 224 Adolescent Development
- PSY 320 Psychology of Personality
- PSY 333 Psychopathology
- SOC 200 Social Problems
- SOC 374 Sociology of Mental Health and Mental Illness
- SOC 375 Sociological Perspectives on Deviance

### 3) Law and Social Control (9 hours required)\*

- PLY 210 Ethical Theories
- PLY 240 Political Philosophy
- PLY 260 Philosophy of Law
- POL 284 American Civil Liberties
- POL 286 Administrative Law
- SOC 314 Social Control
- SOC 336 Sociology of Law
- SOC 371 Sociology of Minority Groups
- SWE 350 Social Problems and Social Welfare Policy
- HIST 235-450 Up to three hours, except HIST 321 and 333

\*in most semesters, one or more special topics courses will be added to this list.

\*\*either PLY 103 or PLY 109, but not both.

## MAJOR CREDIT AND GRADE POLICY

1. There are prerequisites for most major credit courses. See the departmental course listings for particulars.
2. Upon petition to the Coordinator, a student may be allowed substitute courses in the Units. Substitutions must be approved in advance.
3. Courses to be taken for major credit at other institutions must be approved in advance.
4. Grades of "C" or better must be achieved in all courses for major credit. Courses taken pass/fail are not acceptable. The Coordinator of the program routinely requests faculty teaching major courses to submit a list of those students doing less than "C" work at mid-semester. These students are strongly encouraged to meet with their professor, and may be required to meet with the Coordinator for counseling.

## COURSE DESCRIPTIONS

### CJ 215 Criminology

An analytic survey of theoretical orientations which contribute to a sociological understanding of the interrelationships between crime, law, and punishment; emphasis given to analysis of fundamental conflicts between law and social order as manifested in the organization and operation of the American criminal justice system. Also listed as SOC 215. Prerequisite: SOC 100 or POL 102. Cr 3.

### CJ 301 Occupations and Occupational Roles

An analysis of the various occupations and professions that function within the criminal justice system. Each semester the course will focus on one occupation or occupational constellation — including police, bench and bar, and social services. Prerequisite: CJ 215. Cr 3.

### CJ 302 Criminal Law

An examination of the articulation and application of criminal sanctions by agencies of the modern state. Special attention is given to the conflict between the "due process" and "crime control" models of the criminal process. Also listed as POL 302. Prerequisite: CJ 215. Cr 3.

### CJ 310 Comparative Criminal Justice Systems

A cross-national analysis of the form and substance of modern economic and political contexts in which these systems exist, as well as their historical development. Emphasis is placed on underlying differences in theories of social control in an attempt to understand the role that justice systems and their personnel play in a variety of nation states. Also listed as POL 310. Prerequisite: CJ 215. Cr 3.

### CJ 350 Topics in Criminal Justice

Specially developed courses exploring areas of interest and concern in depth. Among those courses currently considered are: Law and the Police, The Lawyer in Modern Society, Community-Based Corrections, Violence in American Society, Political Justice, Police Corruption, Juvenile Corrections, and Law and Personal Freedom. Offered as resources permit. These courses generally count toward completion of the "Units" of the major. Prerequisite: CJ 215 or permission. Cr 3.

### CJ 397 Independent Projects

Individually arranged reading and/or research for juniors and seniors concentrating on a particular subject of concern under the advice and direction of a faculty member. Apply to Program Coordinator. Cr 3.

### CJ 410 Internship

An opportunity for Criminal Justice majors to apply theoretical perspectives to actual field experience. Students will choose a topic for investigation with the advice and under the direction of a faculty member in the Criminal Justice Program and will be expected to submit to the Program Coordinator both a research proposal and a final report on their activities. Prerequisite: advanced standing and permission of Program Coordinator. Cr 3.

### CJ 412 Research in Criminal Justice

Independent or group-organized research project or activity under the direction of a faculty member. Open to advanced students with some training or experience in research methods. Apply to the Program Coordinator. Cr 1-3.

### CJ 425 Senior Seminar

A seminar designed to integrate and synthesize the previous courses in the major sequence. Specific topics in criminal justice will be addressed from a broad interdisciplinary perspective. Open to senior criminal justice majors, or by permission of the instructor. Cr 3.

## INDEPENDENT, INTERN, AND RESEARCH PROJECTS

Independent study courses (CJ 397, CJ 410, and CJ 412) must be approved by the relevant department. The faculty advisor and student should submit a written proposal to the Coordinator of the Criminal Justice Program, who will attach a recommendation to the department for its consideration. Independent study applications are available at the Criminal Justice Office.

## DECLARATION OF MAJOR

Consistent with the general policies of the College of Arts and Sciences, the Criminal Justice Program does not normally accept formal declaration of major before the second semester of the sophomore year.

Students in or beyond the second semester of their sophomore year should complete a "major declaration form." At the same time, their record will be evaluated and a final, binding version of their major requirements will be written. To be accepted as a formal major, the student must have been at the University for at least one full semester, be in good standing, and have demonstrated satisfactory performance in major courses.

Students are invited, before this time, to list their major with the Registrar and to be advised through the Criminal Justice Office. This listing, however, should be considered a declaration of intent.

This listing ensures that grade reports and other materials will be sent to the Criminal Justice Office and that the Coordinator will be listed as your major advisor.

Transfer students must also formally declare their major even though they enter with junior or senior standing.

## TRANSFER CREDIT

Acceptance of degree credit (toward the 120 hours required for graduation) is done only by the Admissions Office and the Dean of the College of Arts and Sciences. These degree credits are then allocated as counting towards 1. General Education Requirements, 2. Elective credit, or 3. Major credit.

In general, "C" work or better is accepted in courses corresponding to those offered by the University of Southern Maine and applicable to the student's program of study if taken at institutions accredited by the New England Association of Schools and Colleges, or other regional accrediting agency. Courses from non-accredited institutions must be "B" grades or better to be considered for degree credit. Within the University of Maine system, some courses are designated by the offering institutions as non-parallel or general studies courses. Courses in this category may be identified by their numbering system — the number preceding the program designation as in 10 LES (Bangor). Courses at USM numbered less than 100, e.g., MS 11, are also in this category. In order for these courses to be considered for degree credit, the student must have earned a "B" grade or better.

Courses accepted for degree credit are also acceptable for General Education Requirements credit unless they were taken pass/fail. Any degree credits accepted may count towards electives.

Major credit is evaluated by the Coordinator in consultation with the department which would offer the course at USM. Courses must be roughly equivalent to a course in the major at USM or clearly substantively applicable. Most of the courses in the major are junior/senior level courses and transfer students should realize that, generally, few courses will be accepted for major credit. Partial credit is sometimes granted towards the major.

When applying for major credit for courses, the student should collect course information (especially reading lists, assignment, examination questions, and papers) for submission to the Coordinator.

## TRANSFER STUDENTS

Students contemplating transfer are advised to consult the Guide for Freshmen and Sophomores at the end of this section. Generally, students at USM are expected to have completed their General Education Requirements and their basic recommended prerequisites by the end of their sophomore year. Transfer students are strongly advised to follow a similar course.

The students should understand that "Law Enforcement" and other similar courses are generally "electives" and should avoid overspecializing in these courses.

Students should further note that equivalents to the "core" or "units" courses at USM are not generally available at two-year institutions. Students must expect to spend their junior and senior years at USM.

Writing proficiency is required in most of the CJ "units" and "core" courses. Students who are deficient in this skill are advised to enroll in remedial courses before they transfer. Students at USM are, on occasion, required to take remedial writing courses.

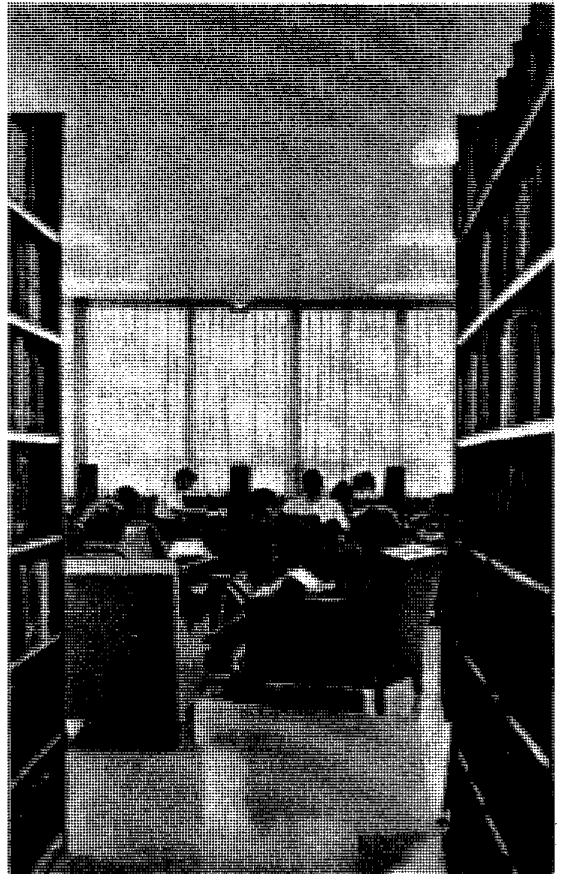
Students contemplating transfer are encouraged to send transcripts directly to the Criminal Justice Office for an unofficial pre-admission assessment of their standing in their major.

## FINANCIAL ASSISTANCE

The University has financial assistance monies available in the form of scholarships, grants, loans, and part-time employment. This assistance is allocated on a University-wide basis upon the demonstration of financial need. Applications and information are available at the Admissions Office or the Office of Student Financial Aid.

Under the provisions of the Law Enforcement Education Program (LEEP), the University provides funds sufficient to cover the cost of tuition and fees for eligible full-time employees of the criminal justice system. A criminal justice major is not required.

The University participates in the New England Regional Program. Students from most other New England states, majoring in criminal justice, qualify for the in-state tuition rate, plus a surcharge of 25 percent.



## AFTER GRADUATION IN CRIMINAL JUSTICE

Contrary to some popular thought, a college degree in anything does not come close to guaranteeing, or even launching, a career. The job market is competitive even for those who have advanced degrees. Graduate education is increasingly difficult to enter.

The program provides a solid but diversified intellectual basis which generally enhances the range of options open to the graduate. It is not a vocational program and does not, therefore, suffer from the "all or nothing" problem arising from narrow specialization. The range of options available includes law enforcement, law school, social services agencies (both inside and outside the CJ system), and academic graduate programs. It is not clear, however, that this range is greater than that available to graduates in other social and behavioral sciences.

Students should be aware that a major in criminal justice has some peculiar liabilities. There is a rather general skepticism about, and even hostility towards, CJ programs as somewhat disreputable. Even graduates of a strong respectable program such as USM can expect to be somewhat disadvantaged by this general reputation in any of the career directions discussed below.

Although the boom is clearly over, there are some opportunities available in *LAW ENFORCEMENT OCCUPATIONS*. Larger police departments, inside and outside Maine, generally place a higher value on a bachelor's degree — although not necessarily CJ. Graduates in other fields, notably political science and sociology, compete highly successfully for positions. In any event, students should remember that most law enforcement positions are filled by competitive examinations, and that particular educational background, beyond high school, is generally relevant only in final selection.

The program can provide a solid basis for *SOCIAL SERVICE OCCUPATIONS* both within the CJ system, such as in Juvenile, Probation-Parole, and diversion agencies, and also occupations outside, such as in welfare agencies. Graduates of the program have seemed to have fair success with these occupations. Students interested in this direction should generally be sure to include study in social welfare and psychology in their program. The number of employment opportunities in this area is severely limited and apparently declining.

*SOCIAL SERVICE GRADUATE PROGRAMS*, such as in "social work" or "vocational and rehabilitation counseling," are available to CJ majors, although employment opportunities are, once again, severely limited. Other *APPLIED MASTERS PROGRAMS* such as "court administration," "police administration," etc., are also available at several institutions, particularly for majors with a heavier political science concentration.

*ACADEMIC GRADUATE PROGRAMS* (M.A. and Ph.D) are available in sociology, political science, and psychology at other schools both regionally and nationally. Students interested in entering these programs should speak with faculty in the relevant departments as early in their college career as possible. *GRADUATE CRIMINAL JUSTICE PROGRAMS* are very receptive to graduates from the USM program. They emphasize the need for a solid grounding in social and behavioral sciences and for strong preparation in statistics and methods. Majors should augment the program with the sociology political science statistics and methods sequence.

*RESEARCH POSITIONS* are an option for CJ students both at a bachelor's and a graduate degree level. The Criminal Justice system, and attendant agencies, are expanding their research activities and in need of skilled practitioners sophisticated in both methods of research and the substantive concerns of the field. Students interested in this direction should pursue the sociology/political science statistics-methods sequence as well as an advanced research seminar if possible. Research-oriented masters programs, probably in sociology or criminal justice, should be considered.

More and more students are interested in attending *LAW SCHOOL*. The CJ Program provides a valid foundation for this option. Admission to professional school is highly competitive, and generally a grade-point average of 3.5 or better, and good scores on the Law School Admission Test (LSAT) are required for admission. A broad liberal arts background is considered ideal preparation for the study of law. Courses in English, history, philosophy, and political science are strongly recommended. Students are urged to select courses which stress development of writing skills.

Students contemplating going on to graduate study should take the Graduate Record Examinations (GRE) early in their senior year. Seniors should contact the Placement Office for applications and additional career information.



## GUIDE FOR FRESHMEN AND SOPHOMORES EXPECTING TO MAJOR IN CRIMINAL JUSTICE

The checklist below is a guide for the first two years of University study for students interested in majoring in the Criminal Justice Program. The checklist does not represent a required set of courses. It is a suggested mixture of courses which will provide a solid groundwork for more advanced major study. The General Education Requirements are explained in more detail at the beginning of the CAS section of your catalog.

..... (3) AREA I: Humanities	CLS	FRE	LAT
..... (3)	CPEN	GMN	PLY
..... (3)	ENG	SPN	GRK

..... ENG 100 and/or ENG 101 are strongly recommended for CJ majors. They do not count towards major or Humanities requirements.

..... (3) AREA II: Fine Arts	ARTH	MUS	DNCE
..... (3)	ARTS	THE	

..... (3) AREA III: Science & Math	BIO	CHEM	GEOL	MET
..... (3)	ASTR	CS	PSYCI	PHYS
..... (3)	GSCI	MS	OCN	

Areas IV, Social Science, and V, General, will generally be fulfilled by Criminal Justice Program students in the course of taking the following recommended courses in their freshmen and sophomore years.

.....	(3)	ANY	101	Man: The Cultural View
.....	(3)	ECON	101	Principles of Economics I
.....	(3)	SOC	100	Introduction to Sociology
.....	(3)	POL	101	Introduction to American Government
.....	(3)	POL	102	Man and Politics
.....	(3)	SWE	101	Introduction to Human Services
.....	(3)	PSY	101	General Psychology, Part I
.....	(3)	PSY	102	General Psychology, Part II
.....	@	PLY	103	Introduction to Philosophy: Human Alienation
.....	(3)	- or -		
.....	(3)	PLY	109	Introduction to Philosophy: Law, Politics and Society
.....	(3)	HIST	131	or other courses in U.S. History
.....	(3)	HIST	132	
.....	(3)	SOC	200	Social Problems
.....	+@	SOC	205	Introduction to Methods of Research
.....	+@	CJ	215	Criminology

@Fulfills Criminal Justice Major Requirements  
+Not recommended for freshmen

SUPPLEMENTARY INFORMATION is published each semester by the Criminal Justice Office to assist students in planning their course schedules. The information includes a summary of major courses for freshmen and sophomores, listings and descriptions of special courses, and general information for majors. The program also publishes a Student Handbook.

To obtain these publications, or for other information, write to:  
Coordinator,  
Criminal Justice Program  
University of Southern Maine  
96 Falmouth Street  
Portland, Maine 04103  
or telephone: (207) 780-4105

# EARTH SCIENCES, PHYSICS, AND ENGINEERING

Chairman of Earth Sciences, Physics, and Engineering Department:  
Parnell S. Hare, 217 Bailey Hall, Science Wing, Gorham.

Associate Professors Armentrout, Ayers, Grass, Hare, Hopkinson, Novak, Pendleton, Walking;  
Assistant Professor Pollock; Planetarium Director Gallant.

Courses offered by the Department of Earth Sciences, Physics, and Engineering are grouped under the following headings:

**ASTRONOMY**  
**EARTH SCIENCE** (including  
Meteorology, and Oceanography)  
**ENGINEERING**  
**GEOLOGY**  
**PHYSICAL SCIENCE**  
**PHYSICS**

Degree programs in earth science and earth science/geology concentration are offered in the College of Arts and Sciences. A major in the earth science or earth science/geology concentration must achieve a 2.0 grade point average in the required non-major courses (mathematics, physics, chemistry); a 2.33 grade point average in the required earth science major courses; and no D's in the major courses.

Students desiring to major in engineering or physics may take part of their program at USM and then transfer to the Orono campus of the University of Maine for the completion of the degree requirements. For details, see subsections under **ENGINEERING** and **PHYSICS**.

Students in the Early Childhood or Elementary programs in the College of Education may obtain an academic major requiring 30 credit-hours of approved biological and physical science courses in the Science Area, but the Science Area Minor of 18 credit-hours is more commonly selected by such students. The latter program is outlined later in this section.

All students are reminded that, in addition to the necessity of meeting departmental requirements for a major leading to a baccalaureate degree, they must also meet the requirements of the school or college involved, as well as the University's General Education Requirements.

## THE EARTH SCIENCE PROGRAM

Two four-year programs are offered in the earth sciences. The programs are designed so that upon completion a student may enter graduate school, or seek work in conservation, state and federal parks and planning agencies, or in industry. Within the earth science major a geology concentration is available for those students intending to pursue a professional career in geology. The requirements for this program follow the requirements for all other earth science majors.

Earth science majors intending to pursue graduate work are urged to determine graduate school foreign language requirements. Students are also encouraged to consider concentrations in allied areas such as biology, chemistry, computer science, economics, geography, and statistics if their interests are in the wider aspects of environmental science.

The earth science major in Arts and Sciences requires the completion of a minimum of 72 credit hours in addition to the University's General Education Requirements.



## REQUIREMENTS FOR AN EARTH SCIENCE MAJOR IN ARTS AND SCIENCES

GEOL	111, 112	Physical Geology	4
GEOL	113, 114	Historical Geology	4
CHEM	113, 114	Qualitative Principles of Chemistry I	5
CHEM	115, 116 or	Qualitative Principles of Chemistry II	5-8
CHEM	109, 110	General Chemistry I	5
CHEM	111, 112	General Chemistry II	5
PHYS	111-112 or	Elements of Physics	8-10
PHYS	121-122	General Physics	
ASTR	100	Astronomy	3
MET	100	Meteorology	3
OCN	100	Oceanography	3
A minimum of 6 credits of mathematics selected from:			6
MS 120, 140, 152 or courses with second digit higher than 5.			6
			51-56

Of the following courses, Arts and Sciences majors are required to take 31-33 credits, including at least 15 credits of 200 level and 9 credits of 300 level courses, and PSCI 498, Independent Study.

ASTR	210	Observational Astronomy	3
CHEM	141	Environmental Chemistry	3
ESCI	110	Environmental Science	3
ESCI	201	Conservation	3
GEOL	116	Environmental Geology	4
GEOL	202	Geomorphology (also GEOG 202)	3
GEOL	203	Mineralogy	3
GEOL	205	Geological Oceanography (also OCN 205)	3
GEOL	301	Structural Geology	3
GEOL	302	Sedimentology	3
GEOL	310	Glacial and Pleistocene	3
OCN	310	Applied Marine Science	4
PSCI	310	History of Science	3
PSCI	498	Independent Study	1-3

## REQUIREMENTS FOR AN EARTH SCIENCE MAJOR WITH A CONCENTRATION IN GEOLOGY

The earth science major with a concentration in geology requires the completion of a minimum of 57 credits in addition to the University's General Education Requirements.

### Chemistry and Physics:

CHEM	109, 110	General Chemistry I	5
CHEM	111, 112	General Chemistry II or	5
CHEM	113, 114	Qualitative Principles of Chemistry I	5
CHEM	115, 116	Qualitative Principles of Chemistry II	5
PHYS	111-112 or		8-10
PHYS	121-122		

A minimum of 6 credits of mathematics selected from MS 120, MS 140, MS 152 or courses with second digit higher than 5.

### Geology:

GEOL	111, 112	Physical Geology	4
GEOL	113, 114	Historical Geology	4
GEOL	202	Geomorphology	3
GEOL	203	Mineralogy	4
GEOL	301	Structural Geology	3
GEOL	302	Sedimentology	3
GEOL	303	Introduction to Petrology	4
GEOL	495	Geology Seminar I	1
GEOL	496	Geology Seminar II	1
GEOL	498	Independent Study in Geology	1-3

### Electives:

At least 6 credits chosen from remaining geology courses with consent of adviser. . . . . 6

## REQUIREMENTS FOR A SCIENCE CONCENTRATION AND MINOR FOR STUDENTS IN THE EARLY CHILDHOOD OR ELEMENTARY EDUCATION PROGRAMS

A science area major or minor consists of 30 hours or 18 hours respectively of courses elected from the following areas: astronomy, biology, chemistry, earth science, geology, meteorology, oceanography, physics, physical science.

It is suggested that the students plan with their advisors a sequence of three introductory courses such as:

- (1) PSCI 110 Elements of Physical Science
- (2) ESCI 120 Concepts of Earth Science
- (3) BIO 101 Biological Principles

The additional courses should represent a variety of science areas and may be chosen from electives such as:

ASTR 100	Astronomy
ASTR 210	Observational Astronomy
BIO 103	Biological Diversity
BIO 104	Survey of Animals and Plants
CHEM 141	Environmental Chemistry
CHEM 109, 110	General Chemistry I
ESCI 200	Environmental Science
ESCI 202	Conservation
GEOL 111, 112	Physical Geology
GEOL 113, 114	Historical Geology
PSCI 310	History of Science
MET 100	Meteorology
OCN 100	Intro to Oceanography
PHYS 100	Descriptive Physics
PHYS 111	Elements of Physics

### ASTRONOMY

#### Courses in Astronomy

##### ASTR 100 Astronomy

Ayers

A descriptive survey of modern astronomy. Topics include theories about the origin and development of the universe, stellar evolution, the solar system, galaxies, observational methods and recent discoveries. Planetarium sessions and optional evening observations with telescopes are included. No prerequisites. Offered fall and spring semester. Cr 3.

##### ASTR 105 Astronomy in the Planetarium

Ayers

For non-science majors. Includes apparent stellar movement and planetary motions, star names and constellation study, stellar magnitudes, stellar navigation and celestial coordinate systems. No prerequisites. Offered fall and spring semesters. Cr 3.

##### ASTR 210 Observational Astronomy

Ayers

Star charts, atlases, binoculars, cameras and telescopes are used to make observations of constellations, sun-spot activity, the moon, the planets and their satellites, star clusters, nebulae, double and variable stars. Prerequisite: ASTR 100 or equivalent. Offered every fall. Cr 3.

### EARTH SCIENCE

#### Courses in Earth Science

##### ESCI 110 Environmental Science

A descriptive study of the basic physical relationships between man and the aquatic and atmospheric environment. This will include man's influence on surface and ground water quality to encompass agricultural, domestic, industrial and municipal realms. The atmosphere will be discussed in terms of geologic origin, natural evolutionary changes, global circulation patterns, and the effect of modern industrial society upon its composition and quality. Background in high school chemistry, mathematics and physics is desired. Three hours lecture. Cr 3.

##### ESCI 120 Concepts of Earth Science

Pendleton

A one semester course introducing students to basic processes as they apply to geology, meteorology and oceanography. These processes are further developed during weekly lab sessions. This course is not open to any student who has had, or is presently taking a college course in any of the above mentioned three earth science areas. Prerequisite: two years of high school science or permission of instructor. Two one-hour lectures and one two-hour lab weekly. Cr 3.

### ESCI 140 Energy, Man and Environment Hare

This course will present a study of man's energy needs, and the alternative energy sources available. In addition, the impact on the environment of the utilization of the various energy sources will be considered. Cr 3.

### ESCI 202 Conservation

A study of man's use of the environment. Topics include the resources of mineral, soil, forests, water, air, wildlife, and man himself. Consideration is given to the issues and problems developing from the interaction of management of these resources. Weekly field trips when weather permits. Two hours lecture, two hours lab. Spring semester, each year. Cr 3.

### ESCE 300-301, 400-401 Cooperative Education in Earth Sciences

The student has the opportunity to relate academic knowledge to practical experience in a job situation. The University makes arrangements with certain institutions, businesses, and industries to employ qualified students for specific jobs for a set time period. The student's work is ordinarily in a related field and the work experiences increase in difficulty and responsibility as the student progresses through the sequence of courses. The experiences are approved on a case-by-case basis by the department. Evaluation is done through a written report done by the student together with the employer and a faculty supervisor. Prerequisite: Junior class standing and a major in earth science. Each semester; students may take each course only once. Cr 1-5.

### MET 100 Meteorology Grass, Hare

A basic introduction to meteorological phenomena. The atmosphere; its characteristics, composition, and structure; cloud types; circulation of air currents and winds; air masses. Analysis of weather reports, weather forecasting, and weather maps. Three hours lecture. Each semester. Cr 3.

### OCN 100 Introduction to Oceanography Hare

Origin and extent of the oceans; nature of the sea bottom; causes and effects of currents and tides; chemical and physical properties of sea water; animal and plant life in the sea. Three hours lecture. Each semester. Cr 3.

### OCN 101 Oceanographic Laboratory Hare

A laboratory course in which the student is introduced to some of the techniques and technical processes involved in oceanic measurements and data reduction. Prerequisite: OCN 100 which may be taken concurrently. One two-hour laboratory session each week. Cr 1.

### OCN 205 Geological Oceanography (also GEOL 205) Novak

Shoreline erosion, transportation, and deposition; the origin and structure of the continental shelves and ocean basins. Coastal and oceanic processes; geomorphic development of the marine environment. Special emphasis on the evolution of the New England coast through examination of salt marshes, estuaries, and beaches. Prerequisite: Physical Geology or Oceanography or permission of the instructor. Three hours lecture. Fall semester, odd years. Cr 3.

### OCN 310 Applied Marine Science

Applications of basic research techniques of the biological and physical sciences to the study of marine and

estuarine ecosystems. Emphasis on field investigations of unspoiled and polluted coastal habitats (e.g., rocky shorelines, beaches, salt marshes, estuaries), their biological, physical and chemical components. Special considerations of man's impact on the coastal environment, contemporary problems of the Maine coast and alternatives to their solution. (Offered during summer session only) (offered on P/F basis only.) Cr 4.

## ENGINEERING

A general first year program is offered which permits completion of the degree requirements in several engineering fields in three more years at the Orono campus of the University of Maine with the exception of electrical engineering which requires a full four years at Orono. A second year of physics courses is also offered which permits completion of the engineering physics program in two more years at Orono.

The transfer procedures to effect continuance at the Orono campus are normally initiated through the USM engineering advisor.

The following curricula are offered at the University of Maine at Orono:

Agricultural Engineering  
Chemical Engineering  
Chemistry  
Pulp and Paper Technology  
Civil Engineering  
Electrical Engineering  
Mechanical Engineering  
Engineering Physics

Reference to the UMO catalog for details is advised.

### Engineering General Freshman Year

		Fall Semester	Credit Hours
Subject			
CHEM 113	Qual Princ of Chemistry I		3
CHEM 114	Qual Lab Techniques		2
GEE 101	Intro to Eng Design I		3
MS 152	Calculus A		4
PHYS 121	General Physics I		5
Total			17
		Spring Semester	Credit Hours
Subject			
CHEM 115	Qual Princ of Chemistry II		3
CHEM 116	Qual Lab Tech II		2
GEE 102	Intro to Eng Design II		3
GEE 105	Engineering Orientation		1
MS 153	Calculus B		4
PHYS 122	General Physics II		5
Total			18

Note for prospective civil and mechanical engineering students: the spring semester chemistry courses CHEM 115 and CHEM 116 are not required but may

be taken if desired. The fall semester chemistry courses CHEM 113 and CHEM 114 are required but may be deferred until the sophomore year at the Orono campus. In either case, suitable electives should be substituted.

### Courses in Engineering

**GEE 101 Introduction to Engineering Design I**  
Principles of graphic science with illustrative exercises in multiview drawing using freehand and instrumental techniques; lettering styles; charts and graphs. Cr 3.

**GEE 102 Introduction to Engineering Design II**  
A continuation of GEE 101 which is prerequisite. Applications of graphic science with creative problems in descriptive geometry, pictorial drawing, engineering design, and mapping. Cr 3.

**GEE 105 Engineering Orientation**  
A series of meetings involving lectures and discussions, with frequent use of audio-visual material to acquaint engineering freshmen with the nature of engineering and science, supplemented by field trips to representative industries. Cr 1.

**MEE 212 Thermal Engineering**  
Elementary thermodynamics, mechanical apparatus, power plant equipment; engineering calculations relative to heat, power, work, and mechanical and electrical energy. Prerequisites: Physics and Chemistry one year each. Cr 3.

**MEE 221 Materials Science**  
The principles of materials science as applied to the metallurgy of ferrous and non-ferrous metals and alloys with emphasis on the relationship between structure and properties and their control through composition, mechanical working, and thermal treatment. Prerequisites: PHYS 121, CHEM 113, MEE 255, or equivalent. Cr 3.

**MEE 250 Applied Mechanics: Statics**  
The study of static force systems and equilibrium, bridge trusses and structural models, distributed forces, friction, centroids and moments of inertia. Cr 3.

**MEE 251 Strength of Materials**  
The principles of solid mechanics and their applications to engineering design problems; stresses and deformations of axially, transversely, and torsionally loaded members, and combined stresses; connections, pressure vessels, shafts, beams, and columns. Prerequisites: MEE 250 and MS 252. Cr 3.

**MEE 252 Applied Mechanics, Dynamics**  
A study of motion of particles and rigid bodies; force, mass and acceleration; work and energy; impulse and momentum, and simple harmonic motion. Prerequisites: MS 252 and MEE 255. Cr 3.

**MEE 255 Statics and Strength of Materials**  
The basic principles of statics and their applications to strength of materials. Equilibrium of various systems including bridge trusses. Centroids and moments of inertia. Stresses and deformations of axially and transversely loaded members connections, pressure vessels, shafts, beams, and columns. Prerequisites: MS 153 and PHYS 121. Cr 3.

### GEOLOGY Courses in Geology

**GEOL 111 Physical Geology**  
Novak, Pendleton  
A study of the ever-changing earth by wind, water, vol-

canism, crustal movement and glaciation. Three hours of lecture. Each fall and spring. Cr 3.

**GEOL 112 Physical Geology Lab**  
Novak, Pendleton  
Identification of common rocks and minerals, further development of the processes covered in lecture; field trips when weather permits. Each fall and spring. To be taken concurrently with GEOL 111. Cr 1.

**GEOL 113 Historical Geology**  
Novak, Pendleton  
Study of the earth's history in terms of physical, chemical and biological change from its origin to the present time, stressing the methods of determining chronology and conditions through fossils and structural characteristics. Prerequisites: GEOL 111, 112. Two hours of lecture. Cr 4.

**GEOL 114 Historical Geology Lab**  
Novak, Pendleton  
A study of rocks, minerals and fossils to determine the geological conditions at some ancient time. Introduction to paleogeographic and topographic maps. Field trips. To be taken concurrently with GEOL 113. Three hours. Each spring. Cr 0.

**GEOL 116 Environmental Geology**  
Novak  
Application of the science of geology to environmental problems resulting from man's intense use of the earth and its natural resources. Prerequisite: GEOL 111, 112 or permission of the instructor. Two 75-minute lecture sessions. One two-hour lab. Spring semester, even years. Cr 4.

**GEOL 202 Geomorphology (Also GEOG 202)**  
Novak  
Description and interpretation of landform development in terms of geologic structure, process, and stage. Field trips. Prerequisite: GEOL 113, 114. Two hours lecture. Two hours lab. Fall semester. Cr 4.

**GEOL 203 Mineralogy**  
Pollock  
An introduction to crystallography, and a study of the physical properties and chemical structures of common rock-forming minerals. Laboratory analysis is an important part of the course. A basic course in chemistry is desirable. Two hours lecture. One hour recitation. Four hours lab. Prerequisite: GEOL 111, 112. Fall semester. Cr 4.

**GEOL 205 Geological Oceanography (Also OCN 205)**  
Novak  
Shoreline erosion, transportation, and deposition; the origin and structure of the continental shelves and ocean basins. Coastal and oceanic processes; geomorphic development of the marine environment. Prerequisite: GEOL 111, 112 or OCN 100 or permission of instructor. Three hours lecture. Fall semester. Cr 3.

**GEOL 301 Structural Geology**  
An introduction to the mechanics of rock deformation, faulting, jointing, top-bottom criteria and metamorphic foliations. The lab includes problems in descriptive geometry, stereonet, the Brunton compass, geologic maps and cross sections, and analysis of poly-phase folding. Prerequisites: GEOL 111, 112 and GEOL 113, 114. Field trips. Two hour lectures, one hour recitation, two hours lab. Cr 4.

**GEOL 302 Sedimentation and Stratigraphy**  
Novak  
Principles of stratigraphy and sedimentation including

correlation, facies, stratigraphic nomenclature, and sedimentary petrology processes and environments. Students will analyze common problems in applied fields associated with these areas. Prerequisites: GEOL 111, 112 and GEOL 203. GEOL 202 recommended. Some weekend field trips. Two hours lecture, three hours lab. Spring semester. Cr 4.

**GEOL 303 Introduction to Petrology**  
Pollock

The megascopic, microscopic and chemical description and origin of sedimentary, igneous and metamorphic rocks. Major topics include composition and texture, classification, specific occurrences, and petrogenesis of important rock types. The laboratory is closely related to the lecture; and students study in hand specimens, thin sections, and on field trips, typical rocks of the group under discussion. Two hours lecture. Four hours lab. Fall semester, odd years. Prerequisite: GEOL 203 or permission of instructor. Cr 4.

**GEOL 304 Optical Mineralogy**  
Pollock

The principles of crystallography and crystal optics are presented as the basis of a practical approach to the identification of minerals with a petrographic microscope. The laboratory is an important part of the course, providing practical applications of the theory and methods covered in the lecture. Prerequisite: GEOL 203. Lecture two hours. Lab four hours. Spring semester. Cr 4.

**GEOL 310 Glacial and Pleistocene Geology**  
Novak

Glacial processes, deposits and the stratigraphy of the Pleistocene Epoch. Emphasis on the erosional and depositional features of glacial events in Maine. Prerequisite: GEOL 111, 112 or GEOL 113, 114. Two hours lecture. Two hours lab. Spring semester. Cr 3.

**GEOL 350 Geological Field Methods**  
Pollock

A basic course in geological field methods intended to introduce to the student the tools and practical techniques used in collecting, compiling and analyzing geological data. Students will have assignments in the igneous/metamorphic and surficial terrain of Southern Coastal Maine. Summer. Three weeks. Prerequisites: GEOL 111, 112 and GEOL 113, 114. GEOL 203, GEOL 301. Recommended: GEOL 302, GEOL 303, GEOL 202. Cr 3.

**GEOL 401 Igneous and Metamorphic Petrology and Petrography**

Aspects of igneous petrology include the classification, occurrence, and emplacement of igneous rocks; experimental and chemical petrology; and the origin and evolution of magmas. Aspects of metamorphic petrology include metamorphic reactions, physical conditions of metamorphism, and a survey of zones and facies of regional and contact metamorphism. The laboratory consists mainly of microscopic studies of igneous and metamorphic suites. Prerequisites: GEOL 303 and GEOL 304. Not offered every year. Cr 4.

**GEOL 405 Tectonics**  
Pollock

Major topics include the nature of the earth's crust and interior, continental drift, seafloor spreading and plate tectonics. The evolution of mountain ranges, continents, and ocean basins will be studied on a global scale. Current articles in scientific journals will be dis-

cussed. Prerequisite: GEOL 301 or permission of instructor. Three hours lecture. Cr 3.

**GEOL 495 Geology Seminar I**  
Staff

The seminar is meant to provide the geology major with an overall view of the discipline as well as the opportunity to discuss, read and report about specific topics in the field. Current problems, research and philosophy of geology will be included. Prerequisite: senior standing. Each fall. Cr 1.

**GEOL 496 Geology Seminar II**  
Staff

A continuation of GEOL 495. Prerequisite: senior standing. Each spring. Cr 1.

**GEOL 498 Independent Study in Geology**  
Staff

To provide juniors and seniors who have demonstrated critical and analytical capability an opportunity to pursue a library, laboratory, and/or field project independently. Topic selection to be arranged mutually between student and faculty in the semester preceding planned registration. Prerequisite: junior or senior standing. On demand. Cr 1-3

## PHYSICAL SCIENCE

### Courses in Physical Science

**PSCI 110 Elements of Physical Science**  
Ayers and Pendleton

A one-semester course designed to develop greater understanding of scientific principles and methods as they apply to areas of the physical sciences. An understanding of basic mathematics is assumed. Two one-hour lectures, one two-hour lab. Cr 3.

**PSCI 310 History of Science**  
Whitten

A comprehensive survey of the historical development of science from earliest records to the present. Attention is given to the nature of science, methods of scientific discovery, the relation of science to technology, and the implications of both for society. Prerequisite: two years of science. Cr 3.

**PSCI 400 Science and Society**  
Sottery

Readings and discussion concerning the relationships between science and society. The "Tactics and Strategy of Science" and the philosophical and social implications of present scientific theories are considered with the aim of promoting understanding of the role of science in modern life. The interaction between scientists and society, and the relationship between research and technology are also examined. Prerequisite: senior students, others by permission. Not offered every year. Cr 3.

**PSCI 498 Independent Study in the Physical Sciences**

To provide juniors and seniors who have demonstrated critical and analytical capability an opportunity to pursue a project independently, selecting a problem and exploring an area of interest in the physical sciences, bringing to it previous experiences and emerging with an intellectually sound, coherent synthesis, or technical creation reflecting a high caliber of performance. Cr 1-3.

## PHYSICS

The University of Southern Maine provides Physics and related courses in the Freshman and Sophomore years, leading to a degree in either Physics (College of Arts and Sciences) or Engineering Physics (College of Technology). Students successfully completing these years may automatically continue into the Junior year of their program on the Orono campus and will receive their degree from the University of Maine at Orono.

Students wishing either of these programs should begin courses in Physics (PHYS 121-122 or 111-112), Chemistry (CHEM 113, 114 and CHEM 115, 116, or in unusual cases CHEM 215, 230), and Mathematics (MS 152-153) in the Freshman year so as to avoid conflict in scheduling upper level courses later on.

These programs are flexible and easily tailored to meet the goals of each student. Planning for the Sophomore year should be done in consultation with the departmental advisor.

### Courses in Physics

#### PHYS 100 Descriptive Physics

Armentrout

For the non-science student. A treatment in semi-descriptive terms of important fundamental topics of mechanics, heat, sound, wave motion, electricity, magnetism, optics, and modern physics. Designed to develop an appreciation for the concepts, vocabulary, and methods of the science rather than a false sense of mastery. High school algebra is recommended. Lecture three hours. Cr 3.

#### PHYS 105 Acoustics and Noise

Walking

A semi-descriptive course on sound, with emphasis on applications of interest to the scientist and non-scientist alike. Discussion will cover the questions: what is sound, how is it perceived, how is it measured, what are its benefits and liabilities? Particular topics may include: the ear and hearing, sound waves, musical acoustics, building acoustics, noise and the environment, legal aspects of noise, underwater sound, biological aspects of sound, and ultrasonics. Consideration will be given to the interests of the members of the class. Three hours of lecture and demonstration. Occasional laboratory or field experience will be provided. Prerequisite: a course in high school algebra. Cr 3.

#### PHYS 106 Science for Technology II

Grass

A study of those areas of physics of special importance in the industrial arts area. The major portion of the course will deal with mechanics, electricity, and light. Laboratory experiments will be concentrated on basic concepts. Two hours of lecture and one two-hour lab per week. Offered fall semester only. Cr 3.

#### PHYS 111 Elements of Physics I

Grass

An introduction to the fundamental concepts of mechanics, sound and heat. Lectures, problem solving, demonstrations, laboratory exercises and visual aids will be used to develop an understanding of physical phenomena. Prerequisites: high school algebra. Lecture three hours, lab two hours. Cr 4.

#### PHYS 112 Elements of Physics II

Grass

A continuation of Physics I considering the topics: optics, electricity and modern physics. Lecture three hours, lab two hours. Cr 4.

#### PHYS 121 General Physics I

Walking

An introduction to the fundamental concepts of mechanics, sound and heat, using calculus where necessary. Recommended for students who plan further study in science, mathematics, or engineering. Prerequisite: prior or concurrent registration in MS 152 or equivalent experience. Lecture three hours, recitation two hours, lab two hours. Cr 5.

#### PHYS 122 General Physics II

Walking

An introduction to the fundamental concepts of electricity, magnetism, light and atomic physics, using calculus where necessary. Recommended for students who plan further study in science, mathematics, or engineering. Prerequisite: PHYS 121 or equivalent. Lecture three hours, recitation two hours, lab two hours. Cr 5.

#### PHYS 210 Introductory Modern Physics

Staff

A development of some of the more important concepts of physics required for understanding the properties of the electron and atomic nucleus. Prerequisites: PHYS 112 or PHYS 122, CHEM 112 or CHEM 114, and one year of calculus. Lecture three hours, lab two hours. Cr 4.

#### PHYS 221 Intermediate Physics I

Armentrout

An intermediate treatment of mechanics, heat, and wave motion to follow PHYS 121 and PHYS 122. May be taken without laboratory for 3 credits with special permission of the instructor. Prerequisites: PHYS 122 and CHEM 115 or CHEM 215 or equivalent and one year of calculus. Lecture two hours, recitation two hours, lab three hours. Cr 5.

#### PHYS 222 Intermediate Physics II

Armentrout

A continuation of PHYS 221. Topics include electricity, magnetism and optics. Lecture two hours, recitation two hours, lab three hours. Cr 5.

#### PHYS 390 Independent Physics Laboratory

A laboratory research investigation of an approved topic in physics, using the facilities of the University laboratories and/or those of industrial and professional laboratories. Prerequisite: consent of the instructor.

Cr 3.



# ECONOMICS

The undergraduate program in economics is designed to prepare students broadly for careers such as civil service, law, management, public affairs, and labor relations. Economics is a social science and as such must be studied in the perspective of a broad training in the liberal arts and sciences. Many students who plan to attend graduate and professional schools will find the undergraduate economics program to be valuable training for advanced academic work. Within the economics program, courses are available in such fields as: microeconomic analysis, money and banking, macroeconomic analysis, international trade, comparative economic systems, public finance, and the social control of business.

Students interested in receiving a Bachelor of Arts degree in Economics may not take more than 42 hours of economics courses or 21 hours of business courses for credit toward a Bachelor of Arts degree.

All students are reminded that, in addition to meeting their departmental requirements for a major leading to a baccalaureate degree, they must also meet the requirements of the school or college involved as well as the University's General Education Requirements.

## REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE IN ECONOMICS

- A. General Foundation Courses 36 credit hours
- Six hours of Humanities (Area 1)
  - Six hours of Fine and Applied Arts (Area 2)
  - Six hours of Social Sciences (Area 4)
  - Six hours from Area 5: General
  - Twelve hours of Mathematics (Area 3) as noted below:
    - MS 109 Linear Systems
    - MS 110 Elementary Mathematical Analysis
    - MS 211 Probability
    - MS 212 Statistics

(An optional, more rigorous mathematics sequence is available to those students who desire it. MS 152, MS 153, and MS 252 will substitute for MS 109 and MS 110. Students will be required to take MS 211 and MS 212. Students who only wish to take MS 152 and MS 153 can substitute those two courses for MS 109 and MS 110. They still must take MS 211 and MS 212. An optional minor in mathematics is also available.)

It is recommended that students who have writing deficiencies take either ENG 001, Writing Laboratory, or ENG 100, College Writing. Students having difficulty in communication should take THE 170, Public Speaking.

- B. Course Requirements in Economics and Business 36 credit hours
- Fifteen hours of core requirements:
- ECON 101 Principles of Economics I
  - ECON 102 Principles of Economics II
  - ECON 301 Macroeconomic Analysis
  - ECON 302 Microeconomic Analysis
  - BUS 101 Principles of Financial Accounting

Completion of at least 21 additional hours in economics courses may also include HIST 338. ECON 150 is not applicable for major credit in economics.

Economics course descriptions may be found under the Department of Economics in the School of Business, Economics and Management section of this catalog.

# ENGLISH

Chairman of English Department: Thomas Carper, 200-B Bailey Hall, Gorham.

Professors Hanna, Jaques, Rutherford, Weeks; Associate Professors Baier, Burke, Carner, Carper, Coffin, Reuter, Rosen, Selkin, Slavick; Assistant Professors Abrams, Ashley, Gish.

In the study of literature, students learn to appreciate the possibilities of language for serious and often moving expression. Through writing practice, students learn to use language effectively. The understanding of language is fundamental to an understanding of what we do, and the quality of language in a society determines and reflects its moral and political condition.

The English major serves those interested in preparing for any profession or vocation where an understanding of experience is important, from the law and medicine to social work and politics. The range of English courses is large, but all will extend the student's ability to engage in the kind of independent and creative thought and expression that is essential for success in fields as widely varied as the professions, industry, business, teaching, and the arts. For information and counsel regarding the major or appropriate and valuable courses for non-majors, students should visit English offices in Gorham (200 Bailey Hall) or Portland (411 Luther Bonney Hall).

Students satisfying the Humanities core requirement in English should begin with English 120 or 122, except when English 120 is waived. Courses numbered below 120 cannot be used to satisfy the Humanities core requirement. Many courses numbered between 121 and 500 may be elected as a second Humanities course without further prerequisites.

The English major begins with a course in writing (100 or 101) and an introduction to the study of literature (120 or 122). The student then selects upper-level English courses (and perhaps certain approved courses in other departments) to complete the major requirements. The twelve required English courses will assure that the student has a familiarity with many of the outstanding literary achievements of Western culture, a knowledge of the history of the language, and a sensitive appreciation of works by the great representative writers and critics in all major periods of English and American literature. The elective and independent study courses will permit the student to go more deeply into subjects of personal interest, including creative expression.

While the Department does not require courses in other disciplines, majors are advised to develop a reading proficiency in a foreign language and to elect or satisfy core requirements with History of Western Civilization I and II (HIST 101 and 102), History of England (HIST 261), a course in American history (HIST 131, 132, 133, or 134), a lower-level philosophy course, (PLY 101, 102, 103, 104, 105, 106), one or more History of Philosophy courses (PLY 310, 320, 330, 340, 350, 360), an art course (ARTH 101, 111, or 112), a music course (MUS 100, 120, or 121), and one or more theatre courses (THE 101, 340, 341, 361, 362, 460).

## PREREQUISITES AND COURSE WAIVERS

ENG 100 or 101, or an equivalent or waiver, is a prerequisite for any English language or literature course, including ENG 120 and 122.

For general-interest courses numbered **130 to 199**, ENG 100 or 101 (or an equivalent or waiver) and ENG 120 or 122 or permission of the instructor are prerequisites.

For courses numbered **200 to 299**, prerequisites are ENG 100 or 101 (or an equivalent or waiver) and ENG 120 or 122.

For courses numbered **300 and above**, prerequisites are ENG 100 or 101 (or an equivalent or waiver), ENG 120 or 122, and either the basic 200-level course in the area of study (indicated in the course listings with an asterisk before the number, as **\*250**) or permission of the instructor.

## NOTE

Non-majors and students with special interests are encouraged to seek the instructor's permission to take any course for which they feel qualified.

ENG 120 or 122 may be waived for a few exceptional students who pass a qualifying examination administered by the English Department, and for transfer students with certain literature course credits.

Other prerequisites or waivers are indicated in the course descriptions.

## ENGLISH MAJOR PROGRAM IN ARTS AND SCIENCES

In addition to meeting English Department requirements, the B.A. candidate must also meet the General Education Requirements of the University.

English majors must meet the following English Department requirements (all courses must be passed with a grade of C or better and six hours with a grade of B or better):

1. ENG 100 or 101 or waiver; ENG 120 or 122 or waiver.
2. At least 48 hours of courses acceptable for English major credit (numbered 200 or above). These courses must include ENG 220, 221, 230, 240, 250, 255, 260 or 261, 265, 270, 275, 280, and 290.
3. The requirements of the English Major Program may be waived in favor of a self-designed major that is approved in advance by the English Department Curriculum Committee.

## TEACHING SPECIALTIES FOR EARLY CHILDHOOD AND ELEMENTARY EDUCATION

Students in Early Childhood or Elementary Education in the College of Education may complete 30 hours of English in an approved program for an academic major or 18 approved hours for an academic minor. Details of such programs may be obtained from the appropriate faculty advisers in the College of Education.

### COURSE DESCRIPTIONS

#### 100-Level Courses

##### ENG 100 College Writing

Classes of fifteen students will meet regularly to analyze professional and student writing as a way of sharpening awareness of how to use language effectively. The writing assignments will encourage students to apply the principles discussed in class to their own work. Recommended for freshmen. Students may not take both ENG 100 and 101 for credit. This course cannot be used to satisfy a Humanities requirement. (Every semester). Prerequisite: writing proficiency.

Cr 3.

##### ENG 101 Independent Writing

Students who realize that they need help to improve their writing and who are willing to work independently will profit from this course, which is conducted primarily in individual weekly conferences — though classes meet occasionally. Problems of style and presentation as well as minor mechanical difficulties are focussed on. For well-motivated students in any class. Students may not take both ENG 100 and 101 for credit. This course cannot be used to satisfy a Humanities requirement. (Every semester). Prerequisite: writing proficiency.

Cr 3.

##### ENG 102 Term Paper Writing

This course will teach the student to write a research paper. The choice of subjects will be worked out by instructor and student. The student will learn how to limit a topic, prepare a working bibliography, become familiar with library resources, take notes in an orderly and meaningful fashion, and then write a final paper after having polished a number of rough drafts.

Cr 1.

##### ENG 103 English Usage

This course is designed to teach the student current practice in grammar and usage as opposed to formal grammar. The student will master the many matters of agreement, punctuation, etc. needed in writing college papers.

Cr 1.

##### ENG 120 Introduction to Literature

A general introduction to the various literary genres — poetry, the short story, drama — which will include a study of critical terminology, close textual reading, and practice in writing. Prerequisite: ENG 100 or 101 or waiver.

Cr 3.

##### ENG 122 Introduction to Literature for English Majors

Like ENG 120, this course gives attention to prose fiction and drama, but its primary emphasis is on the intense reading of selected poems from different periods

of English literature; the careful writing of critical papers is also stressed. Recommended for students with a good background in literature, and particularly for freshmen or prospective English majors. Prerequisite: ENG 100 or 101 or waiver.

Cr 3.

##### ENG 130 The Literature of Sport

Contemporary fiction, poetry, and drama on The Game, its players and watchers, its heroes and losers, its joy and sadness reflected in the works of such writers as Cheever, Updike, Algren, Wain, Roth, Shaw, Schulberg, Wright, Ellison, McCullers, Dickey, Williams, Moore, Ferlinghetti, Sillitoe, and many others. The social and cultural implications of sports, now and in the immediate future, will also be weighed. These include the ritualistic side of competition and spectacle; the blurring of "professional" and "amateur;" flaws in America's hero image; kid teams and adult ambitions; college conferences and academic standards; racism and nationalism in the Olympics; thrills, violence and gate receipts; winner-loser psychology; sex stereotypes; mass versus elite leisure, machismo politics and "femlib." Readings will include two anthologies, a novel, a play, and a collection of recent essays by social anthropologists.

Cr 3.

##### ENG 150 Topics in Literature

A selection of courses, dealing with this general subject and varying in content from term to term, is offered each semester. Descriptions of current offerings are available in the English offices. These courses may be offered in a two-semester sequence, and more than one section may be taken for credit. (Every semester)

Cr 3.

#### Writing Courses

##### ENG 200 Advanced Essay Writing

Burke, Selkin

Study of various forms of discourse with concentration on exposition. Provides experience in logical analysis and in the uses of persona, appeals to the reader, stylistic and fictional devices, and other strategies. (Annually)

Cr 3.

##### ENG 201 Creative Writing

Slavick

An advanced course. Focus is on the writing of a short story; includes a study of plot, design, point of view, characterization, tension and related techniques, modes of creative thinking, and the transformation of experience into the medium of story. (Fall)

Cr 3.

##### ENG 202 Fiction Writing

An introduction to writing fiction, with emphasis on the short story. Students will develop their skills by imitating the style and manner of a variety of contemporary and classic writers.

Cr 3.

##### ENG 203 Poetry Writing

Carper

Focus on methods of poets in different periods of the history of English poetry. Students will aim toward developing creative writing skills through weekly verse-writing assignments.

Cr 3.

##### ENG 204 Playwriting

A lecture-practicum course designed to acquaint the student with playwriting principles. Emphasis is placed on the one-act play form. Students will be required to complete a series of creative exercises culmi-

nating with writing a one-act play. Prerequisites: THE 101 and THE 361 or 362 or 363. This course is also listed as THE 335. Cr 3.

**ENG 209 Business and Report Writing**

Primarily for juniors and seniors majoring in Business Administration. Training in clear expository writing of formal reports, business communications, and related materials. Cr 3.

**ENG 302 Fiction Workshop**

Rosen

The writing and discussion of fiction. Emphasis will be on the short story. May be taken for one to six hours of credit, but only three in a single semester. Cr 1-6.

**ENG 303 Poetry Workshop**

Rosen

An intensive study of poetic forms and techniques, with extensive discussion of the students' own poetry. Emphasis on understanding various techniques through reading and imitation. May be taken for one to six hours of credit, but only three in a single semester. Cr 1-6.

**ENG 400 Independent Study in Creative or Expository Writing**

Cr var.

### Journalism Courses

**ENG 210 Newswriting**

This course includes news and feature writing with intensive practice in journalistic writing techniques, accuracy, judgment and style. Prerequisite: ENG 100/101. Cr 3.

**ENG 310 Advanced Newswriting**

A continuation of Newswriting. Cr 3.

**ENG 410 Independent Study in Journalism** Cr var.

### Masterpiece and Other Courses

**\*ENG 220 World Masterpieces I**

A study of selected major works of classical and Biblical times which will provide students with a background for understanding the most influential books of our culture. Included are Homer, Plato, Greek dramas, Virgil, and the Old Testament. Cr 3.

**\*ENG 221 World Masterpieces II**

A continuation of ENG 220 into the Renaissance. Included are the New Testament, Dante, and Cervantes. Prerequisite: ENG 220 or permission of instructor. Cr 3.

**ENG 223 The Epic Hero in Ancient Literature**

Duclos

Intensive readings in English translations of Gilgamesh, Iliad, Odyssey, Argonautica, Aeneid; discussion, papers. (Also listed as Classics CLS 251.) Cr 3.

**ENG 225 Survey of English Literature I**

Carper

Close reading of representative texts of writers between Beowulf and Johnson, with particular attention to the historical development of English literature. Cr 3.

**ENG 226 Survey of English Literature II**

Close reading of representative texts of writers between Blake and the present, including some attention to the relationship of English, Irish, and American literature in the last two hundred years. Cr 3.

**ENG 227 Poetry in English: A Survey**

Carper

This course first considers representative short poems on recurring themes by early and modern writers; it then takes up important longer works from Chaucer's time to the 1900's. Recommended for students already familiar with the principles of reading poetry well. Prerequisite: sophomore standing or permission of the instructor. Cr 3.

**ENG 320 Greek Tragedy and Comedy**

Hanna

Students will read the extant plays of Aeschylus, Sophocles, and Euripides — thirty-two tragedies in all — as well as six comedies by Aristophanes. An inquiry into dramatic ingredients: ritual and catharsis, myth and legend, meter and music, structure and method. The critical relevance of Aristotle's *Poetics*. Structural, stylistic, and thematic developments. Modern critical theories of interpretation. Oral reports, class discussions, short critiques. Cr 3.

**ENG 321 Dante**

A careful reading of Dante's *Divine Comedy*, with special attention to cultural history, especially classical and medieval theology, philosophy, literature, and art. Background in literature or philosophy strongly recommended. Cr 3.

**ENG 322 Three Continental Humanists**

Hanna

A study of the *Divine Comedy*, *Gargantua and Pantagruel*, and *Don Quixote*. Beginning with Dante's medieval synthesis of the Greco-Roman and Judaeo-Christian traditions, the focus shifts to Rabelais' lusty, iconoclastic hunger for worldly experience, and finally to Cervantes' picaresque tale of faded Spanish glory and Renaissance skepticism. Oral reports, class discussions, brief critiques. Cr 3.

**ENG 325 Oriental Masterpieces**

Coffin

The course introduces the best of Chinese lyrical poetry and the spiritual epics of India. Related material of interest will be used from Tibet. Cr 3.

**ENG 326 American Indian Literature**

Coffin

Readings in the literature of the American Indian. Cr 3.

**ENG 420 Independent Study in Comparative Literature**

Cr var.

### Courses cross-listed with Foreign Languages and Classics:

CLS 251 The Epic Hero in Ancient Literature  
CLS 252 The Tragic Hero in Ancient Literature  
CLS 281 The Golden Age of Greece  
CLS 282 Rome, from Republic to Empire  
FRE 253 Masterpieces of French Literature I  
FRE 254 Masterpieces of French Literature II  
FRE 255 Contemporary French Thinkers  
FRE 256 Avant Garde Theatre in France  
FRE 257 18th Century Literature in France and England

GMN 258 The German Novelle  
SPN 259 Masterpieces of Spanish Literature

For descriptions, see Foreign Languages and Classics section of this catalog.

Up to six hours of specific courses offered by such other CAS departments as History, Theatre, and Philosophy may be elected for English major credit.

### Linguistics and Related Courses

#### \*ENG 230 History of the English Language

Rutherford

This course includes a survey of the prehistory of the language as well as a detailed study of the Old, Middle, and Modern English and the forces which shaped these stages. Some methods of modern linguistic science are utilized in examining current usage. Change and development of the language are emphasized. (Every semester) Cr 3.

#### ENG 231 Modern Grammars

Rutherford

Designed to acquaint students with the three most common forms of English grammatical analysis: traditional, structural, and transformational. The mechanics of the various analyses will be examined, and comparisons will be made to determine what tentative combination best explains the structure of English. Cr 3.

#### ENG 232 Introduction to Linguistics

Rutherford

A general introduction to modern linguistic science, including studies in the development of language, phonology, morphology, the dictionary, and varieties of English and usage. Also examined are the various grammatical philosophies and their methods — traditional, structural, and transformational. (Spring) Cr 3.

#### ENG 233 Structural Linguistics

Coffin

The course first analyzes the structure of many languages: i.e., Mexican and Central American Indian languages, including dialects of Chontal, Aztec, Mayan. The course uses the acquired analytical skills to explore the nature of language itself. (Fall) Cr 3.

#### ENG 234 Semantics

Coffin

Interpretation of literature by means of analysis of the language used. Recommended for prospective teachers of literature and English. Cr 3.

#### ENG 330 Old English

Coffin

The students develop Old English reading ability by working with the best Old English poems and prose. Modern techniques of rapid language acquirement are used. Cr 3.

#### ENG 331 Beowulf

Coffin

This Old English poem is studied as the greatest literary work of the first 600 years of English Literature. Partially in modern English. Prerequisite: ENG 330. Cr 3.

#### ENG 333 Structural Linguistics and Culture

Coffin

The course analyzes the languages and culture (art, religion, poetry) of preliterate societies, particularly the American Indian. Cr 3.

#### ENG 430 Independent Study in Linguistics

Cr var.

### Criticism Courses

#### \*ENG 240 History of Literary Criticism

A study of the great literary critics, their methods and approaches, from Plato and Aristotle to the present day. Among the many figures included are Sidney, Johnson, Coleridge, Arnold, and T.S. Eliot. Cr 3.

#### ENG 340 Study of Literature and Literary Criticism

Carner

An examination of the discipline called "Literature" or "English" or "Criticism." This course attempts to define the aims and ends of literary study, ways of knowing about literature and the creative act, and the relationship of literature to life. It includes formalism, historicism, bibliography, psychological criticism, and a number of other critical methods. In short, a survey of the discipline, its meaning and tools. Recommended especially for sophomores who want an introduction to the major and for seniors who want an overview. Cr 3.

#### ENG 341 Critical Approaches to Literature

This course will provide a basic introduction to the major critical interpretive perspectives indispensable for the sensitive reader (moral-philosophical, formalistic, psychological, mythological, archetypal; and exponential). It will be structured around a close reading of specific works from several genres. It will also study literary terms, prosody, prose style, and the relation of literature to the other arts. (Annually) Cr 3.

#### ENG 440 Independent Study in Criticism

Cr var.

#### ENG 441 Topics in Literary Criticism

Carner

Studies in specific problems or historical movements in literary criticism. Topics will change from year to year. Typical topics: myth and myth criticism; a study of ancient and modern myth systems including Biblical, medieval, and 20th century texts; psycho-analytic theory as myth. Typical texts: *Genesis*, *Exodus*, *Apocalypse*, Grimm's *Fairy Tales*, *The Golden Bough*, *Totem and Taboo*, *Moses and Monotheism*, and *The Myth of the Birth of the Hero*. Cr 3.

### Medieval Period

#### \*ENG 250 Chaucer and the Medieval World

Burke, Weeks, Ashley

Selections from the early poetry and intensive reading in the *Canterbury Tales*. Attention also given to the literary and historical background. Cr 3.

#### ENG 350 Medieval Literature Exclusive of Chaucer

Ashley

Extensive readings in major philosophical background texts and the literature of 14th century England exclusive of Chaucer. Cr 3.

#### ENG 351 Medieval Epic and Romance

Ashley

The background and development of the medieval epic and romance, including English, Germanic, French, and Italian works. Cr 3.

#### ENG 352 Medieval Drama

Ashley

This course will introduce the theatre of the medieval world, which ranges from the *liturgical*, ritual drama of the church, to the *morality plays*, performed by traveling companies, and the *mystery cycles*, produced by civic and guild pride in the 15th century. Attention will be paid to the aesthetic and theological principles

underlying this conjunction of farce and high seriousness in the plays as well as to distinctly medieval techniques of staging and production. Cr 3.

**ENG 450 Independent Study in Medieval Literature**  
Cr var.

## Renaissance

### \*ENG 255 The English Renaissance

A study of the principal writers of the English Renaissance exclusive of Shakespeare, with emphasis on major figures like Spenser, Donne, and Milton, but with some attention to other figures. Cr 3.

### ENG 355 Spenser

Readings in the works of Edmund Spenser with special emphasis on *The Faerie Queene*. Cr 3.

### ENG 356 Milton

Baier, Reuter

Study of Milton's major poetry and selected prose with attention to critical and historical background. Cr 3.

**ENG 455 Independent Study in Renaissance Literature**  
Cr var.

## Shakespeare

### \*ENG 260, 261 Shakespeare

Abrams, Baier, Reuter

ENG 260, 261 each feature class readings of approximately seven of Shakespeare's plays, and focus attention both on philosophical and theatrical meanings. The division of plays within the two courses is largely arbitrary. Its intent is to permit students to take a second course in Shakespeare without repeating the readings of the first course. Neither course is introductory or prerequisite to the other. The main difference is that ENG 260 will include a section on the major history plays (*Richard II*; 1, 2 *Henry IV*); ENG 261 will include a section on the dramatic fairytales or "romances" that Shakespeare wrote at the end of his career (*The Winter's Tale*; *The Tempest*). Beyond that the courses will include the following major plays assigned to each course:

ENG 260: *As You Like It*, *Twelfth Night*, *Hamlet*, *Macbeth*. ENG 261: *Romeo and Juliet*, *Midsummer Night's Dream*, *Othello*, *King Lear*. Each course: Cr 3.

### ENG 360 British Drama to 1642

Reuter

Shakespeare's predecessors, contemporaries, and followers to 1642. Cr 3.

**ENG 460 Independent Study in Shakespeare** Cr var.

### ENG 461 Shakespeare Special Studies

Reuter

A study of both traditional and transformed modes of perceiving (aesthetics) which result in allegorical elements in the plays of Shakespeare and his contemporaries. Selected readings of comedies, tragedies, chronicle histories, "problem" plays. Cr 3.

## Neoclassical Period

### \*ENG 265 The Neoclassical Age

The principal writers from the Restoration to the Romantic Period are studied. Emphasis is on the achievements of major figures, including Dryden, Pope, Swift, and Johnson. Cr 3.

### ENG 366 Restoration Drama

Reuter, Selkin

A study of Restoration and early 18th Century drama with emphasis on innovations in the post-Elizabethan theatre and on changing definitions of the tragic and comic hero. Playwrights studied will include Davenant, Dryden, Otway, Etherege, Shadwell, Cibber, Wycherley, Congreve, Farquhar. Cr 3.

### ENG 367 Masterpieces of English Satire Weeks

A thorough exploration of its backgrounds in classical literature and an attempt to define and understand satire as a mode will be followed by readings and discussions in depth of the most important satires in English. Works to be read will include at least the following: Langland's *Piers Plowman*, Chaucer's *Sir Thopas*, Butler's *Hudibras*, Dryden's *Absalom and Achitophel*, Swift's *Gulliver's Travels*, Pope's *Dunciad*, and Gay's *Beggar's Opera*. Cr 3.

### ENG 368 The Development of the Novel

Reuter

A study of the development of the novel from Christian and classical sources through early 18th century England with emphasis on Bunyan, Defoe, and Swift. Cr 3.

### ENG 369 The Earlier English Novel

Selkin

The principal novelists from the beginnings to Sir Walter Scott. (Annually, fall) Cr 3.

**ENG 465 Independent Study in the Neoclassical Period**  
Cr var.

### ENG 466 Swift

Selkin

A study of Swift and his writings, both prose and poetry — imaginative, political, personal, satiric, and even "unprintable." Prerequisite: at least one previous course from those listed in Section VI, Group B or C. Cr 3.

### ENG 467 The Poetry of Alexander Pope

Weeks

A close study of the most brilliant poet between Milton and Wordsworth. Pope dominated English poetry for half a century, but his most significant works often became lost in anthologies and period courses. Minimum readings will include a sampling of the pastorals, *Essay on Criticism*, *Rape of the Lock*, *Eloisa to Abelard*, selections from *Martin Scriblerus*, the Moral Essays, and the *Dunciad*. Cr 3.

## Romantic Period

### \*ENG 270 Major Romantic Writers

A study of the major British poets and essayists of the Romantic period (approximately 1785-1832) and of the nature of the "Romantic" movement. Readings selected from among Blake, Burns, Wordsworth, Coleridge, Keats, Byron, Shelley, Lamb, DeQuincey, Beddoes, Hunt, Peacock, etc. Cr 3.

### ENG 370 Fiction of the Romantic Period

Carner

The novels of Jane Austen; readings in Maturin, Peacock, Edgeworth, Lewis, Godwin, Mary Shelley, Scott. Cr 3.

**ENG 470 Independent Study in the Romantic Period**  
Cr var.

**ENG 471 William Blake**

Carner  
Examination of Blake's writings and visual art, attempting to develop a comprehensive understanding of Blake's system and intellectual contexts. Cr 3.

**Victorian Period**

**\*ENG 275 Eminent Victorian Writers**

Major writers of the Victorian era, including Tennyson, Browning, Arnold, Thackeray, and Dickens are studied; attention is given to Victorian controversies; emphasis is on the novel as the greatest achievement of the period. Cr 3.

**ENG 375 The Victorian Novel**

The principal novelists from Austen to Hardy. Cr 3.

**ENG 376 Victorian Prose**

Hanna  
Critical and controversial essays by Macaulay, Carlyle, Arnold, Huxley, Newman, Mill, Ruskin, Morris, Pater, and Wilde. Numerous shorter readings by the scientists, architects, feminists, and rebels of the era. Lectures on Victorian times and people. Victorian backgrounds: rich and poor, the Industrial Revolution, Utilitarianism, religious crises, democracy and culture, artistic alienation, and aestheticism. Oral reports and brief papers. Cr 3.

**ENG 377 Victorian Poetry**

Extensive reading in the poetry of Tennyson, Browning, Arnold, Swinburne, Clough, the Rossettis, Meredith, Morris, Hardy, Hopkins, and Housman. Lectures and class discussions will involve several critical approaches — biographical, sociological, psychological, archetypal, symbolical, formalistic and exponential. Collateral readings in 19th century intellectual history — the Romantic revolt, the industrial revolution, the science-religion debate, aestheticism, artistic alienation, Utilitarianism, and Darwinism. Brief oral reports and two short papers. Cr 3.

**ENG 475 Independent Study in the Victorian Period**

Cr var.

**American Literature**

**ENG 280 The American Renaissance**

Jaques, Slavick  
Major American writers of the mid-19th century. Includes critical study of major works by Emerson, Thoreau, Hawthorne, Melville, Whitman, and Dickinson with attention to the social and literary backgrounds. Cr 3.

**ENG 380 Backgrounds of American Thought**

Burke  
Readings in the ideas and lives of those figures who were philosophically influential in American life. For upperclass students with a strong background in American, English, and European history and philosophy. Term paper required. Cr 3.

**ENG 381 Colonial American Literature**

A study of early American writers of religious prose, fiction, and poetry. Cr 3.

**ENG 282 The Earlier American Novel**

Burke, Slavick  
An historical survey of the American novel from Charles Brockden Brown to Henry James. In Professor Burke's sections a term paper is required for an honor grade. Cr 3.

**ENG 389 Writers of Maine**

Jaques  
Historical and literary analysis of writers in and about Maine. The emphasis will be on the literary quality of the best-known writers and the place in history both past and present of the lesser-known writers. Extra credit in the course will be given for a report about any off-campus project related to an author, especially a study of an author and a particular locality in Maine. English majors should have already taken a survey of American literature; prospective teachers will prepare an annotated bibliography of one author of their choice. Cr 3.

**ENG 480 Independent Study in American Literature**

Cr var.

**ENG 481 Hawthorne and Melville**

Slavick  
The chief works of two major figures in American literature. Emphasis will be on Melville. Some supplementary reading will be required. Cr 3.

**ENG 482 Twain and James**

Slavick  
A study of representative works of two major American writers of the last half of the 19th century, with some attention to W. D. Howells, novelist, literary arbiter, and perhaps the only mutual friend of Twain and James. Cr 3.

**ENG 483 Thoreau**

Jaques  
An intensive critical study of the major works of Henry David Thoreau with attention to the social and literary backgrounds of his art. Cr 3.

**ENG 484 The Image of the Black Man in American Literature**

Slavick  
A study of the developing image of the black man in American prose and poetry in the context of American culture from stereotype to victim, outsider, masked man, and Everyman, beginning with songs, sermons, and folk tales, with selections from among the following: Douglass, Stowe, Melville, Twain, Cable, Chesnut, DuBois, Heyward, McKay, Cullen, Hughes, James Weldon Johnson, Faulkner, Toomer, Wright, Ellison, Warren, Welty, Tolson, Styron, Baldwin, Leroi Jones, Martin Luther King, Malcolm X, Cleaver, Eli Green, and Theodore Rosengarten. Cr 3.

**Modern Literature**

**\*ENG 290 The Modern Period**

A study of representative modern British and American writers. Cr 3.

**ENG 390 20th Century British and American Poetry**

Gish  
A close study of the major poets of the 20th century. Emphasis is usually upon Eliot, Yeats, Wallace Stevens, Hart Crane, Dylan Thomas, Robert Lowell, etc., although the poets chosen may vary with semester and instructor. Prerequisites have not been established, but this is not intended as an introductory course to poetry. Cr 3.

**ENG 391 Experimentation in Modern Poetry**

Rosen

This course explores the tradition of experimentation in modern poetry from Rimbaud to the present day. It draws from a range of figures such as Cavafy, Ponge, and Calvino in an effort to bring into focus the achievement of such English and American figures as Eliot, Williams, Auden, Moore, and contemporaries like Dorn and Berryman. Cr 3.

**ENG 392 Twentieth Century British Novels**

Selected novels from the late 19th century to the present. Cr 3.

**ENG 393 Twentieth Century American Novels**  
Burke, Slavick

An historical survey of the American novel since 1900. In Professor Burke's sections a term paper is required for an honor grade. Cr 3.

**ENG 395 Modern Short Story: Themes and Methods**  
Rosen

Detailed consideration of from six to ten short story collections reflecting contemporary themes and narrative methods. Although selections will vary, the recent reading list has included Jorge Luis Borges, Franz Kafka, Anton Chekhov, James Joyce, Thomas Mann, and Isaac Babel. A necessarily wide range of themes are confronted: the corruption of reality by dream; personal inadequacy, alienation, and paranoia; self-deceit; varieties of ignorance and cowardice; the moral insight afforded the artist; violence as a mode of self-discovery. Students are responsible for a term paper, a classroom report, and a weekly review of some critical article. Prerequisite: junior class standing or permission of the instructor. Cr 3.

**ENG 396 Modern Novel: Themes and Methods**

Rosen

Works by six or more distinguished novelists expressing contemporary subject matter and technique. Among representative themes students will consider those of dream and illusion, revolution and personal revolt, alienation and anxiety, crime and self-assertion; among narrative techniques, ellipsis and adaptations of stream-of-consciousness. The list of novelists will vary, but recent assignments include Knut Hamsun, Franz Kafka, Thomas Mann, Hermann Hesse, Andre Malraux, D. H. Lawrence, and James Joyce. Students are responsible for a term paper, a classroom report, and a weekly review of some critical article. Prerequisite: junior class standing or permission of the instructor. Cr 3.

**ENG 397 American Drama**

A study of the drama in the United States. A brief history of early American Playwrights followed by a close study of major figures, with O'Neill as the center. Others: Maxwell Anderson, Robert Sherwood, Tennessee Williams, Arthur Miller, and Edward Albee. This course is also listed as THE 460. Cr 3.

**ENG 490 Independent Study in Modern Literature**

Cr var.

**ENG 491 The Southern Renaissance**

Slavick

The post-World War I flowering in Southern letters, with emphasis on the fiction of Heyward, Wolfe, Faulkner, Elizabeth Madox Roberts, Tate, Gordon, Porter, Agee, Warren, Welty, McCullers, Peter Taylor, Flannery O'Connor, and Walker Percy. Cr 3.

**ENG 492 The Fugitive Poets**

Burke

Intensive readings of the poetry of John Crowe Ransom, Donald Davidson, Allen Tate, and Robert Penn Warren. Recommended for upperclass students and English majors with a strong background in poetry. Attention to the literary situation of the twenties, especially Eliot and Pound. Frequent short papers and verbal participation required. Cr 3.

**ENG 493 Joyce's Dubliners, Portrait, and Ulysses**  
Hanna

A chapter-by-chapter exploration of *Ulysses*, the prestigious world novel by James Joyce. Each student will be assigned a different critical commentary so that divergent interpretations can be pooled in class. Prerequisite: a working knowledge of either *Dubliners* or *A Portrait of the Artist as A Young Man*. Round table sessions; regular oral reports, impromptu themes on key passages. Cr 3.

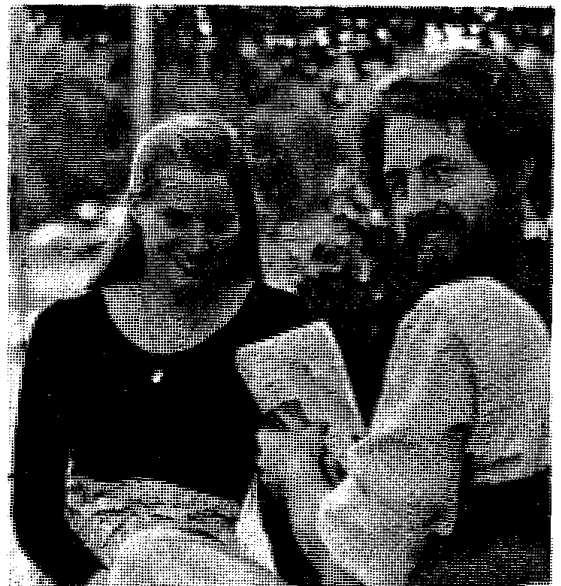
**ENG 494 Fitzgerald, Hemingway, Faulkner**

Slavick

Studies in diction of three 20th century American writers. Cr 3.

**Experimental Courses**

Occasionally the English Department offers special courses not listed individually in the catalog. They appear in the current Schedule of Courses under the designation 99, 199, 299, 399, or 499. Such courses will usually be experimental: pursuing original research, testing new alignments of figures or materials, or trying out courses before including them in the Department curriculum.





# FOREIGN LANGUAGES AND CLASSICS

Chairperson of Foreign Language and Classics Department: Yves Dalvet, 520 Bonney Hall, Portland.

Professor Duclos; Associate Professors Crochet, Dalvet, di Benedetto, Lepelley, Rolfe, Ubans;  
Lecturers Hernandez, Perry, Schwanauer.

## I. COURSES IN ENGLISH TRANSLATION

The Foreign Language and Classics Department offers a number of courses in English translation requiring no previous knowledge of a foreign language and open to any student interested in foreign or classical literature and civilization. These courses are numbered 251-300. Courses in this category may be credited toward either the French major or minor or the German or Spanish minors if the work of the course, including papers and readings, is undertaken in the target language.

## II. BILINGUAL STUDENT

Franco-American students and students with Hispanic, German, or Italian backgrounds are encouraged to consult the instructors of the respective languages to determine their level of study.

## III. ADVANCED PLACEMENT: CREDIT BY EXAMINATION

It is the policy of the Department of Foreign Languages and Classics to grant credit in French, German, Greek, Latin and Spanish to an enrolled student who presents evidence of competency in one of those languages by completing the appropriate Advanced Placement Examination of the College Entrance Examination Board. For more details, contact the Chairman of the Department.

## IV. LANGUAGE CREDIT HOURS IN ELEMENTARY AND INTERMEDIATE FRENCH OR GERMAN COURSES

It is the policy of the Department that a student may receive 6 credit hours but no more for the elementary and intermediate levels each, if he or she takes courses in these languages in any combination of sequence:

Elementary level:	101	102
	103	105
Intermediate level:	131	132
	106	

## V. LANGUAGE PROGRAMS

The department offers programs in French, German,

Classical Greek, Italian, Latin, and Spanish. Beginners courses (101-102) are for students who have never studied the language. Intermediate-level courses (131-132 for modern languages; 231-232 for the ancient languages) are for students with two successful years of high school language study. Students whose background does not fit either of these categories should consult an instructor in Foreign Languages before registering. Courses numbered 105-106 are designed for those students who desire to acquire reading proficiency in French or German for any of the following purposes: research in their fields, graduate school language requirement, cultural enjoyment.

## VI. CONVERSATION

Besides the oral practice in the classroom, students are urged to use the language laboratory located on the Portland campus in Payson Smith Hall, Room 203, and open every weekday from 9 a.m. to 3 p.m. French students who have already reached the level of literature courses may enroll in conversation courses meeting once a week (207-208) which may be repeated for one credit each semester.

## VII. LANGUAGE LAB

Students enrolled in beginners or intermediate courses may register for supervised language practice amounting to a minimum of one hour a week in the laboratory; they will receive one extra credit (on a P/F basis) for regular and active attendance.

Since the work done in the language lab is coordinated with classroom work, only the students enrolled in a language course can take the corresponding lab section for credit. Credit for the lab is granted only if the student passes the course. Any exception to this has to be approved by the Chairman.

However, all students are welcome to use the Language Lab facilities for their own purposes, without credit.

## VIII. MAJOR IN CLASSICAL STUDIES — SELF-DESIGNED

A major in Classical Studies is also available through the self-designed program (involving work in Greek and Latin, Classical Literature in translation, ancient history, philosophy and art).

## IX. FRENCH MAJOR

At the present time the department offers a major only in French. French majors must take a minimum of thirty credit-hours on the 200 level and above, of which twenty-one hours must be in literature courses. They are advised to take as early as possible FRE 201, FRE 231, FRE 283, and FRE 284. Summer and junior-year studies in France or French Canada are encouraged and acknowledged by transfer of credits.

All majors already engaged in studies of French Literature should maintain an active effort to reach fluency in speaking French through constant practice, use of the Language Laboratory and conversation courses FRE 207 and 208. They are expected to have reached

proficiency in speaking and writing French before their graduation.

Each student's progress will be reviewed periodically by the French faculty. All majors must achieve at least 12 credits of B or better grades in their major courses. No grade of D will count toward fulfillment of a French major.

All students are reminded that, in addition to their meeting departmental requirements for a major leading to a baccalaureate degree, they must also meet the requirements of the College of Arts and Sciences, as well as the University's General Education Requirements.

## X. MINORS FOR STUDENTS IN THE COLLEGE OF EDUCATION (Elementary Education)

Future teachers of foreign languages need a solid foundation in their target language so that they will be ready to teach it competently. The following programs are devised to assure that they reach such a goal.

**French Minor** 12 credits at the 200 level or above. (18 including FRE 131-132)

Required courses:	<i>Credit Hours</i>
FRE 201 or 202 Composition I, II .....	3
FRE 203 or 204 Conversation I, II .....	3
FRE 231 Introduction to French Literature .....	3
	9

Elective courses:
FRE 205 Phonetics
FRE 232 Introduction to French Literature II
FRE 401 or 402 Advanced French Grammar
any French Literature course on the 300 level

**German Minor** 12 credits at the 200 level or above. (18 including GMN 131-132)

Required courses:	<i>Credit Hours</i>
GMN 201 and 202 Composition and Conversation I and II .....	6
GMN 231 and 232 Introduction to German Literature .....	6
	12

**Spanish Minor** 12 credits at the 200 level or above. (18 including SPN 131-132)

Required courses:	<i>Credit Hours</i>
SPN 201 and 202 Composition and Conversation I and II .....	6
SPN 231 and 232 Introduction to Spanish Literature I and II .....	6
	12

Students should also take the professional course FLED 301 — The Teaching of Foreign Languages.

## COURSE DESCRIPTIONS

### Literature and Civilization in English Translation

**CLS 251 The Epic Hero in Ancient Literature**  
Duclos

Intensive readings in English translations of Gilgamesh, Iliad, Odyssey, Argonautica, Aeneid; discussion, papers. Cr 3.

**CLS 252 The Tragic Hero in Ancient Literature**  
Duclos

Intensive reading of selected plays in English translation by Aeschylus, Sophocles, Euripides, Seneca; discussion, papers. Cr 3.

**CLS 281 The Golden Age of Greece**  
Duclos

The literature, history, politics, philosophy, art, and architecture of the fifth century B.C. with particular attention to the achievements of Athens. Lectures, discussion, papers, museum trip. Cr 3.

**CLS 282 Rome, from Republic to Empire**  
Duclos

The literature, history, politics, philosophy, art, and architecture of Rome in the first century B.C. Lectures, discussion, papers, museum trip. Cr 3.

**FRE 283 French Civilization: An Historical Approach**

Dalvet  
Aspects of the society, institutions, arts, literature, and religion of France, from the origins to the end of the XIX century. Cr 3.

**FRE 284 French Civilization: Contemporary France**

Dalvet  
Institutions, education, society, economy, politics of France. Requires reading knowledge of French, but no French is spoken in the classroom. Cr 3.

**FRE 253 Masterpieces of French Literature I (in English Translation)**

Dalvet  
Novels and plays representative of French Literature from the beginning of the XIXth century to the present. No knowledge of French is necessary. Cr 3.

**FRE 254 Masterpieces of French Literature II (in English Translation)**

di Benedetto  
Novels and plays representative of French Literature from the Middle Ages to the end of the 18th century. No knowledge of French is necessary. Cr 3.

**FRE 255 Contemporary French Thinkers (in English Translation)**

Dalvet  
Readings and discussion of recent works of French literature selected for their philosophical and ethical importance: Saint-Exupery, Sartre, Camus, de Beauvoir, Teilhard de Chardin and others. No knowledge of French is necessary. Cr 3.

**FRE 256 Avant Garde Theatre in France (in English Translation)**

Study of plays and theoretical texts in English translation from Jarry to Beckett. No knowledge of French is necessary. Cr 3.

**FRE 257 18th Century Literature in France and England**

di Benedetto  
A study of the emergence of the bourgeoisie and its relationship to literature in 18th Century France and neighboring countries. The social and moral evolution of the family, sentimentalism, and middle class revolt will be discussed. Special attention will be paid to the literary interchange between France and England. Readings in Prevost, Marivaux, Rousseau, Diderot, Richardson, Goldsmith, Sterne, Goldoni. In English. Cr 3.

**GMN 258 The German Novelle (in English Translation)**

Ubans  
The study of the genre of the *Novelle* and its development through the major literary movements from the early nineteenth century to the present. Authors read vary, but normally include Goethe, Tieck, E.T.A. Hoffmann, Kleist, C. F. Meyer, Storm, Musil and Mann. No knowledge of German is necessary. Cr 3.

**SPN 259 Masterpieces of Spanish Literature (in English Translation)**

Perry or Staff  
The study of fiction, poetry, and essays representative of Hispanic literature of the 19th and 20th centuries. No knowledge of Spanish is necessary. Cr 3.

**Classics: Greek and Latin****GRK 101 Beginning Greek I**

Duclos  
Fundamentals of classical Greek. Emphasis upon acquisition of reading knowledge. Cr 3.

**GRK 102 Beginning Greek II**

Duclos  
Selections from Euripides' *Alcestis*. Prerequisite: GRK 101. Cr 3.

**GRK 231 Introduction to Greek Literature I**

Duclos  
A study of Plato's *Apology*, *Crito* and selections from the *Phaedo*. Prerequisite: GRK 102 or equivalent. Cr 3.

**GRK 232 Introduction to Greek Literature II**

Duclos  
A study of selected books from Homer's *Iliad* or *Odyssey*. Prerequisite: GRK 231. Cr 3.

**LAT 101 Beginning Latin I**

Duclos  
Fundamentals of the Latin language. Cr 3.

**LAT 102 Beginning Latin II**

Duclos  
Continuation of LAT 101. Cr 3.

**LAT 231 Introduction to Latin Literature I**

Duclos  
Selected readings from masters of Latin prose and poetry. Prerequisite: LAT 102 or equivalent. Cr 3.

**LAT 232 Introduction to Latin Literature II**

Continuation of LAT 231. Cr 3.

**GRK 310 Seminar in Greek Literature**

Duclos  
Readings in Greek prose and poetry; a different author will be read each semester. Translation, supplementary reading, paper. Prerequisite: GRK 232. Cr 3.

**LAT 310 Seminar in Latin Literature**

Duclos  
Readings in Latin prose and poetry; a different author will be read each semester. Translation, supplementary reading, paper. Prerequisite: LAT 232. Cr 3.

**French****FRE 101 Beginning French I**

Beginner's course in French. Initiation in the four skills of language learning: listening comprehension, speaking, reading, and writing. Students are encouraged to register also for laboratory practice (one more credit). Cr 3. (With lab, Cr 4.)

**FRE 102 Beginning French II**

Continuation of FRE 101. Cr 3. (With lab, Cr 4.)

**FRE 103 Review of Elementary French**

Elementary French for students with some previous study of the language who feel the need for a refresher course before entering FRE 131. If possible, register also for laboratory practice (one more credit). Cr 3. (With lab, Cr 4.)

**FRE 105 Reading French**

Beginner's course in French aiming exclusively at a reading knowledge of the language. No French spoken. Recommended also as preparation for language tests required by graduate schools. Cr 3.

**FRE 106 Readings in French**

Further practice of the skill acquired in FRE 105 through an accelerated reading of books on various topics (fiction, history, science, etc). Prerequisite: FRE 105. Cr 3.

**FRE 131 Intermediate French I**

Review of grammatical structures. Further development of listening comprehension, speaking, reading and writing skills. Students are encouraged to register also for laboratory practice (one more credit). Prerequisite: FRE 102, FRE 103, or two years of high school French. Cr 3. (With lab, Cr 4.)

**FRE 132 Intermediate French II**

Continuation of FRE 131. Cr 3. (With lab, Cr 4.)

**FRE 201 French Composition I**

Advanced study of the French language. Proficiency in writing, vocabulary development and idiomatic expression are the objectives of the course. Some free composition and translation. Prerequisite: FRE 132 or equivalent. Cr 3.

**FRE 202 French Composition II**

Continuation of FRE 201. Cr 3.

**FRE 203 French Conversation**

Intensive oral practice, expository reports, debates, class discussions. Prerequisite: FRE 132 or equivalent. Cr 3.

**FRE 204 French Conversation II**

Continuation of FRE 203. Cr 3.

**FRE 205 French Phonetics**

Rolfe

A formal study of the French sound system and an initiation into phonetic transcription with practical and remedial work in pronunciation. Prerequisite: FRE 132 or equivalent. Cr 3.

**FRE 207 The Practice of Conversation I**

For advanced students needing oral practice. This course, which meets once a week, is especially recommended for French majors who may take it repeatedly for credit. Prerequisite: FRE 204 or equivalent. Cr 1.

**FRE 208 The Practice of Conversation II**

Continuation of FRE 207. Cr 1.

**FRE 231 Introduction to French Literature I**

Dalvet

Reading and discussion of representative literary works in the major genres (novel, drama, poetry). Techniques of close reading and *explication de texte* are studied. Designed to give a general background for the major as well as to provide a representative sampling for the non-major. Prerequisite: FRE 202 or equivalent. Cr 3.

**FRE 232 Introduction to French Literature II**

Dalvet

Continuation of FRE 231. Cr 3.

**FRE 301 The French Novel Between the World Wars**

Crochet

Study of important novels by Gide, Proust, Mauriac, Malraux, Giono, and others. Student participation through group discussion and individual oral reports. Prerequisite: FRE 231. Cr 3.

**FRE 302 The French Novel from World War II to the Present**

di Benedetto

Contemporary trends in the novel, with some attention to the short story. The post-war works of Camus and Sartre; novels by Robbe-Grillet, Beckett, Butor,

Claude Simon, Marguerite Duras, and others. Prerequisite: FRE 231. Cr 3.

**FRE 303 French Theatre in the Twentieth Century**

Crochet

Plays by Giraudoux, Salacrou, Claudel, Montherlant, Anouilh, Genet, Ionesco. Prerequisite: FRE 231. Cr 3.

**FRE 304 Women in Contemporary French Literature**

Crochet

The course examines, through fictional and semi-autobiographical works, womanhood as seen by well-known women writers of the 20th century. Works by Colette, Simone de Beauvoir, Christiane Rochefort, Françoise Mallet-Joris, Nathalie Sarraute, Marguerite Duras and Albertine Sarrazin. Prerequisite: FRE 231. Cr 3.

**FRE 321 Drama and Poetry from Romanticism to Symbolism**

Lepelley

Lectures, readings, and discussion of plays and poetry by Hugo, Musset, Vigny, Baudelaire, Verlaine, Mallarme, Rimbaud, and other representative authors. Prerequisite: FRE 231. Cr 3.

**FRE 325 The XIXth Century Novel: Balzac and Stendhal**

Dalvet

Representative novels and short stories of Balzac, Stendhal, and contemporaries. Prerequisite: FRE 231. Cr 3.

**FRE 326 The XIXth Century Novel: Flaubert and Zola**

Lepelley

Representative novels of Flaubert, Zola, and contemporaries. Prerequisite: FRE 231. Cr 3.

**FRE 331 The Enlightenment in French Literature**

di Benedetto

The use of literature for propagation of ideas in XVIIIth century France. Readings from Fontenelle, Montesquieu, Voltaire, Diderot, Rousseau. Prerequisite: FRE 231. Cr 3.

**FRE 332 The XVIIIth Century French Novel**

Dalvet

Readings from Prevost, Marivaux, Rousseau, Laclos, and others. Prerequisite: FRE 231. Cr 3.

**FRE 335 French Literature of the 17th Century until 1660**

Lepelley

Readings from Malherbe, Scarron, Descartes, Pascal, Corneille. Prerequisite: FRE 231. Cr 3.

**FRE 336 French Literature of the 17th Century: the Apogee of the Classical Age**

Lepelley

Readings from Mme. de la Fayette, Moliere, Racine, La Fontaine, La Bruyere, Boileau. Prerequisite: FRE 231. Cr 3.

**FRE 345 French Literature of the Medieval Period**

Lepelley

*Chansons de Geste, Romans courtois*; theatre, lyric, poetry. In modern French translation. Prerequisite: FRE 231. Cr 3.

**FRE 347 French Literature of the 16th Century**

Reading and discussion of works by Marot, Rabelais, Ronsard, Montaigne and a few others. The course examines various genres — poetry, satire, drama, essay — and the aspirations, discoveries, problems and struggles of the period. Cr 3.

### **FRE 381 Littérature Québécoise**

Reading and discussion of novels, short stories, poems, and plays by contemporary French Canadian writers Gabrielle Roy, Gerard Bessette, Jacques Godbout, M. Claire Blais, Marcel Dube, Saint-Denis Garneau, Alain Grandbois, and P. M. Lapointe. Prerequisite: FRE 231. Cr 3.

### **FRE 401 Advanced French Grammar I**

Rolfe

Designed to provide prospective teachers with an adequate foundation in French grammar. Prerequisite: FRE 202. Cr 3.

### **FRE 402 Advanced French Grammar II**

Rolfe

Continuation of FRE 401. Cr 3.

## **Foreign Language Education**

### **FLED 301 The Teaching of Foreign Languages**

Rolfe

Principles and practices of teaching foreign languages at different learning levels. Survey of current trends and methods. Application of language-learning principles to classroom procedures. For seniors seeking certification in teaching foreign languages. Cr 3.

## **German**

### **GMN 101 Beginning German I**

Beginner's course in German. Initiation in the four skills of language learning: listening comprehension, speaking, reading, and writing. Students are encouraged to register also for laboratory practice (one more credit). Cr 3. (With lab, Cr 4.)

### **GMN 102 Beginning German II**

Continuation of GMN 101 Cr 3. (With lab, Cr 4.)

### **GMN 103 Review of Elementary German**

Elementary German for students with some previous study of the language who feel the need for a refresher course before entering GMN 131. If possible, register also for laboratory practice (one more credit). Cr 3. (With lab, Cr 4.)

### **GMN 105 Reading German I**

Schwanauer

Elementary course in German aiming exclusively at a reading knowledge of the language. No German spoken. Cr 3.

### **GMN 106 Reading German II**

Schwanauer

Further practice of the reading skill acquired in GMN 105. Recommended also as preparation for language tests required by graduate schools. Prerequisite: GMN 105 or instructor's permission. Cr 3.

### **GMN 131 Intermediate German I**

Ubans

For students who have completed GMN 102 or 103 or the equivalent. Review of grammar. Classroom practice aiming at fluency in speaking and reading. Students are encouraged to register also for laboratory practice (one more credit). Prerequisite: GMN 102 or 103. Cr 3. (With lab, Cr 4.)

### **GMN 132 Intermediate German II**

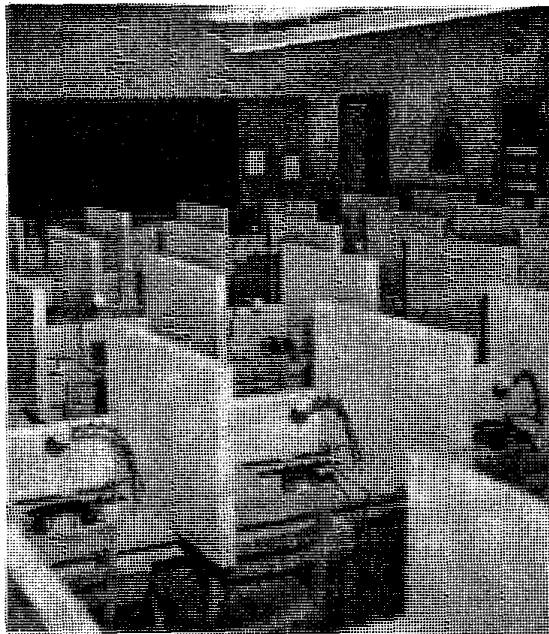
Ubans

Continuation of GMN 131. Cr 3. (With lab, Cr 4.)

### **GMN 201 Composition and Conversation in German I**

Ubans

Systematic training in correct pronunciation and



usage, and in vocabulary building, with written and oral practice and work in the laboratory. Prerequisite: GMN 132 or equivalent. Cr 3.

### **GMN 202 Composition and Conversation in German II**

Ubans

Continuation of GMN 201. Cr 3.

### **GMN 231 Introduction to German Literature I**

Ubans

Reading and discussion of selected works representing the major literary movements from Enlightenment to Realism. Readings are in German; class discussions and exams are in English. Prerequisite: GMN 132 or GMN 106 or an equivalent reading ability of German. Cr 3.

### **GMN 232 Introduction to German Literature II**

Ubans

Reading and discussion of selected works representing the major literary movements from Naturalism to the present. Readings are in German; class discussions and exams are in English. Prerequisite: GMN 132 or GMN 106 or an equivalent reading ability of German. Cr 3.

### **GMN 258 The German Novelle (in English translation)**

Ubans

The study of the genre of the *Novelle* and its development through the major literary movements from the early nineteenth century to the present. Authors read vary, but normally include Goethe, Tieck, E.T.A. Hoffmann, Kleist, C. F. Meyer, Storm, Musil, and Mann. No knowledge of German is necessary. Cr 3.

## **Italian**

### **ITA 101 Beginning Italian I**

Dalvet

Beginner's course in Italian. Initiation in the four skills of language learning: listening comprehension, speaking, reading, and writing. Students are encouraged to register also for laboratory practice (one more credit). Cr 3. (With lab, Cr 4.)

**ITA 102 Beginning Italian II**

Dalvet

Continuation of ITA 101. Cr 3. (With lab, Cr 4.)

**ITA 131 Intermediate Italian I**

Dalvet

Reading of short stories and essays reflecting the wealth and variety of Italian culture. Classroom practice of conversation. Prerequisite: ITA 102. Cr 3.

**ITA 132 Intermediate Italian II**

Dalvet

Continuation of ITA 131. Cr 3. (With lab, Cr 4.)

**Spanish**

**SPN 101 Beginning Spanish I**

Beginner's course in Spanish. Initiation in the four skills of language learning: listening comprehension, speaking, reading, and writing. Students are encouraged to register at the same time for laboratory practice (one more credit). Cr 3. (With lab, Cr 4.)

**SPN 102 Beginning Spanish II**

Continuation of SPN 101. Cr 3. (With lab, Cr 4.)

**SPN 103 Review of Elementary Spanish**

Elementary Spanish for students with some previous study of the language who feel the need of a refresher course before entering SPN 131. If possible, register also for laboratory practice (one more credit). Cr 3. (With lab, Cr 4.)

**SPN 131 Intermediate Spanish I**

Hernandez

For students who have completed SPN 102 or the

equivalent. Review of grammar. Classroom practice aiming at fluency in reading and speaking. Students are encouraged to register also for laboratory practice (one more credit). Prerequisite: SPN 102 or equivalent. Cr 3. (With lab, Cr 4.)

**SPN 132 Intermediate Spanish II**

Hernandez

Continuation of SPN 131. Cr 3. (With lab, Cr 4.)

**SPN 201 Composition and Conversation in Spanish I**

Hernandez

Advanced study of the Spanish language. Frequent practice of composition. Conversation and oral reports. Prerequisite: SPN 132 or equivalent. Cr 3.

**SPN 202 Composition and Conversation in Spanish II**

Hernandez

Continuation of SPN 201. Cr 3.

**SPN 231 Introduction to Spanish Literature I**

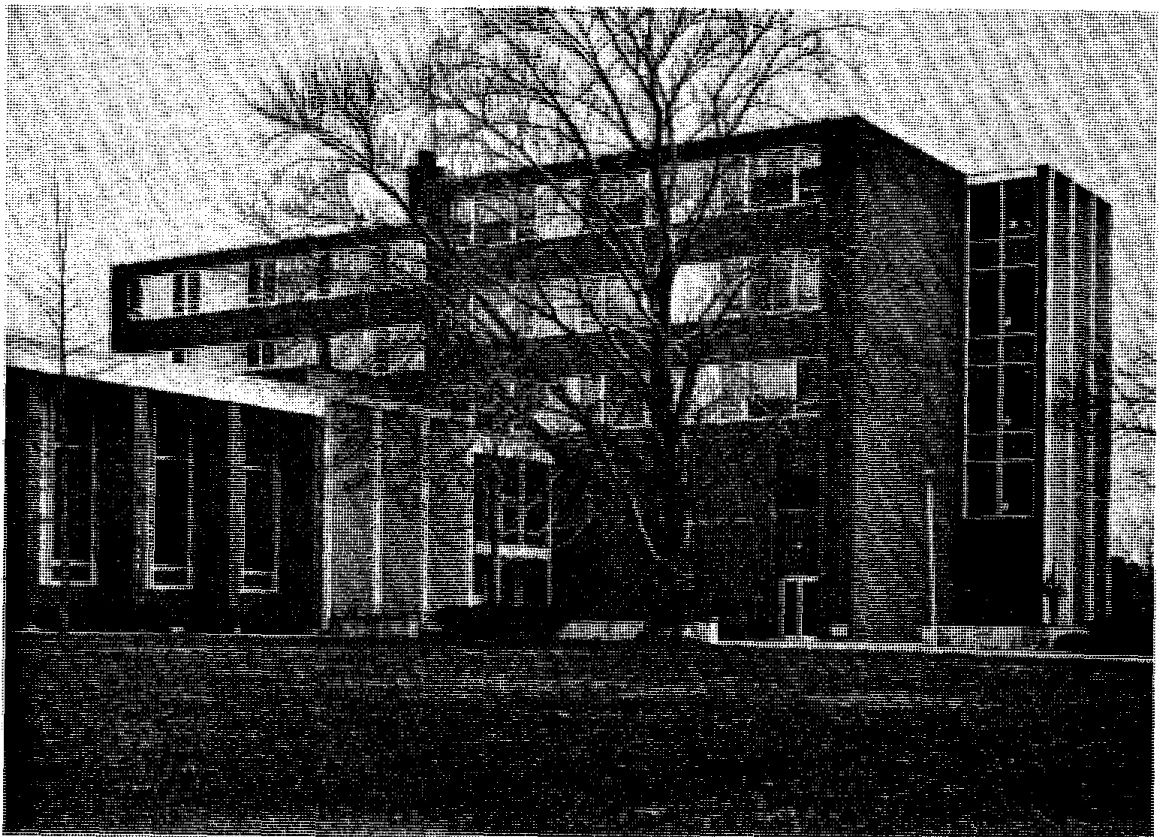
A survey of the important periods and trends in Spanish literature with reading of representative works. Prerequisite: SPN 132. Cr 3.

**SPN 232 Introduction to Spanish Literature II**

Continuation of SPN 231. Cr 3.

**SPN 399 Contemporary Latin-American Literature**

Reading and discussion in Spanish of a selection of key essays, poems, short stories and novels from the late 19th century to the present. Authors included are Borges, Mistral, Neruda, Paz, Vallejo. Assignments will include oral reports and one project. Prerequisite: SPN 231 or with permission from instructor. Cr 3.



# GEOGRAPHY-ANTHROPOLOGY

Chairman of Geography-Anthropology Department: Robert J. French, 320C Bailey Hall, Gorham.

Associate Professors French, Hodges, Tizon; Assistant Professor Yesner.

The Department of Geography-Anthropology offers the following programs:

- (1) A 39-hour major in geography-anthropology in the College of Arts and Sciences;
- (2) An 18-hour minor in geography or anthropology for all students in the College of Education including Early Childhood and Elementary Education majors.

All students with majors or specific discipline minors in the social sciences must achieve at least 6 credits with grades of B or better in such major or minor requirements. No grades of D will count toward fulfillment of the major or minor requirements. No required course may be repeated more than once.

All students are reminded that, in addition to their meeting departmental requirements for a major leading to a baccalaureate degree, they must also meet the requirements of the school or college involved, as well as the University's General Education Requirements.

The program leading to a major in geography-anthropology will emphasize the integration of the two disciplines. The major in geography-anthropology will be a 39-hour interdisciplinary major to the extent that students will be expected to take courses from the two disciplines of geography and anthropology. It will be possible for a student to concentrate his/her interest heavily in either geography or anthropology, or to achieve any desired balance between the two disciplines. A student's program of courses beyond the basic requirements listed below must be planned in *close consultation* with the student's advisor and approved by the latter. This approach allows for the flexi-

bility of students' interest while providing close guidance and the control of educational quality by the department.

## GEOGRAPHY-ANTHROPOLOGY MAJOR

### College of Arts and Sciences Basic Requirements

- A. Students electing to concentrate in anthropology must take ANY 101, a choice of ANY 102 or 105, and ANY 210 for a total of nine (9) credit hours.
- B. Students electing to concentrate in geography must take GEOG 101, 102, 104, and 201 for a total of twelve (12) credit hours.
- C. Additionally, all geography-anthropology majors are required to take three (3) hours of quantitative methods and three (3) hours of research writing or their equivalents.

Beyond these basic requirements the student must set up a program of geography/anthropology courses to fulfill the remaining credits of the thirty-nine (39) hour major with his/her advisor, and all courses in that program must be *previously approved* by the advisor.

## GEOGRAPHY MINOR

### For Early Childhood or Elementary Education Students

<i>Required</i>	<i>Credit Hours</i>
GEOG 101 Principles of Geography .....	3
At least one course in regional geography from: .....	3
GEOG 201 Cultural Geography	
GEOG 310 Geography of Asia	
GEOG 311 Geography of North America	
12 hours of electives from the remaining geography courses .....	12
<b>TOTAL REQUIREMENTS FOR A MINOR IN GEOGRAPHY .....</b>	<b>18</b>

## SOCIAL SCIENCES CONCENTRATION

### For Early Childhood or Elementary Education Students

A minimum of 30-credit hours of HIST, SOC, POL, ANY, ECON, GEOG courses.

## SOCIAL SCIENCES MINOR

### For Early Childhood or Elementary Education Students

A minimum of 18-credit hours of HIST, SOC, POL, ANY, ECON, GEOG courses.

### SPECIAL PROGRAMS

#### Museum of Man

The Museum of Man provides a unique experience for students and the community. It is designed to tell the story of human culture through works created by man through the ages. The Museum collection is visited each year by students, faculty, and the surrounding community. Field expeditions, materials, and facilities are also available to those interested in Museum activities. Further information about the Museum of Man may be obtained from Director Robert French, Department of Geography-Anthropology, or from the office of the Dean of the CAS. The Geography-Anthropology Department offers GYAY 100 Museum Aide for one credit hour in conjunction with this project.

#### Institute for Applied Community and Regional Programs (IACRP)

Operated under the auspices of the Geography-Anthropology Department, the purpose of the Institute is two-fold:

- 1) The Institute will provide the services of the academic community to the local area, through regional data collection, research, and planning.
- 2) The Institute will enhance educational and research opportunities for students and faculty members by complementing classroom education with applied experience in community research and development.

### COURSE DESCRIPTIONS

#### Geography-Anthropology

##### GYAY 100 Museum Aide

Museum aides serve on volunteer (unpaid) projects relating to research classification, maintenance and display of artifactual materials. Since the Museum solicits input from students, their contributions are expected to show originality and complement the goals of the Museum of Man. A minimum of thirty (30) hours of service each semester is required for credit. Cr 1.

##### GYAY 205 Archaeology Field School

The summer field school is designed to combine training in research methods of archaeology and geography. Students will receive intensive training in methods of site survey excavation and materials analysis. Several weeks will be spent at selected areas of coastal Maine involved in survey and excavation of sites, mapping sites and landscape features, investigating potential food resources in site areas, and obtaining sediment samples for geological study. This will be followed by some laboratory analysis of recovered materials. Cr 6.

##### GYAY 221 Energy and Society

This course examines the relationship of energy and society with a unique synthesis of geographic and anthropological approaches. Both simple and complex societies are analyzed in terms of energy flow, supplies, and consumption patterns, with special emphasis given to the position of the U.S. past, present, and future. Cr 3.

##### GYAY 250-251 Internship in Applied Geography- Anthropology

Internships offer the student practical experience in working with public agencies, private firms, and municipalities engaged in applied geographical-anthropological activities including, but not limited to, planning, transportation, delivery of human services, and natural resources.

A written contract will be drawn up by advisor and student for each internship, specifying the number of credits sought and work required for these credits. As a general rule, internships will require at least eight hours of actual work per week. Interns will be expected to meet at least once every two weeks with instructor to discuss experiences and/or problems.

In addition, a major paper will be required from each student intern discussing an aspect of the internship or the work performed during the internship. The paper will be presented by the student at the end of the semester to a departmental seminar on applied geography-anthropology.

Prerequisites: junior or senior standing in geography-anthropology; GYAY 200; Problem Solving and Methodology. Cr 1-6.

##### GYAY 321 Analysis of Historic American Material Culture

This lab/discussion course involves the analysis of materials derived from field survey and archaeological investigation of selected historic period North American sites. Chronological and distributional analysis of ceramic, glass, metal and other artifacts of the historic period are among the techniques presented. Students are encouraged to pursue specific research topics using documentary sources as well as assist in the curation of artifacts in the Museum of Man. Cr 3.

#### Anthropology

##### ANY 101 Anthropology: The Cultural View

This course is a basic introductory survey of cultural anthropology. It examines the differences between cultures as well as cultural universals, and the relationship between social organization, ideology, economics, and political structure in different types of societies. It reviews the various theoretical approaches in cultural anthropology's attempt to explain human behavior, presenting examples from "primitive," intermediate, and complex cultures through readings and films. This course is required for all majors concentrating in anthropology. Cr 3.



### **ANY 102 Biological Anthropology**

Man's place in nature; the relationship between human biology and culture; the relevance of primate behavior and human evolution to understanding contemporary human society; human biological adaptations, including a discussion of population and nutrition; and contemporary human variation with an evaluation of the concept of race. Cr 3.

### **ANY 103 Human Origins**

This course traces the biological and cultural evolution of humanity during the last several million years. Various human fossils are considered in order to shed light on the processes of human evolution, and the development of human culture is explored through the archaeological record from the earliest evidence to the advent of farming and domestication. Cr 3.

### **ANY 104 Origins of Civilization**

This course traces the evolution of human culture from the origins of farming and domestication, to the development of complex societies. General processes of urbanization and social stratification will be investigated, and examples will be drawn from throughout the Old and New Worlds, including the "classical" civilizations of the Near East, Southeast Asia, Mexico, and Peru. This course is designed as a sequel to ANY 103. No prerequisites. Cr 3.

### **ANY 105 Introduction to Archaeology**

Introduction to Archaeology describes the methods and theories used by modern archaeologists to uncover information about past human lifeways. Attention is given to techniques of survey and excavation of archaeological materials; concepts of space and time in archaeology; and detailed analysis of artifacts and organic residues. Some attention will be given to specific topics such as the archaeology of Maine. Cr 3.

### **ANY 201 South American Culture History**

This course deals with pre-Columbian South American cultures, from the earliest signs of population to the Spanish conquest. The rise and fall of "high" civilizations (Chavin, Huari, Inca) as well as regional patterns (coast, highlands, tropical forest) will be reviewed. Various theories on the development, interconnection, and disappearance of cultures will be analyzed, along with topical problems such as the origin and spread of agriculture and the evidence for trans-Pacific and trans-Atlantic contact. Cr 3.

### **ANY 203 North American Archaeology**

An examination of the stage of cultural development from the earliest Paleo-Indian populations to the European invasion. Emphasis is placed upon culture as a system of adaptation and anthropological culture sequences in the Southwest, Southeast, Plains and the Northeast are studied in detail. Prerequisite: ANY 105 or permission. Cr 3.

### **ANY 204 North American Indians**

An ethnographic study of Indian cultures at the time of contact by Europeans. Emphasis will be placed upon selected societies from the native culture areas north of Mexico. This comparative analysis examines the variety of cultural systems that existed prior to the European invasion, and the social disorientation that followed. No prerequisites. Cr 3.

### **ANY 206 Archaeological Laboratory Analysis**

Students will be introduced to the analysis of materials collected on an archaeological site. Their work will be centered around the results of previous summers'

archaeological excavations. Research projects will be associated with the same materials. Lecture material will center around environmental archaeology, with special attention given to topics such as faunal analysis. Prerequisite: ANY 105. Cr 3.

### **ANY 210 Culture Theory**

This course is an historical survey of theory in anthropology from the early classical evolutionists to contemporary materialist and idealist approaches. It will examine the various theories in terms of their level of analysis, explanatory value, and relationship to the western society from which they emerged. This course is a requirement for those concentrating in anthropology. Prerequisite: ANY 101 or permission. Cr 3.

### **ANY 212 Economic Anthropology**

The course is designed to offer students with a minimal background in anthropology an understanding of the range of economic systems existing in the world today, including tribal, peasant and state-level economics and the general process which creates this diversity. A specific theme will be the analysis of supply and demand concepts and whether they do or do not apply to other cultures. Cr 3.

### **ANY 213 Cultural Ecology**

This course examines interactions between human societies and their natural environments. One part of the framework of the course is historical, seeking the roots of our current energy-related and ecological crises through the study of simple human societies. A second part of the course involves mastering the methodology that anthropologists use in studying the interrelationships between human groups and their environments. Cr 3.

### **ANY 232 Introduction to Linguistics**

(cross-listed with ENG 232)

A general introduction to modern linguistic science, including studies in the development of language, phonology, morphology, the dictionary, and varieties of English and usage. Also examined are the various grammatical philosophies and their methods — traditional, structural, and transformational. Cr 3.

### **ANY 233 Structural Linguistics**

(cross-listed with ENG 233)

The course first analyzes the structure of many languages: i.e., Mexican and Central American Indian languages, including dialects of Chontal, Aztec, and Maya. The course uses the acquired analytical skills to explore the nature of language itself. Cr 3.

### **ANY 300 Independent Study in Anthropology**

The department faculty offers independent study in a topic in anthropology for upper-level students (junior and senior status). Individuals wishing to take advantage of this option should secure a faculty sponsor and departmental approval. Variable credits will be offered.

### **ANY 301 Victims of Progress:**

**The Anthropologist's Burden**

This course reviews the role of anthropology — past, present, future — in both promoting and explaining culture change. It examines internal and external colonialism — the disappearance of low-energy "primitive" societies, as well as the relationship of the overdeveloped to the underdeveloped world. It explores the strategies for and responsibilities of future anthropology. Cr 3.

### **ANY 305 Models in Archaeology**

Using archaeological data, archaeological anthropology tests a wide range of hypotheses about society. The introduction of the hypothesis testing approach into archaeology is the result of recent expansions in theoretical orientations and methodological strengths. The literature discussing those theoretical and methodological developments will be critically evaluated by the student. Special attention will be given to reconstruction of prehistoric subsistence and settlement, and application of theory to public (conservation) archaeology. Prerequisite: ANY 105. Cr 3.

### **ANY 314 Magic, Religion, and Witchcraft**

This course examines belief in the supernatural as a cultural universal and its expression in the religions of the range of cultural systems, from low-energy "primitive" societies to high-energy complex ones. It will encompass various theoretical approaches to the origin, evolution, and function of religion — from ideological to ecological. Prerequisite: ANY 101 or permission. Cr 3.

### **ANY 333 Structural Linguistics and Culture**

(cross-listed with ENG 333)

This course analyzes the language and culture (art, religion, poetry) of pre-literate societies, particularly the American Indian. Cr 3.

### **ANY 352 Peoples of the North**

This course is designed as a comprehensive summary of the prehistory, traditional culture, and contemporary lifeways of peoples living in the northern hemispheres of both the Old and New Worlds — from Maine to Alaska, and from Siberia to Lapland. Special attention will be given to the origins of these peoples; the way in which they have achieved solutions to common problems of living in cold, northern environments; the effects of European contact; and the modern problems that they face ranging from the effects of urbanization to land claim disputes. Prerequisites: ANY 101 and 105 or permission. Cr 3.

## **Geography**

### **GEOG 101 Principles of Geography**

This course deals with geographic principles which explain why things are located where they are. Various locational models are presented and worked with. Problem solving techniques are analyzed. The course emphasizes cultural patterns of behavior and focuses on how locational decisions are made. Cr 3.

### **GEOG 102 Physical Geography**

This course examines the interrelationships between people and the physical environment. Climate, soil, vegetation, landforms, water and mineral resources are the topics which are covered in this introductory course. This course is required for all majors concentrating in geography. Cr 3.

### **GEOG 104 Cartography**

Mapping the Landscape: Principles of Cartographic Design. An introductory course in Cartography focused on developing basic mapping and graphic communication skills essential to a wide variety of

disciplines. The course will be flexible and adjusted to individual needs. Familiarization with basic charting technology and cartographic tools will be included. A laboratory fee will be required. This course is required for all majors concentrating in geography. Cr 3.

### **GEOG 106 The Local Environment**

This is a field-oriented course that deals with the application of fundamental geographic concepts in the interpretation of areal development. The local area serves as the "laboratory" and provides models of geographic interaction that have application on a broader scale. Cr 6.

### **GEOG 201 Cultural Geography**

A concept-oriented approach to human geography that explores both natural and cultural influences upon man's use of the land and the varied spatial patterns that reflect the manner of occupation. Basic themes include the regional approach, cultural ecology, perception of environment, and landscape analysis. Prerequisite: GEOG 101. This course is required for all majors concentrating in geography. Cr 3.

### **GEOG 202 Geomorphology (also GEOL 202)**

Description and interpretation of landform development in terms of geologic structure, process, and stage. Field trips. Prerequisite: GEOL 111 or permission of instructor. Two hours lecture, two hours lab. Fall semester even years. Cr 3.

### **GEOG 204 Advanced Cartography**

This course is intended to build upon the basic cartographic skills introduced in GEOG 104 and to develop new, more advanced skills in cartographic design and communication. The course will be tailored around individual student's needs and interests, and will include fundamental aspects and use of major types of map projections, statistical mapping, landform representation, and mapping point, volume and linear data. Offered for seven weeks. A laboratory fee is required. Prerequisite: GEOG 104 or permission of instructor. Cr 3.

### **GEOG 209 Planning for the Future: Introduction to Land Use Planning**

This course offers an overview of man/land relationships as they influence contemporary patterns of settlement and use of the land. It will discuss the logic of a planning process as a method of decision making, the formulation of goals and evaluation of alternative courses of action, standards and requirements for specific planning objectives (such as land use, energy, recreation, transportation), and the place of the planning function in government and the role of citizens and private groups. Introduction to basic planning tools and techniques including PERT, aerial photography, and methods of land inventory and classification will be presented. No prerequisite. GYAY 200 is recommended. Cr 3.

**GEOG 215 Air Photo Interpretation**

This basic course is intended to familiarize students with the mechanics, methods and applications of air photo interpretation. Aerial imagery of various scales, spectrums and stereo coverage is analyzed relative to problems such as those involving land use, forestry and archaeology. Offered for a seven-week period to complement the cartography course. Cr 3.

**GEOG 221 Spatial Organization**

Basic concepts of geography are approached within a spatial-organizational format. This involves concepts of spatial efficiency, the geometry of space, geographic predictive approaches, as well as computer simulations and applications. Recommended for GYAY majors concentrating in geography. Cr 3.

**GEOG 300 Independent Study in Geography**

The department faculty offers independent study in a topic in geography for upper-level students (junior and senior status). Individuals wishing to take advantage of this option should secure a faculty sponsor and department approval. Variable credits will be offered.

**GEOG 302 Urban Geography**

Deals with the American city as a type. Urban centers are dealt with at two levels — as whole entities in which location, characteristics, growth, and relations with the countryside are explored, and as complex nodal regions in which the internal variations of the city are examined. Prerequisite: GEOG 101. Cr 3.

**GEOG 303 Economic Geography**

Economic Geography presents a topical approach to economic activities in the world. Primary, secondary, and tertiary economic activities are examined. The major objectives are (1) to present the pattern of

economic activities on a world scale and (2) to present explanations for the location of economic activities. Prerequisite: GEOG 101. Cr 3.

**GEOG 304 Political Geography**

Political Geography is an examination of political conditions in selected areas of the world with emphasis upon theory, process, and results of political decisions. Physical, economic, and cultural factors are considered as explanations for political problem areas. Prerequisite: GEOG 101. Cr 3.

**GEOG 305 Geography of Agriculture**

The course will examine agricultural systems in different parts of the world in terms of productivity, trade, economy and ecology. Physical and cultural inputs will be considered for each system. Trends and problems within the United States will be examined, with special emphasis given to the region of New England and the state of Maine. Prerequisite: background courses in anthropology or geography. Cr 3.

**GEOG 310 Geography of Asia**

The course examines the regions of South Asia, South-east Asia, and East Asia. Monsoon Asia is regional in approach and all aspects of the environment are presented. Physical, cultural, economic, and political factors are examined in an integrative analysis to allow an understanding of some of the reasons for conditions in this part of the world. Prerequisite: GEOG 101. Cr 3.

**GEOG 311 Geography of North America****French**

An open-ended approach, ranging from theory to the empirical, that deals with progress and problems in North America as seen from the spatial point of view. Prerequisite: GEOG 101. Cr 3.

# HISTORY

Chairman of History Department: Joel Eastman, 325 Bonney Hall, Portland;  
departmental offices: 314 Bonney Hall, Portland; 300 Bailey Hall, Gorham.

Professors Cole, Emerson, Hunt, Schleh, Young, York;  
Associate Professors Albee, Bibber, Connick, Dietrich, Eastman, Padula, Ventresco, Whitmore.

History remains a venerable and enduring academic discipline because of the nature of time and the human need to gain perspective and direction by recovering a sense of the past. To do this requires the techniques of preserving, analyzing, and drawing significance from documents and artifacts. The USM history curriculum offers students the opportunity to learn the historian's craft through lectures, discussions, research, and writing.

History is an excellent major for students planning on graduate studies in business, law, or library science. Besides teaching, careers include service with federal, state, and local governments; archival and library work; social science research; editing of documents; publishing; writing and research for historical presentations on television and radio; and many others.

In addition to the Bachelor of Arts in History, the Department offers courses which are used in the history concentration for the College of Education's early childhood or elementary programs; in the Bachelor of Arts degrees in Social Sciences; in the Master of Science in Education with history concentration; and in a Master of Arts in History in cooperation with the University of Maine at Orono.

Students in all departments are well advised to broaden their understanding of mankind through history courses. The following program defines the requirements for majors. Whether or not the student exceeds the minimum number of history electives, they should be chosen to provide a coherent program. Courses in other departments should be an integral

part of this program and should be selected in consultation with an advisor. It is strongly recommended that history majors, especially those expecting to do graduate study, acquire proficiency in a foreign language.

The Department of History participates in an exchange program with King Alfred's College in Winchester, England. Each fall a selected group of majors spends a semester in the British Isles. Departmental offices have information on this program. History majors are also encouraged to take advantage of internship programs administered by the Department of Political Science.

A history major or minor must achieve at least six credits of "B" or better grades in history courses. No grade of "D" will count toward fulfillment of a history major or minor. No required course may be repeated more than once.

The History Department offers an Honors Program for outstanding history majors. The program gives students an opportunity to undertake an independent research project in their junior or senior year under the guidance of a member of the Department. Information is available at either Department office.

All students are reminded that, in addition to their meeting departmental requirements for a major leading to a baccalaureate degree, they must also meet the requirements of the school or college involved, as well as the University's General Education Requirements.

## REQUIREMENTS FOR HISTORY MAJORS

	<i>Credit Hours</i>
HIST 101 and 102 Western Civilization I and II .....	6
HIST 131 and 132 U.S. History to 1877 and U.S. History Since 1877 .....	6
Any two courses from the following Third World Surveys: .....	6
HIST 161 and 162 Introduction to African History to Partition and Introduction to African History since Partition	
HIST 171 and 172 Traditional East Asia and Modern East Asia	
HIST 181 and 182 Latin America I and II	
HIST 200 Reference, Research and Report Writing .....	3
Advanced History Courses .....	18
Minimum Total to Meet Major Requirements .....	39

Unusually well-prepared entering students may, upon passing an examination, gain exemption from any of the required courses. Up to six hours of credit may be granted for superior achievement on such examinations. Otherwise, students will take advanced elective courses to complete the minimum number of credit hours for the major.

## HISTORY CONCENTRATIONS IN COLLEGE OF EDUCATION PROGRAMS

Students in Early Childhood or Elementary Education in the College of Education may complete 30 hours of History in an approved program for a concentration or 18 approved hours for an academic minor. HIST 101-102 and HIST 131-132 are required courses in either the concentration or minor program.

### COURSE DESCRIPTIONS

#### HIST 101 Western Civilization I

A basic survey and introduction to the heritage of Western man from ancient to early-modern times. Particular attention is given to the ancient civilizations of Egypt, Greece and Rome. Medieval civilization is explored with a focus on the institutions it bequeathed to the modern world. The Renaissance and Reformation and the rise of the great nation-states are studied. Throughout the course important individuals are considered such as Alexander the Great, Caesar, Charlemagne, Michaelangelo, and Elizabeth I. The course also introduces students to historical method. Cr 3.

#### HIST 102 Western Civilization II

A basic survey and introduction to the heritage of Western man from early modern times to the atomic age. Particular attention is given to the Enlightenment, the French Revolution, the rise of the industrial era, the growth of nationalism, and the World Wars. Personalities such as those of Napoleon, Hitler, and Stalin are studied. The course also introduces students to historical method. Cr 3.

#### \*HIST 131 United States History to 1877

A basic survey and introduction to the field of American history, covering the political, social, and economic development of the United States through Reconstruction. Cr 3.

#### \*HIST 132 United States History Since 1877

The course is a continuation of HIST 131. A survey of American political, social, and economic development since about 1877. Cr 3.

#### \*HIST 133 American History I

A survey of United States History which examines institutional development and change in major areas of American society and culture before 1900 by means of lecture case studies, a variety of paperbound readings, films, slides, music, and small-group discussions. (This course may not be used to fulfill requirements for Major, Minor or Concentration as of September, 1976). Cr 3.

#### \*HIST 134 American History II

A continuation of HIST 133 which examines institutional change and development in modern American urban industrial society and culture since 1900. (This course may not be used to fulfill requirements for Major, Minor or Concentration as of September, 1976). Cr 3.

\*HIST 131-132 and HIST 133-134 are both introductory courses, although their organization and emphasis differ. History majors may take HIST 133-134 only for general elective credit.

#### HIST 161 Introduction to African History to Partition

Schleh

A survey of African history from early migrations to the beginning of the Colonial era. The approach is both regional, stressing selected countries representative of their regions, and topical, cutting across political boundaries. Topics include the states of the Sudan, city states of East Africa, Islam, the slave trade, exploration and partition. Cr 3.

#### HIST 162 Introduction to African History Since Partition

Schleh

A survey of the Colonial era, the transformation of African societies, the rise of nationalist movements, wars of liberation, and early years of the new era of independence. Cr 3.

#### HIST 163 Africa Through Its Literature

Schleh

An examination of how African history has been portrayed through novels. Both historical re-creation novels and books reflective of the societies which produced them are used, with particular emphasis on English-speaking Africa. (Offered every other year.) Cr 3.

#### HIST 171 Traditional East Asia

Bibber, Dietrich

The history and culture of China and Japan from earliest times to about 1700, with emphasis on the composition of the "traditional" societies. Cr 3.

#### HIST 172 Modern East Asia

Bibber, Dietrich

China and Japan since about 1700, emphasizing contrasting moves toward modernization in two traditional societies. Cr 3.

#### HIST 181 Latin America I

Padula

This survey outlines the nature of the pre-Columbian Indian civilizations, their conquest by the European powers and the creation of the Hispanic and Portuguese empires in America. Cr 3.

#### HIST 182 Latin America II

Padula

This survey begins with the shattering of Iberian colonialism, and moves rapidly into the 20th century. Special attention is given to Mexico, Brazil, Argentina and Cuba, and their varying solutions to the problem of national development. Cr 3.

#### HIST 200 Reference, Research and Report Writing

An introduction to research and writing, designed to prepare undergraduates for the requirements of upper-level courses in history and the social sciences with emphasis on practical methods of utilizing a library, locating materials, taking and organizing notes, and writing and rewriting research papers and reports. (Offered both Fall and Spring semesters in day sessions.) Cr 3.

#### HIST 231 Ancient History I

The political, social, and economic history of the civilizations of the ancient Mediterranean world, with Egypt, the Near East, and Greece being studied. (Offered occasionally.) Cr 3.

#### HIST 232 Ancient History II

A continuation of HIST 231 concentrating upon an examination of ancient Rome. (Offered occasionally.) Cr 3.

### **HIST 235 Medieval Civilization**

Cole

Europe from late antiquity through the Carolingian Empire, Islamic Empire, Byzantine Empire, Medieval Church and State and the coming of the Renaissance and Reformation. Prerequisite: HIST 101 or permission. Cr 3.

### **HIST 241 Renaissance and Reformation**

Ventresco

A study of the transformation of European society from the world of the Renaissance to the crisis of the Reformation. The course will concentrate on the development of Italian Humanism and its influence on Northern Europe. The rise of the Reformation will be examined through the personalities of Martin Luther and John Calvin and the intense feelings which engendered the religious wars and the Counter Reformation. Prerequisite: HIST 101. Cr 3.

### **HIST 242 French Revolution and Napoleon**

Young

The course takes the French Revolution as a climax of major intellectual, political, and social trends in eighteenth-century Europe. Thorough coverage is given to the Old Regime, the Enlightenment and the influence of the American Revolution. There is in-depth analysis of the coming, course and outcome of the French Revolution itself, and its impact outside France. The Napoleonic era is handled as the culminating phase of the Revolution and as a major influence on nineteenth-century Europe. Prerequisite: HIST 102 or permission. Cr 3.

### **HIST 243 Society and Politics of**

#### **19th Century Europe**

Ventresco

A survey of Europe's major powers and their international relations. Major topics also include liberalism, nationalism, socialism, and imperialism. Intellectual and cultural developments are stressed. Prerequisite: HIST 102. Cr 3.

### **HIST 244 20th Century Europe**

Albee, Ventresco, Young

An intensive survey of European developments in the 20th century. The course deals with such intellectual trends as the revolt against positivism, Freudian psychology, expressionism and surrealism in the arts as well as with such phenomena as totalitarianism in its various forms (Nazism, Fascism, Soviet Communism). World Wars I and II and the post-1945 evolution of Europe are thoroughly analyzed. Prerequisite: HIST 102 or permission. Cr 3.

### **HIST 256 World Wars I and II:**

#### **European War and Diplomacy**

Albee

A study of the origins, course, and consequences of the First and Second World Wars. The questions of inevitability and responsibility, the nature of total war, the workings of alliances, the effect of the military upon politics, the wisdom of the peace settlements, and the impact of war upon European society are among the subjects to be considered. Prerequisite: HIST 102 or permission. Cr 3.

### **HIST 261 History of England**

Cole

A survey of England from Anglo-Saxon times to the beginning of the 20th century, with emphasis on the nature of English monarchy, the development of politi-

cal institutions, and evolving constitutionalism. Particular attention is given to broad movements such as the Reformation, the Industrial Revolution, and Imperialism. Prerequisite: HIST 101 or permission. Cr 3.

### **HIST 263 Britain in the 20th Century**

Albee

A study including the Victorian and Edwardian Age, Imperialism, the Monarchy, the Depression, appeasement, the English people in two World Wars, the question of Ireland, and the leadership of Lloyd George and Churchill. Prerequisite: HIST 102 or permission. Cr 3.

### **HIST 265 Italy, Unification to World War I**

Ventresco

A political, intellectual, diplomatic, and social history of Italy from the Risorgimento to the eve of World War I. Considerable emphasis will be given to the role of the Papacy in Italian affairs. Major literary figures to be examined will include Foscolo, Leopardi, Manzoni, Verga, and Carducci. Prerequisites: HIST 101 and HIST 102. Cr 3.

### **HIST 266 Fascist Italy**

Ventresco

This course examines the development, practice and theory of Fascism. Considerable attention will be centered on Benito Mussolini and his relationship to the Fascist Party, the people, the Catholic Church, and foreign affairs. Italian culture in the fascist era will be explored through literature and the arts. Prerequisite: HIST 102 or permission. Cr 3.

### **HIST 272 Germany Since 1870**

Young

A study of the German Empire, its dissolution in 1918, the Weimar Republic, Hitler's Third Reich, Germany in World War II, and divided Germany since 1945. The course examines cultural and social factors which help explain Germany's role in the modern world. Prerequisite: HIST 102 or permission. Cr 3.

### **HIST 275 Russia to 1861**

Young

A survey of political, social, cultural and economic history of the Russian people to the emancipation of the serfs. The course surveys geographic factors, influence of Byzantine civilization, the impact of invasions, and the development of Russia's unique problems. Prerequisite: One history survey or permission. Cr 3.

### **HIST 276 Russia Since 1861**

Young

A survey of political, social, cultural, and economic history from serf emancipation to today. The course deals with Tsarist autocracy and its weaknesses, pressures for reform, the intelligentsia, revolutionary parties, the Bolshevik Revolution, and Communist Russia since 1917. Prerequisite: One history survey or permission. Cr 3.

### **HIST 301 American Colonial History**

Whitmore

The first half of the semester is devoted to the discovery, exploration and colonization of the American colonies. The second half concentrates on the social and political development of these colonies, touching upon various aspects of colonial life and emphasizing the growing maturation of society. Prerequisite: HIST 131. (Offered every other year.) Cr 3.

**HIST 302 The American Revolution**

Hunt

A study of the 1763-1789 period, stressing the breakdown of Anglo-American relations; American independence and its ideological underpinnings; the Revolutionary War; the postwar struggle to strike a balance between too much government and too little; and the drafting and ratification of the U.S. Constitution. (Offered every other year.) Cr 3.

**HIST 305 Hamilton and Jefferson**

Hunt

A study of Hamilton and Jefferson including biographical information and the Jefferson-Hamilton political dichotomy and its subsequent influence. Following this, the course will present a general analysis of social, intellectual, political, economic, and diplomatic problems facing the "New Nation" between 1789-1815. (Offered every other year.) Cr 3.

**HIST 306 The Age of Jackson, 1815-1850**

Hunt

A consideration of American political, cultural, social, and economic development in the first half of the 19th century. Specific topics will include the controversies surrounding Jacksonian democracy, the Bank of the United States, internal improvements, the tariff, "Manifest Destiny," and the sectional-slavery issue. Prerequisite: HIST 131 or permission. (Offered every other year.) Cr 3.

**HIST 307 Civil War and Reconstruction**

Emerson, Hunt

An examination of the period 1850-1877, dealing with the background and causation of the war; Lincoln and the secession crisis; the military, political, diplomatic, and economic aspects of the Civil War; and the challenges and ultimate failure of reconstruction after 1865. Prerequisite: HIST 131. Cr 3.

**HIST 308 The Gilded Age in America, 1869-1898**

Bibber

The United States in the age of enterprise with emphasis on the development of political and economic radicalism, the commercialization of agriculture, the rise of the American city, new directions in social thought, concentration of industrial wealth and financial power, and American foreign policy. Prerequisite: HIST 132 or permission. Cr 3.

**HIST 309 Early 20th Century America, 1898-1938**

Emerson

The United States in the first four decades of the twentieth century with coverage of the Spanish-American War, the progressive movement, American entry into World War I, the Roaring Twenties, the Great Depression, and the domestic programs of the New Deal. Prerequisite: HIST 132. Cr 3.

**HIST 310 America Since 1938**

Emerson

The United States since the Great Depression with coverage of the foreign policy of the New Deal, the Background to Pearl Harbor, World War II, the Fair Deal, the Cold War, the Eisenhower years, the New Frontier, and the Great Society. Prerequisite: HIST 132 or permission. Cr 3.

**HIST 321 History of Maine**

York

A survey of Maine's social, economic and political life from exploration and early settlement to the present. Cr 3.

**HIST 325 History of the American Frontier**

Emerson

The Turner thesis, historiography, and adaptations to the challenges of the environment are considered. Various frontiers from the Atlantic seaboard to the last frontier on the Great Plains are studied. Prerequisites: HIST 131 and 132 or permission. (Offered every other year.) Cr 3.

**HIST 331 History of Black Americans**

Whitmore

An examination of the interaction of black people with American social, political, cultural, and economic institutions. Major topics include the African heritage, components of slavery, abolitionism, segregation, programs of race advancement, and the modern search for identity. Prerequisites: HIST 131 and 132 or permission. Cr 3.

**HIST 333 The American Home**

Bibber

A survey of U.S. domestic architecture, considering the influence of changing tastes, as well as climate and technology, on the buildings in which Americans have lived. Attention will be given to the historical styles as illustrated in the homes of the well-to-do, but attempts also will be made to look carefully at where and how "the people" lived. The approach will include slide-illustrated lectures and on-the-spot observation. Prerequisite: six hours of U.S. History. Cr 3.

**HIST 335 American Urban History**

Whitmore

A survey of the American city: social, political, intellectual, and cultural components; the changing nature of "community;" the course of urban development; and the emergence of urban life styles. Special attention is focused on the population movement to the city; the development of slums, ghettos, and suburbs; the growth of municipal institutions and services; the relationship of city dwellers and government; and the emergence of "Megalopolis." Prerequisite: HIST 131. (Offered every other year.) Cr 3.

**HIST 337 American Economic and Business History, 1607-1860**

Eastman

Economic and business developments in the United States from the first settlements to the Civil War. The course covers the British mercantile system, the colonial economy, the Transportation Revolution, the Southern plantation system, and the beginnings of American industrialization. Prerequisite: HIST 131 or permission. (Offered occasionally.) Cr 3.

**HIST 338 American Economic and Business History Since 1860**

Eastman

Economic and business developments in the United States from the Civil War to the present. The course covers the growth of a national market and distribution system, the revolution in agriculture, the rise of big business, the organization of labor, and the growing involvement of the federal government in business and the economy. Prerequisites: HIST 131 and 132 or permission. (Offered occasionally.) Cr 3.

**HIST 339 American Labor in the Twentieth Century**

Emerson

A chronological examination of the efforts of workers to adjust to our corporate industrial society. Topics will include the emergence of the AFL, labor radical-

ism, the role of labor leadership, racketeering, labor and the New Deal, and labor theory. The focus will be on unions, but attention will be given to nonunion segments of the labor force as well. Prerequisite: HIST 132 or permission. (Offered every other year.) Cr 3.

**HIST 341 American Social and Intellectual History I**  
Emerson, Whitmore

An analysis of the evolution of American religious, political, economic, social, and scientific thought from the colonial period to 1865. The course examines major principles, assumptions, and values; the relation of American thought to class structure, ethnic and racial associations, mobility, and immigration; and the relation of American thought to contemporary intellectual patterns in the Western world. (Prerequisite: HIST 131. (Offered every other year.) Cr 3.

**HIST 342 American Social and Intellectual History II**

Emerson, Whitmore

A continuation of HIST 341 from 1865 to the present. Prerequisite: HIST 132. (Offered every other year.)

Cr 3.

**HIST 343 Diplomatic History of the United States I**  
York

This course covers the development of key United States foreign policies from the Revolution to the Spanish-American War. Prerequisite: HIST 131. Cr 3.

**HIST 344 Diplomatic History of the United States II**  
York

The chief emphasis is placed on the causes and results of World Wars I and II, the nature of the Cold War, and the character of our present commitments. Prerequisite: HIST 132. Cr 3.

**HIST 345 American Character**

Emerson

A course focusing on a particular problem of historical analysis: the interpretation of the national character as revealed in sources ranging from the earliest accounts of foreign travelers to the most recent works of social psychologists. Authors to be considered in discussions, reports, and papers include Tocqueville, Bryce, Adams, Turner, Siegfried, Mead, Potter, Riesman, and others. Prerequisite: HIST 131 or permission. (Offered every other year.) Cr 3.

**HIST 347 Viewpoints in American History**

Bibber

A seminar involving discussions of selected topics in United States history, with emphasis on varying interpretations of trends and events. Students will read and analyze both traditional and more recent views, noting changes in frames of reference, methodology, and general approach. Prerequisite: 12 hours of U.S. history. Cr 3.

**HIST 348 A History of Religion in America**

Whitmore

A history of religion in American society from the colonial era to the present, examining theology, organization, leaders, critics, and the religious contribution to the American heritage. Prerequisites: HIST 131 and 132 or permission. (Offered every other year.) Cr 3.

**HIST 362 Contemporary Africa**

Schleh

An interdisciplinary seminar on contemporary Africa examining literature and the arts, social change, development and adaption in African politics, economic

development, race relations, and international politics. (Offered every other year.) Cr 3.

**HIST 371 The United States and Asia**

Bibber

A history of the United States' interests in the Far East from 1789 to the present, considering economic and social contacts as well as diplomatic. Prerequisites: HIST 131 and 132. HIST 172 strongly recommended. Cr 3.

**HIST 373 History of Late Traditional China**

Dietrich

Before the nineteenth century no Chinese doubted — and few outsiders who saw it disagreed — that the "Middle Kingdom" was the greatest of the world's civilizations. No society was larger, had stronger ties to its past, or had contributed more to the development of human culture. This course will explore the institutions and values of China in the period from 800 to 1800, and its relationships with other societies. Prerequisite: HIST 171 recommended. Cr 3.

**HIST 374 History of Modern China**

Dietrich

After dealing with the nature of Chinese society and institutions as they existed around 1800, the course will take up problems of modernization, imperialism, revolution, warlordism, Japanese aggression, civil war, and the present communist regime. Prerequisite: HIST 172 recommended. Cr 3.

**HIST 376 History of Modern Japan**

Dietrich

This course will explore what Japan was like when Perry "opened" it in 1854 and will deal with the rapid social changes which made Japan the outstanding example of modernization among nonwestern nations. The problems which this development has created will also be considered. Prerequisite: HIST 172 recommended. Cr 3.

**HIST 377 Chinese Thought**

Dietrich

Prior to the modern era, the Chinese interpreted their world through traditional idea systems, the most prominent of which were Confucianism, Taoism, and Buddhism. This course will explore these traditions: their assumptions and values, their varieties and internal tensions, and their relationships to the larger social system. Prerequisite: HIST 171 recommended. Cr 3.

**HIST 381 Latin America and the United States**

Padula

A survey of U.S.-Latin American relations with emphasis on the efforts of the U.S. government and multinational corporations to adjust to the growth of the nationalism, state capitalism and socialism south of the Rio Grande. Cr 3.

**HIST 383 The Society and Culture of Latin America**  
Padula

This seminar seeks to examine, through the use of popular novels and films, the principal characteristics of Latin American culture. Such elements as the role of dictators and revolutionaries, of machismo and imperialism, of great haciendas and folkloric religions will be considered. Cr 3.



### **HIST 386 Modern War and Its Images**

Schleh

An examination of twentieth century warfare stressing the ways in which it has been portrayed to mass audiences. Particular use is made of film, both documentary and feature, and continuing attention is given to the uses of film in the study and teaching of history. Fiction, reporting, and survey histories will also be used, as well as occasional participation by guest discussants. (Offered every other year.) Cr 3.

### **HIST 392 Problems in Contemporary History**

An analysis of a selected controversial and contemporary problem. The topic to be studied and the method of approaching it will be chosen jointly by interested students and the staff. Prerequisite: permission of the instructor. Cr 3.

### **HIST 394 Selected Topics in History**

An analysis of a selected controversial historical problem. The topic to be studied and the method of approaching it will be chosen jointly by interested students and the staff. Prerequisite: permission. Cr 3.

### **HIST 410 The European Revolutionary Tradition**

Since 1789

Young

A seminar analyzing modern European revolutions, revolutionary theory, revolutionary leadership, and the dynamics of revolution, including the role of the revolutionary crowd. Revolutions analyzed range from the French Revolution to the Bolshevik Revolution and include 20th century fascist revolutions. Open to seniors and others by permission. Prerequisite: at least six hours of European history or equivalent in unusual cases. Cr 3.

### **HIST 412 Totalitarianism: Nazism and Soviet Communism**

Young

A seminar in which we seek to analyze and understand the 20th century phenomenon of totalitarianism by in-depth historical case studies of Nazism and Soviet Communism. Such topics as the leader (Hitler/Stalin), the party (Nazi/Communist), the enforcement operation (SS/NKVD), concentration camps and "Gulag Archipelago," propaganda techniques and results, internal administrative organization, war machines (Wehrmacht/Red Army) will be included. Open to juniors, seniors, and graduate students with back-

ground in 20th century European history and political science. Cr 3.

### **HIST 415 Recent Literature in European History**

A survey of the most important recent literature in the field of European history. Designed to inform the public school teacher and advanced undergraduate of the newest publications and historical controversies. Annotated bibliographies will be prepared. Emphasis on reading and discussing books and articles with applicability to secondary education programs. Prerequisite: six hours of European history or permission. Cr 3.

### **HIST 445 Recent Literature in United States History**

A survey of the most important recent literature in the field of U.S. History. Designed to inform the public school teacher and advanced undergraduate of the newest publications and historical controversies. Annotated bibliographies will be prepared. Emphasis on reading and discussing books and articles with applicability to secondary education programs. Prerequisite: twelve hours of U.S. history or permission. Cr 3.

### **HIST 493 Independent Study Semester**

This is the course designator for students who participate in the History Department's semester abroad exchange program with King Alfred's College in England. Cr 12.

### **HIST 495 Historiography**

A survey of the principal schools of historical writing and of their products, with a detailed analysis of the philosophical principles, specific purposes, and research and writing techniques of selected major historians. Prerequisite: senior history majors only. Cr 3.

### **HIST 498 Independent Study in History**

To provide juniors and seniors who have demonstrated critical and analytical capability an opportunity to pursue a project independently, charting a course and exploring an area of interest within their major field, bearing upon it previous course experiences and emerging with an intellectually sound, coherent synthesis reflecting a high caliber of performance. Prerequisite: permission. Cr 1-3.

Other courses in the College of Arts and Sciences have historical interest. Although they do not count for history credit, the major may wish to take some of them as supplementary electives. A current list may be obtained from the History Chairman.

# MATHEMATICS AND COMPUTER SCIENCE

Chairman of Mathematics and Computer Science: Maurice J. Chabot, 230 Science Building, Portland.

Professors Estes, Fish, Guay, Kratzer, Mainville, Rogers; Associate Professors Brown, Chabot, Foster, Irish, MacDonald, Welty; Assistant Professors Heath, Smith, Soychak.

The Department of Mathematics and Computer Science offers four-year programs leading to a B.A. degree in Mathematics or a B.A. degree in Computer Science. The Department also provides the mathematics major courses for a B.S. in Education (see College of Education). All students are reminded that, in addition to meeting departmental requirements for a major, they must also meet the requirements of the school or college involved, as well as the University's General Education Requirements.

## REQUIREMENTS FOR THE MATHEMATICS MAJOR

As a mathematics major, a student may select one of the three options described below. However, as a prerequisite to other courses, all majors are required to complete successfully the calculus sequence (MS 152, 153, 252), a foundations course (MS 290), and a computer science course (CS 160). Each student must have an accumulative grade point average of at least 2.0 in major courses before being considered for a baccalaureate degree in mathematics.

### Option I

Mathematics majors intending to pursue graduate work should choose this option. Those intending to teach at the secondary level should choose this option or the area major described below. Prospective graduate students are urged to take Real Analysis I and II, Abstract Algebra, Topology, and one year of French, German, or Russian; those interested in teaching should take Abstract Algebra, College Geometry, Probability and Statistics I, and should satisfy the appropriate education requirements. To be eligible for student teaching in secondary mathematics, a student must have completed 30 hours of mathematics courses having a second digit 5 or greater with a grade-point average of at least 2.0 in these courses and have successfully completed MsEd 345.

#### Requirements:

A) Successful completion of one of the courses listed in each of the following four areas:

- |                          |                                     |
|--------------------------|-------------------------------------|
| (1) Algebra:             | MS 382 Abstract Algebra             |
|                          | MS 380 Linear Algebra               |
| (2) Analysis:            | MS 352 Real Analysis I              |
|                          | MS 354 Topics in Advanced Calculus  |
|                          | MS 355 Complex Analysis             |
|                          | MS 490 Topology                     |
| (3) Applied Mathematics: | MS 350 Differential Equations       |
|                          | MS 362 Probability and Statistics I |
|                          | MS/CS 364 Numerical Analysis I      |
| (4) Geometry:            | MS 370 College Geometry             |
|                          | MS 372 Non-Euclidean Geometry       |
|                          | MS 371 Projective Geometry          |

B) Successful completion of at least nine additional hours of approved mathematics courses with second digit five or greater.

### Option II

Those majors intending to enter industry or other applied fields should seriously consider this option or Option III. Majors who plan to prepare for the actuarial profession should be certain to include in their programs Linear Algebra, Probability and Statistics I & II, Numerical Analysis, and the appropriate courses in the School of Business.

#### Requirements:

A) Successful completion of:

- MS 350 Differential Equations
- MS 362 Probability and Statistics I
- MS 363 Probability and Statistics II
- MS 380 Linear Algebra
- MS 460 Mathematical Modeling

B) Successful completion of two of the following:

- MS 354 Topics in Advanced Calculus
- MS 492 Graph Theory and Finite Combinatorics
- MS 366 Linear Programming
- MS/CS 364 Numerical Analysis I
- MS 461 Introduction to Operations Research

- C) Successful completion of at least 18 hours in allied disciplines which utilize mathematical techniques. The particular program of courses must be approved in writing by the department.

### Option III

This option is designed for those students who wish to combine mathematical expertise with a knowledge of computer science. It is recommended for those intending to pursue graduate study in computer science or those intending to use the computer in scientific applications.

#### Requirements:

- A) Successful completion of five of the following courses:

- MS 350 Differential Equations
- MS 354 Topics in Advanced Calculus
- MS 355 Complex Analysis
- MS/CS 364 Numerical Analysis I
- MS 362 Probability and Statistics I
- MS 363 Probability and Statistics II
- MS 366 Linear Programming
- MS 380 Linear Algebra
- MS 460 Partial Differential Equations
- MS 460 Mathematical Modeling
- MS 461 Introduction to Operations Research

- B) Successful completion of five additional approved computer science courses with second digit 5 or greater.

### REQUIREMENTS FOR THE COMPUTER SCIENCE MAJOR

The program in Computer Science offers a background in digital computing together with special courses designed to prepare the undergraduate for a career in computer programming or for a further study in computer science. The major consists of 41 credit hours in mathematics and computer science courses. Each student must have an accumulative grade-point average of at least 2.0 in major courses before being considered for a baccalaureate degree in computer science.

#### Requirements:

- A) Successful completion of the following courses:

- CS 160 Introduction to Programming: FORTRAN
- CS 161 Algorithms in Programming
- CS 268 Computer Organization and Planning
- CS 368 Data Structures
- MS 152 Calculus A
- MS 153 Calculus B
- CS 290 Introduction to Discrete Structures

- B) Successful completion of four of the following courses:

- CS 269 Machine and Assembly Language Programming
- CS 360 Concepts of Higher Level Programming Language
- MS/CS 364 Numerical Analysis I
- MS/CS 365 Numerical Analysis II
- CS 369 Systems Programming
- CS 370 Topics in Computer Science
- CS 380 Introduction to the Theory of Computing
- CS 468 Advanced Data Structures
- CS 469 Introduction to Compiler Construction
- CS 497 Independent Study in Computer Science

- C) Successful completion of two mathematics courses with second digit 5 or greater, excluding MS 290.

### COMPUTER SCIENCE AND MATHEMATICS FOR EDUCATION MAJORS

- A) The Department of Mathematics and Computer Science in cooperation with the College of Education offers an area major of 51 hours of mathematics and computer science courses for students majoring in Secondary Education. The program consists of the following courses.

- I. Successful completion of the following:

- MS 152 Calculus A
- MS 153 Calculus B
- MS 252 Calculus C
- MS 290 Foundations of Mathematics; or
- CS 290 Introduction to Discrete Structures
- CS 160 Introduction to Programming: FORTRAN

- II. Successful completion of one course from each of the following areas:
- |                      |                                   |
|----------------------|-----------------------------------|
| Algebra:             | MS 380 Linear Algebra             |
| Analysis:            | MS 382 Abstract Algebra           |
|                      | MS 352 Real Analysis I            |
|                      | MS 355 Complex Analysis           |
|                      | MS 490 Topology                   |
| Applied Mathematics: | MS 350 Differential Equations     |
|                      | MS 362 Probability & Statistics I |
|                      | MS/CS 364 Numerical Analysis I    |
| Geometry:            | MS 370 College Geometry           |
|                      | MS 371 Projective Geometry        |
|                      | MS 372 Non-Euclidean Geometry     |

- III. Successful completion of five of the following computer science courses:
- CS 161 Algorithms in Programming
  - CS 268 Computer Organization and Planning
  - CS 269 Machine and Assembler Language Programming
  - CS 360 Concepts of Higher Level Programming Languages
  - CS 364 Numerical Analysis I
  - CS 368 Data Structures
  - CS 369 Systems Programming
  - CS 370 Topics in Computer Science

- IV. Successful completion of six additional hours of electives in mathematics or computer science with second digit 5 or greater.

V. Professional Education Courses:		Credit Hours
EDU 150	PreProfessional Experiences	2
EDU 200	Foundations of Education	3
EDPY 333	Human Growth and Development	3
EDU 314	Secondary Curriculum	3
EDU 316	Introduction to Learning Disabilities	3
MSED 345	Teaching Mathematics in the Secondary School	3
EDU 324	Student Teaching	12

To be eligible for student teaching in secondary mathematics, a student must have completed 30 hours of mathematics courses having second digit 5 or greater with a grade point average of at least 2.0 in these courses and have successfully completed MSED 345.

It is also recommended that CSED 345 Teaching Computer Science in the Secondary School be taken as an elective in the completion of the overall 120 credits required for graduation.

- B) A minor in computer science may be obtained by successfully completing 21 hours of the computer science courses listed below:  
 Required: CS 160, CS 161, CS 268, CS 360, CSED 345.  
 Two courses from the following: CS 269, CS/MS 364, CS 368, CS 370.
- C) A minor in mathematics may be obtained by successfully completing 18 hours of mathematics courses in which the second digit is 5 or greater.
- D) Early Childhood or Elementary majors may fulfill an area concentration by successfully completing MS 131, MS 231, MS 232, and seven elective three-credit hour mathematics courses with MS code numbers of 120 or above.
- E) Early Childhood or Elementary majors may complete an academic minor in mathematics by successfully completing MS 131, MS 231, MS 232 and three elective three-credit hour mathematics courses with MS code numbers of 120 or above.

### RECOMMENDED COURSES FOR NON-MAJORS

Students who desire an introductory course to satisfy the Area 3 general education requirement should consider MS 104. For students majoring in other disciplines, but wishing to develop competency in using mathematics, the following courses are recommended. Individual course descriptions should be consulted to determine prerequisites.

- MS 109 Linear Systems
- MS 110 Elementary Mathematical Analysis (or MS 152 and MS 153 for greater depth in calculus).
- CS 100 Introduction to Computer Science (or CS 160 for greater depth in computer programming).
- MS 120 Introduction to Statistics (or MS 211 and MS 212 for greater depth in probability and statistics).
- MS 264 Statistical Methods for Research

## COURSE DESCRIPTIONS

### Computer Science

#### CS 100 Introduction to Computer Science

A general course designed for students not majoring in mathematics or computer science. Topics will include: history of data processing technology; study of the tools and methods; the application of computers and their economic and social implications; and an introduction to a programming language. Cr 3.

#### CS 160 Introduction to Programming: FORTRAN

A study of programming techniques and applications using the FORTRAN language. Prerequisite: none. Cr 3.

#### CS 161 Algorithms in Programming

The development and use of algorithms through several case studies intended to demonstrate the application of the FORTRAN language. Prerequisite: CS 160. Cr 3.

#### CS 230 Programming in COBOL and RPG

A study of programming languages used primarily in business. Major emphasis will be on COBOL with some emphasis on RPG. Prerequisite: CS 160. Cr 3.

#### CS 240 Programming in PL/1

A continuation of the study of programming principles through study of the PL/1 language. Prerequisite: CS 160. Cr 3.

#### CS 268 Computer Organization and Planning

The purpose of this course is to introduce the student to the structure and organization of digital computers and the use of assembly language programming systems. Prerequisite: CS 160. Cr 3.

#### CS 269 Machine and Assembler Language Programming

Software organization, a study of assembler and macro language capabilities, assembler language coding, loader and execution tasks. Comparison with interpretive processing. Introduction to program and data structures. Prerequisite: CS 268. Cr 3.

#### CS 290 Introduction to Discrete Structures

Concepts of Modern Algebra, Set Theory, Boolean Algebra, elements of graph theory, and their application to computer science. Prerequisite: CS 160. Cr 3.

#### CS 360 Concepts of Higher Level Programming Languages

Formal definition of programming language, syntax, semantics, basics of compilers, compiler implementation, survey of important programming languages. Introduction to APL, PL/1, ALGOL. Prerequisite: CS 268 or permission of instructor. Cr 3.

#### CS 364 Numerical Analysis I

A study of the theory and application of computational algorithms for interpolation, equation solving, matrix methods, integration; error analysis. Prerequisites: MS 252, CS 160, and permission of instructor. Cr 3.

#### CS 365 Numerical Analysis II (Continuation of CS 364)

Ordinary differential equations, boundary value problems, interpolation and approximation, error analysis, large scale linear systems. Prerequisite: CS 364. Cr 3.

#### CS 368 Data Structures

Basic concepts of data, strings, stacks, arrays, and

lists. Representations of trees and graphs. Storage systems and structures, searching and sorting techniques. Multi-linked structures. Prerequisite: CS 268. Cr 3.

#### CS 369 Systems Programming

Operating systems; batch processing, multi-programming and multi-processor systems, time sharing, scheduling, storage allocation, input-output. File system organization and management. Remote and hierarchical job control. Prerequisite: CS 269. Cr 3.

#### CS 370 Topics in Computer Science

Topics to be covered may include philosophy of computers, history of computers, computers and society, simulation, graphics, and other advanced topics. Prerequisite: CS 268 or permission of the instructor. Cr 3.

#### CS 380 Introduction to Theory of Computing

Introduction to the basic concepts of finite automata and Turing machines; finite state acceptors and regular sets; linear sequential circuits, complexity results for finite networks, elementary notions of recursive and recursively enumerable sets. Prerequisite: CS 290 or MS 290. Cr 3.

#### CS 390 Computer Architecture

Fundamentals of the design and organization of digital computers. Topics include applications of Boolean algebra to logical design; machine algorithms used in addition, subtraction, multiplication, etc.; types of memory; synchronous and asynchronous operation; minimization of logic circuits. Also, concepts from microprocessors and large parallel computers. Prerequisites: CS 290 or MS 290 and CS 268. Not given every year. Cr 3.

#### CS 468 Advanced Data Structures (Continuation of CS 368)

Internal tables, external sorting, file organization, data base management systems and designs. Prerequisite: CS 368. Cr 3.

#### CS 469 Introduction to Compiler Construction

Definition of a language, context free grammars, rigorous definition of a typical small language in BNF, design and implementation of a compiler for programs within this language. Prerequisites: CS 269, CS 368. Cr 3.

#### CS 470 Operating Systems

Computer resource management. Topics include an in-depth study of concurrent cooperating processes; virtual systems; segmentation and paging; I/O device handling; protection and security; deadlock; race conditions. Prerequisites: CS 269, CS 368. Cr 3.

#### CS 497 Independent Study in Computer Science

An opportunity for juniors and seniors who have demonstrated critical and analytical capability to pursue a project independently, charting a course and exploring an area of interest within their major field. Prerequisites: junior or senior standing and permission of the department chairman and instructor. Cr 1-3.

#### CSED 345 Teaching Computer Science in the Secondary School

Critical study of programs and techniques for teaching secondary school courses in computer literacy, computer organization, and computer programming. Prerequisite: junior or senior standing. Cr 3.

#### CSCE 200-201, 300-301, 400-401 Cooperative Education in Computer Science

The student has the opportunity to relate academic

knowledge to practical experience in a job situation. The University makes arrangements with certain institutions, businesses and industries to employ qualified students for specific jobs for a set time period. The student's work is ordinarily in a related field, and the work experiences increase in difficulty and responsibility as the student progresses through the sequence of courses. The experiences are approved on a case-by-case basis by the department. Evaluation is done through a written report done by the student together with the employer and a faculty supervisor. Prerequisites: open to qualified students, subject to availability of suitable jobs. Cr 1-5.

## Mathematics

\*Note that MS 10 and MS 11 carry credit only toward the Associate Degree.

### MS 10 Elementary Algebra

The first course of a two-course sequence designed for students who are deficient in high school algebra. Topics covered include number systems, functions, graphs, the solution of equations, and the solution of problems with a business orientation. No prerequisites. Cr 3.\*

### MS 11 Intermediate Algebra

A continuation of MS 10. Prerequisite: MS 10 or one year of high school algebra. Cr 3.\*

### MS 100 College Algebra

The real number system, algebraic operations, sets, equations, inequalities and their graphs, functions and relations, quadratic functions, exponential and logarithmic functions, theory of equations, systems of equations, permutations, combinations, probability, sequences and series, matrices and determinants, and mathematical induction. Prerequisite: two years high school algebra. Cr 3.

### MS 101 Trigonometry

Functions of an acute angle, reference angles, graphs of trigonometric functions, identities and fundamental relations, trigonometric equations and inequalities, functions of the sum or difference of two angles, functions of a double angle, inverse trigonometric functions, trigonometry of a triangle, polar form of complex numbers. Prerequisite: two years of high school algebra. Cr 3.

### MS 102 Basic Technical Mathematics I

This course, beginning with a review of basic algebra, includes the real number system, metric and British systems of measurements, geometry, and a study of functions. Topics are related to technical applications. Prerequisite: two years high school algebra and one year of geometry. Cr 3.

### MS 103 Basic Technical Mathematics II

A continuation of MS 102 to include topics from geometry, determinants and matrices, analytic geometry, trigonometry and vector and polar coordinates. Topics are related to technical applications. Prerequisite: MS 102 or permission of the instructor. Cr 3.

### MS 104 Topics in Mathematics

A general course designed for students not majoring in

mathematics or computer science. The emphasis will be on the basic concepts encountered in mathematics as well as the applications of mathematics. The topics presented may be interdisciplinary in nature. A student may enroll twice, with the instructor's permission, for an additional three hours of credit not to exceed a total of six credit hours for the course. Prerequisites: two years of high school algebra and one year of geometry. Cr 3.

### MS 109 Linear Systems

An introduction to vectors, matrices, and linear systems of algebraic equations; linear programming; elementary functions. Prerequisites: two years of high school algebra and one year of geometry. Cr 3.

### MS 110 Elementary Mathematical Analysis

A unified treatment of the elementary functions of analysis: their analytical properties including derivatives, integrals, and series; introduction to multivariate calculus; applications. Prerequisites: two years of high school algebra and one year of geometry. Cr 3.

### MS 120 Introduction to Statistics

An introductory course including basic probability, random variables, and their distributions; estimation and hypothesis testing; regression and correlation. Prerequisite: two years of high school algebra. Cr 3.

### MS 131 Number Systems for Elementary Teachers

This is the first course in a three-course sequence in mathematics recommended by the Committee on the Undergraduate Mathematics Program of the Mathematical Association of America for prospective primary and elementary teachers. Major emphasis is placed on an intuitive approach to the real number system and its subsystems. Prerequisites: two years of high school algebra and one year of geometry. Cr 3.

### MS 140 Pre-Calculus Mathematics

A brief review of elementary algebra followed by a study of the algebraic, exponential, logarithmic, and trigonometric functions. Prerequisites: two years of high school algebra and one year of geometry. Cr 3.

### MS 152 Calculus A

This is the first of a sequence of three basic calculus courses covering functions of one or more variables, graphs, limits, derivatives, integrals, optimization, infinite series, vectors, and various applications. Calculus A provides an introduction to the differential and integral calculus of functions of one variable. Prerequisites: two years of high school algebra plus geometry and trigonometry, or MS 140. Cr 4.

### MS 153 Calculus B

A continuation of Calculus A. Calculus B will usually include infinite series and an introduction to vectors. Prerequisite: MS 152. Cr 4.

### MS 211 Probability

Discrete and continuous sample spaces; common probability laws; expected values; sampling distributions. Prerequisites: MS 110 or MS 152. Cr 3.

### MS 212 Statistics

Sampling distributions; estimation; hypothesis testing; introduction to regression analysis and analysis of variance. Applications primarily in business and economics. Prerequisite: MS 211. Cr 3.

### MS 231 Algebra for Elementary Teachers

The second course in a three-course sequence in mathematics recommended by the Committee on the Undergraduate Mathematics Program of the Mathematical Association of America for prospective primary and

elementary teachers. Emphasis is upon the properties of operations in several different algebraic systems. Equations are studied in finite systems as well as in conventional algebra. Prerequisite: MS 131. Cr 3.

**MS 232 Geometry for Elementary Teachers**

The third course in a three-course sequence in mathematics recommended by the Committee on the Undergraduate Mathematics Program of the Mathematical Association of America for prospective primary and elementary teachers. Emphasis is upon constructions, congruence, parallelism, and similarity. Direct and indirect methods of proof are studied but the main approach is intuitive. Prerequisite: MS 131. Cr 3.

**MS 233 Probability for Elementary Teachers**

An introductory course in probability designed for the elementary and junior high teacher. The course content includes empirical probability through conditional probability, random variables and their distributions, including binomial and normal distributions. Prerequisite: MS 131. Cr 3.

**MS 235 History of Mathematics for Elementary Teachers**

A history of certain topics in number theory, geometry, and elementary algebra. Prerequisite: MS 131. Cr 3.

**MS 252 Calculus C**

Multivariate calculus and vector calculus. Prerequisite: MS 153. Cr 4.

**MS 290 Foundations of Mathematics**

Selected topics in set theory, symbolic logic, and methods of proofs needed in more advanced mathematics courses. Prerequisite: consent of the department. Cr 3.

**MS 291 The Real Numbers**

An axiomatic construction of the real number system. Prerequisite: CS 290 or MS 290 or permission of instructor. Cr 3.

**MS 292 Theory of Numbers**

Basic course in number theory, including such topics as divisibility properties of integers, prime numbers, congruences, multiplicative number theoretic functions, and continued fractions. Prerequisite: CS 290 or MS 290. Cr 3.

**MS 350 Differential Equations**

A study of various methods for solving ordinary differential equations and initial value problems including transform, numerical, and series methods. Prerequisite: MS 252. Cr 3.

**MS 352 Real Analysis I**

Limits, continuity, differentiation and integration of functions of one or more real variables, infinite series, uniform convergence, and other selected topics. Prerequisites: MS 252, and CS 290 or MS 290. Cr 3.

**MS 353 Real Analysis II**

A continuation of Real Analysis I. Prerequisite: MS 352. Cr 3.

**MS 354 Topics in Advanced Calculus**

Selected topics on multivariate functions, vectors, transformations, line integrals, and surface integrals. Prerequisites: MS 252 and CS 290 or MS 290. Cr 3.

**MS 355 Complex Analysis**

A study of the complex number system and its applications: differentiation and integration of complex-valued functions, the Cauchy integral theorem and for-

mula, Taylor and Laurent series, singularities and residues, conformal mappings. Prerequisite: MS 252 or permission of instructor. Cr 3.

**MS 362 Probability and Statistics I**

Probability laws, random variables and distributions, estimation and hypothesis testing, regression, correlation, analysis of variance. Emphasis on applications. Prerequisite: MS 153. Cr 3.

**MS 363 Probability and Statistics II**

An analysis of some of the methods used in MS 362. Topics include moment generating functions. Functions of random variables, limit theorems, principles of estimation and hypothesis testing. Additional topics in regression and non-parametric methods. Prerequisites: MS 362 and MS 252. Cr 3.

**MS 364 Numerical Analysis I**

A study of the theory and application of computational algorithms for interpolation, equation solving, matrix methods, integration; error analysis. Prerequisites: MS 252, CS 160, and permission of instructor. Cr 3.

**MS 365 Numerical Analysis II**

(Continuation of MS 364)  
Ordinary differential equations, boundary value problems, interpolation and approximation, error analysis, large scale linear systems. Prerequisite: MS 364. Cr 3.

**MS 366 Linear Programming**

A study of matrix algebra applied to the problem of optimizing a linear function subject to linear inequality constraints, utilizing the simplex procedure. Prerequisite: CS 290 or MS 290. Cr 3.

**MS 370 College Geometry**

Selected topics from Euclidean geometry. Prerequisite: CS 290 or MS 290. Cr 3.

**MS 371 Projective Geometry**

Synthetic and analytic projective geometry, including finite projective planes. Prerequisite: CS 290 or MS 290. Cr 3.

**MS 372 Non-Euclidean Geometry**

A development of one or more of the non-Euclidean geometrics. Prerequisite: CS 290 or MS 290. Cr 3.

**MS 380 Linear Algebra**

An introduction to the theory of vector spaces and linear transformations. Prerequisite: CS 290 or MS 290. Cr 3.

**MS 382 Abstract Algebra**

Algebraic structures, such as groups, rings, integral domains, and fields. Prerequisite: CS 290 or MS 290. Cr 3.

**MS 390 History of Mathematics**

The development of mathematics from ancient to modern times. Prerequisites: MS 152 and CS 290 or MS 290. Cr 3.

**MS 431 Selected Topics in Mathematics for Elementary Teachers**

A course designed to provide enrichment topics for the elementary teacher. The course will include such topics as Number Theory, Motion Geometry, Topology, and Projective Geometry, Graphs, and Sets and Logic. Prerequisites: Junior Elementary Education Major and permission of the instructor.

**MS 432 Selected Topics in Mathematics for Elementary Teachers**

A course designed to provide enrichment topics for the

elementary teacher. The course will include such topics as Awareness Geometry, Transformational Geometry, Analysis of Shapes, Number Theory, and Measurement. Prerequisites: Junior Elementary Education Major and permission of the instructor. Cr 3.

#### **MS 450 Partial Differential Equations**

An introduction to the general properties of partial differential equations followed by solutions of specific equations. The techniques include eigenfunction, expansions, operational methods, and conformal mapping. Prerequisite: MS 350. Cr 3.

#### **MS 460 Mathematical Modeling**

An introduction to the process of formulating problems in mathematical terms, solving the resulting mathematical model and interpreting the results and evaluating the solutions. Examples will be chosen from the behavioral, biological, and physical sciences. This course and MS 461 complement each other. Prerequisites: junior or senior standing, some elementary calculus including differentiation and integration, elementary probability, and some computer programming experience. Cr 3.

#### **MS 461 An Introduction to Operations Research**

A study of some of the problem structures facing the decision maker in the management and social sciences and the methodologies used in reaching optimal solutions. Typical topics might be from among: allocation, scheduling, inventory, optimization, conflict resolution, game theory, waiting lines, decisions under uncertainty, simulation. This course and MS 460 complement each other. Prerequisites: junior or senior standing, some elementary calculus including differentiation and integration, elementary probability, and some computer programming experience. Cr 3.

#### **MS 490 Topology**

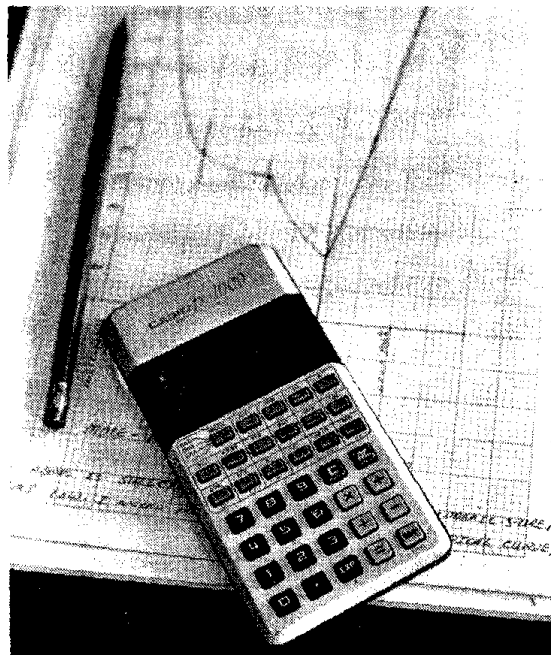
An introduction to fundamental concepts in topology, including topological spaces, mappings, convergence, separation and countability, compactness, connectedness, metrization, and other selected topics. Prerequisites: MS 252 and CS 290 or MS 290. Cr 3.

#### **MS 492 Graph Theory and Combinatorics**

This course is designed to acquaint students with some fundamental concepts and results of graph theory and combinatorial mathematics. Applications will be made to the behavioral, managerial, and social sciences. Prerequisite: CS 290 or MS 290. Cr 3.

#### **MS 497 Independent Study in Mathematics**

An opportunity for juniors and seniors who have demonstrated critical and analytical capability to pursue a project independently, charting a course and exploring an area of interest within their major field. Prerequisites: junior or senior standing, permission of the instructor and permission of the department chairman. Cr 1-3.



#### **MS 498 Topics**

Selected topics in advanced mathematics. Prerequisite: permission of instructor. Cr 3.

#### **MSCE 200-201, 300-301, 400-401 Cooperative Education in Mathematics**

The student has the opportunity to relate academic knowledge to practical experience in a job situation. The University makes arrangements with certain institutions, businesses, and industries to employ qualified students for specific jobs for a set time period. The student's work is ordinarily in a related field, and the work experiences increase in difficulty and responsibility as the student progresses through the sequence of courses. The experiences are approved on a case-by-case basis by the department. Evaluation is done through a written report done by the student together with the employer and a faculty supervisor. Prerequisite: open to qualified students, subject to availability of suitable jobs. Cr 1-5.

### **Mathematics Education**

#### **MSED 345 Teaching Mathematics in the Secondary School**

Critical study of programs and techniques for teaching and learning mathematics in grades 7-12 for the slow, average and advanced pupil, with the use of instructional media. Prerequisite: junior or senior standing. Cr 3.



# MUSIC

Chairman of Music Department: Ronald F. Cole, 103 Corthell Hall, Gorham.

Professor Bowder; Associate Professor R. Cole; Assistant Professors D. Maxwell, M. Rowell, R. Russell; Lecturers A.F. Jones, E. Jones; Portland String Quartet in residence: Kecskemethy, Lantz, Adams, Ross.

## APPLIED MUSIC FACULTY

Piano:	Naydene Bowder Thomas Bucci Ronald Cole Ocy Downs Robert Glover David Maxwell Elizabeth Voldstad Richard Roberts	Bass:	Paul Ross
Voice:	Sue Ellen Kuzma Robert Russell Stewart Shuster Johanna von Tiling	Flute:	Katherine Graffam Frances Drinker Pamela Guidetti
Organ:	Marion Anderson David Maxwell Douglas Rafter	Oboe:	Roberta Barker Neil Boyer Clinton Graffam
Violin:	Deirdre Clark Rebecca Garland Stephen Kecskemethy Ronald Lantz	Clarinet:	Robert Carabia Eugene Jones
Viola:	Julia Adams	Saxophone:	Eugene Jones Bill Street
Cello:	Katherine Graffam	Bassoon:	Ardith Freeman Jones
		Trumpet:	Bruce Hall Malcolm Rowell
		French Horn:	Nina Allen
		Trombone:	James Bennett
		Euphonium:	Larry Douglas
		Tuba:	David Winer
		Percussion:	Henry Dempsey
		Harp:	Deirdre Carr
		Classical Guitar:	Michael Katz

The Department of Music offers a number of music groups open to all students, a number of courses primarily for non-majors, and concentrated study in the areas of music history, music theory, performance, and music education. Students majoring in music may earn a baccalaureate degree either in Education (Bachelor of Science in Music Education) or in Arts and Sciences (Bachelor of Arts in Music, or Bachelor of Arts in Music-Performance). In addition, a minor in music is offered for students majoring in Elementary Education. A Master of Science in Education with a music concentration is available through the College of Education Graduate Division.

Students other than music majors or minors will be accommodated for applied music lessons if teacher time is available, but will be subject to a fee of \$90.00 for one credit or \$180.00 for two credits.

Interested students should make inquiry at the Music Department office. This fee must be paid before lessons commence.

### AUDITION REQUIRED

Admission criteria for degree programs in music, major and minor, will be based on the following elements:

- The applicant's high school record, including recommendations, SAT achievement scores.
- An audition, including performance on the applicant's major instrument, and aural comprehension,

rhythmic recitation, and sight singing tests which are administered to each applicant individually by a member of the staff.

- A written standardized musical achievement test.

### ADVANCED STANDING

Students who desire to apply for advanced standing in music curricula should apply to the chairman of the department for a special examination.

### JURY EXAMS

Each student enrolled in the Performance and Music Education Degree programs will play a jury exam on his/her major instrument at the end of each academic year. The jury panel will determine a level of performance and submit a written evaluation which will be included in the student's file.

### CURRICULUM FOR MUSIC EDUCATION MAJORS

#### Special Requirements

All students are reminded that, in addition to meeting departmental requirements for a major leading to a baccalaureate degree, they must also meet the requirements of the school or college involved, as well as the University's General Education Requirements and the Physical Education Requirements.

In addition to the General Education Requirements, Music Education majors will be required to take (a) a three-credit course in Educational Psychology and (b) either Modern Philosophies of Education or Studies in Educational Foundations.

In addition to the regular curriculum, all music education majors will meet the following requirements:

1. Fulfillment of minimum requirements in both voice and piano, regardless of major instrument.
2. Participation in at least one instrumental and one vocal organization each semester. Non-instrumentalists will be in two vocal groups.
3. Successful completion of seven semesters of major applied lessons.
4. Successful completion of recital class in each semester when registered for major applied lessons.
5. Presentation of a solo recital in the senior year (or junior year with special permission).

### Piano Proficiency Requirement

Each student must successfully complete the piano-proficiency requirement by the end of the third week of the semester before student teaching. The student must enroll in applied piano each semester until the requirement is met. If the piano proficiency has not been met at the end of four semesters, the student will continue applied piano for no credit and at the student's own expense.

New students who feel prepared to meet the requirement may schedule an exam during the orientation period. Thereafter, exams will be offered at the end of each semester and may be taken whenever the student and the applied teacher feel that the student is qualified.

Requirements for the piano-proficiency exam are as follows:

1. Be prepared to play all major and minor scales (2 octaves, hands together).
2. Play a prepared piece of the student's choice of at least the difficulty of a Sonatina by Clementi or Kuhlau.
3. Offer evidence of study of a representative selection of piano literature.
4. Sight read:
  - a. Melody with chord symbols.
  - b. Hymn-style composition.

### Voice Proficiency Requirement

All students enrolled in the B.S. Music Education program must complete at least one year of vocal study before student teaching. They must also pass the following requirements in a vocal proficiency examination before graduation:

- A. The student will be prepared to demonstrate and explain the principles of singing, including:

1. Posture
2. Breathing
3. Tone Production
4. Articulation

- B. The student will submit a representative repertoire list of all periods, including songs in at least three of the commonly used foreign languages.
- C. The student will be prepared to perform from memory three songs from a list of six that will include at least three in a foreign language. From this list the student will sing two songs of his own choice and a third selected by the jury.
- D. If the proficiency is not met after 2 years of study, the student will continue to study for no credit at his/her own expense until this standard is met.

### Professional Education

All Music Education majors are required to take the following professional education courses:

- EDU 324 Student Teaching (12 credits)  
EDU 350 Modern Philosophies of Ed. (3 credits)  
or  
EDU 200 Studies in Educational Foundations (3 credits)  
EDPY Any EDPY course (3 credits)

Student teaching is the culmination of a comprehensive preprofessional, required sequence of activities which includes the following:

Freshman year:

The equivalent of two days of directed observation of music education in cooperating schools in surrounding areas, as arranged by the Music Department.

Sophomore year:

The equivalent of two days of assisting classroom teachers in music. Music-education students serve in a capacity similar to teacher aides.

Junior year:

Elementary and secondary methods courses wherein students observe, plan, and teach using actual classroom situations.

Senior year:

Student teaching which encompasses both elementary and secondary as well as instrumental and vocal areas.

In addition to the basic 18 credit-hours in professional education, Music Education majors will complete the following:

Instrumental emphasis:

- |                  |                                  |
|------------------|----------------------------------|
| MUED 220         | Woodwind Class                   |
| MUED 221         | Brass Class                      |
| MUED 222         | Percussion Class                 |
| MUED 320 and 321 | String Class                     |
| MUED 322         | Elementary General Music Methods |
| MUED 324         | Instrumental Methods             |
| MUED 420         | Marching Band Techniques         |

<b>Vocal emphasis:</b>			
MUED 220	[Woodwind Class Brass Class Percussion Class]	Select one	MUS 150, 151, 250, 251 Applied Music, Minor
MUED 221			MUS 160, 161, 260, 261
MUED 222			360, 361, 460, 461 Applied Music, Major
MUED 320	String Class		MUS 244 Basic Conducting
MUED 322	Elementary General Music Methods		MUS 142, 143, 242, 243 342, 343, 442, 443 Recital Class
MUED 323	Secondary Choral Methods		MUS 255 Guitar (vocal and general emphasis)
<b>General emphasis:</b>			MUS 344 Instrumental Conducting (instrumental and general emphasis)
MUED 220	Woodwind Class		MUS 345 Choral Conducting (vocal and general emphasis)
MUED 221	Brass Class		MUS 240, 340 Instrumental Conducting Lab. (instrumental and general emphasis)
MUED 222	Percussion Class		MUS 241, 341 Choral Conducting Lab. (vocal and general emphasis)
MUED 320	String Class		MUS 420 Orchestration [ general (instrumental emphasis: choose one)]
MUED 321	String Class (or Vocal Pedagogy)		MUS 421 Choral Arranging (vocal emphasis)
MUED 322	Elementary General Music Methods		MUS 355 Vocal Pedagogy (vocal emphasis) General emphasis students will choose vocal pedagogy or string class
MUED 324	Instrumental Methods		
MUED 323	Secondary Choral Methods		

### Area Specialization

The music content program consists of the following courses:

- MUS 120, 121, 220, 221 History of Music
- MUS 130, 131, 230, 231 Theory
- MUS 132, 133, 232, 233 Solfeggio

## MUSIC EDUCATION CURRICULUM

### Freshman Year

*Credit Hours*

MUS 120 and 121	History of Music I and II	6
MUS 130 and 131	Theory of Music I and II	6
MUS 132 and 133	Solfeggio I and II	2
MUS 150 and 151	Applied Music, Minor	2
MUS 160 and 161	Applied Music, Major	4
MUS 142 and 143	Recital Class	1
	Ensembles	2
	General Education Requirements	9
	Physical Education	2
		<u>34</u>

### Sophomore Year

<b>All Music Education Majors must complete:</b>		
MUS 220 and 221	History of Music III and IV	6
MUS 230 and 231	Theory of Music III and IV	6
MUS 232 and 233	Solfeggio III and IV	2
MUS 250 and 251	Applied Music, Minor	2
MUS 260 and 261	Applied Music, Major	4
MUS 244	Basic Conducting	2
MUS 242 and 243	Recital Class	1
	Ensembles	2
	General Education	6
<b>Sophomores with an Instrumental emphasis must complete:</b>		
MUS 240	Instrumental Conducting Lab.	1/2
MUED 220	Woodwind Class	1
MUED 221	Brass Class	1
MUED 222	Percussion Class	1
		<u>34 1/2</u>

**Sophomores with a Vocal emphasis must complete:**

MUS 241	Choral Conducting Lab	1/2
MUS 255	Guitar	1
		<u>3 1/2</u>

**Sophomores with a General emphasis must complete:**

MUS 255	Guitar	1
MUED 220	Woodwind Class	1
MUED 221	Brass Class	1
MUED 222	Percussion Class	1
		<u>35</u>

**Junior Year**

**All Music Education Majors must complete:**

MUS 360 and 361	Applied Music, Major	4
MUS 342 and 343	Recital Class	1
MUED 322	Elementary General Music Methods	3
EDPY	AnyEDPY course	3
	Ensembles	2
	General Education	9

**Juniors with an Instrumental Emphasis must complete:**

MUS 340	Instrumental Conducting Lab	1/2
MUS 344	Instrumental Conducting	2
MUED 324	Instrumental Methods	3
MUED 420	Marching Band Techniques	1
MUED 320 and 321	String Class	2
		<u>30 1/2</u>

**Juniors with a Vocal Emphasis must complete:**

MUS 341	Choral Conducting Lab	1/2
MUS 345	Choral Conducting	2
MUS 355	Vocal Pedagogy	1
MUED 323	Secondary Choral Methods	3
MUED 320	String Class	1
MUED 220, 221 or 222	Woodwind, Brass or Percussion Class	1
		<u>30 1/2</u>

**Juniors with a General Emphasis must complete:**

MUS 340	Instrumental Conducting Lab	1/2
MUS 344	Instrumental Conducting	2
MUS 341	Choral Conducting Lab	1/2
MUS 345	Choral Conducting	2
MUED 323	Secondary Choral Methods	3
MUED 324	Instrumental Methods	3
MUED 320, 321 or 322	String Class I & II	3
MUED 320 and 321	String Class I & Vocal Pedagogy	2
		<u>35</u>

**Senior Year**

**All Music Education Majors must complete:**

MUS 460 or 461	Applied Music, Major	2
MUS 442 or 443	Recital Class	1/2
EDU 200 or 350	Studies in Educational Foundations or Modern Philosophies of Education	3
EDU 324	Student Teaching	12
	Ensembles	1
	General Education Requirements	6

**Seniors with an Instrumental Emphasis must complete:**

MUS 420	Orchestration	3
		<u>27 1/2</u>

**Seniors with a Vocal emphasis must complete:**

MUS 421	Choral Arranging	3
		<u>27 1/2</u>

**Seniors with a General emphasis must complete:**

MUS 420 or 421	Orchestration or Choral Arranging	3
		<u>27 1/2</u>

## Summary

	<i>Instrumental</i>	<i>Vocal</i>	<i>General</i>
USM General Education Requirements (Including P.E.)	32	32	32
Professional Education	30	26	32
Area Specialization	<u>64½</u>	<u>66½</u>	<u>67½</u>
Totals	<u>126½</u>	<u>124½</u>	<u>131½</u>

### CURRICULUM FOR BACHELOR OF ARTS IN MUSIC

The Bachelor of Arts degree with a major in Music is designed to provide the opportunity for a scholarly study of music to meet the needs of those who wish to obtain a liberal education with an emphasis on music, and those who plan to do graduate work in music. The aim of the program is to instill a thorough understanding of the various aspects of music and their relationship to contemporary society. Sufficient flexibility is built into the program to allow the individual student to establish areas of emphasis both in music and in the arts and sciences.

	<i>Credit Hours</i>
USM General Education Requirements	30
Electives (including language proficiency,* but not music electives)	42
MUS 120, 121, 220, 221 History of Music, I, II, III, IV	12
MUS 130, 131, 230, 231 Theory I, II, III, IV	12
MUS 132, 133 Solfeggio I, II	2
MUS 320 Seminar in Music History	3
MUS 330, 331 Form and Analysis I, II	5
MUS 332 Counterpoint	3
Applied Music	4
Ensembles	4
Music Electives	<u>9</u>
	<u>126</u>

The Bachelor of Arts in Music Curriculum requires a total of 126 hours.

\*"Language proficiency" means completion of a second year of a language. This may be bypassed by examination for no academic credit.

Retention in the program will be based on all University requirements plus maintenance of a grade-point average of 2.5 in music subjects.

### CURRICULUM FOR BACHELOR OF ARTS IN MUSIC (Performance)

The Bachelor of Arts degree with a major in Music (Performance) is designed to provide the opportunity for a study of music to meet the needs of those who wish to obtain a liberal education with an emphasis on music performance, and those who plan to do graduate work in applied music. The aim of the program is to instill a thorough understanding of the various aspects of music and their relationship to contemporary society and performance skills on the student's major instrument or voice. Sufficient flexibility is built into the program to allow the individual student to establish secondary areas of emphasis both in music and in the arts and sciences.

	<i>Credit Hours</i>
USM General Education Requirements	30
Electives (in any College)	18
Music Electives	3
MUS 120, 121, 220, 221 History of Music, I, II, III, IV	12
MUS 130, 131, 230, 231 Theory I, II, III, IV	12
MUS 132, 133, 232, 233 Solfeggio I, II, III, IV	4
MUS 321 Literature of the Major Instrument	2
MUS 330, 331 Form and Analysis I, II	5
MUS 332 Counterpoint	3
MUS 140, 141, 240, 241 Recital Class	4
340, 341, 440, 441	
MUS 170, 171, 270, 271 Applied Music, Major*	24
370, 371, 470, 471	
MUS 372 Pedagogy of the Major Instrument	2
Performance Ensembles**	<u>6</u>
	<u>125</u>

The Bachelor of Arts in Music (Performance) Curriculum requires a total of 125 hours.

\*Satisfactory completion of a short recital in the Junior year and a Senior Recital is expected of all Performance Majors. In addition, all Performance Majors are required to pass a piano proficiency examination or to complete successfully two years of piano as a minor instrument.

**\*\*Performance Majors shall have a minimum of 4 (four) credit hours of their Ensemble Requirements in their appropriate Major Ensemble. (A student is expected to be enrolled in the appropriate Major Ensemble whenever registered as a full-time student.) A minimum of 2 (two) credit hours shall be in Chamber Music.**

## CURRICULUM FOR A MINOR IN MUSIC EDUCATION

The minor in Music Education program is designed to provide an opportunity for candidates for the degree of Bachelor of Science in Elementary Education who demonstrate interest and ability to continue music studies beyond the high school level and to equip them to successfully implement in their classrooms the planned programs recommended by Music Supervisors.

The minor in Music Education is comprised of the following courses:

		<i>Credit Hours</i>
MUS 100	Music History and Appreciation .....	3
	Music History Elective .....	3
MUS 130, 131	Theory I and II .....	6
MUS 132, 133	Solfeggio I and II .....	2
MUED 322	Elementary Music Methods and Materials .....	3
MUS 150, 151	Applied Music Ensembles .....	2
		<b>21</b>

The minor in Music Education Program requires a total of 21 hours.

## COURSE DESCRIPTIONS

### Music Courses Primarily For Non-Majors

#### MUS 100 Music Appreciation and History

A survey of music from the Gregorian Chant to the modern times, covering musical practices of the Renaissance, Baroque, Classical, Romantic, and Contemporary periods. Representative works by the outstanding composers of each period. Open to all students. Cr 3.

#### MUS 110 Fundamentals of Music

A background study of concepts and skills essential to an intelligent reading of music. The development of natural music abilities through participating in singing, rhythmic activities, and instrumental work. An appreciation of music through awareness of basic structures. Open to all students. Cr 3.

#### MUS 202 Music in America

A survey of the important trends in music from Colonial days to the present. Emphasis will be placed on the role of the native American composer in the development of sacred music, concert music, jazz, musical comedy, and pop music. Cr 3.

#### MUS 203 Music in the Twentieth Century

A study of trends in European and American music from the beginning of the century to the present with emphasis on the literature of the major composers. Cr 3.

#### MUS 204 Symphonic Literature

A survey of music for the symphony orchestra from the Pre-Classical period of C.P.E. Bach to the present. Cr 3.

#### MUS 205 Chamber Music Literature:

##### Portland String Quartet

A historical survey of the literature for chamber ensembles from the Classical period to the present. Recorded and live performances will be studied in class. Open to all students. Cr 3.

#### MUS 211 Class Piano

Practical class piano for the elementary teacher with little or no piano background. Course covers note reading, scales, accompaniment of simple songs, transposition, and sight reading. Open to all students. Cr 2.

#### MUED 200 Music for the Classroom Teacher

An activities course combining the study of music fundamentals with the teaching of music skills through sequential grade-to-grade development. This course has no prerequisites and is designed primarily for the non-music major. Cr 3.

### Music Performance Groups Open to All Students

#### MAJOR ENSEMBLES

MUS 400 Chamber Orchestra Cr 0.5.

#### MUS 401 The Gorham Chorale

A choral group of a hundred students from all departments; specializes in larger choral works with orchestral accompaniment; several campus performances and occasional tours. Cr 0.5.

#### MUS 402 University Concert Band

A wind and percussion ensemble open to all university students through audition. The ensemble focuses on the fundamentals of ensemble performance dealing with a variety of literature. The University Concert Band performs at least one major concert per semester and is active in presenting school assembly programs. Cr 0.5.

#### MUS 403 A Cappella Choir

A chorus of fifty members, open to all students by audition. At least one concert is presented on campus each semester, and usually several off campus. Cr 0.5.

#### MUS 405 The Chamber Singers

A select group of twenty-five singers specializing in music from the Renaissance to the Contemporary. Extensive touring throughout the state. Cr 0.5.

#### MUS 408 Wind Ensemble

Cr 0.5.

## SMALL ENSEMBLES

### MUS 406 Chamber Music

A performance course open to all qualified students interested in forming chamber groups — duets, trios, quartets, quintets, etc., under faculty supervision.

Cr 0.5

### MUS 407 Jazz Ensemble

An instrumental ensemble specializing in the study and performance of jazz for large and small groups from Dixieland to present. Open to all students by audition.

Cr 0.5

## Music Courses Primarily for Majors

### MUSIC HISTORY AND THEORY

#### MUS 120 History of Music I

Medieval and Renaissance periods: historical development and music practices from the Gregorian Chant and early polyphony through the culmination of the madrigal in England. Musical examples of outstanding composers are played, analyzed, and discussed. For music majors or minors. Others only with permission of instructor.

Cr 3

#### MUS 121 History of Music II

Baroque period; continuation of MUS 120, from the establishment of opera in Italy and the rise of instrumental music, to the culmination of polyphony in the works of J. S. Bach. For music majors or minors. Others only with permission of instructor.

Cr 3

#### MUS 130 Music Theory I

Major and minor scales; intervals, triads, and chord connections; cadences; harmonization of soprano and bass lines utilizing primary triads. For music majors or minors. Others only with permission of instructor.

Cr 3

#### MUS 131 Music Theory II

Triads in first and second inversion; modulation; non-harmonic tones (passing, auxiliary, appoggiature, suspension, and anticipation); dominant seventh chord (root position inversion, regular and irregular resolutions). Prerequisite: MUS 130.

Cr 3

#### MUS 132 Solfeggio I

A course in sight singing and ear training. For music majors or minors. Others only with permission of instructor. Two one-hour meetings per week.

Cr 1

#### MUS 133 Solfeggio II

A continuation of MUS 132. Prerequisite: MUS 132.

Cr 1

#### MUS 220 History of Music III

Classical and Romantic periods; historical development and musical practices from the establishment of the sonata, string quartet, and symphony, through program music, music-drama, and the rise of nationalism in music. Representative works of outstanding composers are played, analyzed, and discussed. For music majors or minors. Others only with permission of instructor.

Cr 3

#### MUS 221 History of Music IV

Contemporary period; continuation of MUS 220, from Impressionism to recent tendencies. Melodic, harmonic, rhythmic, and structural features of the twentieth century American and European music and their relationship to tradition. For music majors or minors. Others only with permission of instructor.

Cr 3

#### MUS 230 Music Theory III

Diatonic seventh chords; modulation; expansion of nonharmonic tones; altered chords; Neapolitan sixth; augmented sixth chords; chromatic alterations; chorales and their harmonizations; composition in simple forms of the 18th and the 19th centuries. For music majors or minors. Others only with permission of instructor. Prerequisite: MUS 131.

Cr 3

#### MUS 231 Music Theory IV

Contemporary techniques of composition; 20th century harmony, theory, and related studies. Prerequisite: MUS 230.

Cr 3

#### MUS 232 Solfeggio III

An advanced course in sight singing and ear training. Two one-hour meetings per week. For music majors or minors. Others only with permission of instructor.

Cr 1

#### MUS 233 Solfeggio IV

A continuation of MUS 232. Prerequisite: MUS 232.

Cr 1

#### MUS 320 Seminar in Music History

A concentrated study of selected topics in Music History based on individual research. Prerequisites: History of Music I, II, III, and IV. For music majors or minors. Others only with permission of instructor.

Cr 3

#### MUS 321 Literature of the Major Instrument

A survey of the literature for voice or a specific instrument. Except for piano or voice, which are offered in class sessions when the number of registrants warrants it, this will be scheduled as independent study. Normally the piano and voice sessions will be offered in alternate years. For music majors. Others only with permission of the department.

Cr 2

#### MUS 330 Form and Analysis I

Study and analysis of music of the Classical, Romantic, and Contemporary periods with emphasis on homophonic forms and styles. Prerequisite: Theory II. For music majors or minors. Others only with permission of instructor.

Cr 3

#### MUS 331 Form and Analysis II

Study and analysis of music of the Baroque and Contemporary periods with emphasis on contrapuntal forms and styles. Prerequisite: Theory II. For music majors or minors. Others only with permission of instructor.

Cr 2

#### MUS 332 Counterpoint

Tonal counterpoint. The process of invention and fugue as exemplified in the music of the Baroque era. Prerequisite: Theory III. For music majors or minors. Others only with permission of instructor.

Cr 3

#### MUS 334 Electronic Music I

Lectures, discussion and exercises in sound generation and processing, with emphasis on voltage-controlled systems. The student's time will be divided between class sessions and actual work in the electronic studio. Prerequisite: permission of the instructor.

Cr 3

#### MUS 420 Orchestration

A study of the nature of the various instruments. Practice in scoring for instrumental combinations, orchestra, and band. Prerequisite: MUS 231. Others only with permission of instructor.

Cr 3

#### MUS 421 Choral Arranging

Arranging choral music for various combinations of voices.

Cr 3

**MUS 498 Independent Study in Music**  
To provide juniors and seniors who have demonstrated critical and analytical capability and opportunity to pursue a project independently, charting a course and exploring an area of interest within their major field. For music majors or minors. Others only with permission of the department. Cr 1-3.

### MUSIC PERFORMANCE COURSES

**MUS 142 Recital Class for Freshmen I**  
Performance in major field, stage department, and evaluation of performances. Restricted to freshmen. Cr 0.5.

**MUS 143 Recital Class for Freshmen II**  
A continuation of MUS 142. Cr 0.5.

**MUS 150 Applied Music for Freshmen I**  
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. One half-hour lesson per week in the minor performance area (1 credit) in fulfillment of applied music requirements. Restricted to freshmen. Cr 1.

**MUS 151 Applied Music for Freshmen II**  
A continuation of MUS 150. Cr 1.

**MUS 160 Applied Music for Freshmen I**  
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A one-hour lesson per week in the major performance area (2 credits) in fulfillment of applied music requirements. Restricted to freshmen. Cr 2.

**MUS 161 Applied Music for Freshmen II**  
A continuation of MUS 160. Cr 2.

**MUS 170 Applied Music for Freshmen I**  
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A one-hour lesson per week in the major area, with three hours' practice daily, would grant 3 credits for the Performance Major. Restricted to freshmen. Cr 3.

**MUS 171 Applied Music for Freshmen II**  
A continuation of MUS 170. Cr 3.

**MUS 240 Instrumental Conducting Lab for Sophomores**  
Performance techniques on instruments of primary and/or secondary interest to each student. Principles of ensemble training are exemplified. The repertoire consists of selections from various periods and styles and is varied from year to year in order to cover a considerable range during the student's attendance. Restricted to sophomores. Cr 0.5.

**MUS 241 Vocal Conducting Lab for Sophomores**  
Emphasizing singing technique and interpretation and an exploration of choral literature of various periods and styles. Principles of choral training are exemplified. The repertoire is varied from year to year so that the course covers a considerable range during a given student's attendance. Cr 0.5.

**MUS 242 Recital Class for Sophomores I**  
Performance in major field, stage department, and evaluation of performances. Restricted to sophomores. Cr 0.5.

**MUS 243 Recital Class for Sophomores II**  
A continuation of MUS 242. Cr 0.5.

**MUS 244 Basic Conducting**  
Practical conducting experiences; score reading, basic beat patterns, gestures and interpretation. Cr 2.

**MUS 250 Applied Music for Sophomores I**  
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. One half-hour lesson per week in the minor performance area (1 credit) in fulfillment of applied music requirements. Restricted to sophomores. Cr 1.

**MUS 251 Applied Music for Sophomores II**  
A continuation of MUS 250. Cr 1.

**MUS 255 Guitar**  
An introduction to basic guitar skills. Emphasis is placed upon those skills which lead to playing effective accompaniments. Cr 1.

**MUS 260 Applied Music for Sophomores I**  
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A one-hour lesson per week in the major performance area (2 credits) in fulfillment of applied music requirements. Restricted to sophomores. Cr 2.

**MUS 261 Applied Music for Sophomores II**  
A continuation of MUS 260. Cr 2.

**MUS 270 Applied Music for Sophomores I**  
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A one-hour lesson per week, with three hours' practice daily, would grant 3 credits for the Performance Major. Restricted to Sophomores. Cr 3.

**MUS 271 Applied Music for Sophomores II**  
A continuation of MUS 270. Cr 3.

**MUS 340 Instrumental Conducting Lab for Juniors**  
Performance techniques on instruments of primary and/or secondary interest to each student. Principles of ensemble training are exemplified. The repertoire consist of selections from various periods and styles and is varied from year to year in order to cover a considerable range during the student's attendance. Restricted to juniors. Cr 0.5.

**MUS 341 Vocal Conducting Lab for Juniors**  
Emphasizing singing technique and interpretation and an exploration of choral literature of various periods and styles. Principles of choral training are exemplified. The repertoire is varied from year to year so that the course covers a considerable range during a given student's attendance. Restricted to juniors. Cr 0.5.

**MUS 342 Recital Class for Juniors I**  
Performance in major field, stage department, and evaluation of performances. Restricted to juniors. Cr 0.5.

**MUS 343 Recital Class for Juniors II**  
A continuation of MUS 342. Cr 0.5.

**MUS 344 Instrumental Conducting**  
Advanced development of non-verbal gestures through the art of instrumental conducting. Score reading analysis, rehearsal techniques and performance preparation. Cr 2.

**MUS 345 Vocal Conducting**  
Organization, training, and directing of choruses and glee clubs in high schools and junior high schools. Study and practice in rehearsal techniques, problems of diction, and emphasis on repertoire and musical style. Cr 2.

**MUS 350 Applied Music for Juniors I**  
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. One half-hour lesson per



week in the minor performing area (1 credit) in fulfillment of applied music requirements. Restricted to juniors. Cr 1.

**MUS 351 Applied Music for Juniors II**  
A continuation of MUS 350. Cr 1.

**MUS 355 Vocal Pedagogy**  
Basic vocal principles and how to teach them. Cr 1.

**MUS 360 Applied Music for Juniors I**  
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A one-hour lesson per week in the major performing area (2 credits) in fulfillment of applied music requirements. Restricted to juniors. Cr 2.

**MUS 361 Applied Music for Juniors I**  
A continuation of MUS 360. Cr 2.

**MUS 370 Applied Music for Juniors I**  
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A one-hour lesson per week, with three hours' practice daily, would grant 3 credits for the Performance Major. Restricted to juniors. Cr 3.

**MUS 371 Applied Music for Juniors II**  
A continuation of MUS 370. Cr 3.

**MUS 372 Pedagogy of the Major Instrument**  
A study of the teaching methods and materials for voice or instruments. Except for piano and voice, which are offered in class sessions when the number of registrants warrants it, this will be scheduled as additional applied music time with an instrumental specialist. Normally the piano and voice sessions will be offered in alternate years. For music majors. Others only with permission of the department. Cr 2.

**MUS 440 Instrumental Ensemble for Seniors**  
Performance techniques on instruments of primary and/or secondary interest to each student. Principles of ensemble training are exemplified. The repertoire consists of selections from various periods and styles and is varied from year to year in order to cover a considerable range during the student's attendance. Restricted to seniors. Cr 0.5.

**MUS 442 Recital Class for Seniors I**  
Performance in major field, stage department, and evaluation of performances. Restricted to seniors. Cr 0.5.

**MUS 443 Recital Class for Seniors II**  
A continuation of MUS 442. Cr 0.5.

**MUS 450 Applied Music for Seniors I**  
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. One half-hour lesson per week in the minor performing area (1 credit) in fulfillment of applied music requirements. Restricted to seniors. Cr 1.

**MUS 451 Applied Music for Seniors II**  
A continuation of either MUS 450 or MUS 351. Cr 1.

**MUS 452 Accompanying**  
A workshop course in applied accompanying under faculty supervision. One-half credit is awarded for each twenty hours of university-supervised accompanying, with a maximum of two credits in any academic year. Cr 0.5-2.

**MUS 460 Applied Music for Seniors I**  
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A one-hour lesson per week in the major performing area (2 credits) in fulfillment

of applied music requirements. Restricted to seniors. Cr 2.

**MUS 461 Applied Music for Seniors II**  
A continuation of either MUS 460 or MUS 361. Cr 2.

**MUS 470 Applied Music for Seniors I**  
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A one-hour lesson per week in the major area, with three hours' practice daily, would grant 3 credits for the Performance Major. Restricted to Seniors. Cr 3.

**MUS 471 Applied Music for Seniors II**  
A continuation of MUS 470. Cr 3.

## MUSIC EDUCATION

**MUED 220 Woodwind Class**  
Methods of teaching woodwind instruments; practical experience on various woodwinds; and elements of transposition. Cr 1.

**MUED 221 Brass Class**  
Methods of teaching brass instruments including practical experience on the various instruments; elements of transposition. Cr 1.

**MUED 222 Percussion Class**  
Practical experience on and methods of teaching percussion instruments. Cr 1.

**MUED 320 String Class — Violin and Viola**  
Class methods and materials in teaching violin and viola. Fundamentals of violin and viola, including bowing, tone production, intonation, and fingering techniques extended into the third position. Cr 1.

**MUED 321 String Class — Ensemble**  
String ensemble methods and materials for beginning strings. Fundamentals of violin, viola, cello and string bass. Rudiments of fingering, bowing, and tone production. Cr 1.

**MUED 322 Elementary General Music Methods**  
Study of methods and materials in present elementary school music education, including those of Kodaly and Orff. Cr 3.

**MUED 323 Secondary Choral Methods**  
Techniques and procedures for teaching choral music in junior and senior high schools. Cr 3.

**MUED 324 Instrumental Methods**  
The course will acquaint the instrumental music major with methods and procedures of teaching instrumental music in the public schools. Administering and organizing the program, recruiting, budgets, public relations, ensemble literature, scheduling and performance are issues addressed in the course. Discussions will focus on developing an effective instrumental music program in the public schools. Cr 3.

**MUED 420 Marching Band Techniques**  
The course is designed to prepare the music educator to organize and effectively teach Marching Band in the public schools. A statement of philosophy is stressed. Marching styles, execution, music developing Marching Percussion, role of the drum major and effective instrument placement are emphasized in the course. Cr 1.

# PHILOSOPHY

Chairman of Philosophy Department: Joseph Grange, 224 Science Building, Portland.

Professors Gavin, Grange, F. Schwanauer; Assistant Professors Conway, Gross.

Courses in philosophy are designed primarily to provide students with sound principles of critical thinking, to help them acquire a knowledge of the development and problems of philosophic thought, and to lead them to formulate an intelligent view of the meaning and value of life in terms of their own experience.

The study of philosophy has traditionally been one which endeavors to give the broadest understanding possible of a true liberal education and has placed little emphasis on the vocational utility of such a study. However, students have found a philosophical background useful for all vocations.

The major in philosophy is designed to meet the following requirements: (1) Those who wish to derive the broadest liberal education through the study of philosophy, but have no professional interest in the field; (2) those who desire a broadly-based liberal education preparatory to graduate study in a field other than philosophy; for example: medicine, law, theology, or government; (3) those who, by reason of professional interest in philosophy, plan to do graduate work and teach in the field.

Each major in philosophy will arrange a program of courses in conference with the chairman or a member of the department assigned by him. The program will be designed in terms of the student's interests, needs, vocational plans, and the year in which the student declares a major. The major will require 30 hours of courses beyond a PLY 100-level course.

All philosophy majors must take the following four History of Philosophy courses offered by the Department:

- PLY 310 — Ancient Philosophy
- PLY 320 — Medieval Philosophy
- PLY 330 — Early Modern Philosophy
- PLY 340 — Late Modern Philosophy

In the senior year, the following are required: (1) A senior paper to be written in connection with participation in the Senior Tutorial. This paper should deal with material not previously studied, or should extend knowledge of a subject gained by attending courses. (2) A comprehensive oral examination based on the Senior Tutorial paper. (3) The Graduate Record Examination in philosophy, for those intending to go on to graduate school in philosophy.

In the last year a senior tutorial is required. This consists of a major (minimum 50 pages) paper on a topic selected by the student and mentored by one member of the department. Upon completion of the paper, an oral examination of its contents is held before the full department.

Those intending to go on to graduate school in philosophy will have to take the Graduate Record Examination in philosophy.

Every major intending to pursue graduate study and teach in philosophy will be expected to take German or French through the intermediate level. German is preferred to French, although ideally both sets of courses should be taken.

Any introductory philosophy course is a prerequisite to all other courses in philosophy.

## COURSE DESCRIPTIONS

### PLY 101 Introduction to Philosophy:

#### Man and His Will

Schwanauer

Is there a human will at all? This course will concentrate on the issue of freedom vs. determinism. The importance of the human will insofar as it influences views of experience, politics, society, etc., will also be considered.

Cr 3.

### PLY 102 Introduction to Philosophy:

#### The Quest for Certainty

Gavin

Philosophy has often been defined as the attempt to become aware of the hidden assumptions we make in our everyday outlooks on life. The present course will deal with one of the most pervasive of these assumptions — the thesis that human beings should pursue certainty and objectivity at any price. The history of philosophy will be utilized to trace and to criticize the identification of all true knowledge with certainty. Questions will be raised as to whether the quest for certainty is either feasible or beneficial to the human person. An analysis of some 20th Century alternatives, including Existentialism and Pragmatism, will be undertaken.

Cr 3.

### PLY 103 Introduction to Philosophy:

#### Human Alienation

Grange

Why does modern man picture himself as alienated from nature and his fellow man? How did the problem of alienation come about? What possibilities exist for overcoming it? This course will deal with these issues and attempt to suggest viable alternatives.

Cr 3.

### PLY 104 Introduction to Philosophy:

#### Ways of Knowing

How much can we really know? Consideration will be given to some theories of knowledge and how they may be applied to science and human relations. The writings of some philosophers will be critically examined by way of illustration.

Cr 3.

**PLY 106 Introduction to Philosophy:  
Why Philosophize?**

Conway

The course centers about the exploration of a single question: what it means to think philosophically. In the context of this question, we will examine what are the sources of philosophical thought and whether philosophy can justify its claim to be the foundation of all reflective endeavor. Cr 3.

**PLY 109 Introduction to Philosophy:  
Law, Politics and Society**

Gross

This course will introduce the student to the philosophical issues of Political Life in the West from the period of Greek Culture to the Present. Texts will be chosen from the works of Plato, Aristotle, Machiavelli, the Social Contract Theorists, Hegel, Marx, and the early Anarchists. The aim of the course is to provide the firm ground necessary to deal with political issues of our time. Cr 3.

**PLY 150 Symbolic Logic**

Schwanauer

Techniques of modern deductive logic; properties of formal systems; logical implications and paradoxes of language. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 200 Metaphysics**

Schwanauer

An analysis of various theories of reality, together with a critical examination of their conceptual con-

structs, principles and methodologies. Issues to be discussed include Change, Time, Freedom and Necessity, Immortality and God, Good and Evil. Thinkers to be studied include Plato and Aristotle, Spinoza, Kant, Hegel, Whitehead and Heidegger. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 210 Ethical Theories**

Schwanauer

Critical evaluation of major ethical theories and systems. Extensive reading in original texts. Analysis of contemporary ethical issues. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 220 Philosophy of Art**

Gavin

Inquiry into the question of whether aesthetic experience is intelligible, or emotional, or both; examination of various theories and interpretations, classic and contemporary. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 230 Philosophy of Religion**

Grange

Analysis of the nature of religious experience, knowledge, and language. Special attention given to problems, classical and contemporary, exhibited in religious experience, and relevant to areas of common concern in the sciences, humanities, and philosophy. Prerequisite: any PLY 100-level course. Cr 3.



**PLY 240 Political Philosophy**

Gross

Critical evaluation of political philosophies, classical and contemporary; extensive reading in original texts; analysis of contemporary political issues. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 250 Philosophy of Science**

Gavin

Nature of scientific explanation; relationship among facts, laws, and theories; clarification of methods and concepts in science, such as cause, determinism, teleology, theory, law, probability. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 260 Philosophy of Law**

Gross

This course will deal with the philosophical foundations of Law in the West. We will examine in detail the various schools of Law beginning with the Greek view of Law, Mankind, and Society, move up to the modern schools of Legal Positivism, Sociological Jurisprudence, and Natural Law, and attempt to delineate the strains of these positions within the American system of Law. Cr 3.

**PLY 270 Epistemology**

Schwanauer

An analysis of various theories of knowledge in reference to their methodologies and consequences. Texts to be read include Berkeley, Hume, Descartes, Kant and Hegel. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 290 Problems of Philosophy**

Consideration of selected problems or systems of philosophical significance, including general problems of metaphysics, epistemology, axiology, specialized areas, etc. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 310 History of Ancient Philosophy**

Conway

Philosophic thought from the pre-Socrates to the late Hellenistic period, with major emphasis on Plato and Aristotle. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 320 History of Medieval Philosophy**

Schwanauer

The merger of the philosophic with the religious stream; ideas of Augustine, Thomas Aquinas, Bonaventure and others critically examined; determining cultural factors explored. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 330 History of Early Modern Philosophy**

Grange

Main currents of rationalism and empiricism are explored, as developed in major writings from Descartes to Hume. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 340 History of Late Modern Philosophy**

Gross

Development of German idealism; emergence of social

and scientific philosophies; contributions of Kant, Hegel, Marx, Schopenhauer, Nietzsche, Feuerbach, and others. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 350 American Philosophy**

Gavin

History and background of the origin of philosophical ideas in America; particular emphasis given to Peirce, James, Royce, Dewey, Whitehead. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 360 Existentialism**

Grange

An examination of the historical development and basic themes of existentialism as found in the writings of its major representatives: Kierkegaard, Nietzsche, Heidegger, Sartre, Buber, Marcel, and others. Prerequisite: any PLY 100-level course. Cr 3.

**PLY 370 Linguistic Analysis**

Schwanauer

A historical approach to twentieth century linguistic philosophy. This course will begin with logical atomism, continue through the era of logical positivism, and end with ordinary language analysis. Extensive reading of primary sources and major commentators. Cr 3.

**PLY 398 Independent Study**

Independent study undertaken under the mentorship of a professor in the department. Prerequisite: A minimum of two (2) 300-level philosophy courses plus written permission of the instructor involved. Cr 3.

**PLY 400, 401, 402 Seminar in Philosophy**

Grange

These numbers are used to indicate seminar courses dealing with a specified topic or person in philosophy. Topics or individual philosophers will change from year to year and may or may not be repeated. The prerequisite for any 400-level seminar course is two 300-level courses in Philosophy, or permission of the instructor. Cr 3.

**PLY 409 Senior Seminar**

A research seminar designed to provide senior level students an opportunity to participate in the research efforts of individual faculty and collaborate with each other in the design, methodology and completion of their tutorials. Prerequisite: senior standing, advanced standing as a philosophy major, and permission of the department. Cr 3.

**PLY 410 Senior Tutorial**

Designed to furnish senior philosophy majors with extensive training, under tutorial supervision, in analysis of a philosophical problem or system or philosopher, with a view to producing and presenting a senior paper for oral defense. Prerequisites: senior standing, advanced standing as a philosophy major, and permission of the department. Cr 3.

# POLITICAL SCIENCE

Chairman of Political Science Department: Irving D. Fisher, 38 Chamberlain Avenue, Portland.  
Professor Peirce; Associate Professors Coogan, Fisher, Maiman, Roberts, Woshinsky.

## REQUIREMENTS FOR THE MAJOR IN POLITICAL SCIENCE

- a. Each major must complete a minimum of 36 hours in the Department of which six must be POL 101 and 102. A grade of C or better is required to receive major credit in the Department.
- b. Each major must take at least one course in each of the following five areas of the Department:

### Judicial Process

POL 283  
POL 284  
POL 286

### Comparative Political Systems

POL 235  
POL 236  
POL 237  
POL 238  
POL 240  
POL 245  
POL 259  
POL 332

### Political Theory

POL 289  
POL 290  
POL 292

### International Politics

POL 104  
POL 239  
POL 274  
POL 275  
POL 387  
POL 388

### American Political System

POL 103  
POL 210  
POL 213  
POL 233  
POL 234  
POL 251  
POL 252  
POL 253  
POL 257  
POL 258  
POL 357  
POL 358

- c. Each major is required to participate in at least one Seminar (POL 400, 401, 402, 403, 404). In unusual cases students may, with prior permission of the Department, substitute independent study for a Seminar.

Upper-level political science courses *all* require either POL 101 or 102 or the permission of the instructor. Note that POL 101 is *not* a prerequisite for 102.

In special cases the requirement of POL 101 may be waived if the student successfully completes an examination administered by the Department. Students with appropriate prior experience may, in special cases, be granted credit for one or more of the internship courses (POL 353, 354, 355). In rare cases the Department may also grant credit for other political science courses. Students who wish to obtain the POL 101 waiver or receive credit for other departmental courses should petition the department through its chairman.

The Political Science Department offers students an opportunity to pursue a concentration in World Affairs by selecting interdisciplinary courses from a recommended list. See Dr. Peirce for details.

Political science majors are encouraged to take advantage of a variety of internship opportunities as part of their program.

All students are reminded that, in addition to their meeting departmental requirements for a major leading to a baccalaureate degree, they must also meet the requirements of the school or college involved, as well as the University's General Education Requirements.

Political science courses are normally offered on the following schedule:

Every semester: POL 101, 102, 352, 354, 355, 356, Independent Study, at least one Seminar.

Yearly: (Fall) POL 207, 233, 283, 289. (Spring) POL 284, 290, 353. (Either semester) POL 104, 235, 236, 237, 251, 258, 274, 275, 357, 358.

Irregularly (approximately once every two years): POL 103, 210, 213, 234, 238, 239, 240, 245, 252, 253, 257, 259, 286, 292, 302, 332, 387, 388.

## COURSE DESCRIPTIONS

**POL 101 Introduction to American Government**  
The political institutions, processes, behavior, and problems of government in the United States are considered. The national government is emphasized. The constitution, Supreme Court, Congress, Presidency, political parties, public opinion, and interest groups are studied.

Cr 3.

### **POL 102 People and Politics**

This course introduces the student to modern political analysis. It centers on the basic questions in the study of political behavior: how people learn about politics, what kind of political system they adopt and support, who does and who does not participate in politics, how political conflict is expressed and resolved in various societies. The course aims at familiarizing the student with major approaches or methods which political scientists have found helpful for understanding real political behavior. Note: POL 101 is not a prerequisite for POL 102. Cr 3.

### **POL 103 Government and Politics of Maine**

This course concerns Maine State Government, including legislative, executive and judicial programs and powers as exercised within the system of Maine values, political parties, and interest groups. Up-to-date texts authored by Political Science faculty of the University and guest lecturers involved in the Maine government and political process will be used. Open to political science majors and as an elective or special interest to the student who has an interest in the programs and politics of the State of Maine. Cr 3.

### **POL 104 Introduction to International Relations**

Examination of the relationships of nations in their efforts to deal with each other from differing political, economic and cultural bases. Cr 3.

### **POL 205 Methods of Social Research**

Conceptualization and research design; data collection and analysis; logic of inquiry and research techniques. Includes one hour per week of laboratory exercises. Also listed as SOC 205. Prerequisite: POL 102 or SOC 100. Cr 4.

### **POL 210 Power and Change in American Society:**

#### **Inter-governmental Relations**

This course examines attempts to bring about social and economic changes through governmental action. Functional and dysfunctional aspects of the political, economic and social systems are considered. Attempts at intervention are examined through selected case studies in inter-governmental relations. Cr 3.

### **POL 213 Comparative State Political Systems**

An examination of the formal and informal processes through which choices are made by the States. Topics will include local and regional political cultures, incentives of political elites, constitutions, legislatures, governors, bureaucracies and courts. Prerequisites: POL 101, 102, or 103. Cr 3.

### **POL 233 The American City**

The city in the American political life; types of municipal governments; developments in intergovernmental relations; metropolitan area problems; the future of the city. Students will participate in a task force on a selected urban program. Prerequisite: POL 101 or 102. Cr 3.

### **POL 234 Municipal Administration**

The management, financial control and administration of modern American cities with emphasis on administration of personnel and finance, the city plan, and line functions. Considerations will be given to the administration of public safety, transportation, health, welfare, and housing. Prerequisite: POL 101. POL 233 is recommended. Cr 3.

### **POL 235 Democratic Governments of Europe**

An introduction to the parliamentary system, through a study of the governmental operations and politics of

Britain, France, and the Federal Republic of Germany. Other topics covered: the Common Market and prospects for European integration; relationship of democratic Europe with Communist Europe. Prerequisite: POL 101 or 102. Cr 3.

### **POL 236 Communist Governments**

A survey of existing communist social systems is offered. The following topics will be considered: variation in political parties and state systems, the problem of nationalism, economic management, and cultural policy. Special attention will be given to a comparative survey of current communist ideology and the question of the "socialist commonwealth." Prerequisite: POL 101 or 102. Cr 3.

### **POL 237 The Politics of the Soviet Union**

An introduction to the USSR: Russian and Soviet political history; Marxism-Leninism; the party and state structures; the socialist economy; the impact of the regime on the individual. Cr 3.

### **POL 238 Canadian Government and Politics**

An introduction to political life in Canada. Primary topics to be covered in the course: Canadian political culture, voting behavior, the parliamentary system, federalism, political parties, and interest groups. The place of Quebec and French-speaking Canadians within the Canadian political system will be given special emphasis. Prerequisite: POL 101 or 102. Cr 3.

### **POL 239 Soviet Foreign Policy**

A survey of Soviet foreign policy as a continuation of Tsarist policies; as a world movement; the Comintern and the Popular Front. Impact of World War II; the emergence of the USSR as a superpower. Post-Stalin modifications. Case studies in contemporary foreign problems, including relations with the Communist world. Cr 3.

### **POL 240 The Politics of Developing Nations**

An examination of the thrust towards modernization in the "third world." Economic development, relationships with the world community, the role of the military, and various theories about the nature of the relationship between the "third world" and the communist and non-communist industrial worlds are considered. POL 101, 102 or 104 are recommended. Cr 3.

### **POL 245 British Politics**

A survey of the contemporary Constitution of Great Britain. The workings of Parliament, the Government, and the parties. Principal stress is on the main issues now current in British politics. Cr 3.

### **POL 251 Public Administration**

An examination of national, state, and local bureaucracies, including their processes of decision making, communications, leadership, internal and external political relationships. A continuing question will be, "How can those institutions be made responsive to the public?" Prerequisite: POL 101. Cr 3.

### **POL 252 Budgets and Politics**

A comparative examination of the budgetary processes of municipalities, states, and nations. The budget is the critical point at which goals intersect with resources. Students who complete the course will have a working understanding of various budgeting techniques (such as PPBS, zero-based budgeting, and incremental budgeting) as well as an appreciation of their effectiveness, their impact on expenditures, and their political consequences. Prerequisite: POL 251 or permission of the instructor. Cr 3.

**POL 253 Systems Analysis**

An exploration of the application of systems analysis concepts and the methods of public administration. After a basic familiarity with the subject is achieved, application will be studied in relation to a line unit, administrative staff, program planning and policy development. A case study approach will be used. POL 234, 251 or 252 are recommended. Cr 3.

**POL 257 Political Parties**

Development and present organization and operation of the American party system. Nature and function of major and minor parties, sectionalism, nominating system, presidential and congressional elections, the electorate, finance, interest groups. Prerequisite: POL 101. Cr 3.

**POL 258 Public Opinion and Electoral Behavior**

The role of public opinion in the American political system; definition and measurement; sociological and psychological influences, mass media; linkages to government; the role of public opinion in other nations; voting and presidential elections. Prerequisite: POL 102. Cr 3.

**POL 259 Psychology and Politics**

An introduction to the psychological roots of political behavior. The course will examine various theories of personality and motivation which explain why people act as they do in politics. It will focus on such questions as: Can "national character" explain political differences among nations? What are the psychological causes of political extremism and mass movements? Are there "authoritarian" and "democratic" personalities? What are the needs or drives which lead men into full-time political activity? The bulk of the course will focus on elite, rather than mass, behavior. Prerequisite: POL 102. Cr 3.

**POL 274 Contemporary International Affairs**

An analysis of contemporary world problems with emphasis on the interdependence of nations versus their viability as individual nation states. Cr 3.

**POL 275 United States Foreign Policy**

A detailed evaluation of U.S. foreign policy focusing on such topics as: identification of U.S. policy; governmental agencies and personalities in the formulation and implementation of policy; the role of non-governmental influences. The course is designed to evaluate current policy goals and practices within the context of long-range goals. Cr 3.

**POL 283 The American Judicial System**

The role of the judiciary in American politics, with emphasis on the United States Supreme Court. A series of case studies will cover such topics as economic regulation, civil rights, reapportionment, and war powers. Attention will also be given to the impact of judicial philosophies on decision-making. Prerequisite: POL 101. Cr 3.

**POL 284 American Civil Liberties**

An analysis of judicial interpretations of Bill of Rights guarantees and their effects on political processes in the United States. Topics include church and state, freedom of speech and press, the rights of the accused and the convicted. Prerequisite: POL 283. Cr 3.

**POL 286 Administrative Law**

The law made by and for administrative agencies. Topics include delegation, standing judicial review, and the merits and demerits of "discretionary justice." Prerequisite: POL 101. Cr 3.

**POL 289 Political and Social Thought I**

An intensive study of ancient political and social philosophies. A textual criticism of the works of Plato and Aristotle is emphasized. Prerequisite: junior or senior standing. Cr 3.

**POL 290 Political and Social Thought II**

A study of selected political theories from Machiavelli to modern political philosophers. The basic approach is historical, but an attempt is made to relate theories of politics to the environments in which they developed. Prerequisite: junior or senior standing. Cr 3.

**POL 292 American Political Thought**

An examination of American historical and contemporary thinking on a variety of political topics including equality, revolution, liberty, property, war, and individualism. Prerequisite: consent of the instructor. Cr 3.

**POL 302 Criminal Law**

An examination of the articulation and application of criminal sanctions by agencies of the modern state. Special attention is given to the conflict between the "due process" and "crime control" models of the criminal process. Prerequisite: CJ 215. NOTE: This course may be applied toward the Political Science Department's 36-hour major requirement but may not be used to help satisfy the department's distribution requirements. Cr 3.

**POL 307 Statistical Methods for Social Research**

Emphasis on uses of statistics in the organization, interpretation, and presentation of research data. Measures of association and correlation; testing of hypotheses, probability and sampling. Includes one hour per week of laboratory exercises. Also listed as SOC 307. Prerequisite: POL 102 or SOC 100. Cr 4.

**POL 310 Comparative Justice Systems**

A cross-national analysis of the form and substance of modern economic and political contexts in which these systems exist, as well as their historical development. Emphasis is placed on underlying differences in theories of social control in an attempt to understand the role that justice systems and their personnel play in a variety of nation states. Also listed as CJ 310. Prerequisite: CJ 215. Cr 3.

**POL 332 Comparative Political Behavior**

This course will introduce students to major approaches and concepts in comparative politics. Emphasis will be placed on using theoretical concepts to understand practical politics in a variety of nations (primarily those modern industrial states of Western Europe and North America). Major topics for study: public opinion, political parties, legislative behavior, bureaucracy. Prerequisite: POL 235 or 236, or permission of the instructor. Cr 3.

**POL 352 Internship in Private and Semi-Public Organizations**

Provision may be made to gain professional experience in administration and research. The course is open only to selected students. Readings and research reports are required. Cr 6.

**POL 353 Municipal Administration Internship**

Provision may be made to gain professional experience in a local government. The course is open only to selected students. Readings and research reports are required, focusing on the management, financial control and administration of modern American cities,

with emphasis on administration of personnel and finance, the city plan and line functions: public safety, transportation, health, welfare and housing. Cr 6.

**POL 354 State Internship**

Provision may be made to gain professional experience in a department or agency of state government. The course is open to selected students. Readings and research reports are required. The state government internship is available under the Maine State Government Internship Program. Cr 6.

**POL 355 Congressional Internship**

Provision may be made to gain professional experience in the local or Washington offices of Maine's U.S. Congressmen and Senators. The course is open to selected students. Readings and research reports are required. Cr var.

**POL 356 Internship in Washington, D.C.**

Provision may be made to gain professional experience in an agency of the national government or with a private or semi-public organization in Washington, D.C. The internship program is run under the auspices of the Washington Center for Learning Alternatives. The course is open only to selected students. Readings and research reports are required. Cr 9.

**POL 357 The American Presidency**

This course examines the development of the modern presidency; the scope and exercise of presidential decision-making in domestic and foreign policy; and standards for assessing presidential performance. Prerequisite: POL 101. Cr 3.

**POL 358 The American Congress**

The role of the national legislature in American politics is considered. The course undertakes a study of the men who reach Congress, the internal norms and procedures within Congress, and the effects of these procedures on national decision-making. Among topics covered are the committee system, leadership patterns in the Senate and the House, the public's influence on Congress, Congress and the Presidency, and Congressional policy-making in selected areas. Prerequisite: POL 101 or 102. Cr 3.

**POL 387 International Law**

An analysis from the political perspective of the sources, limitations and institutions of international law as they relate to the search for peace and world order. (Offered in alternate Fall semesters.) Cr 3.

**POL 388 International Organization**

An analysis of the approaches to the problems of peace, economic and social justice at the international level. Emphasis on the United Nations systems and its specialized agencies. (Offered in alternate Spring semesters.) Cr 3.

**POL 395 Independent Study I**

A concentrated program of research or study on a particular subject of the student's selection. The topic will be chosen with the advice and under the direction of a faculty member. Admission by permission of the political science faculty. Cr 3.

**POL 396 Independent Study II**

A concentrated program of research or study on a particular subject of the student's selection. The topic will be chosen with the advice and under the direction of a faculty member. Admission by permission of the political science faculty. Cr 3.

**POL 397 Independent Study III**

A concentrated program of research or study on a particular subject of the student's selection. The topic will be chosen with the advice and under the direction of a faculty member. Admission by permission of the political science faculty. Cr 3.

**POL 400 Seminar in American Politics**

A seminar focusing on some aspect of American politics. Prerequisite: consent of the instructor. Cr 3.

**POL 401 Seminar in International Affairs**

A seminar which focuses on some aspect of international politics. Prerequisite: consent of the instructor. Cr 3.

**POL 402 Seminar in Comparative Politics**

A study of some aspects of comparative political institutions and behavior. Prerequisite: consent of the instructor. Cr 3.

**POL 403 Seminar in Judicial Process**

A seminar focusing on some aspect of judicial processes and behavior. Prerequisite: consent of the instructor. Cr 3.

**POL 404 Seminar in Political and Social Thought**

A seminar focusing on some aspect of political and social theory. Prerequisite: consent of the instructor. Cr 3.



# PSYCHOLOGY

Chairman of Psychology Department: John S. Bishop, 518 Science Building, Portland.

Professors Bishop, Paradise, Saldanha; Associate Professors Hearn, Sanborn, Gayton, Sytsma.

The Department of Psychology offers a four-year program for students majoring in psychology. It also includes courses for students majoring in allied fields as well as for students wishing an orientation to the field of psychology as part of their general education. Courses are designed to create an awareness of the fundamental principles of psychology, psychological research, and the means by which psychological knowledge is acquired. The emphasis is upon the scientific inquiry into basic phenomena and principles of behavior, not upon the development of professional skills.

All students are reminded that, in addition to their meeting departmental requirements for a major leading to a baccalaureate degree, they must also meet the requirements of the school or college involved, as well as the University's General Education Requirements.

## REQUIREMENTS FOR A PSYCHOLOGY MAJOR IN ARTS AND SCIENCES

The minimum requirement for a major is 40 credit hours in psychology (no maximum) and **MUST** include the following courses:

		<i>Credit Hours</i>
PSY 101 and 102	General Psychology (3 credits each semester) to be taken as a two-semester sequence . . . . .	6
PSY 201	Statistics in Psychology . . . . .	3
PSY 205	Experimental Methodology . . . . .	3
PSY 223	Child Development . . . . .	3
PSY 330	Social Psychology . . . . .	3
PSY 333	Psychopathology . . . . .	3
PSY 350	Psychology of Learning . . . . .	4
PSY 361	Sensation and Perception . . . . .	4
PSY 365	Physiological Psychology . . . . .	3
PSY 371	History and Systems . . . . .	3
		<u>35</u>

Other courses offered by the department can be taken as electives to complete the 40-hour minimum.

In addition, successful completion of the following three non-psychology courses is required for certification as a psychology major. These courses should be completed by the end of the Sophomore year.

MS 140	Pre-Calculus Mathematics (Prerequisite for PSY 201)
BIO 101	Biological Principles
BIO 111	Human Anatomy and Physiology (Prerequisites for PSY 365)

PSY 101 and 102 are prerequisites for all additional psychology courses.

Psychology 101 and 102 should be elected no later than the sophomore year by students who plan to major in psychology. All majors are required to elect PSY 201 and PSY 205 no later than their junior year. PSY 201 may be taken concurrently with PSY 102. No grade of D in any departmental course will count toward fulfillment of the major requirement.

The department recommends that the students who wish to take a more extensive program or who plan to enter graduate school elect, in consultation with their major advisor, further courses in psychology and also include in their programs study in related fields, such as mathematics, biology, philosophy, sociology, anthropology, and computer programming.

## COURSE DESCRIPTIONS

### PSY 101 General Psychology I

An introduction to the study of behavior as a natural science. Among the topics covered are: method of inquiry, physiological foundations of behavior, sensation and perception, motivation and emotion, learning and thinking. This course is a prerequisite for all courses in the department. Cr 3.

### PSY 102 General Psychology II

A continuation of Psychology 101. It deals with complex psychological processes such as ability testing, personality, conflict, behavior disorders and therapy, and social and industrial behavior. Prerequisite: PSY 101. Cr 3.

### PSY 201 Statistics in Psychology

A general introduction to the techniques of descriptive, predictive, and inferential statistics. Emphasis is placed on measures of central tendency and variability, correlation, hypothesis testing, and simple analysis of variance. Prerequisites: PSY 101 and MS 140 or permission of the instructor. Cr 3.

### PSY 205 Experimental Methodology

Emphasis on the principles, methods, and techniques of experimental psychology. Applications of general methodology and specific techniques to the design of experiments in behavioral research. Prerequisite: PSY 201. Cr 3.

### PSY 220 Developmental Psychology

A study of the factors in human psychological growth traced from genetic predisposition through the prenatal and postnatal periods, childhood, adolescence, adulthood and aging to death. The major theorists relevant to each developmental period are considered. Prerequisites: PSY 101 and 102. NOTE: This course does not count toward major credit. Cr 3.

### PSY 223 Child Development

A systematic study of the behavior and psychological development of children during infancy, preschool and school-age periods. Analysis of the genetic, prenatal, and postnatal influences on the physical, cognitive, and personality development. Implications of the research for practical application in dealing with children. Prerequisites: PSY 101 and 102. Cr 3.

### PSY 224 Adolescent Development

A systematic study of the behavioral and psychological development of the adolescent. The adolescent personality and problems of adjustment in relation to the family, the school and the community. Prerequisites: PSY 101 and 102. Cr 3.

### PSY 232 Psychology of Adjustment

A study of the development of personality patterns, modes of behavior, life styles, and coping mechanisms considered normal in this society. Consideration of their value to individual functioning. Prerequisites: PSY 101 and 102. NOTE: This course does not count toward major credit. Cr 3.

### PSY 235 Psychology of Women

Psychology of women and psychological literature relevant to men and women. Some topics include physiological and personality differences between the sexes, sex-role development, role conflict, women and traditional therapy. NOTE: This course does not count toward major credit. Prerequisites: PSY 101 and 102. Cr 3.

### PSY 311 Industrial Psychology

Critical treatment of research methods in personnel selection and evaluation and current theories of individual behavior in complex organizations such as government and business. Prerequisites: PSY 101 and 102. Cr 3.

### PSY 320 Psychology of Personality

Consideration of current issues and findings in personality. Personality development. Current research in such areas as aggression, anxiety, altruism, self-concept, authoritarianism, need for achievement, and human sexual behavior. Prerequisites: PSY 101 and 102. Cr 3.

### PSY 330 Social Psychology

The psychological principles which enter into the social behavior of the individual. Areas of consideration include perception, communication, attitude formation, interpersonal attraction, and group behavior. Prerequisites: PSY 101 and 102. Cr 3.

### PSY 333 Psychopathology

The etiology, development, and manifestation of the major forms of mental illness with particular emphasis upon the neuroses and psychoses. Psychological, social, and biological factors which contribute to maladjustment are examined. Prerequisites: PSY 101 and 102. Cr 3.

### PSY 335 Deviations of Childhood

Intensive readings and discussion of the etiology and manifestation of deviant patterns of behavior and functioning in children. Problems relating to the identification and management of such deviations are considered. Prerequisites: PSY 223 or permission of the instructor. Cr 3.

### PSY 338 Theories of Personality

A survey of the major contemporary approaches to the study of personality. Different theories are compared, their impact upon current thinking evaluated, and their research contributions assessed. Prerequisites: PSY 101, 102, and 320, or permission of the instructor. Cr 3.

### PSY 340 Behavior Modification

An introduction to the principles of operant conditioning with emphasis on the application of operant techniques in educational, correctional, and therapeutic situations. Prerequisites: PSY 101 and 102. Cr 3.

### PSY 343 Psychological Test Theory

The theoretical and statistical concepts underlying the development of various psychological tests. Individual and group tests of intelligence, personality, aptitude, and interest are examined and evaluated in terms of these concepts. Uses and abuses of psychological tests are considered. Prerequisite: PSY 201. Cr 3.

### PSY 350 Psychology of Learning

Experimental findings on the fundamental principles that underlie the acquisition and retention of new behavior. Laboratory experience with techniques in the study of learning in animals and humans. Prerequisites: PSY 205 and 201. Cr 4.

### PSY 351 Psychology of Motivation

A survey of theory, research methods, and experimental findings related to the search for the determinants of human and animal behavior. The course requires a research paper on a topic of interest to the student, and the planning of an experiment growing out of that interest. Laboratory. Prerequisites: PSY 101 and 102. Cr 3.

**PSY 355 Research in Personality**

Examination of current research in personality. Intensive experience in designing, executing, reporting and evaluating research in personality. This will include a research project. Prerequisite: PSY 320 or permission of instructor. Cr 4.

**PSY 360 Cognitive Processes**

Experimental findings and theoretical analyses of the acquisition, retention, and transfer of verbal behavior and a critical survey of theories and research on such topics as problem solving, creative thinking, reasoning, concept formation, decision making, thought and language, and related topics. Prerequisites: PSY 101 and 102. Cr 3.

**PSY 361 Sensation and Perception**

An examination of perceptual processes in selected sensory systems. Emphasis on experimental methodology, research findings, and theoretical interpretations. Laboratory. Prerequisites: PSY 201 and 205. Cr 4.

**PSY 365 Physiological Psychology**

Basic neuroanatomy, neurophysiology, and endocrinology, and the relationships between nervous-system functioning and behavior. Physiological analysis of sensory function, motivation, and learning. Prerequisites: BIO 101 and 111; PSY 101, 102. Cr 3.

**PSY 366 Comparative Psychology**

A survey of the principles and concepts of biological psychology. Understanding the physiological basis of learning, motivation, and species-typical behaviors from a comparative approach. Prerequisites: PSY 101 and 102; BIO 101 and 111. Cr 3.

**PSY 370 Engineering Psychology**

Behavior of individuals operating equipment; effects of control and display design, legibility, and physical dimensions; principles of error reduction and application to military, aerospace, and industrial areas. Prerequisites: PSY 101 and 102. Cr 3.

**PSY 371 History and Systems of Psychology**

A survey of the history of psychological thought from its beginnings in Greek philosophy to modern times. Special attention will be given to the influence of philosophy and natural science on the development of contemporary psychology. The course concludes with a survey of the major systems. Prerequisite: 15 hours in psychology. Cr 3.

**PSY 380 Psychology and the Law**

This course represents an intensive study of the role of

psychology in the legal process with particular emphasis upon the insanity defense; competency to stand trial; and involuntary commitments. Also considered are those psychological factors which relate to such topics as jury selection and deliberation; eye witness testimony and credibility; and courtroom strategy. Prerequisites: PSY 101, 102, 333 and/or permission of the instructor. Cr 3.

**PSY 385 Contemporary Psychotherapies**

A survey of contemporary psychotherapies including Gestalt therapy, logotherapy, bioenergetics, reality therapy, transactional analysis and rational-emotive therapy. Seminar format. This course is designed for advanced psychology majors planning to go on to graduate school in clinical or counseling psychology. Prerequisite: permission of the instructor. Cr 3.

**PSY 390 Selected Topics in Psychology**

A critical in-depth investigation of one of various topics and issues in different areas of psychology (e.g., experimental, social, clinical, child-developmental, etc.). Each student is expected to complete a research project on the topic for the semester. Consult the Psychology Department for topics offered. Prerequisites: PSY 201, 205 and permission of the instructor. Cr 3.

**PSY 400 Research in Psychology I**

This course is open to qualified majors in psychology who wish to engage in independent readings on selected topics or conduct research projects. With permission of departmental chairman. Cr 3.

**PSY 490 Senior Seminar in Psychology**

A seminar designed to bring together and synthesize the previous courses in the major sequence. Open only to qualified seniors and by permission of the instructor. Cr 3.

**PSY 521 Individual Psychological Testing**

Intensive training in the administration, scoring, and interpretation of the Stanford Binet form L-M and Wechsler Intelligence Scales. Prerequisites: PSY 201 and 343 each with a grade of C or better and permission of the instructor. Open to graduate students only. Cr 4.

**PSY 522 Psychological Assessment of Children**

Intensive training in the use of psychological tests (e.g., WISC, WRAT, Bender) in the assessment of childhood deviations with particular emphasis upon interpretation of test results. Prerequisites: open to graduate students only; PSY 521 and permission of the instructor. Recitation 2, lab 4. Cr 4.

# SOCIAL WELFARE

Chair of Social Welfare Department: Joseph D. Kreisler, 7 Chamberlain Avenue, Portland.

Professors Romanyshyn, Steinman; Associate Professors Kreisler, Rich; Assistant Professors Deprez, Lazar, Loth, Tierney.

The successful completion of the major leads to a BA degree in social welfare and prepares the student for professional practice of social work at the entry level. The social welfare curriculum is accredited by the Council on Social Work Education.

Students who receive a degree from an accredited undergraduate program in social work may apply to selected graduate schools of social work for advanced standing. If accepted, they may complete an MSW degree in one instead of two years.

Students are initially admitted to the department on a provisional basis. Formal admission takes place after a student has completed appropriate department application and has had an admission interview with his or her advisor. This normally takes place in the sophomore year.

The major in social welfare consists of 36 credits of required foundation knowledge in the humanities and social sciences. These courses can also be used to satisfy the University's General Education Requirements. In addition students must take 38 credits in required social welfare courses.

In planning their program, provisional and admitted students must regularly consult with their faculty advisor to: help the student explore career objectives,

review departmental requirements, design the best possible combination of required and elective courses and to facilitate a productive relationship between the student and the department.

The Social Welfare Department has a policy of awarding credits for work experience to students when a thorough review of their work experience in the human services reveals they have attained a level of competence equivalent to that expected of students in selected practice-oriented courses.\* See Department Policy Statement, "Advanced Credit Procedures for Social Work Methods and Community Lab."

\*When credits are awarded for work experience they are assigned the following course designations:

SWE: 250 Methods of Social Work Practice;  
Credit for Work Experience

SWE: 251 Community Laboratory in Social Welfare;  
Credit for Work Experience

In addition to their meeting departmental requirements for a major leading to a baccalaureate degree, students must also meet the requirements of the school or college involved, as well as the University's General Education Requirements.

## REQUIRED FOUNDATION KNOWLEDGE

(Substitutions for or waivers of any of these courses require the written approval of a student's advisor.)

	<i>Credit Hours</i>
<b>Introductory Level</b>	
ENG 100 College Writing .....	3
ECON 101 Principles of Economics .....	3
POL 101 Introduction to Government -or-	
POL 102 People and Politics .....	3
PLY (Any introductory Philosophy course) .....	3
PSY 101 & 102 General Psychology I & II .....	6
SOC 100 Introduction to Sociology .....	3
	21
<b>5 Advanced Level Sociology and Psychology Courses .....</b>	<b>15</b>

This must include SOC 371 Sociology of Minority Groups. Four other courses are selected with the advice and approval of student's advisor.

## REQUIRED COURSES

	<i>Credit Hours</i>
SWE 101 Introduction to the Human Services .....	3
SWE 252 & 253 Methods of Social Work Practice I & II .....	6

SWE 254 & 255	Community Laboratory in Social Welfare I & II	12
SWE 350	Social Problems and Social Welfare Policy	3
SWE 351	Human Services and the Consumer	3
SWE 370	Human Development and Social Welfare	3
SWE 454 & 455	Social Welfare Research	5
SWE 456	Issues in Social Welfare and Social Work	3
		<u>38</u>

Students are expected to achieve a grade of C- or better in all Department of Social Welfare and required foundation knowledge courses.

## COURSE DESCRIPTIONS

\* Not offered each year -

### SWE 101 Introduction to the Human Services

Seeks to define a perspective within which to understand the needs, problems and potential of humans as individuals and in groups. Describes and analyzes social welfare systems and social work practices as they currently respond to social needs, and as they might better facilitate the development of human potential. Cr 3.

### SWE 102 Introduction to Social Work\*

An introduction to the practice of social work focusing on the nature of intervention, the roles and functions of social workers in the delivery of services in various settings and beginning practice skills. The course enables a student to make a more informed decision about his/her entry into the field. Prerequisite: SWE 101. Cr 3.

### SWE 252 Methods of Social Work Practice I

An introduction to basic concepts and skills in social work interviewing and in the problem-solving approach within the framework of systems theory. Study of the values and knowledge base of social work skills. Class discussion and assignments based on community lab experience (254) which must be taken concurrently. Prerequisite: SWE 101. Cr 3.

### SWE 253 Methods of Social Work Practices II

A continuation of 252 covering the application of basic social work skills to areas of practice such as community organization, crisis intervention, group work. Class discussions and assignment based on community lab experience (255) which must be taken concurrently. Cr 3.

### SWE 254 Community Laboratory I

For Social Welfare majors: a required internship in an agency placement, designed to provide an opportunity to relate social work theory to practice. Prerequisites: SWE 101; 252 (concurrent). Cr 6.  
Pass/Fail

### SWE 255 Community Laboratory II

A continuation of SWE 254. Prerequisites: SWE 252 and 254; SWE 253 concurrent. Cr 6.  
Pass/Fail

### SWE 265 Women — Social Change

Examines the ways our culture affects and is affected by women in the areas of physical and mental health throughout their lifespan. Emphasis will be placed on an assessment of the problems women face in today's world as well as personal and political approaches to these problems. Cr 3.

### SWE 266 Concept of Self and the Handicapped Person

To enhance effective interaction and communication with handicapped persons, issues are examined from the perspectives of society and of the individual (handicapped and non-handicapped). Topics include basic human needs and self-image, independence-dependence, anger-frustration, failure, the power of guilt and shame. All students participate in sensory exercises. Cr 3.

### SWE 267 Relating Professionally to Homosexuality

Provides an understanding of varying concepts of homosexuality. Employs recent theoretical, empirical and clinical literature to assess attitudes toward homosexuality. Examines motivation and skills to achieve constructive interaction between the professional and the homosexual. Cr 3.

### SWE 274 Aging and Social Policy:

#### A Cross-Cultural View

Examines similarities and differences between simple and complex societies in their treatment of processes of aging. Against this background the position of older Americans is considered in relation to various social institutions, together with the origin and implementation of social policies affecting them. Cr 3.

### SWE 275 Developmental Services to the Aging

Policy, administration, and implementation of human services to older people are studied from a developmental standpoint. Examines implications of age bias (and its modification) for the nature of service. Prerequisite: SWE 274 recommended but not required. Cr 3.

### SWE 350 Social Problems and Social Welfare Policy

A critical examination of social welfare institutions, the social problems and social needs to which they are addressed, and the policy decisions which determine the organization and direction of social welfare programs. Prerequisite: SWE 101. This course is offered one semester each academic year. Cr 3.

### SWE 351 Human Services and the Consumer

Provides a series of concepts for the study and critical evaluation of the bureaucracies, professions, and consumers of social work and other services. Examines a range of approaches to rendering human services more responsive to client needs. This course is offered one semester each academic year. Cr 3.

### SWE 352 Methods of Social Work Practice III\*

Provides further exploration of the theoretical knowledge and practice skills involved in utilization of particular interventive methods (e.g., child advocacy, organizational change and/or the more focused knowledge, methods and skills needed for effective intervention with a particular population at risk (e.g., adolescents, the frail elderly). Prerequisite: permission of instructor. Cr 3.

**SWE 353 Methods of Social Work Practice IV**

A continuation of SWE 352.

Cr 3.

**SWE 354 Community Laboratory III**

An advanced field experience in human services. Prerequisites: SWE 254 and 255 or permission of the instructor.

Cr var.

**SWE 355 Community Laboratory IV**

A continuation of SWE 354.

Cr var.

**SWE 364 Comparative Social Welfare Systems\***

A study of social welfare programs in advanced industrial and in developing societies, in market and non-market economies and in democratic and authoritarian political systems. Prerequisites: SWE 350 or permission of instructor.

Cr 3.

**SWE 365 Social Work with Minority Groups\***

An exploration of issues in social welfare policy and social work practice as they are related to the status of minority groups and their movement for self-determination. Prerequisites: SOC 371 and six hours of social welfare.

Cr 3.

**SWE 370 Human Development and Social Welfare**

A study of the implications of research and theory related to human development for social welfare policy and social work practice. Prerequisites: at least six hours of social welfare courses. This course is offered one semester each academic year.

Cr 3.

**SWE 380 Child Welfare\***

A study of the process of growing up under handicapping social conditions and the implications for social services and institutional change. Prerequisite: SWE 101 or permission of the instructor.

Cr 3.

**SWE 397 Department Projects**

Individual or group projects, requiring independent study or field work in some aspect of social welfare, to be selected by students in consultation with faculty. Prerequisite: department permission.

Cr var.

**SWE 454 Social Welfare Research**

A study of the implications of social welfare research for social policy and social work practice. Students practice applications of concepts and methodology by means of projects. Prerequisite: at least six hours of social welfare courses.

Cr 2.

**SWE 455 Social Welfare Research**

A continuation of SWE 454.

Cr 3.

**SWE 456 Issues in Social Welfare and Social Work**

Senior seminar for social welfare majors that seeks to integrate class and field experience. Open to others

with permission only. Must be taken in students' final semester.

Cr 3.

## **SPECIAL SOCIAL WELFARE DEPARTMENT PROGRAMS**

### **1. Student Organization**

The student organization seeks to facilitate communication between students and faculty; to insure student involvement in departmental deliberations; to help provide for professional growth, working closely with NASW chapter; and to attempt to act on issues and problems in the community. Student representatives attend faculty meetings and serve as full members on the department's curriculum and personnel committees.

### **2. Programs and Activities**

Social welfare students and faculty are involved in a great many community-service and social-action projects. These are an integral part of our attempts to offer learning experiences which simultaneously contribute to the development of the students as well as service to the community.

Among these are or have been an annual conference on the handicapped, an annual spring festival for senior citizens, social action in the realm of women's issues and the field of gerontology, the development and operation of drop-in centers for youth, organizing workshops for training volunteers, etc.

A special project operated by students under the supervision of a faculty member is the High Street Resource Center. The Center provides information and referral services as well as crisis intervention and short term counseling for people in the Greater Portland area. Students have the opportunity to pursue innovative and creative projects at the Center.

A large number of social and community agencies in the Greater Portland area as well as in other towns and cities of Southern Maine have been most generous in their cooperation with the department in making available field instruction resources including supervision for students of the department.

# SOCIOLOGY

Chairman of Sociology Department: David C. Fullam, 120 Bedford Street, Portland.

Professors Giguere, Lacognata, Monsen; Associate Professors Anspach, Fullam, Grzelkowski, Lehman; Assistant Professor J. Young.

Sociology is the study of social life and the social causes and consequences of human behavior. Sociology's subject matter ranges from the intimate family to the hostile mob, from crime to religion, from the division of race and social class to the shared beliefs of a common culture, from the sociology of work to the sociology of sport. Although teaching remains the dominant activity among the more than fifteen thousand sociologists today, other forms of employment are growing. An undergraduate major in sociology offers valuable preparation for careers in social work, social research, politics, public administration, law, business and education.

All students are reminded that, in addition to their meeting departmental requirements for a major leading to a baccalaureate degree, they must also meet the requirements of the school or college involved, as well as the University's General Education Requirements.

Junior and senior sociology majors having completed ten hours of sociology credits and in the upper 35 per cent of their class are eligible for nomination to Alpha Kappa Delta, the national sociology scholarship and honor society.

## REQUIRED COURSES

The minimum requirement for a major in the department is 38 hours of sociology, which must include the following:

	<i>Credit Hours</i>
SOC 100 Introduction to Sociology	3
SOC 205 Methods of Social Research	4
SOC 300 Sociological Theory	4
SOC 307 Statistical Methods for Social Research	4
SOC 401 Senior Seminar	3

In addition, each major is required to take at least one course from each of the following areas, plus three elective courses from within the discipline:

SOC 310 — SOC 319 Social Processes	3
SOC 330 — SOC 339 Social Institutions	3
SOC 350 — SOC 369 Units of Social Life	3
SOC 370 — SOC 379 Social Problems	3

Note: SOC 215 may be taken to satisfy the Social Problems requirement.

In addition to the 38 required hours of sociology, the sociology major must also take six hours above the introductory level in one of the following:

Anthropology	Mathematics
Biology	Philosophy
Criminal Justice	Political Science
Economics	Psychology
Geography	Social Welfare
History	

## COURSE DESCRIPTIONS

### SOC 100 Introduction to Sociology

The fundamental concepts, principles, and methods of sociology; analyzes the influence of social and cultural factors upon human behavior; evaluates effect of group processes, social classes, stratification, and basic institutions on contemporary society. Cr 3.

### SOC 200 Introduction to Social Problems

The application of a sociological frame of reference to selected contemporary issues. Emphasis is placed on guiding the student toward a general understanding of why and how problems develop, how particular social groups are affected by them, and what is involved in dealing with them. Specific problems considered vary from term to term, and from section to section. Descriptions of current topics are available in the Sociology Department office. Students should consult these descriptions before registering for the course. The course may be taken only once for credit, and cannot be used to satisfy the 370-379 unit area requirements for majors. Prerequisite: SOC 100. Cr 3.

### SOC 205 Methods of Social Research

Giguere, Monsen, Young

Conceptualization and research design; data collection and analysis; logic of inquiry and research techniques. Includes one hour per week of laboratory exercises. Prerequisite: SOC 100 or POL 102. (This course also listed as POL 205.) Cr 4.

### SOC 215 Criminology

Lehman, Young

An analytic survey of theoretical orientations which contribute to a sociological understanding of the interrelationships between crime, law and punishment; emphasis given to analysis of fundamental conflicts between law and social order as manifested in the organization and operation of the American criminal justice system. This course may be credited toward the Social Problems area requirement. Cr 3.

### SOC 300 Sociological Theory

Fullam

A critical examination of the sociological theories of such people as Marx, Weber, and Durkheim; and contemporary theorists such as Parsons and Merton. Prerequisites: SOC 100 and two other SOC courses. Cr 4.

### SOC 307 Statistical Methods for Social Research

Monsen, Young

Emphasis on the uses of statistics in the organization, interpretation, and presentation of research data. Measures of association and correlation; testing of hypotheses, probability and sampling. Includes one hour per week of laboratory exercises. Prerequisite: SOC 100 or POL 102. (This course also listed as POL 307.) Cr 4.

## Social Processes

### SOC 310 Social Change

Giguere

Analysis of sociocultural factors related to social change and the dynamics of the change process. Prerequisite: SOC 100. Cr 3.

### SOC 312 Social Stratification

Anspach

Systematic analysis of social differentiation and evaluation. Theories of and research in the structure and function of class, caste, and ethnic stratification. Prerequisite: SOC 100. Cr 3.

### SOC 314 Social Control

Examination and comparison of major societal control mechanisms. Emphasis on institutions of social mechanisms. Emphasis on institutions of social control and their role in establishing and maintaining social order. Prerequisite: SOC 100. Cr 3.

### SOC 315 Personality and Social Systems

Anspach

A sociological examination of theories and research in some major areas relating personality and social systems; attitudes and behavior; socialization; social perception; a bureaucratic structure and personality; etc. Emphasis on issues involved in relating two theoretical levels of analysis. Prerequisite: SOC 100. Cr 3.

### SOC 316 Sociology of Sex Roles

Young

An examination of sex roles in a socio-political and cultural context focusing on the sexual division of labor in American Society. Prerequisite: SOC 100. Cr 3.

## Social Institutions

### SOC 330 Sociology of the Family

Anspach, Giguere

A sociological approach to the study of the family, including the structure of social relationships, the modern American family as a social institution, the cultural background of the family, and the impact of social change. Prerequisite: SOC 100. Cr 3.

### SOC 331 Sociology of Education

Lacognata

A study of theory and research on the educational institution, with emphasis upon the multiple and changing functions of the formal education in industrial societies. Prerequisite: SOC 100. Cr 3.

### SOC 332 Industrial Sociology

Social factors involved in the development of industry; social consequences of technological change; social organization within industry; problems encountered within the social structure(s) of industry. Prerequisite: SOC 100. Cr 3.

### SOC 333 Sociology of Medicine

Attention is given to the relationship between sociocultural factors and the occurrence of disease and the social systems which are developed in the treatment and prevention thereof. Prerequisite: SOC 100. Cr 3.

### SOC 334 Sociology of Religion

Fullam

Religion as a social institution. Attention is given to the social correlates of religion and the functions of religion in society. Prerequisite: SOC 100. Cr 3.

### SOC 335 The Sociology of Penology and Corrections

Lehman, Young

The course will focus on the social and political problems of dealing with offenders using an examination and analysis of the inter-relations between penology and corrections. Prerequisite: SOC 100 or permission of instructor. Cr 3.

### SOC 336 Sociology of Law

Lehman

An examination of the interrelationships between law and society, focusing on law, custom, and morality as well as law in relation to social goals. Specific examples of how law functions in the context of the social structure will be used to highlight the major theoretical models used traditionally in this area. Prerequisite: SOC 100, SOC 215, or permission of instructor. Cr 3.

### SOC 337 Sociology of Juvenile Justice

Examination and analysis of the philosophies, processing, and treatment of juvenile offenders with an emphasis on historical and comparative materials. Prerequisite: SOC 100 or permission of instructor. Cr 3.

## Units of Social Life

### SOC 350 Sociology of Urban Life

Giguere, Grzelkowski

A descriptive and analytical approach to the study of city life. Emphasis is placed on environment, social organization, the ecological processes, population areas, housing, and maladjustment. Prerequisite: SOC 100. Cr 3.

### SOC 352 Population Dynamics

Giguere

The dynamics of change in size, composition and distribution of population by means of fertility, mortality, and migration within the context of the physical, social and cultural environments. Prerequisite: SOC 100. Cr 3.

### SOC 353 Collective Behavior and Social Movements

Grzelkowski

Unstructured social behavior, e.g., crowds, mobs, riots. The rise and development of social movements emphasizing structuring and institutionalization. Prerequisite: SOC 100. Cr 3.

### SOC 355 Social Structure and Politics

Monsen

The sociological analysis of politics with a cross-national emphasis, including the social basis of mass political behavior. Conceptual focus will be around consensus and conflict, bureaucratization and the institutionalization of interest groups, social movements, and political parties. Prerequisite: SOC 100. Cr 3.

### SOC 356 Social Organization

An examination of selected institutions in modern society; analysis of social roles, processes, and structures within typical organized groups, such as industrial, military, religious, and fraternal organizations; discussion of bureaucracy, decision-making, social conflict; the implications of cultural and technological change. Prerequisite: SOC 100. Cr 3.

### SOC 357 Bureaucracy in Modern Society

Grzelkowski

Examination of the nature and types of formal organizations, the relationships between them and the larger social context of which they are a part, and their internal structure. Prerequisite: SOC 100. Cr 3.



**SOC 361 Sociology of Franco-Americans**

Giguere

Description and analysis of the development and present state of the culture, institutions and social structure of Americans of French-Canadian descent in the United States. Prerequisite: SOC 100. Cr 3.

**Social Problems**

**SOC 371 Sociology of Minority Groups**

Fullam

Analysis of factors involved in group conflict, with emphasis on minority groups in culture-conflict situations. Prerequisite: SOC 100. Cr 3.

**SOC 373 The Adult Years**

Giguere

Problems of age stratification and of role transitions for the years between adolescence and old age will be addressed within a life course perspective. This perspective includes: (a) the life span or growing older element; (b) the social timetable of the life course (e.g., entry into marriage, etc.) (c) historical time (i.e., birth year as an index of historical time). Prerequisite: SOC 100. Cr 3.

**SOC 374 Sociology of Mental Health and Mental Illness**

Anspach

An examination of theory and research in the mental health field. Particular attention on the influence of culture on the definition of illnesses, the relationship between social factors and illness, and the social context of treatment. Prerequisite: SOC 100. Cr 3.

**SOC 375 Sociological Perspectives on Deviance**

Fullam

The origin and causes of socially disapproved behavior. Ways in which society interprets and copes with the deviant. Study of the major forms of social disorganization; specific social problems are considered, such as suicide, crime, drug addiction, alcoholism, prostitution, mental illness, divorce, group conflict. Prerequisite: SOC 100. Cr 3.

**SOC 376 Society and Social Policy**

Anspach

This course has three objectives: to familiarize students with the policy implications of various sociological theories; to introduce the political and ideological underpinnings of differing approaches to social policy; and to apply these ideas in the analysis of specific social policies. Prerequisite: SOC 100. Cr 3.

**Advanced Sociological Theory**

**SOC 380 Sociological Classics**

Monsen

An in-depth study of selected (by faculty and students) seminal works in sociology, aimed at the identification of major concepts and propositions. Prerequisites: SOC 300 or permission of instructor. Cr 3.

**SOC 381 Contemporary Marxism**

Anspach

A survey of issues and debates within Marxist political, social and economic theory. Specific topics examined include: Law and the Modern State; Power and the Political Process; the Crisis of Hegemony in Late Capitalism. Prerequisites: SOC 300/permission of instructor. Cr 3.

**SOC 385 Seminar in Social Thought**

Lacognata

Analyses of contemporary social issues, ideas, and attitudes characterizing American society. Independent library research projects to be emphasized in concert with seminar dialogues. Prerequisites: juniors and seniors only and permission of instructor. Cr 3.

**SOC 387 Theory Construction**

Monsen

The vocabulary and logic of theory construction; from assumptions and isolated propositions to systematized theory. The course aims at enabling the student to understand the utility of theory and its relevance for empirical research. Prerequisite: senior standing in sociology. Cr 3.

**Specialized Advanced Courses**

**SOC 390 Research Seminar**

Focus on the actual conduct of sociological research. Students will formulate a research problem, develop a research design, collect and analyze data and report their findings. Prerequisites: SOC 205, SOC 307 and senior standing. Cr 3.

**SOC 397 Department Projects I**

Independent reading and/or research for juniors and seniors. Apply to department chairman. Prerequisite: 15 hours in sociology. Cr 2-3.

**SOC 398 Department Projects II**

Continuation of independent reading and/or research for juniors and seniors. Apply to department chairman. Prerequisite: SOC 397. Cr 2-3.

**SOC 401 Senior Seminar**

Focusing on synthesis, the seminar is meant to provide the sociology major with an overall view of his discipline and its perspective as well as an opportunity to consider current issues and the future of sociology. Prerequisite: senior standing in sociology. Cr 3.

# THEATRE

Chairman of Theatre Department: Walter R. Stump, Russell Hall, Gorham.

Professor Stump; Associate Professors Duclos, Power, Rootes, Steele; Assistant Professor Kading.

## BACHELOR OF ARTS (B.A.) DEGREE IN THEATRE

Incoming freshmen may declare their intent to major. For those declaring their intent to become a theatre major, the following courses are required:

### Preparation for the Theatre Major

ENG 101 College Writing (May be waived through a successful score on the standard English exam.)

THE 120 Fundamentals of Acting  
THE 101 Introduction to Drama (or THE 134)  
THE 290 Oral Interpretation  
THE 135 Stage Craft

Students who have declared an intent to become majors are then identified as candidates for matriculation in the Department of Theatre. They may request status as a major when the above requirements have been completed.

When the request for major status is submitted, the department will review the student's past record in terms of academic and practical potential for success. Notification of admittance or rejection will be issued. The student may appeal any rejection if desired.

A total of twenty-four units in theatre, not to include those hours selected for major preparation, is required for graduation.

The following units are required:

THE 220 Acting II: Voice for the Actor  
THE 320 Contemporary Acting Methods  
THE 330 Stage Lighting (or THE 331 Scene Design)  
THE 340 History of the Theatre I (or THE 341 History of the Theatre II)  
THE 210 Play Analysis

Any One Course:

THE 361 Late 19th Century Drama of the Western World  
THE 362 20th Century Drama of the Western World  
THE 363 Contemporary Avant-Garde Drama  
THE 460 American Drama

In addition to the above, a total of nine units must be selected from the following allied areas, unless otherwise approved by the department:

### ART

ARTX 102 Film as Image and Idea (3)  
ARTX 141 Design I (3)  
ARTX 151 Drawing I (3)

### DANCE

DNCE 300 Contemporary Dance (2)  
DNCE 301 Contemporary Dance (2)  
DNCE 302 Contemporary Dance (2)

### ENGLISH

ENG 242 Shakespeare I (3)  
ENG 243 Shakespeare II (3)  
ENG 246 British Drama to 1642 (3)  
ENG 266 Restoration Drama (3)  
CPEN 372 Greek Epic, Tragedy and Comedy (3)  
ENG 352 Medieval Drama

### FOREIGN LANGUAGES & CLASSICS

CLS 252 The Tragic Hero in Ancient Literature (3)  
FRE 264 Avant-Garde Theatre in France (3)  
FRE 303 French Theatre in the 20th Century (3)

### MUSIC

MUS 401 Gorham Chorale (0.5)  
MUS 403 A Cappella Choir (0.5)  
MUS 405 The Chamber Singers (0.5)

### EDUCATION

EDU 499 Photography for Classroom Use (3)

### INDUSTRIAL ARTS

IA 210 Electronics Technology  
IA 241 Graphic Arts Technology  
IA 444 Photographic Reproduction

Since practical experience in all phases of production is absolutely essential to the theatre student, all majors are required to participate in at least five productions while matriculating at USM. In fulfilling this requirement, students will be allowed to attempt no more than two consecutive production areas, such as costuming, acting, etc., before attempting another. If, for example, a student acts in two consecutive USM productions, that student must then attempt some aspect of technical theatre. Conversely, if a student concentrates in the area of technical theatre, that student must then attempt an acting role.

The department will meet at least once a semester to review each major's progress and to call to the attention of the student any departmental concern.

## COURSE DESCRIPTIONS

### THE 101 Introduction to Drama

A lecture-discussion course designed to provide students with a conception of the structural elements of dramatic literature. The course consists of a survey of Greek medieval, Elizabethan, French neo-classic, and 18th, 19th and 20th Century plays. Cr 3.

### THE 120 Acting I: Fundamentals of Acting

A course designed to introduce the student to basic skills of acting through the use of mime, improvisation, and role playing. Emphasis made on internal preparation for developing a role and on external techniques for projecting that role. (2 credits lec., 1 credit lab.) Cr 3.

**THE 124 Intercollegiate Forensics**

A course designed to acquaint students with intercollegiate competition. Students will compete at various forensic tournaments throughout the east. Permission of instructor is required. Cr 1.

**THE 125 Intercollegiate Forensics**

A continuation of THE 124. Cr 1.

**THE 126 Intercollegiate Forensics**

A continuation of THE 125. Cr 1.

**THE 127 Intercollegiate Forensics**

A continuation of THE 126. Cr 1.

**THE 130 Theatre Workshop I**

A course designed to give students practical application of theatre practices in the fields of acting, design, scene construction, costuming, properties, lighting, management, and directing. A laboratory course. Cr 1.

**THE 131 Theatre Workshop II**

A continuation of THE 130. Prerequisite: THE 130. Cr 1.

**THE 132 Theatre Workshop III**

A continuation of THE 131. Prerequisite: THE 131. Cr 1.

**THE 133 Theatre Workshop IV**

A continuation of THE 132. Prerequisite: THE 132. Cr 1.

**THE 134 Introduction to Theatre Production**

A basic course providing background and experience in play production including such topics as play analysis and selection as influenced by cast and faculty options, rehearsal schedules, blocking action and related stage business. This course is particularly valuable for the classroom teacher. Practicum required. Cr 3.

**THE 135 Stagecraft I**

A lecture/discussion/lab course in technical theatre and related topics relevant to technical direction. Specific areas of emphasis will include: theatre/stage terminology and organization; scene shop practices and use of shop tools; basic methods of construction, rigging and moving scenery for the stage. The lecture portion of the course will be supplemented by actual construction, painting and mounting of a major university theatre production. (Concurrent enrollment in Stagecraft Lab THE 137 required.) Cr 3.

**THE 136 Stagecraft II**

A lecture/discussion/lab course in basic theatrical drafting/graphic practices relating to theatrical construction and design techniques. The primary emphasis of the course will be the execution of various types of theatrical design and construction mechanical drawings, supplemented by construction, painting and mounting of a major university theatre production. Concurrent enrollment in Stagecraft Lab THE 137 required. Prerequisite: THE 135 or instructor consent. Cr 3.

**THE 137 Stagecraft Lab**

A lab course allowing practical application of theory discussed in THE 135, 136. Concurrent enrollment in THE 135 or 136 required. Cr 1.

**THE 138 Make-up**

The course will emphasize the fundamentals of design and application of theatrical make-up. Specific areas of study will include the use of painted highlight and shadow to alter facial features; the relationship of colored light and make-up; the application of crepe hair and nose putty, and a basic approach to theatrical make-up design. Primary emphasis of the course will be the actual application of make-up, giving the student the opportunity to practice realistic and abstract make-up techniques. An additional 30 hours of production work will be required of each student providing the opportunity to apply classroom techniques to the actual performance experience. Cr 3.

**THE 170 Public Speaking**

An introductory course in the fundamentals of public discourse. Primarily a lecture-performance course, students will learn the basics of informative, persuasive, and entertaining speaking, as well as the processes of problem-solving and informative discussion. Emphasis is upon conception, analysis, structure, and modes of proof. Cr 3.

**THE 210 Play Analysis**

Representative dramas for the stage are read, discussed and analyzed in writing in terms of Plot, Character, Thought, Diction and Spectacle, and in terms of dramatic form and style. Cr 3.

**THE 220 Acting II: Voice for the Actor**

Designed as a practicum course to develop the actor's voice allowing him to understand the vocal mechanism and the methods in which it can be used to create articulate speech projection and dialect. Prerequisite: THE 120. (2 credits lec., 1 credit lab.) Cr 3.

**THE 230 Creative Dramatics**

Study of problems in introducing young people to theatre as a total art form. Course to include the development of children's plays from improvisations and existing literature workshops and improvisational work with children in the community will serve as practicum experience for students enrolled. Cr 3.

**THE 240 Costuming I**

The course will consist of an introduction to costuming; including basic design, basic construction and an introduction to the materials used in millinery, wig making and special costume problems (armor, footwear, etc.). The major emphasis will focus on design and construction. Additional hours of production work will be required providing a practical application of classroom theory. Concurrent enrollment in THE 137 is required. Cr 3.

**THE 274 Journalistic Drama Criticism**

This course will provide the student with a comprehensive analysis of the role of the writing critic in Professional, Community, Educational, and Amateur Theatre. Stress will be placed upon the critic's options in making judgments and upon development of a workable writing style. A minimum of five plays will be seen from which reviews will be generated. Prerequisite: THE 134. Cr 3.

**THE 290 Oral Interpretation**

A course in the assimilation and analysis of literary material (poetry, prose, drama), with emphasis on the techniques used in reading written material aloud to an audience. Designed to stimulate an understanding and responsiveness to literature and to develop the ability to convey to others, through oral reading, an appreciation of that literature. Cr 3.

**THE 320 Acting III: Contemporary Acting Methods**  
Designed to broaden the basic skills of the actor in achieving theatrical effectiveness through an individualized examination of the actor's problems with heavy emphasis placed upon contemporary techniques. Student will become acquainted with the principles established by Stanislavsky, Strasberg and Ball. Prerequisites: THE 120, THE 220. (2 credits lec., 1 credit lab.)  
Cr 3.

**THE 330 Stage Lighting**  
Introduction to stage lighting design, elements of electricity, color, light sources, instrumentation, and control systems. Student will participate in lighting projects in practicum. Prerequisites: THE 135, THE 136.  
Cr 3.

**THE 331 Scene Design**  
Lecture and practicum in stage scenic design. Emphasis on the visual art and drafting of designs. Prerequisites: THE 135 and THE 136.  
Cr 3.

**THE 332 Fundamentals of Directing**  
Designed to train directors in theatrical organization and rehearsal techniques. Encompasses composition, picturization, movement and rhythm. Course involves both contemporary theory and practical application. Prerequisites: THE 101, 120, 134, 135, 220 and 320. Senior or junior with permission.  
Cr 3.

**THE 335 Playwriting**  
A lecture-practicum course designed to acquaint the student with playwriting principles. Emphasis is placed on the one-act play form. Students will be required to complete a series of creative exercises culminating with writing of a one-act play. Prerequisites: THE 101 and THE 361 or 362 or 363.  
Cr 3.

**THE 340 History of the Theatre I**  
A study of the development of the drama, the physical theatre, and the modes of production from the ancient Greek period through to 1640. Prerequisite: THE 101.  
Cr 3.

**THE 341 History of the Theatre II**  
A study of the development of the drama, the physical theatre, and the modes of production from the Restoration to the present. Prerequisite: THE 101.  
Cr 3.

**THE 350 Theatre Management**  
Investigation of educational and professional theatre management roles, including: Managing Director; Business Manager; Box Office Manager; Publicity Director; House Manager. Practicum required.  
Cr 3.

**THE 361 Late 19th Century Drama of the Western World**  
This course is designed to acquaint the theatre major and non-major with a broad range of dramatic literature of the early 19th century. Representative plays of Ibsen, Strindberg, Chekhov, Shaw, and others will be studied which exemplify the literary, social, political, and philosophical aspects of the age. Prerequisite: THE 101.  
Cr 3.

**THE 362 20th Century Drama of the Western World**  
This course is designed to acquaint the theatre major and non-major with a broad range of dramatic literature of the 20th century. Representative plays of O'Neill, Odets, Anouilh, Brecht, Sartre, Wilder, Miller, Beckett, Osborne, Chayefsky, and others will be studied which exemplify the literary, social, political, and philosophical aspects of the age. Prerequisite: THE 101.  
Cr 3.



**THE 363 Contemporary Avant-Garde Drama**  
This course is designed to acquaint the student of theatre with the new voices in contemporary dramatic literature. Focus is upon such playwrights as Beckett, Genet, Pinter, Albee, LeRoi Jones, and representative plays from "Off-Broadway" Theatre. Prerequisite: THE 101.  
Cr 3.

**THE 390 Advanced Oral Interpretation**  
A continuation of THE 290.  
Cr 3.

**THE 391 Reader's Theatre**  
A study of principles and techniques utilized in the performance of a literary work in the Reader's Theatre style. Emphasis is on providing new insights into the material through oral performance.  
Cr 3.

**THE 398 Theatre Internship**  
Students will assume a full one semester internship with a professional theatre or Reader's Theatre Company. Students will be involved in management, acting, directing or technical theatre as a member of the company. Each student will be assigned a faculty advisor who will make a biweekly evaluation of ongoing work. Participants will be required to keep a diary and/or portfolio to be reviewed by the faculty of the Theatre Department at the conclusion of the internship. All creative work done by the student will be evaluated by the advisor and at least one other or if possible all members of the department. Prerequisites: permission of the Theatre Department.  
Cr 3-15.

**THE 399 Independent Study**  
The student will submit a written proposal defining the scope and the limitations of his study. He must submit his project for Independent Study to the faculty one month prior to the completion of the semester preceding his study. This deadline should be published at

least one month prior to the student's deadline. The faculty must approve and determine the credits given to the Independent Study. If the faculty does not meet before the semester is concluded the student will not be eligible to do the study until the coming semester. The student will choose a supervisor. It will be in the duty of this instructor to closely supervise, advise, and recommend to the student and assure all faculty that each will receive a copy of the proposal before the meeting at which the student's proposal will be presented to the entire faculty. At the completion of the Independent Study the student will take an oral examination conducted by the entire faculty and chaired by his advisor (Review Board). At the completion of the oral examination the faculty will advise the student's advisor as to their determination of a grade. The advisor will then determine the grade and submit the grade to the Registrar's Office. A student, generally, should not embark on a study until he has taken and completed all of the available course work that is necessary to do his study in depth. Each theatre student is entitled to take six units in either Independent Study or Theatre Project, or a combination of both not to exceed six units unless the specific proposal is unanimously approved by the theatre faculty. Cr 3.

#### THE 420 Acting Styles

Deals with specific problems in interpretation of Shakespeare and classical and neo-classical tragic and comic styles. Emphasis will be placed on language and characterization, and on audition work. Prerequisites: THE 101 or 102; THE 220; ENG 242 or 243 or any other English literature course; or permission of instructor. Cr 3.

#### THE 433 Project I

Investigation of special topics, or execution of special projects which fall within the purview of theatre. Students may select an inter- or intra-departmental committee of three professors to approve, assist, and oversee the project. Prerequisites: juniors and seniors only; precise definition of project and unanimous permission of committee. Students must obtain rules for this course from the department chairman. Credit hours arranged.

#### THE 460 American Drama

A study of the drama in the United States. A brief history of early American playwrights followed by a close study of major figures, with O'Neill as the center. Others: Maxwell Anderson, Robert Sherwood, Tennessee Williams, Arthur Miller, and Edward Albee. Cr 3.

## CAS Program Majors

### LIBERAL STUDIES MAJOR

The Liberal Studies Major is a structured, generalized program in the College of Arts and Sciences for students who choose not to specialize in an academic discipline, declare a major, or follow a program concentration. Students interested in this course of study may apply to the Liberal Studies Major Board at the normal time for declaring a major. Guidelines for this program may be obtained from the office of the Dean of the College of Arts and Sciences.

### SELF-DESIGNED MAJOR

The Self-Designed Major is an option for creative students who wish to pursue a multi-disciplinary program on a theme or problem not available to them within a department major. The Self-Designed Major must be structured around an area as broad as a department major and must provide breadth and depth dimensions consistent with a College of Arts and Sciences major. The major encourages a broad, in-depth concentration and is structured by the individual student in conjunction with faculty sponsors. Students may apply for this program to the Committee on Self-Designed Majors at the normal time for declaring a major. The program description and guidelines may be obtained from the office of the Dean of the College of Arts and Sciences.

### SOCIAL SCIENCE

The Social Science Major is a multi-disciplinary program offered by the Departments of Economics, Geography-Anthropology, History, Political Science, and Sociology. Each student must take a minimum of 51 credits, 21 of which must be in a concentration requirement.

#### Concentration Requirements

Students must meet the following requirements within the discipline selected for concentration:

- a. Geography-Anthropology — to include GYAY 200, GEOG 101, GEOG 102 or GEOG 201, ANY 101, ANY 105 or ANY 102. 21 credits
- b. History — to include at least 12 credit hours at the 200 level or above. 21 credits
- c. Political Science — 21 credit hours as arranged with advisor.
- d. Sociology — to include SOC 100, 300, 305; or SOC 307, 312, or 356. 21 credits
- e. Economics — to include ECON 101, 102, 301, 302; three advanced economics courses including ECON 201. 21 credits

Program description and guidelines are available in the office of the Dean of the College of Arts and Sciences.

# College of Education

## DEAN

Loren W. Downey  
408 Bailey Hall, Gorham

Assistant Dean  
George F. Hackett

Director of Clinical Experiences  
Associate Professor Melissa H. Costello

Director of In-Service Programs  
Assistant Professor A. Nye Bemis

Director of Educational Placement  
Associate Professor David Morrill

## FACULTY

### DIVISION OF ADVANCED STUDIES

#### Administration

Professors Cobb, Downey, Philippi; Associate Professors Hackett, Smith (Coordinator).

#### Adult Education

Associate Professor Whitten (Coordinator); Assistant Professors Ellis, Martin.

#### Counselor Education

Professor Southworth; Associate Professors D. Moore, Williams; Assistant Professors Barnard, Sutton (Coordinator).

#### Industrial Education

Professor Berry, Associate Professors Faulkner, Nannay, Zaner (Coordinator).

#### Professional Teacher

Associate Professors Chronister, M. Costello, Gorman, Milbury, Pine; Assistant Professors Bemis, Cohen (Coordinator), Silvernail.

#### Reading

Professor O'Donnell (Coordinator); Associate Professor Fickett.

The College of Education offers a variety of programs for persons interested in a career in teacher education or an allied field. The College is organized into three divisions with the Division of Undergraduate Studies primarily responsible for developing programs for initial teacher certification in the State of Maine. The Division of Advanced Studies offers a broad range of programs for professional development, leading to a Master of Science degree in Education, and recertification. The Division of Inservice Programs is the College's community outreach division where workshops and seminars are offered to teachers in the field.

The three divisions support a Clinical Experiences Office which coordinates preprofessional experiences practicums and student teaching, and a Placement Office which provides professional assistance in preparing graduates for employment opportunities.

All baccalaureate degree programs in the College of Education require a minimum of 120 semester hours.

### DIVISION OF UNDERGRADUATE PROGRAMS

**Early Childhood/Elementary Education Department**  
Professor Neuberger; Associate Professors Allen, Colucci, M. Costello, Fickett, Lyons (Chairman), D. Moore, Pine; Assistant Professors A. Campbell, Davis, Hamrin, Lapointe, Silvernail; Instructors Henry, Sandberg.

**Industrial Educational and Technology Department**  
Professor Berry (Chairman); Associate Professors Carter, Faulkner, W. Moore, Morrill, Nannay; Assistant Professors Anderson, Jellema, Kirk, Taylor, Wright, Zaner; Staff Development Consultants Greer, Helms.

#### Physical Education Department

Professors R. Costello, Hodgdon; Associate Professors Bouchard, Goodwin; Instructors Drew, Raybould (Chairman).

#### Recreation/Leisure Studies Department

Professor Sullivan (Chairman); Associate Professor Folsom; Assistant Professors Martin, Willard; Instructor McCullough.

### DIVISION OF ADVANCED STUDIES

The Division of Advanced Studies offers programs leading to a Master of Science degree in: Counselor Education, Educational Administration, Industrial Education/Home Economics, Professional Teacher, Reading, and a Master of Science in Adult Education.

Information about these programs is available from:

College of Education  
Division of Advanced Studies  
407 Bailey Hall  
University of Southern Maine  
Gorham, Maine 04038

### DIVISION OF UNDERGRADUATE PROGRAMS

The Division of Undergraduate Programs offers programs for teacher preparation in the fields of Early Childhood Education, (including a competency based Intern option), Elementary Education, Secondary Education Mathematics, Art Education, Music Education, Industrial Arts and Vocational Technical Education.

Admission to an undergraduate program in the College of Education is initiated through the Admissions Office. Candidates for admission must be graduates of approved secondary schools or hold the high school equivalency diploma. The secondary school preparation must include successful completion of the following courses of study:

English	4 Units
*Mathematics	3 Units (2 algebra, 1 geometry)
Sciences	2 Lab Units
History/Social Studies	2 Units

\*Mathematics majors in Secondary Education 4 Units.

A detailed description of the admissions procedure is described in the beginning of this catalog.

## GENERAL INFORMATION

Students matriculating for a degree in the College of Education are all considered to be Education Majors. In each case, the student is developing a teaching specialty in the form of a concentration or minors. Education Majors will be assigned an adviser during the first semester they are enrolled in the College. Responsibility for successfully completing the requirements of a teacher preparation program resides with the student. It is, therefore, necessary that students carefully read the catalog which describes program requirements, and confer at least once each semester with their adviser for approval of the courses.

### Grade Point Average

Students must earn an accumulative grade point average of 2.0 for their complete baccalaureate program.

Students must achieve a grade point average of 2.5 in their selected majors and/or minors. No more than one D will count toward fulfillment of the major and minor programs.

Students majoring in the Early Childhood or Elementary Education programs must achieve a grade point average of at least 2.5 in their professional educational requirements (EDU courses) prior to Student Teaching. No grades of D will count toward the fulfillment of the professional requirements.

### Pass-Fail Option

An undergraduate in the College of Education may register for a total of 18 hours of pass-fail credits in addition to electing pass-fail credits for Student Teaching and the related seminar. Required courses in the Core Curriculum and the student's major may not be taken pass-fail. Only two elective courses in a concentration and only one elective course in a minor may be taken pass-fail.

### Independent Study

Junior and senior students may elect independent study in their major for one to six credits. Normally, no more than three credits may be earned in a semester.

The student submits to a faculty sponsor an independent study application which includes a detailed description of the proposed program of study. Approval by the appropriate program coordinator is required. No university credit may be earned for courses described in catalog through independent study.

The approved independent study form is filed with the registrar during the registration period.

### Alternative Intern Programs

A teaching internship is a cooperative teacher education program for Early Childhood and Elementary Education Majors that the College of Education shares with participating school districts. In addition to being assigned to classroom teachers who help interns integrate theory and practice, the interns receive courses on-site taught by University and public school personnel. Internship programs generally are designed as a two-semester program where the interns may earn up to 36-academic credits.

Exchange programs with two colleges in England are also available. Students may elect to complete a semester of study, including student teaching, through this option.

### Physical Education Requirements For All Education Majors

Students in the College of Education are required to complete 2 credit hours of Physical Education which may not be applied toward the General Education Requirements. A student may be excused from this requirement by the Dean of the College of Education on the basis of one or more of the following exemption criteria:

1. A student entitled to veteran's benefits.
2. A student who will be 30 years of age or over upon graduating.
3. A student who has a written medical excuse from the University Health Service.
4. The Dean of the College may waive the Physical Education requirements for other reasons reflecting unusual circumstances.

A carbon copy of the letter exempting the student will be sent to the student, faculty adviser, and registrar.

### Maine Children's Resource Center

A resource center of books, pamphlets, slides, cassettes, film strips, records, films, projectors, tape recorders, videotape equipment, etc. is maintained in the office of the Maine Children's Resource Center on the Gorham campus.

An annotated bibliography is available to interns. Requested materials are mailed to interns. Interns are encouraged to visit the resource center whenever possible. Interns may be videotaped in their classrooms and use these tapes for self-assessment. Videotapes are also used in workshops to illustrate teacher competence and by university advisers as a teaching tool.

## UNDERGRADUATE PROGRAM DESCRIPTIONS

### Early Childhood Education Program

Three options are available within this program: 1) The Preschool option prepares students to work in a variety of group settings such as Day Care, Head Start, Parent-Child Centers, and Nursery Schools. 2) The Early Elementary option qualifies students to teach in kindergarten through grade three. 3) The Preschool-Early Elementary combination qualifies students to teach at the preschool through grade three levels.

### Elementary Education Program

The Elementary Education Curriculum qualifies graduates to teach grades kindergarten through eight with emphasis on grades four through six.

### Early Childhood-Intern Option (competency-based)

The Early Childhood Intern Curriculum is specifically designed for the student (intern) who is employed in a preschool classroom and at the same time studying for a baccalaureate degree. Since each intern is working full time, it is estimated that it will take six years to complete the program. The curriculum qualifies the graduate to teach preschool through grade eight. Interns study how children learn and how adults in the home, school and community can foster this learning. Special emphasis is placed on the child from infancy to eight years of age.

Inquiries about this program may be directed to the Maine Children's Resource Center located on the Gorham campus of the University.

### Secondary Education Mathematics Program

The Secondary Education Program offers a major in mathematics. Graduates of this program are certified to teach mathematics in grades 7 through 12. Students enrolled in this Secondary Education Program are also required to complete an 18-semester hour minor of a subject commonly taught in the secondary schools.

### Art Education Program

Graduates of the program are qualified to teach or supervise art in all grades of the public schools. Information about the Art Education curriculum is provided under the Art Department section of this catalog in the College of Arts and Sciences.

### Music Education Program

The aim of the Music Education Program is to develop individual potential in the areas of musicianship and scholarship as well as to present the most recent trends in the fields of music education. Upon satisfactory completion of the four-year program, graduates receive a Bachelor of Science degree with a major in Music Education and are certified by the State of Maine to teach music in grades one through twelve. The program qualifies graduates to teach or supervise all phases of vocal and instrumental music. All information about the Music Education curriculum is pro-

vided under the Music Department heading in the section of this catalog dealing with the College of Arts and Sciences.

### Industrial Arts Program

The Industrial Arts curriculum prepares teachers for the teaching of industrial arts in elementary and secondary schools. It is the only college program in the State of Maine in this specialized field. A detailed description of this program is provided on the following pages of this section.

### Vocational-Technical Education Program

This is a part-time evening and summer program leading to a B.S. degree with a major in Vocational Education, Vocational Technology or in Industrial Technology. A detailed description of this program is provided on the following pages of this section.

## EARLY CHILDHOOD/ ELEMENTARY EDUCATION

### REQUIREMENTS

- A. General Education Requirement - 41 semester hours
- B. Teaching Specialty - 30 to 36 semester hours
- C. Professional Education Requirement - 35 to 38 semester hours
- D. Electives

NOTE: 50% of the above outlined program must be composed of liberal arts courses in order to meet a teacher certification requirement of the State of Maine.

### A. General Education Requirements

Early Childhood and Elementary Education Majors are required to complete the following core of courses which meet the General Education Requirements of USM, and which are especially adapted to meet the general educational needs of teachers of children.

#### Humanities (Area I) 6 semester hours

ENG 120 Introduction to Literature

Elective from English, Foreign Language, Philosophy, or Classics

NOTE: A proficiency in writing is required for all education majors. This requirement may be met by scoring 55 or greater on the high school Test of Standard Written English (TSWE) or by earning a grade of C or better in ENG 100 College Writing.

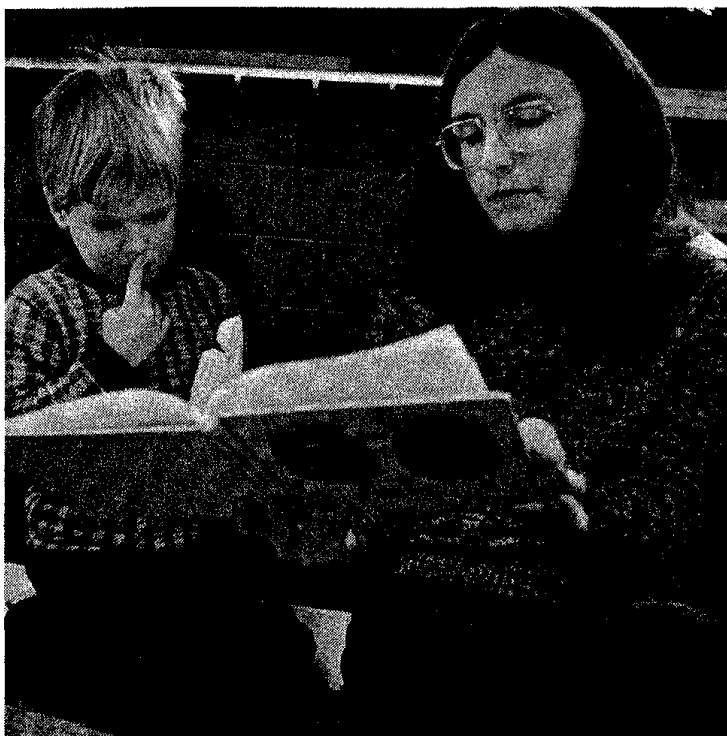
#### Fine and Applied Arts (Area II) 6 semester hours

Electives from Art (ARTH or ARTS prefixes), Music, Dance, or Theatre

#### Science (Area III) 6 semester hours

Elective from Astronomy, Biology, Chemistry, Earth Science, Geology, General Science, Meteorology, Oceanography, Physics, Physical Science





**Mathematics (Area III) 9 semester hours**  
 MS 131 Mathematics for Elementary Teachers  
 MS 231 Algebra for Elementary Teachers  
 MS 232 Geometry for Elementary Teachers

**Social Science (Area IV) 6 semester hours**  
 Electives from Anthropology, Communication, Political Science, Psychology, History, Geography, Economics, Sociology

**General (Area V) 6 semester hours**  
 Electives from courses outlined in above academic areas

**Physical Education 2 semester hours**  
 Electives from Physical Education (PE) or Recreation (REC) skills courses (PE 100-197, 204, 207, 215, or REC 100).

## B. Teaching Specialties

The second component of a teacher preparation program for Early Childhood and Elementary Education Majors is the development of a teaching specialty. The teaching specialty may take one of two forms: 1) a concentration of ten courses or 30 semester hours in any one of the disciplines outlined below in the left column, or 2) two minors of six courses each or 18 semester hours each in any one of the areas outlined below in the right column.

NOTE: Appropriate courses selected for the General Education Requirement may be applied to the development of a concentration or minor.

### Concentrations and Minors Approved for Teaching Specialties

Concentrations	Minors
English	English
History	Economics
Language	
Communications	French
Mathematics	Geography
Science	German
Social Science	History
	*Language
	Communications
	*Learning Disabilities
	Mathematics
	Music
	*Physical Education
	Leadership
	*Preschool Education
	Science
	Social Science
	Spanish
	*Education minors

Each of these concentrations and minors is described in detail on the following pages of this section.

## C. Professional Education Requirement

The Professional Education component of a teacher preparation program is a sequence of courses appropriate to an Early Childhood Education Program (featuring grades K-3) or a sequence of courses appropriate to an Elementary Education Program (featuring grades 4-6).

### The Early Childhood Professional Requirement

	Semester hours
EDU 150 Preprofessional Experiences	2
EDU 200 Studies in Educational Foundations	3
EDPY 333 Human Growth & Development	3
EDU 300 Introduction to Teaching in the Early Elementary Grades	3
EDU 302 Primary Reading	3
EDU 304 Math Experiences For Young Children	3
EDU 307 Science Experiences for Young Children	3
EDU 336 Children's Literature	3
EDU 340 Language Acquisition	3
EDU 324 Student Teaching	12-18

### The Elementary Education Professional Requirement

	Semester hours
EDU 150 Preprofessional Experiences	2
EDU 200 Studies in Educational Foundations	3
EDPY 333 Human Growth & Development	3
EDU 301 Elementary School Curriculum	3
EDU 303 Elementary Reading	3
EDU 305 Teaching Elementary School Math	3
EDU 308 Teaching Elementary School Science	3
EDU 336 Children's Literature	3
EDU 324 Student Teaching	12-18

## EARLY CHILDHOOD-INTERN OPTION (Field-Based) PROGRAM REQUIREMENTS

The Early Childhood Intern Curriculum is specifically designed for the student (intern) who is employed in a preschool classroom and at the same time studying for a baccalaureate degree. Since each intern is working full time, it is estimated that it will take six years to complete the program. The curriculum qualifies the graduate to teach preschool through early grades. Interns study how children learn and how adults in the home, school and community can foster this learning. Special emphasis is placed on the child from infancy to eight years of age.

Inquiries about this program may be directed to the Maine Children's Resource Center on the Gorham campus of the University.

### Curriculum Outline:

General Studies (Primary)

Interns will complete the core of general studies as described in this catalog. Seven learning centers have been established throughout the state and interns in each of these geographic areas decide which of these courses will be offered in their learning center each semester. Instructors are chosen with the approval of both the university and the interns.

## Professional Studies

### Field Teaching Experiences:

The unique aspects of this option are as follows:

The interns are already working in preschool classrooms located throughout Maine and each intern has an advisory committee. Each committee member observes the intern's teaching competence and recommends individualized learning experiences for improving teaching skills.

Workshops are provided to enable the intern to focus on specific areas of teaching competence. The advisory committee is selected by the intern and consists of the intern, a university adviser who is a specialist in preschool education, the parent of a child who has been enrolled in the intern's classroom, and a "child advocate" who is a community person working with children. This child advocate might be the head teacher in charge of the classroom, the education supervisor, or a consultant who frequently observes in the classroom. Demonstrated teaching competence in the preschool classroom is an important objective of this program.

Each intern keeps a portfolio which contains certificates of attendance at workshops, transcripts of college courses completed, minutes of assessment committee meetings and any documentation relevant to the intern's classroom competence.

In the series of Field Teaching Experiences course (EDFE 201, 203-209) listed below, the intern focuses on teacher competencies outlined by the Child Development Associate (CDA) Consortium.

EDFE 201 - Directed Classroom Observation  
- 3 credits

EDFE 202 - Directed Classroom Participation  
- 2 credits (optional)

EDFE 203 - Safe, Healthy, Learning Environments  
- 2 credits

EDFE 204 - Advancing the Child's Physical and Intellectual Competence - 2 credits

EDFE 205 - Building the Child's Self-Concept and Individual Strength - 2 credits

EDFE 206 - Positive Functioning of Children and Adults in the Classroom - 2 credits

EDFE 207 - Coordination of Home and School  
- 2 credits

EDFE 208 - Preschool Administration - 2 credits

EDFE 209 - The Competent Teacher - 4 credits

## Professional Education Courses

Interns will complete the courses required for Early Childhood Education majors as follows:

EDU 200 - Studies in Foundations of Education

EDU 300 - Introduction to Teaching in the Primary Grades

EDU 302 - Primary Reading

EDU 304 - Math Experiences for Young Children

EDU 307 - Science Experiences for Young Children

EDU 333 - Human Growth and Development

EDU 336 - Children's Literature

- Field Teaching Experiences may be substituted for EDU 324 - Student Teaching.

EDU 344 - Teaching the Child Under Six - is required.

Concentration/Minors (a 30 credit concentration or two 18 credit minors are required).

It is recommended that interns complete an 18 credit minor in English and another 18 credit minor in Learning Disabilities.



## DESCRIPTION OF CONCENTRATIONS AND MINORS FOR EARLY CHILDHOOD AND ELEMENTARY EDUCATION MAJORS

### Economics Minor

An academic minor in Economics may be fulfilled by completing the following courses.

#### Required Courses:

ECON 101 Principles of Economics I

ECON 102 Principles of Economics II

ECON 350 Comparative Economic Systems

ECED 300 Economic Concepts and Resource Materials  
(currently offered as independent study)

#### Elective Courses:

9 hours of electives from any of the remaining Economics courses.

(NOTE: This is a 21-hour minor.)

### English Concentration and Minor

An English concentration of 30 credits or a minor of 18 credits consists of courses elected from the English course offerings.

### French Minor

A French minor consists of 12 credits above the FRE 200 level. (18 credits including Intermediate French I and II.)

#### Required Courses:

FRE 201 or 202 French Composition I, II

FRE 203 or 204 French Conversation I, II

FRE 231 Introduction to French Literature I

#### Elective Courses:

FRE 205 Phonetics

FRE 232 Introduction to French Literature II

FRE 401 or 402 Advanced French Grammar I, II

Students should also take the professional course FLED 301 — The Teaching of Foreign Languages.

### Geography Minor

A Geography minor consists of the following sequence of courses:

#### Required Courses:

- GEOG 101 Principles of Geography
- At least one course in regional geography from:
  - GEOG 201 Cultural Geography
  - GEOG 310 Geography of Asia
  - GEOG 311 Geography of North America

#### Elective Courses:

12 hours of electives from any of the remaining Geography courses.

### German Minor

A foreign language minor in German may be fulfilled by completing the following courses:

#### Required Courses:

- GMN 131 and 132 Intermediate German I & II
- GMN 201 and 202 Composition/Conversation I & II
- GMN 231 and 232 Introduction to Literature I & II

Students may register for optional language laboratory practice in GMN 101, 102, 131, and 132. Students should also take the professional education course FLED 301 — The Teaching of Foreign Languages.

### History Concentration and Minor

A concentration in History of 30 credits or a minor of 18 credits consists of courses elected from the History course offerings.

### Language Communications Concentration and Minor

#### Options

##### A. 30-hour concentration

- (1) One course from each of the following sections.
- (2) Fifteen (15) hours of electives from any of the five sections that may include six hours of independent study.

##### B. 18-hour minor

- (1) One course from the following Sections 1, 3, and 5.
- (2) Nine (9) hours of electives from any of the sections that may include three (3) hours of independent study.

#### Section No. 1

- EDU 302 Primary Reading
- EDU 303 Elementary Reading
- EDU 306 Secondary Reading
- EDU 321 Atypical Reading Patterns
- EDU 322 Remedial Reading

#### Section No. 2

- COM 102 Introduction to Communication
- COM 171 Interpersonal Communication
- COM 250 Small Group Communication
- COM 272 Persuasion
- COM 290 Organizational Communication
- COM 370 Inter-Cultural Communication

#### Section No. 3

- EDU 312 Teaching of Language Arts in the Elementary School
- ENG 381 Modern Grammar
- ENG 382 Introduction to Linguistics
- EDU 368 Introduction to Communication Disorders

#### Section No. 4

- ARTS 141 Design I
- ARTS 151 Drawing I
- EDU 310 Preparation of Classroom Materials
- MUED 200 Music for the Classroom Teacher
- MUS 211 Classroom Piano

**Section No. 5**

- EDPY 331 Group Dynamics
- THE 120 Acting I: Fundamentals of Acting
- THE 170 Public Speaking
- THE 220 Acting II: Voice for the Actor
- THE 290 Oral Interpretation

**Learning Disabilities Minor**

A Learning Disabilities minor is composed of the following courses and requires a minimum of 18 credit hours:

Required:		<i>Credit Hours</i>
EDU 316	Learning Disabilities .....	3
EDU 321	Atypical Reading or	
EDU 322	Remedial Reading .....	3
EDU 363	Emotional Problems of Exceptional Children .....	3

**Electives:**

EDUX 399	Methods and Materials for Teaching the Learning Disabled .....	3
EDU 366	Practicum in Learning Disabilities .....	3-6
EDU 368	Introduction to Communication Disorders	
EDU 367	Psycholinguistics	
EDU 346	Exceptionality and the Preschool Child	
EDPE 308	Physical Education for Exceptional Children	
SWE 199	Self-Concept of the Handicapped	
PSY 101	General Psychology I	
PSY 102	General Psychology II	
PSY 343	Psychological Test Theory	

Those students wishing to seek transcript analysis certification in Learning Disabilities are advised to choose courses only after consultation with the faculty in this area.

**Mathematics Concentration and the Minor**

A Mathematics concentration of 30 credits or a minor of 18 credits may be fulfilled by successfully completing the courses MS 131, MS 231, and MS 232.

The remaining credits necessary to complete a program may be selected from courses which have MS or CS code numbers of 120 or above.

**Music Education Minor**

The minor in Music Education is designed to provide an opportunity for students who demonstrate interest and ability to continue music studies beyond the high school level and to equip them to successfully implement music programs in the classrooms. Entrance to this program by audition only.

The minor in Music Education is comprised of the following courses:

		<i>Credit Hours</i>
MUS 100	Music History and Appreciation .....	3
	Music History Elective .....	3
MUS 130-131	Theory I and II .....	6
MUS 132-133	Solfeggio I and II .....	2
MUED 322	Elementary Music Methods & Materials .....	3
	Ensembles .....	2
MUS 150-151	Applied Music .....	2

The minor in Music Education Program requires a total of 21 hours.

**Physical Education Leadership Minor**

The following required and elective courses comprise the 18 credit Physical Education Leadership minor.

Required Courses:		<i>Credit Hours</i>
EDPE 210	Introduction to Experiential Learning .....	1
EDPE 298	Standard First Aid and Safety .....	2
	or	
EDPE 389	Advanced First Aid and Emergency Care .....	3
EDPE 304	Methods and Materials for Teaching Physical Education .....	3
EDPE 310	Experiential Learning in Outdoor Education .....	3
EDPE 401	Practicum in Physical Education Leadership .....	3
<b>TOTAL</b>		<b>12 or 13</b>

**Elective Courses:**

A minimum of 6 credits are to be completed from the list of elective courses.

	<i>Credit Hours</i>
EDPE 216 Analysis of Human Movement .....	3
EDPE 300 Camp Leadership .....	3
EDPE 306 Movement Education in the Elementary School .....	3
EDPE 308 Physical Education for the Atypical Child .....	3
EDPE 309 Rhythms and Motor Activities .....	3
EDPE 398 Independent Study in Physical Education .....	1-3

**Preschool Education Minor**

A Preschool Education minor of 18 credits is composed of the following sequence of courses:

**Required Courses:**

- EDU 342 Theories and Practices of Early Childhood Education
- EDU 344 Teaching the Child Under Six
- EDU 346 Exceptionality and the Preschool Child

**Elective Courses:**

- EDU 325 Seminar in Early Childhood Education
- EDU 348 Cooperative Experiences in Early Childhood Education
- EDU 440 Workshop in Creative Expression
- EDU 442 Organizing and Directing the Preschool
- EDU 465 Media and Instructional Materials for the Early Childhood Teacher

**Social Science Concentration and Minor**

A Social Science concentration of 30 credits and minor of 18 credits consists of courses selected from the following areas: History, Sociology, Political Science, Anthropology, Geography, and Economics. Psychology courses may not be included in the program.

**Science Area Concentration and Minor**

A Science Area concentration or minor consists of 30 hours or 18 hours respectively of courses elected from the following areas: Astronomy, Biology, Chemistry, Earth Science, Geology, Meteorology, Oceanography, Physics, Physical Science.

It is suggested that the students plan with their advisers a sequence of three introductory courses such as:

- (1) PSCI 110 Elements of Physical Science
- (2) GEOL 111 Physical Geology
- (3) BIO 101 Biological Principles

The additional courses should represent a variety of science areas and may be chosen from the following recommended electives:

- ASTR 100 Astronomy
- BIO 103 Biological Diversity
- BIO 104 Survey of Animals and Plants
- CHEM 111 General Chemistry I
- CHEM 151 Environmental Chemistry
- ESCI 200 Environmental Science
- ESCI 202 Conservation
- ASTR 210 Observational Astronomy
- GEOL 112 Historical Geology
- PSCI 310 History of Science
- MET 100 Meteorology
- OCN 100 Introduction to Oceanography
- PHYS 100 Descriptive Physics
- PHYS 111 Elements of Physics
- ESCI 201 Natural Science

**Spanish Minor**

A foreign language minor in Spanish may be fulfilled by completing the following courses:

**Required Courses:**

- SPN 131 and 132 Intermediate Spanish I & II
- SPN 201 and 202 Composition/Conversation I & II
- SPN 231 and 232 Introduction to Literature I & II

Students may register for optional language laboratory practice in SPN 101, 102, 131 and 132. Students should also take the professional education course FLED 301 — The Teaching of Foreign Languages.

## SECONDARY EDUCATION PROGRAM IN MATHEMATICS REQUIREMENTS

- A. General Education Requirements - 32 semester hours
- B. Teaching Specialty - Mathematics 39 to 51 semester hours
- C. Professional Education Requirement - 23 semester hours
- D. Electives

**Social Science (Area IV) 6 semester hours**  
Electives from Anthropology, Communication, Political Science, Psychology, History, Geography, Economics.

**General (Area V) 6 semester hours**  
Electives from courses outlined in the above academic areas.

**Physical Education 2 semester hours**  
Electives from Physical Education (PE) or Recreation (REC) skills courses (PE 100-197, 207, 211, 215, or REC 100).

**NOTE:** Teacher certification requirements require that a teacher candidate successfully complete a concentration of 50 hours OR a major of 30 semester hours and a minor of 18 semester hours of subjects commonly taught in the secondary schools.

### A. General Education Requirements

**Humanities (Area I) 6 semester hours**  
ENG 120 or ENG 200 A Literature Course  
Elective from Foreign Language, Philosophy, English, Comparative Literature, or Classics.

**NOTE:** A proficiency in writing is required for all education majors. This requirement may be met by scoring 55 or greater on the high school Test of Standard Written English (TSWE) or by earning a grade of C or better in ENG 100 College Writing.

**Fine and Applied Arts (Area II) 6 semester hours**  
Electives from Art (ARTH or ARTS prefixes), Music, Dance, or Theatre.

**Science and Mathematics (Area III) 6 semester hours**  
Electives from Astronomy, Biology, Chemistry, Earth Science, Geology, General Science, Meteorology, Oceanography, Physics, Physical Science.

### B. Teaching Specialty

The options for a concentration in mathematics and computer science or a major in mathematics are described by the Mathematics Department in the College of Arts and Science section of this catalog.

**NOTE:** Courses selected for the General Education Requirement may not be applied to the development of a concentration or minor.

A minor to meet the teacher certification requirement may be any six-hour sequence of courses elected in one liberal arts discipline that represents subjects commonly taught in the secondary school.

### C. Professional Education Requirement

*Semester hours*

EDU	150	Preprofessional Experiences	2
EDU	200	Studies in Education Foundations	3
EDPY	333	Human Growth and Development	3
MSED	345	Teaching Mathematics in the Secondary School	3
EDU	324	Student Teaching	12

The Department of Mathematics and Computer Science in cooperation with the College of Education offers an area major of 51 hours of mathematics and computer science courses for students majoring in Secondary Education. The program consists of the following courses.

- I. Successful completion of the following:
  - MS 152 Calculus A
  - MS 153 Calculus B
  - MS 252 Calculus C
  - MS 290 Foundations of Mathematics; or
  - CS 290 Introduction to Discrete Structures
  - CS 160 Introduction to Programming: FORTRAN

II. Successful completion of one course from each of the following areas:

- Algebra: MS 380 Linear Algebra  
MS 382 Abstract Algebra
- Analysis: MS 352 Real Analysis I  
MS 354 Topics in Advanced Calculus  
MS 355 Complex Analysis  
MS 490 Topology
- Applied Mathematics: MS 350 Differential Equations  
MS 362 Probability & Statistics I  
MS/CS 364 Numerical Analysis I
- Geometry: MS 370 College Geometry  
MS 372 Non-Euclidean Geometry  
MS 371 Projective Geometry

III. Successful completion of five of the following computer science courses:

- CS 161 Algorithms in Programming  
CS 268 Computer Organization and Planning  
CS 269 Machine and Assembler Language Programming  
CS 360 Concepts of Higher Level Programming Languages  
CS 364 Numerical Analysis I  
CS 368 Data Structures  
CS 369 Systems Programming  
CS 370 Topics in Computer Science

IV. Successful completion of six additional hours of electives in mathematics or computer science with second digit 5 or greater.

V. Professional Education Courses:

	<i>Credit Hours</i>
EDU 150 Pre-Professional Field Experience .....	2
EDU 200 Studies in Educational Foundations .....	3
EDPY 333 Human Growth and Development .....	3
EDU 314 Secondary School Curriculum .....	3
EDU 316 Introduction to Learning Disabilities .....	3
MSED 345 Teaching Mathematics in the Secondary School .....	3
EDU 324 Student Teaching .....	12

To be eligible for student teaching in secondary mathematics, a student must have completed 30 hours of mathematics courses having second digit 5 or greater with a grade point average of at least 2.0 in these courses and have successfully completed MSED 345.

It is also recommended that CSED 345 — Teaching Computer Science in the Secondary School be taken as an elective in the completion of the overall 120 credits required for graduation.

### Teaching Minor in Computer Science

	<i>Credit Hours</i>
1. CS 160 Introduction to Programming: FORTRAN	
CS 161 Algorithms in Programming	
CS 268 Computer Organization & Planning	
CS 360 Concepts of Higher Level Programming	
.....	12
2. Two of the following courses: CS/MS 364, CS 370, CS 368, CS 269 .....	6
3. CSED 345 — Teaching Computer Science in the Secondary School .....	3
TOTAL	<u>21</u>



## COURSE DESCRIPTIONS IN EDUCATION

### **ECED 300 Economic Concepts and Resource Materials**

A study of the simplification of economic concepts and preparation of resource materials used for presentation at elementary grade levels. Cr 3.

### **EDPY 331 Group Dynamics**

An experimental study of the nature of group process and one's own functioning in a group. The developing awareness of one's self in relation to others in a group will be of primary importance. Specific techniques will include reading and participation in a seminar planned to aid in the exploration of self and others. Prerequisite: upper class or graduate status and permission of instructor. Cr 3.

### **EDPY 332 Psychology of the Self**

An exploration into the development of the self, primarily as an issue of personal growth. Topics might include alienation, loneliness, and verbal-nonverbal communication. Learning techniques center around reading, common class experiences, and intensive small-group interaction. Prerequisite: permission of instructor. Cr 3.

### **EDPY 333 Human Growth and Development**

A study of significant elements in the physical, mental, emotional, and social make-up of children as they develop from infancy to adolescence. Selected case-studies and projects in the application of basic principles of growth and development to problems of adjustment to school, home, and community. Special attention is given to the developmental tasks of school-age children. Cr 3.

### **EDPY 335 Educational Psychology**

Basic principles, techniques, and research in Educational Psychology. A special consideration given to the learning process, perception, motivation, individual differences, and measurement, with reference to the facilitation of effective teaching and learning. Prerequisite: upper class status. Cr 3.

### **EDU 150 Pre-Professional Field Experience**

This course is required of all education majors and is normally taken during the second semester of the freshman year. The purpose of the course is to provide an exploratory opportunity in public school or educational agencies to assist students in becoming acquainted with the teaching profession and to examine various options in the field of education. Students may elect this course for only 2 credits per semester for a maximum of three semesters. Transportation not provided. (Pass-Fail only.) Required orientation meeting each semester, September and January.

### **EDU 151 Pre-Professional Field Experience (For International Exchange Students)**

This section is designed primarily for International Exchange students. It allows an expanded pre-professional experience (requiring a minimum of two full days per week in schools) to supplement the pre-professional experience of their international placement. Students are expected to participate in some teaching activities as well as classroom management during this placement. Cr 2.

### **EDU 200 Studies in Educational Foundations**

This course provides an introduction to the study of American education. Problems and issues in contemporary education are examined from several perspectives, including the social, historical and philosophical. Cr 3.

### **EDU 300 Introduction to Teaching in the Early Elementary Grades**

This basic course is designed to provide an overview of curriculum, methods and materials utilized in early elementary education. Emphasis will be placed on teaching learning theory, learning styles, approaches to school and classroom organization, parent involvement, the teacher as a human being and the hidden curriculum. Students will work independently in a modular approach for one segment of this course. (Formerly Primary Curriculum) Cr 3.

### **EDU 301 Elementary School Curriculum**

This course is designed to provide an overview of the influences, methods, and materials that affect curriculum designs in the intermediate grades. Emphasis is given to four factors affecting curriculum development: (1) goals and objectives; (2) sources of content; (3) teaching strategies; and (4) evaluation. Prerequisite: EDPY 333. Cr 3.

### **EDU 302 Primary Reading**

This course introduces and analyzes the basic components of the developmental primary reading program. Students are encouraged to formulate instructional goals which must be considered in planning balanced reading activities. The topics include: individual differences in reading readiness; word perception and vocabulary development; reading interests; the directed reading-thinking activity; oral reading; diversifying comprehension requirements; and diagnosis of reading competence. Special attention given to research and innovations with emphasis on the applied use of concepts, practices, and materials. Includes pre-professional experiences. Cr 3.

### **EDU 303 Elementary Reading**

This course will involve the relationship of reading skills to the typical learner, the materials used to teach him, the processes that are common approaches, and various kits used as vehicles. The student also will be exposed to the classroom, both as an observer and a participant in teaching. Cr 3.

### **EDU 304 Practicum in Elementary School Mathematics**

A field-based course conducted primarily in the setting of actual elementary school classes. After several mathematics workshop sessions, the students will prepare and then teach several lessons in elementary school math classes. All planning and teaching will occur with guidance of the professor and the public school cooperating teacher. Recommended to be taken concurrently with EDU 307. Prerequisites: MS 131, EDPY 333, and EDU 301. Cr 3.

### **EDU 305 Methods of Teaching Elementary School Mathematics**

The content of this course will focus on developing techniques for teaching mathematics to elementary grade pupils. The course will be conducted mainly in the setting of a mathematics resource center, featuring manipulative devices appropriate to teaching mathematics concepts. Prerequisites: MS 131, EDPY 333, and EDU 301. Cr 3.

**EDU 306 Secondary Reading**

A study of the methods of teaching reading in secondary schools and their application to specific content areas. Emphasis is on developmental, corrective, adaptive, and remedial readings. Cr 3.

**EDU 307 Practicum in Elementary Science**

A field-based methodology course conducted primarily in an elementary school. After several science workshop sessions students prepare and teach sequential lessons in the actual K-6 classroom setting under the supervision of University staff and cooperating public school teachers. Recommended to be taken concurrently with EDU 304. Cr 3.

**EDU 308 Science for Children**

An alternative to EDU 307. This course is conducted in a University science resource center and provides opportunities for students to apply learning theory by exploring current science curricula. Emphasis is on content analysis and comparison and on implementation in public classrooms. A field experience is included wherever possible. Recommended prerequisite: EDPY 333 or 335. Cr 3.

**EDU 309 Selection and Utilization of Education Media**

A course designed to orient the pre-service and the in-service teacher to current trends in instructional media. Instruction will be directed to proper selection and utilization of the latest available equipment and materials. There will be provision for associated laboratory work. Cr 3.

**EDU 310 Preparation of Classroom Instructional Materials**

This lecture-laboratory course involves students in the creation of instructional materials using techniques such as dry mounting of flat pictorial materials, professional quality lettering, rudimentary photography and processing (including use of the darkroom), and the production of transparent projectuals. Lab fee \$10.00. Cr 3.

**EDU 312 Teaching Language Arts in Elementary School**

Recent methods and materials basic to the teaching of communication skills. Topics include spelling, handwriting, listening, creative expression, oral and written reporting. Use of tapes, records, filmstrips, and recent language art books for the elementary school. Opportunities to work with children in local schools. Cr 3.

**EDU 313 Maine School Law**

A review and interpretation of those statutes which directly affect the teacher. The case-study method is employed to cover such topics as certification, employment, tenure, dismissal, professional rights and responsibilities of the teacher, liability, curriculum, requirements, attendance and classification of pupils, church-state relationship, and pupil control. Cr 3.

**EDU 314 Secondary School Curriculum: Methods and Materials**

This course is designed to provide an overview of the techniques of teaching concepts in grades 7-12. Emphasis will be given to clarifying the intent of instruction, organizing daily and unit lessons, and assessing accomplishment. Open only to matriculated secondary education students majoring in mathematics or computer science. Cr 3.

**EDU 316 Introduction to Learning Disabilities**

This course is designed to serve as an introduction to the reasons why some children have difficulty in school. In pursuit of this goal, it will survey the field of exceptionality in general, and will focus specifically on origins, detection, and strategies of intervention for disabilities in the information processing model. Cr 3.

**EDU 318 Teaching Science in the Secondary School**

History of science education, methods and materials in the teaching of science, curricular trends, emphasis on behavioral objectives. May include student demonstrations, opportunity for observation and participation in secondary schools. Students concentrating in biology are strongly urged to take EDU 330, Teaching Biology in the Secondary School, in place of this course. Prerequisite: junior or senior standing. Cr 3.

**EDU 319 Measurement and Evaluation**

Construction, selection, and use of educational achievement tests, including diagnostic and survey instruments. Skill in writing essay and objective types is developed. An inquiry into the validity and reliability of typical standardized tests. Elements and uses of statistics; tabulation of data; measures of central tendency, variability, and correlation. Cr 3.

**EDU 320 Kindergarten Development**

Students are involved with curricula, materials, methods, and philosophies of contemporary and conventional kindergarten and early childhood programs. An emphasis is upon the practical, as well as the theoretical. Cr 3.

**EDU 321 Atypical Reading Patterns**

The purpose of this course is to give the prospective teacher added depth with the typical as well as the atypical reader. Special areas of emphasis will be speech and reading. Includes pre-professional experiences. Prerequisite: a foundations course in reading. Cr 3.

**EDU 322 Remedial Reading**

An empirical approach, relating class discussions to clinical observation. Methods by which the teacher copes with individual difficulties are explored. Testing and diagnostic work are studied and applied to subject-groups. Prerequisite: a foundations course in reading. Cr 3.

**EDU 323 Independent Study in Education**

To provide juniors and seniors who have demonstrated critical and analytical capability an opportunity to pursue a project independently, charting a course and exploring an area of interest within their major field, bearing upon it previous course experiences and emerging with an intellectually sound, coherent synthesis, or an artistic or technical creation reflecting a high caliber of performance. May not be used as a substitute for currently described courses. Cr var.

**EDU 324 Student Teaching**

Full time student teaching during the senior year is provided for one semester under direct supervision in off-campus situations for all who meet requirements. Opportunities for student teaching include: Preschool, Early Elementary, Elementary, Secondary Mathematics, Art, Music, Industrial Arts, and Vocational Education. Prerequisites vary according to major field of study. See curriculum listing in catalog. Applications due in the office of the Director of Clinical Experiences by February 1 each year. Cr 12.

**EDU 325 Internship**

Year long internship during the junior or senior year is provided under direct supervision in off-campus teaching/learning centers for all who meet requirements. Professional courses are offered concurrently with internship. Opportunities for internship are available for Preschool, Early Elementary, and Elementary Majors only. Cr 18.

**EDU 326 Seminar In Elementary Education**

A study of issues in elementary education: school law; professional and ethical procedures; organization of student teaching; and teacher relationships with schools, community, and state. Visiting lecturers participate. Concurrent: enrollment in EDU 324 or EDU 325. Cr 2-3.

**EDU 328 Teaching Family Life and Sex Education**

A philosophical, physiological, and methodological approach to education for sexuality in the schools. Activities provided for development of knowledge competence and communication skills, perspectives, methods and materials, program planning, and curriculum development included. Cr 3.

**EDU 336 Children's Literature**

This course emphasizes a creative, interdisciplinary approach to children's books, an understanding of the interests and developmental tasks of the child, and, by precept and example, methods of individualizing reading. The student will be expected to read children's books widely and in depth. Cr 3.

**EDU 340 Language Acquisition**

This course focuses on the development of language acquisition, 0-5 years; factors which affect language acquisition process; brief introduction to deviations in early language and speech function; and materials methods and skill development for facilitating language and speech development.

**EDU 342 Theories and Practices in Early Childhood Education**

In addition to familiarizing the student with the historical perspective of early childhood education, this course is designed to acquaint the student with the underlying philosophical bases of a wide variety of early education models and with the approaches for implementing these models. Content will be presented by means of films, filmstrips, recordings, guest speakers, group discussions, student presentations and lectures. Cr 3.

**EDU 344 Teaching the Child Under Six**

Philosophy, curricula, methods, and materials of the preschool child and his teachers. Extensive observation and field experience are integral parts of the course. Prerequisite or corequisite EDU 342. Cr 3.

**EDU 346 Exceptionality and the Preschool Child**

This course is designed primarily for students interested in exceptionality and the preschool child. It is intended to be a practical introduction to the field of exceptionality. Topics covered will include: definitions, labels, brief history of special education, the law, parents, special education taxonomy, segregation vs. integration, attitudes, diagnosis and prescription, materials, and community resources. Cr 3.

**EDU 348 Cooperative Experiences in Early Childhood Education**

This course is designed exclusively for Early Childhood Education Majors who are currently contributing to a preschool or K-3 program in a public or private

school. Seminars and on-site visits by the instructor will be an integral part of the experience. Prerequisites: EDU 150 and instructor approval of the cooperative experience site. Cr 3.

**EDU 350 Modern Philosophies of Education**

This course is designed to examine the current patterns of thought that ground and guide contemporary theory, policy, and practice in the enterprise of education. An emphasis will be placed on philosophy as an activity through which one critically examines the merits of alternative patterns of educational thought and seeks to form a personal philosophy of education. Open to juniors and seniors; others by permission of instructor. Cr 3.

**EDU 351 Historical Foundations of American Education**

This course examines the development of public education in the United States and traces selected reforms that have influenced and altered the nature, purposes, and roles of this institution. Offered during the first and third quarters of the academic year. Prerequisites: EDU 200. Cr 3.

**EDU 352 Role of School in Social Change**

A study of selected types of action for social change, the theories that support each type and the consequences of social change for persons and society. The focus of the course is to examine the role of education in the whole process of social change. Cr 3.

**EDU 363 Emotional Problems of Exceptional Children**

This course is designed to offer a cross-categorical view of exceptionality with emphasis on disabilities in the affective domain. Origins, detection, prevention, and strategies of intervention will be treated. Cr 3.

**EDU 366 Practicum in Learning Disabilities**

This course is designed to provide students with an advanced pre-professional experience with learning-disabled children. This experience is served co-terminously by a seminar which provides leadership in discussion activities to assist students in reflecting on experiences and viewing them from various perspectives. Prerequisite: EDU 316. Cr 3.

**EDU 367 Psycholinguistics**

This course is designed to study the mental processes which underlie the acquisition and use of language as it is related to human development and other behavior, including learning and thought. This course will deal with the normal acquisition of language from birth through the primary years. Included in the course will be how to recognize and deal with students in the classroom whose language is delayed. Selected tests will be studied in terms of their relationship to educational tasks. Examples of language problems will be provided as well as materials and suggestions for classroom language activities. Cr 3.

**EDU 368 Introduction to Communication Disorders**

The common speech and language disorders found in school children will be discussed. For each disorder the probable causes, symptoms, and methods of diagnosis and remediation will be covered. The course will also include the basic principles of articulatory phonetics. Cr 3.

### **EDU 371 Career Education for the Elementary School**

Exploration of the Career-Based Curriculum model emphasizing the relationship and interdisciplinary nature of all curricular areas to the Career Education theme. Students will work with tools, equipment, and materials applicable to the elementary setting and will develop model lessons and units of study stressing career awareness and guidance practices. (Career Awareness has been identified by the U.S. Office of Education as the major thrust for education of our young people as well as adults.) Cr 3.

### **EDU 393 Science Field Workshop**

An advanced field experience designed to enhance the student's awareness of and capability in the teaching of science to young children. Students individually, or in small groups, plan process-concept hierarchies, translate these into activities for appropriate learning levels, and prepare the materials necessary for classroom implementation. Students are expected to trial teach their units in classrooms under close supervision of cooperating school and University staff. Pass/Fail grading. Cr 3.

### **EDU 440 Workshop in Creative Expression**

A "hands on" course for those who plan to work with children aged 3-8, this workshop is designed to acquaint and involve the student with music, movement, puppetry, art, crafts, creative dramatics and dramatic play. Participants will also examine the nature of creativity, what can be done to enhance it, how to get the environmental conditions that will nurture creative talent and how to provide activities that will encourage young children to use their creativity. Cr 3.

### **EDU 442 Organizing and Directing the Preschool**

Comprised of a series of discrete modules, this course will focus on the implementation, organization, and continued functioning of the preschool. Equipment, daily routines, health and safety, licensing regulations, parent involvement, and funding will be among the topics explored. Students will spend considerable time while participating in this course. Cr 3.

### **EDU 449 Introductory Photography**

Basic principles, skills, and techniques of the photographic medium. The course of study will consider the camera, film, composition, lighting, exposure, processing, printing, and print finishing. Major thrusts to be in the black and white realm. Lab fee: \$15.00. Cr 3.

### **EDU 465 Instructional Media for the Early Childhood Teacher**

This course is designed to equip the early childhood teacher with skills and resources to design, prepare and utilize appropriate instructional media. The course will be lecture-demonstration with laboratory experiences designed to afford each student a high degree of facility with media material and equipment. Lab fee: \$7.50. Cr 3.

### **EDUX 299 Current Issues in Education**

This inter-program course will explore topics of current interest in education. Modules will be designed to increase the student's awareness of areas such as sex role education, career development, legal issues, health education, nutrition, programs for gifted children, evaluation of assessment measures, identification of community resources, and other practical programs within schools. It is anticipated that topics presented will vary as needs of preservice students are identified. Cr 3.

### **EDUX 399 Methods and Materials for Teaching Learning Disabled**

This course reviews approaches and materials currently used for teaching children with learning problems. Remediation methods for perceptual, motor, cognitive, communication and academic skills will be covered as well as ways to modify existing curriculum to meet existing needs. Prerequisite: EDU 316. Cr 3.

### **EDU 499 British Exchange**

A cooperative program between the College of Education of USM and King Alfred's in England. The program emphasizes a classroom teaching experience. Cr 12.

## **INDUSTRIAL EDUCATION AND TECHNOLOGY**

Undergraduate programs in Industrial Arts Education are designed to prepare students to organize, manage and teach programs of industrial arts in elementary and secondary schools. Courses in energy and transportation, graphic communication, and manufacturing and construction provide a technical/conceptual background in industry.

Evening/summer programs in Vocational/Occupational Education are designed to prepare instructors for programs in vocational/technical education or other occupational training programs. This program recognizes occupational experience and requires three years' minimum experience as a prerequisite for the degree program.

Industrial technology is a management-oriented technical program designed to prepare an individual for technical-managerial roles in industry. The program serves both the industrial arts oriented and the occupationally oriented person. A cooperative degree program has been established with the School of Business, Economics and Management with options providing for technical training and recognition of an associate degree or occupational experience.

## **INDUSTRIAL ARTS**

Assistant Professor Anderson; Associate Professor Carter (Coordinator, Industrial Technology); Associate Professor Faulkner; Assistant Professor Jellema; Assistant Professor Kirk; Associate Professor Moore; Associate Professor Morrill; Associate Professor Nannay (Coordinator, Industrial Arts Education); Assistant Professor Taylor; Associate Professor Zaner.

The undergraduate curriculum in Industrial Arts has as its central purpose the preparation of certified teachers who are able to organize, manage, and teach a program of industrial arts in the elementary and secondary schools of the State.

A secondary purpose of the Industrial Arts program is to provide non-teaching majors in Industrial Technology an opportunity to develop general technical proficiencies along with a basic knowledge of business administration, leading to middle management positions in industry.

Industrial Arts majors must supply personal protective equipment (glasses, laboratory aprons, etc.) and specialized tools and equipment (drafting sets, reference materials, etc.). Approximate cost, \$125.

A B.S. degree with a major in Industrial Arts Education or Industrial Technology will be granted upon successful completion of the following requirements:

## REQUIRED OF BOTH INDUSTRIAL ARTS EDUCATION MAJORS AND INDUSTRIAL TECHNOLOGY MAJORS

**General Education Courses: 49 credit hours total**

Humanities	9 credits
Fine and Applied Arts	6 credits
Mathematics and Science	12 credits
Social Sciences	6 credits
Area 5: General	6 credits
Modern Industry (IA 270)	3 credits
Physical Education	1 credit
Electives (General)	6 credits

**Core Requirements in Technical Education: 21 credit hours total (Each course listed carries 3 credits)**

IA 102	Introduction to Technology
IA 210	Electronics Technology
IA 220	Power Technology
IA 231	Technical Graphics
IA 241	Graphic Arts Technology
IA 250	Metal Technology
IA 260	Wood Technology

**Required Technical Courses: 21 credit hours total (each course listed carries 3 credits)**

IA 311	Communication Electronics
IA 321	Automotive Systems
IA 331	Engineering Design Graphics
IA 342	Photo Offset Lithography
IA 351	Machining and Fabrication
IA 361	Production Manufacturing in Wood
IA 371	Plastics Technology

**Technical Electives: 9 credit hours total (each course listed carries 3 credits)**

### Energy and Transportation

IA 312	Computer Technology
IA 313	Electrical Construction
IA 322	Automotive Diagnosis and Tuneup
IA 323	Energy and the Consumer
IA 413	Instrumentation
IA 414	Digital Electronics
IA 423	Fluid Power
IA 424	Fluid Power Systems

### Graphic Communication

IA 332	Architectural Drawing and Design
IA 333	Descriptive Geometry
IA 343	Communication Design
IA 434	Industrial Production Illustration
IA 435	Systems Analysis and Design
IA 444	Photographic Reproduction
IA 445	Color Reproduction Theory

### Manufacturing and Construction

IA 352	Fabrication and Forming
IA 362	Residential Construction
IA 363	Wood Science
IA 370	Crafts Technology
IA 452	Metallurgy and Metrology
IA 472	Materials Testing (Metals/Wood)

IA 490 Special Problems in Industrial Arts (may be substituted for a technical elective)

## REQUIRED OF INDUSTRIAL ARTS EDUCATION MAJORS

**Professional Education Courses: 25 credit hours total**

EDU 150	Pre-Professional Field Experiences
IAED 290	Contemporary Teaching in Industrial Education
EDPY 333	Human Growth and Development
	or
EDPY 335	Educational Psychology
IAED 380	Curriculum Materials in Industrial Arts
IAED 381	Methods of Teaching Industrial Arts
EDU 324	Student Teaching and Seminar

(Minimum 2.5 cumulative index required and must be maintained in order to register for IAED 380, IAED 381, and EDU 324 and for graduation from the program.)

Minimum required for graduation: 125 credits.

## REQUIRED OF INDUSTRIAL TECHNOLOGY MAJORS

**Business Administration and Economics: 24 semester hours\***

Required core: 12 semester hours  
Electives specialization: 12 semester hours (see options below)

\*ECON 101 taken in the freshman year in lieu of EDU 150

**Technology: 51 semester hours**

Required core  
Electives specialization

Minimum required for graduation: 124 credits.

### Technology Area Options

Technology majors may plan and develop a program to meet individual interests and needs in both the business and technical areas with advisor approval.

The business component consists of twenty-four (24) hours. Twelve (12) are required core and twelve (12) are elective. Four (4) options for specialization are identified and recommended.

**CORE (12 required)**

ECON 101	Principles of Economics I
ECON 102	Principles of Economics II
BUS 101	Principles of Financial Accounting
BUS 340	Principles of Management

### OPTION 1 — General

- BUS 102 Financial and Management Accounting
- BUS 320 Business Finance
- BUS 360 Marketing
- BUS 390 Introduction to Computers in Business

### OPTION 2 — Personnel Management

- BUS 102 Financial and Management Accounting
- BUS 346 Personnel Management
- BUS 348 Industrial Relations
- ECON 320 Labor Economics

### OPTION 3 — Accounting

- BUS 301 Intermediate Accounting I
- BUS 302 Intermediate Accounting II
- BUS 305 Cost Accounting
- BUS 320 Business Finance

### OPTION 4 — Marketing and Distribution

- BUS 370 Managerial Marketing
- BUS 360 Marketing
- BUS 363 Advertising
- BUS 346 Personnel Management

### ADDITIONAL ELECTIVES (Course descriptions may be found in Vocational-Technical Education)

- IT 300 Time and Motion Study
- IT 310 Plant Layout and Material Handling
- IT 320 Industrial Safety
- IT 330 Production Control
- IT 340 Quality Control Fundamentals

### Clinical Training in Manual Arts Therapy

An opportunity is provided junior and senior Industrial Arts majors to participate in a clinical training program provided by Veterans Administrations Hospital, Brockton, Massachusetts. Two hundred and forty hours, or six weeks, to be spent at hospital, at convenience of student. Transportation not furnished, but room and board provided at no expense. Consult program coordinator for further details.

## COURSES IN INDUSTRIAL ARTS

### Energy and Transportation

#### IA 101 Energy and Transportation

Energy and Transportation is designed as an introduction to the worlds of energy, power, and transportation. The emphasis of this course is on understanding concepts of power and transportation — past, present, and future — through research and basic laboratory experiences. Students are involved with laboratory experiences which illustrate the concepts of hydraulic, electric, and mechanical transmission of power. Prerequisite: permission of instructor. Cr 3.

#### IA 210 Electronics Technology

A study of the fundamental concepts of electronics. Laboratory experiences with typical circuits found in power supplies, amplifiers, and receivers. Use of test equipment including meters, the oscilloscope, signal generators and component checkers. Opportunity to practice soldering and printed circuit development is also provided. Prerequisite: IA 102 or permission of instructor. Cr 3.

#### IA 220 Power Technology

Power Technology is designed as an introduction to the broad field of power. Power is examined from the standpoints of generation, transmission, and application. Emphasis will be placed on understanding through study and manipulative experiences in the power laboratory. Experiences will include assembly and disassembly procedures, design and construction, testing, diagnosis, service, power measurements and safety considerations as applied to heat engines. Prerequisite: IA 102 or permission of instructor. Cr 3.

#### IA 311 Communication Electronics

A detailed study of communication circuits and applications; including receivers, transmitters, antennas, and satellites. Opportunity provided to obtain an Amateur Radio license. Prerequisite: IA 210 or permission of instructor. Cr 3.

#### IA 312 Computer Technology

Study of the function and applications of programmable calculators, micro-processors, and digital computers. Laboratory experiences relating to digital electronics and using the computing facilities of the University. Prerequisite: IA 210 or permission of instructor. Cr 3.

#### IA 313 Electrical Construction

A study of electrical wiring, control circuits and motors, as they relate to industrial and residential applications. Laboratory experiences and field study are used to enhance the student's learning. Prerequisite: IA 210 or permission of instructor. Cr 3.

#### IA 321 Automotive Systems

Automotive Systems is an extension of the basic concepts of power technology as they are applied to the automobile. Automotive technology is examined through analysis of, the operation, and service of electrical and fuel systems. Experiences include testing and measurement as well as overhaul procedures. Includes theory of design, construction, and operation of basic systems in automotive products. Prerequisite: IA 220 or permission of instructor. Cr 3.

#### IA 322 Automotive Diagnosis and Tuneup

Automotive Diagnosis and Tuneup is designed as an in-depth study of automotive ignition and carburetion systems. Theory, operation and testing of ignition, carburetion and pollution control systems is included. Opportunities for independent research and problem solving are provided. Prerequisite: IA 321 or permission of instructor. Cr 3.

#### IA 323 Energy and the Consumer

Designed as an introduction to the efficient use of energy from the consumer standpoint. Areas explored include the use of energy to condition homes, commercial structures and other buildings, as well as the use of power in motive devices. Activities include analysis, testing and owner maintenance of these energy using devices. Prerequisite: IA 220 or permission of instructor. Cr 3.

#### IA 413 Instrumentation and Process Control

A study of instruments and sensing devices used to observe and/or control processes in our industrial society. Laboratory and field experiences to research and/or construct an instrument of interest to the student. Prerequisite: IA 210 or permission of instructor. Cr 3.

### **IA 414 Digital Electronics**

A study of the fundamentals of digital logic and logic systems. Laboratory experiences with typical circuits using semiconductor devices, including diodes, transistors and integrated circuits. Prerequisite: IA 210 or permission of instructor. Cr 3.

### **IA 423 Fluid Power**

A study of fluids at work. Investigation of the theory and application of hydraulics and pneumatics in mechanics and industry. Design, construction, and maintenance of fluid power devices and systems. Prerequisite: permission of instructor. Cr 3.

### **IA 424 Fluid Power Systems**

Application of fluid power and fluidic systems to manufacturing and construction industries. Prerequisite: IA 423 or permission of instructor. Cr 3.

## **Graphic Communication**

### **IA 130 Graphic Communication**

Introduction to the concepts of effective industrial communications. Translating ideas and images through understanding and applying the elements of graphic design, shape and dimension, layout and image assembly, and reproduction techniques. Prerequisite: permission of instructor. Cr 3.

### **IA 231 Technical Graphics**

Concepts of spatial relationships and visualizations with related techniques. Basic skill development and understanding taught through freehand illustrations as well as conventional instruments and devices. Multiview projections, pictorial techniques, primary and secondary auxiliaries, detail and assembly working drawings, and reproduction techniques. Contemporary industrial practices and processes. Prerequisite: IA 102 or permission of instructor. Cr 3.

### **IA 241 Graphic Arts Technology**

A study of the common reproduction systems with significance in the graphic arts industries and technology. Designing, composing, reproduction, assembling, and finishing of printed materials utilizing conventional reproduction techniques. Emphasis on letterpress, offset lithography, and screen printing with related experiences in rubber stamp making, block printing, embossing, and photo enlarging. Prerequisite: IA 102 or permission of instructor. Cr 3.

### **IA 331 Engineering Design Graphics**

Engineering Design Graphics will expose the student to contemporary industrial practices and techniques of advanced spatial and dimensional theory utilizing orthographic and pictorial techniques. Emphasis will be on design criteria selection and implementation employing standard scientific procedures. Both individual and team assignments will be used. Prerequisite: IA 231 or permission of instructor. Cr 3.

### **IA 332 Architectural Drawing and Design**

Basic architectural design and drawing as related to residential and light construction. A detailed set of plans for a single home will be executed. Construction techniques, environmental considerations, building materials, specifications, costs and financing, codes and zoning, schedules, and architectural models. Prerequisite: IA 331 or equivalent or permission of instructor. Cr 3.

### **IA 333 Descriptive Geometry**

Analysis of the spatial relationship of points, lines, planes, and solids with orthographic and pictorial practice. Vector analysis, nomographs, charts, graphs, graphical arithmetic, truss systems with application. Prerequisite: IA 331 or permission of instructor. Cr 3.

### **IA 342 Photo Offset Lithography**

Theory and practice in lithographic and photo-offset printing with emphasis upon camera work, stripping, platemaking, presswork, and finishing. Photographic conversion of line and halftone copy and copy preparation are also included. Prerequisite: IA 241 or permission of instructor. Cr 3.

### **IA 343 Communications Design**

An introduction to the principles of layout and design in preparing camera copy for graphic reproduction. Emphasis on design elements and fundamentals, manuscript, and illustration preparation, graphic and photographic techniques, and production specifications. Prerequisite: IA 241 or permission of instructor. Cr 3.

### **IA 434 Industrial Production Illustration**

Principles and techniques employed by contemporary industry to graphically describe industrial products, technical concepts, and service information. The media range will include chalk, ink, pencil, charcoal, water color, tempera, pressure sensitive transfer symbols, and various methods of graphic reproduction. Engineering and architectural problems. Prerequisite: IA 331 or permission of instructor. Cr 3.

### **IA 435 Systems Analysis and Design**

Research applied to solving basic engineering problems. Contemporary systems of analysis and design. Economic factors, resource utilization, planning, design, model construction, follow-up studies and evaluation techniques applied to specific practical problems. Prerequisite: IA 331 or permission of instructor. Cr 3.

### **IA 444 Photographic Reproduction**

Photographic concepts, processes, and techniques utilized in graphic reproduction. Experience in contact printing, continuous tone enlarging, duotones, posterization, and color separation. Prerequisite: IA 241 or permission of instructor. Cr 3.

## **Manufacturing and Construction**

### **IA 100 Manufacturing and Construction**

Basic concepts and common functions involved in both the production of manufactured goods and building construction are studied. Custom and line-production activities and model structures are utilized. Graphic communication concepts are included. Prerequisite: permission of instructor. Cr 3.

### **IA 250 Metal Technology**

A study of metal manufacturing industries. Introduction to concepts of designing, planning, fabrication, finishing, and distribution as they pertain to these industries. Selection, use, and care of equipment. Safety practices. Prerequisite: IA 102 or permission of instructor. Cr 3.

## Industrial Arts Education

### IA 260 Wood Technology

A basic course in wood technology, including wood properties, basic hand and machine tool processes, assembly and finishing. Prerequisite: IA 102 or permission of instructor. Cr 3.

### IA 351 Machining and Fabrication

A study of metal industries concerned with electric and gas welding and machining techniques. Emphasis on process engineering. Individual and group problems. Laboratory and maintenance practices. Prerequisite: IA 250 or permission of instructor. Cr 3.

### IA 352 Fabrication and Forming

Concepts, principles and activities in TIG welding, sheet metal fabrication, and casting techniques as they relate to the manufacturing and construction industries. Group and individual problems and activities. Prerequisite: IA 351 or permission of instructor. Cr 3.

### IA 361 Production Manufacturing in Wood

Production and wood manufacturing problems including production planning, mass production, jigs, fixtures, special machine operations, and advanced finishing techniques. General maintenance procedures on production equipment. Group and individual research assignments and related technical problems. Prerequisite: IA 260 or permission of instructor. Cr 3.

### IA 362 Residential Construction

A study of the residential construction industries including construction principles; layout, foundation, framing, exterior covering, and finish. Related areas of services, plot planning, earth-moving principles considered in research activities. Group and individual problems. Prerequisite: IA 260 or permission of instructor. Cr 3.

### IA 363 Wood Science

Wood anatomy and identification experiences leading into a study of the properties of wood, wood-liquid relations, bonding and finishing of wood, and machining as they relate to the manufacturing processes. Prerequisite: IA 260 or permission of instructor. Cr 3.

### IA 370 Crafts Technology

Design and manufacture of products utilizing ceramics, leather, plastics, art metals, and other craft materials. Examination of artistic crafts for leisure-time activities and for adult programs. Individual and group research and problem solving. Prerequisite: IA 250 and 260, and permission of instructor. Cr 3.

### IA 371 Plastics Technology

A study of plastics as a material and the basic industrial process used to produce plastic products. Included are basic polymer chemistry, injection molding, extrusion, blow molding, compression and transfer molding, thermoforming, roll forming, lamination, casting, expansion, thermofusion, fabrication and bonding, product applications, mold design and construction. Prerequisite: permission of instructor. Cr 3.

### IA 452 Metallurgy and Metrology

The technology of metallurgy and metrology. Heat treatment, powdered metals, machining and inspection of metal parts. Individual and group activity. Prerequisite: permission of instructor. Cr 3.

### IA 472 Materials Testing

Industrial techniques involved in the analysis of the physical properties of materials and their utilization in the manufacturing and construction industries. Emphasis on research and experimentation. Individual and team activities. Prerequisite: IA 351 or 361 or permission of instructor. Cr 3.

### IA 102 Introduction to Technology

An introductory study of industry and technology and their impact on our culture. Emphasis on the role of industrial education in developing an understanding of basic concepts and functions of industry and technology is stressed. The conceptual areas of energy and transportation, manufacturing and construction, and graphic communication are defined and developed. Required for all entering program majors. Lecture and lab. Cr 3.

### IA 270 Modern Industry

Evolution and contemporary structure of American industry and its impact upon the social, economic, and cultural environment. Major areas and functions of industry explored include: personnel administration, research and development, production, finance, marketing, and service. Industrial visitations and reports. Prerequisite: permission of instructor. Cr 3.

### IA 490 Special Problems in Industrial Arts

Provides upper-level students an opportunity to pursue independently a topic, project, or experiment of interest. Students will prepare a contract or proposal for study to be conducted and, upon completion, submit findings in a scholarly report or other evidence of merit. Permission of instructor. Technical elective may be substituted. Cr 3.

### IAED 290 Contemporary Teaching in Industrial Education

This course is designed to develop verbal communication skills in the field of Industrial Arts. Basic understanding of related terminology in Industrial Education will be emphasized. Students will become knowledgeable of contemporary Industrial Arts programs at the elementary, junior high, and senior high school levels. Prerequisite: EDU 150. Cr 3.

### IAED 380 Curriculum Materials in Industrial Arts

Development of curriculum materials for contemporary programs in industrial arts. Emphasis on unit preparation, performance-based objectives, and task analysis essential for identifying content and an effective instructional delivery system. Individualized and class instruction. First of a full-year sequence prior to student teaching. Prerequisites: 100/200 level technical core, IA 270, 2.5 GPA and recommendation of faculty. Cr 3.

### IAED 381 Methods of Teaching Industrial Arts

Utilization of prepared plans for micro- and participation-teaching. Instructional media preparation and utilization. Audio and video tape presentations and critiques. Introduction to criterion-referenced evaluation techniques. Safety principles and classroom control stressed. Basic organization and administration procedures for implementing a modern program of industrial arts. Orientation to student teaching. Prerequisite: IAED 380. Cr 3.

### EDU 371 Career Education for the Elementary School

Exploration of the Career-Based Curriculum model emphasizing the relationship and interdisciplinary nature of all curricular areas to the Career Education theme. Students will work with tools, equipment, and materials applicable to the elementary setting and will develop model lessons and units of study stressing career awareness and guidance practices. Cr 3.



# VOCATIONAL/OCCUPATIONAL EDUCATION

Professor Berry (Coordinator); Associate Professor Carter; Assistant Professor Wright;  
Staff Development Consultants Greer, Helms.

An evening and summer program designed to:

- a) prepare instructors for the teaching of vocational/occupational and/or technical subjects in the high schools and post-secondary schools of Maine. Candidates must be eligible for vocational teaching certification. (EDUCATION)
- b) provide non-teaching majors an opportunity to pursue a collegiate program leading to a baccalaureate degree which recognizes trade or technical competency and provides knowledge of business and industry leading to supervision, technician, or middle management positions. (INDUSTRIAL TECHNOLOGY)

A B.S. degree with a major in Vocational Education or Industrial Technology will be granted upon successful completion of the following requirements:

## CURRICULUM REQUIREMENTS

One hundred and twenty (120) semester hours of credit are required for the bachelor's degree. A minimum of one year, or 30 semester hours, exclusive of work trade experience credits, must be earned at this institution.

### Occupational

A.	General Education		45 credit hours
	Humanities		6
	Fine and Applied Arts		6
	Science and Mathematics	15-18	
	Social Sciences		6
	ECON 101 Principles of Economics I		3
	IVE 360 Modern Industry		3
	Area 5: General		6
B.	Professional Education (Teaching Majors Only)		27 credit hours
	IVE 305 Curriculum Development in Vocational Education		3
	EDU 333 Human Growth and Development		3
	IVE 300 Occupational and Trade Analysis		3
	IVE 310 Methods and Materials of Instruction in Voc Ed		3
	IVE 340 Shop Organization and Management		3
	IVE 350 Philosophy of Vocational Education		3
	IVE 411 Measurement and Evaluation (Vocational)		3
	EDU 324 Student Teaching/Clinical Experiences (Required for all candidates with less than three years of successful teaching experience)		6
C.	Area of Specialization (Occupational)		45 credit hours maximum
	IVE 400 Occupational Experience, verified (Credits will be determined by rating plan)		
	IVE 440 Related Occupational Experiences (Two options, total credits to be no more than the difference between those granted for IVE 400 and 45 credits)		
	Recommended Electives		
	IVE 315 Learning and Programmed Instruction		3
	IVE 320 Coordination of Cooperative Education		3
	IVE 325 Conference Learning		3
	IVE 330 Principles and Practices of Vocational Guidance		3
	IVE 420 Trends in Vocational Education		3
	IVE 450 Local Administration and Supervision of Vocational Education		3
	IVE 455 Development of Technical Education		3
	IVE 460 Independent Study in Vocational Education		3
	EDU 310 Preparation of Instructional Materials		3
	EDU 314 Curriculum (Education)		3

**Required of Industrial Technology Majors:**

IT	300	Time and Motion Study	3
IT	310	Plant Layout and Material Handling	3
IT	320	Industrial Safety	3
IT	330	Production Control	3
IT	340	Quality Control Functions	3

**Industrial Technology Major**

(To be taken in place of professional education) . . . . . 27 credit hours

Technology majors may plan and develop a program to meet individual interests and needs in both the business and technical areas with adviser approval.

The business component consists of twenty-seven (27) hours: (fifteen (15) are required core and twelve (12) are elective). Seven (7) options for specialization are identified and recommended.

**Core (15 required)**

IVE	300	Occupational & Trade Analysis	3
IVE	325	Conference Leading	3
ECON	102	Principles of Economics II	3
BUS	101	Principles of Financial Accounting	3
BUS	340	Principles of Management	3
			<u>15</u>

**Option 1 General**

BUS	102	Financial & Mgt. Accounting	3
BUS	320	Business Finance	3
BUS	360	Marketing	3
BUS	390	Introduction to Computers in Business	3
			<u>12</u>

**Option 2 Personnel Management**

BUS	102	Financial & Mgt. Accounting	3
BUS	346	Personnel Management	3
BUS	348	Industrial Relations	3
ECON	320	Labor Economics	3
			<u>12</u>

**Option 3 Accounting**

BUS	301	Intermediate Accounting I	3
BUS	302	Intermediate Accounting II	3
BUS	305	Cost Accounting	3
BUS	320	Business Finance	3
			<u>12</u>

**Option 4 Marketing and Distribution**

BUS	370	Managerial Marketing	3
BUS	360	Marketing	3
BUS	363	Advertising	3
BUS	346	Personnel Management	3
			<u>12</u>

### Option 5 Electronics

EET	51	Analog Systems	4
EET	61	Digital Systems	4
EET	71	Micro-Computer Architecture and Design	4
			12

### Option 6 Computer Science

CS	160	Introduction to Programming: FORTRAN	3
CS	161	Algorithms in Programming	3
CS	268	Computer Organization and Planning	3
CS	269	Machine and Assembler Language Programming	3
or			
CS	368	Data Structures	3
			12

### Option 7 Quality Control

CSQ	12-51	Basic Statistics and Inspection Sampling	2
CSQ	13-51	Managing Quality Costs	2
CSQ	14-51	Purchased Material Control	2
CSQ	15-51	Inspection Tools and Gaging (Elective) or	2
CSQ	16-51	Government and ASME Code Quality Requirements (Elective)	2
CSQ	17-51	Quality Problem Solving	2
CSQ	18-51	Quality Audits	2
			12 credits

## COURSES IN VOCATIONAL/ OCCUPATIONAL EDUCATION

**IVE 300 Occupational and Trade Analysis**  
Identification of occupational or trade fields, units, operations, and items of related information. Cr 3.

**IVE 305 Curriculum Development in Vocational Education**  
This course is concerned with developing specific course content from an occupational analysis. The identification of educational needs and objectives precedes the selection and organization of relevant matter. Prerequisite: IVE 300. Cr 3.

**IVE 310 Methods and Materials of Instruction in Vocational Education**  
This course treats the general and specific materials and methods of teaching vocational courses. Deals with both the theoretical and practical aspects. Prerequisites: IVE 300 and 305. Cr 3.

**IVE 312 Teaching Students With Special Needs**  
A course designed for vocational educators who need to learn how to serve handicapped, disadvantaged and gifted youth. It is structured to aid vocational teachers in working with special education personnel and to provide skills needed in planning instruction for students with special needs. Cr 3.

**IVE 315 Learning and Programmed Instruction**  
The first application of the laboratory and scientific study of the learning process, including the principles of learning which are derived from experimental study and which have provided a foundation for advances in the techniques of learning. Cr 3.

**IVE 320 Coordination of Cooperative Education**  
The role of the coordinator in organizing and conducting a program of work-study experience in high school. Introduction to cooperative half-time training, community survey, advisory committees, laws and regulations; and examination of the responsibilities and activities of the coordinator. Cr 3.

**IVE 325 Conference Leading**  
A course in the philosophy and techniques of organizing and conducting successful conferences. Each participant will assume the responsibility of planning and leading a simulated conference. Cr 3.

**IVE 330 Principles and Practices of Vocational Guidance**  
Discussion and study with the intent to develop a better understanding of principles and objectives of Vocational Guidance. Cr 3.

**IVE 331 Practicum — Vocational Guidance**  
Field experiences in identification of content and relevant information for vocational counseling. Individual and group activity, visitations, tours, and career counseling techniques. Cr 3.

**IVE 340 Shop Organization and Management**  
Basic principles of planning, organizing and managing an industrial or technical shop or laboratory. Selection and arrangement of equipment including specification writing. Control of personnel for efficient shop management. Prerequisite: IVE 310. Cr 3.

**IVE 350 Philosophy of Vocational Education**  
A survey of the history and philosophy of vocational education in the United States with emphasis upon recent developments. Cr 3.

**IVE 360 Modern Industry**  
Evolution and structure of modern American industry and its impact upon the social, economic, and cultural milieu. Major areas and functions of industry explored include: personnel administration, research and development production, finance, marketing and service, industrial visitations and reports. Cr 3.

**IVE 382 Preparation of Instructional Materials**  
A lecture-laboratory series which involves students in the creation of instructional materials. Techniques include the dry mounting of flat pictorial materials, cloth backing of pictorial materials, professional-quality lettering, rudimentary photography and processing

(including use of the darkroom), and the production by several techniques of transparent projectuals. Cr 3.

**IVE 400 Trade Experience, verified**  
(see IVE 440, Option No. 2 below.)

(Credits will be determined by rating plan.)

**IVE 411 Measurement and Evaluation in Vocational Education**

The construction, selection, and use of achievement and performance tests in industrial-technical education. Skill in writing test items is developed. Elementary statistics for the industrial-technical instructor, including grading, are stressed. Prerequisites: IVE 300 and 310. Cr 3.

**IVE 420 Trends in Vocational Education**

Identification, analysis, and discussion of major problems and trends in vocational education. Cr 3.

**IVE 440 Related Occupational Experiences**

(Two options, total credits to be no more than the difference between those granted for IVE 400, and 45 credits.)

**OPTION NO. 1**

This course option is designed to permit attendance at an approved industry-sponsored school or seminar for the purpose of providing the student with advanced related occupational or technical training. Courses provided by organizations such as General Motors Training Centers, or International Typographical Union, qualify under this course option.

**OPTION NO. 2**

Approved employment with a company may qualify a student under this option. Arrangements must be approved by the adviser in advance. The experiences should provide opportunities for updating technical skills and knowledge. Credit will be determined on the basis of one credit for each two full weeks of employment with a maximum of five credits for each period of approved continuous full-time employment. A daily log, summary report and evaluation by an industrial supervisor will constitute part of this option.

For additional information concerning either option of IVE 440, consult your adviser.

**IVE 450 Local Administration and Supervision of Vocational Education**

Procedure and practices utilized in establishing, promoting, coordinating, supervising, controlling vocational programs on the local level. Cr 3.

**IVE 452 Heat Treatment and Inspection**

A study of the origin, nature, and properties of metals. Specimen mounting and microscopic identification of their properties. Experimentation in various heat treatment processes and microscopic observation of these. Selection, care, maintenance, and use of measuring and testing equipment. Application of this equipment in metal manufacturing. Cr 3.

**IVE 453 Computers in Industry and Technology**

Use of digital computer techniques in industry. Introduction to FORTRAN Programming and utilization of the language to study the design of the IBM 360 system. Specialized applications for process control and product testing will be considered as well as use of desk and mini computers. Cr 3.

**IVE 455 Development of Technical Education Programs**

Planning and development of technical education programs including the determination of needs and organization of programs for secondary and post-secondary schools. Cr 3.

**IVE 460 Independent Study in Vocational Education**

An opportunity to pursue independently, a topic, project, or experiment of interest. Students will prepare a contract or proposal for study to be conducted and, upon completion, submit findings in a scholarly report or other evidence of completeness. Permission of adviser. Cr 3.

**IT 300 Time and Motion Study**

A study of techniques to utilize available resources (men, material, machines and facilities) in the most effective and economical manner giving full recognition to the human factors involved in engineering work methods and time measurements. Cr 3.

**IT 310 Plant Layout and Material Handling**

A study of materials flow, layout production, assembly and service departments, manufacturing, buildings, service facilities, handling equipment, and packaging techniques. Cr 3.

**IT 320 Industrial Safety**

Theory of industrial safety with emphasis on fundamental concepts in the industrial environment. Emphasis will be placed on the psychological, sociological and physiological aspects of industrial safety. Consideration will be given to OSHA and its impact on the work environment. Cr 3.

**IT 330 Production Control**

Production control as a system, types of process organization, planning and scheduling, inventory control, forecasting production control and production planning. Some of the techniques developed in Operational Research will be used to solve problems in Production Control. Cr 3.

**IT 340 Quality Control Fundamentals**

An overview of fundamental concepts and principles of quality control. The course will cover techniques utilized from the simplest products test to process control engineering and will include incoming material control, inspection sampling and quality control management. The course will cover practical application for installing quality control systems using actual case studies developed by participants. Cr 3.

## DEPARTMENT OF PHYSICAL EDUCATION

The Department of Physical Education offers a Physical Education Leadership minor for students in the Early Childhood and Elementary Education programs. Information concerning this program will be found under the Description of Concentrations and Minors section for these programs.

A Certificate Program in Athletic Coaching for Men and Women is also offered. This 15-credit program is an elective one which a student may take in addition to his or her major field of study.

The department offers a number of dance courses, several of which qualify for Area 2: Fine and Applied Arts of the University's General Education Requirement.

In addition to a variety of course offerings, intramurals, extracurricular dance, and community-wide lifeline programs are sponsored. The department also offers challenge activities through the Wilderness Pursuits Program.

### GOALS AND OBJECTIVES

The goals and objectives of this department are to provide course offerings, programs, and services in our specialty areas to all University students. Through wholesome physical activities and experiences, the student will learn lifetime skills and techniques.

In order for students to become liberally educated, they should understand and appreciate the importance of human movement with respect to their complete development.

### COURSES IN PHYSICAL EDUCATION ACTIVITIES

Courses in Physical Education Activities numbered PE 100 through PE 198, PE 207, PE 208 and PE 215 may be used to satisfy the Physical Education requirements of the College of Education. They may also be used as General Education electives under Area 5 of the General Education Requirements for students in the College of Arts and Sciences or the School of Nursing (3 credit limit), or for four-year Business Administration majors in the School of Business, Economics and Management.

PE 100	Foundations of Phys. Ed.
PE 102	Independent Activities
PE 103	Physical Fitness
PE 105	Weight Training
PE 106	Wrestling
PE 107	Trampoline
PE 108	Camping
PE 109	Yoga
PE 110	Canoeing
PE 112	Cycling
PE 113	X-C Skiing
PE 114	Snow Shoeing
PE 115	Scuba Diving
PE 116	Hiking
PE 117	Small Boat Handling
PE 118	Roller Skating
PE 119	Horsemanship
PE 121	Mountaineering I
PE 122	Mountaineering II
PE 134	Basketball
PE 135	Field Hockey
PE 136	Slimnastics
PE 137	Tumbling
PE 140	Ballet
PE 174	Archery
PE 175	Badminton
PE 177	Candlepin Bowling
PE 179	Folk Dancing
PE 180	Dance
PE 181	Modern Dance

PE 182	Fencing
PE 184	Golf
PE 185	Gymnastics
PE 186	Jogging
PE 187	Karate
PE 188	Lacrosse
PE 189	Soccer
PE 190	Skiing (Downhill)
PE 191	Softball
PE 194	Tennis
PE 195	Volleyball
PE 196	Self-Defense
PE 197	Rhythms
PE 198	Foundations of Exercise Science
PE 207	Gymnastics
PE 208	Folk & Square Dance
PE 215	Posture & Figure Control

### CERTIFICATE PROGRAM IN ATHLETIC COACHING FOR MEN AND WOMEN

This program is designed to prepare interested students in handling certain coaching responsibilities in schools and recreational programs. The curriculum includes an introduction to the organization and administration of athletics as well as practical work in assisting coaches in selected sports. Coverage is also given to the prevention and care of the most common injuries occurring in athletic programs.

A certificate of accomplishment will be presented to students completing the minimum fifteen-hour program. In addition, the proper notation will be made on the student's official transcript indicating proficiency in the area of athletic coaching as determined by the Certificate Program.

#### Course of Study in Athletic Coaching (15 credit program)

Required Courses:	Credits
PE 203 Athletic Training (Care & Prevention of Athletic Injuries)	3
PE 302 Coaching Philosophy & Fundamentals	3
PE 314 Organization & Administration of Athletics	3
PE 391 Field Experience in Coaching	1-3
Elective Courses:	
PE 209 Officiating Basketball	2
PE 210 Officiating Field Hockey	2
PE 211 Officiating Soccer	2
PE 212 Officiating Baseball and/or Softball	2
PE 303 Coaching Basketball	2
PE 305 Coaching Track and Field	2
PE 311 Coaching Soccer	2 or 3
PE 312 Coaching Football	2
PE 315 Coaching Field Hockey	2
PE 316 Coaching Volleyball	1
PE 318 Coaching Gymnastics	2
PE 331 Coaching Golf	1
PE 332 Coaching Tennis	1
PE 334 Coaching Cross Country	1
PE 335 Coaching Baseball & Softball	2

## PROGRAM-RELATED COURSES IN PHYSICAL EDUCATION

### PE 198 Foundations of Exercise Science

The purpose of this course is to provide the student with a scientific background in exercise physiology and health concepts in order to develop and maintain a lifetime program of high level physical fitness and quality health. Cr 2.

### PE 201 Conditioning and Therapeutic Exercise

Discussions in practical application of various theories of athletic conditioning and therapeutic exercise, i.e., progressive resistance, circuit training, isometrics, interval training, aerobics, calisthenics, etc. Also, analysis of body alignment and how functional problems can be corrected with reconditioning exercises. Cr 2.

### PE 202 Current Health Issues

The aim of this course is to help students grow in scientific health knowledge, develop desirable health attitudes, improve health practices, and solve individual and group health problems. Cr 3.

### PE 203 Athletic Training

Care and prevention of athletic injuries; the use of proper field equipment, support methods, therapeutic modalities, pharmacology in athletics, and training techniques. Cr 3.

### PE 207 Gymnastics

A basic course in tumbling and gymnastics including use of apparatus for men and women. Satisfies PE requirement. Cr 1.

### PE 208 Folk and Square Dance

Fundamental and traditional dance steps, folk and square dances, and cultural background of the folk dances of other nations will be covered. Open to beginners and beyond. Satisfies PE requirement. Cr 1.

### PE 209 Officiating Basketball

Study and discussion of the rules as well as practical experience in the techniques of officiating basketball. Practical and written tests will be given. Students completing this course will have the opportunity to take officials' examinations. Cr 2.

### PE 210 Officiating Field Hockey

Study and discussion of the rules of field hockey as well as practical experience in the techniques of officiating. Practical and written tests will be given. Opportunity to become a rated official. Cr 2.

### PE 211 Officiating Soccer

Study and discussion of the rules of soccer as well as practical experience in the techniques of officiating. Practical and written tests will be given. Opportunity to become a rated official. Cr 2.

### PE 212 Officiating Baseball/Softball

Study and discussion of the rules of baseball and softball as well as practical experience in the techniques of officiating. Practical and written tests will be given. Opportunity to become a rated official. Cr 2.

### PE 215 Posture and Figure Control

The course includes individual postural appraisal, corrective exercises, and recognition of postural deviations. Recommended for prospective teachers. Satisfies PE requirement. Cr 1.

### PE 302 Coaching Philosophy and Fundamentals

This course will cover various approaches to planning, organizing, and implementing practice sessions in preparation for athletic competition. The psychological and emotional aspects of coaching will also be covered. One segment of the course will be concerned with society's view of coaching as illustrated by today's literature. Cr 3.

### PE 303 Coaching Basketball, Philosophy and Methods

Emphasis on the methods of teaching and coaching basketball. Offense and defense, coach-player relationship, team selection, planning of practice sessions, and game situations will be areas of concentration. Cr 2.

### PE 305 Coaching Track and Field, Philosophy and Methods

Coaching experience on the field with analysis of the form and technique of the various events. Selection of candidates, training, conditioning, diet, organization and promotion of track will be covered. Cr 2.

### PE 311 Coaching Soccer, Philosophy and Methods

Emphasis on the methods of teaching and coaching soccer. Offense and defense, player-coach relationship, team selections, planning of practice sessions, and game situations will be areas of concentration. Cr 2 or 3.

### PE 312 Coaching Football, Philosophy and Methods

Emphasis on the methods of teaching and coaching football. Offense and defense, player-coach relationship, team selections, planning of practice sessions, and game situations will be areas of concentration. Cr 2.

### PE 314 Organization and Administration of Athletics

This course covers the principles and practices of athletic administration as related to elementary, junior and senior high schools.

### PE 315 Coaching Field Hockey, Philosophy and Methods

Analysis of the techniques and methods of coaching field hockey with emphasis on stick work, team strategy, and practice organization. Cr 2.

### PE 316 Coaching Volleyball, Philosophy and Methods

Fundamentals of individual skills, team strategy, practice organization, and team play are emphasized. Cr 1.

### PE 318 Coaching Gymnastics, Philosophy and Methods

Analysis of skills fundamental to competitive gymnastics with emphasis on techniques of coaching floor exercise, uneven parallel bars, vaulting, and balance beam. Judging skills are also developed. Cr 2.

### PE 324 Dance Methods and Materials

Theory and practice of dance concepts including concentrated techniques of movement vocabulary, exploration of movement sequences, elements of movement qualities, dance composition, and correlation of rhythm and dynamics in music. Cr 3.

### PE 331 Coaching Golf, Philosophy and Methods

Course content includes methods of team selection, fundamentals of golf, types of competition, and practical experience. Cr 1.

### PE 332 Coaching Tennis, Philosophy and Methods

Course content includes skill development strategies, drills, conditioning principles, and team management. Cr 1.

**PE 334 Coaching Cross Country, Philosophy and Methods**

Course content includes the techniques of training and conditioning, the operation of meets, course layouts and running techniques. Cr 1.

**PE 335 Coaching Baseball and Softball, Philosophy and Methods**

Emphasis on the methods of teaching and coaching baseball. Offense and defense, player-coach relationship, team selection, planning of practice sessions, and game situations will be areas of concentration. Cr 2.

**PE 391 Field Experience in Coaching**

Practical field work in a coaching area. The student will be assigned as an assistant coach in a sport for a season. Supervision, evaluation, and guidance of the student will be provided by a staff member who is responsible for that coaching area. Prerequisite: PE 203, PE 302. Cr 1-3.

**PHYSICAL EDUCATION LEADERSHIP COURSES**

**EDPE 210 Introduction to Experiential Learning in Outdoor Education**

A survey of experiential learning programs and the relevance and rationale of their involvement in elementary and secondary education and in public and private agencies. Cr 1.

**EDPE 216 Analysis of Human Movement**

A study of major skeletal bones and muscle groups; posture appraisal, development, and correction; and application of the principles of mechanics to body movement. Cr 3.

**EDPE 218 Games and Activities**

An introductory course in non-competitive games for school age children. The course follows the growth of the New Game Foundation and has a practical teaching experience with school age children. Cr 1.

**EDPE 298 First Aid and Safety**

A multi-media approach to the utilization of techniques of first aid as prescribed by the American Red Cross. Various aspects of safety will be discussed. Successful completion of the course requirements will lead to Red Cross certification. Cr 2.

**EDPE 300 Camp Leadership**

A leadership course for the elementary school teacher to direct an outdoor education program. The course includes the skills, attitudes, and appreciations necessary for the intelligent use of the outdoors and outdoor pursuits. Many of these are often considered a part of physical education and recreation programs but they have significance in other subjects which cut across all areas of the school curriculum. Cr 3.

**EDPE 304 Methods and Materials for Teaching Physical Education**

A basic course for prospective teachers to acquaint them with the various areas of physical education. Topics include: philosophy and objectives of physical education; characteristics of children; the PE curriculum; class organization and teaching; lesson planning; physical fitness; movement education; fundamental skills; gymnastics and small apparatus; wilderness pursuits; health and safety and extra-curricular programs. Observation of and practical experience with children will be included. Cr 3.

**EDPE 306 Movement Education in the Elementary School**

A course is designed to help the prospective teacher plan instructional programs which will give children an opportunity to be creative and to participate in the planning. Activities based on movement skills — movement exploration are stressed. Children from grades one to six are part of the experience. Cr 3.

**EDPE 308 Physical Education for the Atypical Child**  
This course is planned to help students understand adaptive physical education for the physically and mentally handicapped child. Emphasis will be placed on educable mentally retarded and learning disabled children. An investigation into the causes of mental retardation and learning disabilities is also included. Cr 3.

**EDPE 309 Rhythms and Motor Activities**

Preparation of classroom teachers with necessary knowledge to provide an understanding of sound mechanical principles that insure the proper application of force and the attainment of accuracy and balance through the learning of basic motor skills. Also to provide comprehensive dance experiences for students through the introduction to the meaning and areas of dance, teachers of techniques, skills aids to teaching and the use of rhythm in accompaniment. Cr 3.

**EDPE 310 Experiential Learning in Outdoor Education**

**Ropes/Initiative Course Construction and Use**

Participants can expect to gain first-hand knowledge and experience through actual participation in all phases of initiative course construction and operation. Of primary importance will be the understanding one receives from this experience for constructing a similar course in his/her own educational program.

**Mountaineering**

Designed to gain knowledge in technical mountaineering and to improve capabilities in technical rock climbing.

**Orienteering**

Designed to gain knowledge in expedition planning and route finding. Cr 3.

**EDPE 389 Advanced First Aid and Emergency Care**  
This course will cover the topics prescribed by the American Red Cross and their advanced first aid and emergency care course, including respiratory emergencies, artificial respiration, wounds, poisoning, water accidents, drugs, burns, emergency child birth, emergency rescue and transfer, and CPR. Successful completion of the course requirements will lead to advanced Red Cross first aid and emergency care and CPR certification. Cr 3.

**EDPE 398 Independent Study in Physical Education**  
Provides students who have demonstrated critical and analytical capability an opportunity to pursue a project independently, charting a course and exploring an area of interest, bearing upon it previous course experience and emerging with an intellectually sound, coherent synthesis reflecting a high caliber of performance. Restricted to students in the PE Leadership Minor. Prerequisite: permission of instructor. Cr 1-3.

## EDPE 401 Practicum in Physical Education

### Leadership

Provides opportunity for a seminar approach to group thinking and discussion of problems of the beginning teacher. Areas of emphasis include organization, administration and conduct of programs of physical education, intramurals, and recreation in the elementary and secondary school. Opportunity for each student to gain leadership experience in local area schools under the supervision of qualified teachers and a University instructor. Prerequisite: previous experience with children or permission of instructor. Cr 3.

## DANCE

In addition to course offerings, Dance opportunities are provided through "The Dance Group." Students engage in lecture-demonstrations and developmental activities and present programs to collegiate and local civic-community organizations. Interested students, with or without experience, should meet with the instructor and register under one of the DNCE numbers.

### Course Descriptions in Dance

#### DNCE 300 Contemporary Dance I

A course involving the technique of modern dance; beginning, intermediate, and advanced depending on the degree of competency; work in choreography, program planning, use of music in dance, history of the dance. Open to men and women students. Cr 2.

#### DNCE 301 Contemporary Dance II

A continuation of DNCE 300. Cr 2.

#### DNCE 302 Contemporary Dance III

A continuation of DNCE 301. Cr 2.

#### DNCE 324 Dance Methods and Materials

Theory and practice of dance concepts including concentrated techniques of movement vocabulary, exploration of movement sequences, elements of movement qualities, dance composition and correlation of rhythm and dynamics in music. Cr 3.

#### DNCE 406 Survey of Movement and Dance

A background of the history and development of modern dance heritage. Folk, square, modern dance forms, including techniques and teaching composition for each form. Cr 3.

## DEPARTMENT OF RECREATION AND LEISURE STUDIES

The Department of Recreation and Leisure Studies offers both an Associate of Science degree and a Bachelor of Science degree in Therapeutic Recreation. In addition to the two degree programs, a wide selection of professional recreation and leisure courses as well as activity courses are available. Students are encouraged to pursue recreation and leisure course offerings relevant to their academic programs.

The University of Southern Maine Portland campus gymnasium is the home base for a wide variety of recreational activities. This facility consists of three separate regulation basketball courts, a multi-purpose room, weight training room, dance room, three racquetball/handball courts and one squash court. Each locker room offers shower and sauna facilities available to students, faculty, and staff. In addition, two classrooms are located on the second floor of the gymnasium.

The Department of Recreation and Leisure Studies sponsors the USM Community Leisure-Learn Recreation Program. This program is designed to make the gymnasium facilities available to all members of the University community and the general public. Use of the facility by the general public is offered only during those hours when student use is not up to capacity. Information concerning these activities, including fees and time schedules, can be secured from the Department of Recreation and Leisure Studies office in the Portland gymnasium.

Lifeline is another program sponsored by the Department of Recreation and Leisure Studies. It is designed for the sedentary individual who for a variety of reasons is not in good physical condition. This program is essentially a series of sessions of jogging and calisthenics based on a progressive style of programming. Exercise begins slowly and builds from week to week.

## CURRICULUM FOR THE ASSOCIATE OF SCIENCE IN THERAPEUTIC RECREATION DEGREE (Sixty Credit Hours)

The two-year associate degree with a major in Therapeutic Recreation prepares students for employment as activity leaders or technicians working with the handicapped and the elderly. These graduates usually find jobs in nursing and boarding homes, hospitals, rehabilitation schools for the handicapped, centers, camps, municipal parks and recreation departments, and appropriate human service agencies.

The two-year program in Therapeutic Recreation consists of the following courses leading to the Associate of Science degree:

### General Foundation Courses

Required	Credits
ENG 010 (101) Freshman Writing .....	3
THE 017 (170) Oral Communication .....	3
or	



COM 017 (171)	
BIO 019 (100) Biological Basis for Human Activity	3
<b>Electives</b>	
Humanities Area (one course)	3
Social Sciences Area (one course)	3
General elective course	3

### Major Requirements

RLS 010 Introduction to Recreation and Leisure Services	3
RLS 011 Leadership, Supervision and Program Planning in Recreation	3
RLS 012 Organization and Administration of Recreation Services	3
RLS 013 Pre-Professional Field Experience	3
RLS 016 Advanced First Aid and Emergency Care	3
RLS 020 Introduction to Therapeutic Recreation Services	3
RLS 030 Methods and Materials in Therapeutic Recreation	3
Select two courses from the following	9
RLS 021 Development and Utilization of Therapeutic Recreation Resources	
RLS 022 Recreation Activities for Special Population	
RLS 031 Arts and Crafts in Therapeutic Recreation	
RLS 033 Environmental Recreation for Special Population	
RLS 095 Internship	9
Two elective courses in recreation	6

### Courses with Prerequisites

Course	Prerequisite
RLS 011,012	RLS 010
RLS 021	RLS 020
RLS 030	RLS 020
RLS 031	RLS 020
RLS 033	RLS 020
RLS 095	Completion of 30 credit hours and RLS 013

#### Transfer Option from the Two-Year Associate Degree Program in Therapeutic Recreation to the Four-Year Degree Program in Therapeutic Recreation:

Students in the associate degree program in Therapeutic Recreation who have a 3.0 cumulative average at the end of the first year or a 2.4 cumulative average at the end of their second year may transfer to the four-year Therapeutic Recreation program. Students interested in this option are advised to meet with Dr. Sullivan, chairman of the Department of Recreation and Leisure Studies.

#### Description of Courses in the Associate Degree Program

**RLS 010 Introduction to Recreation/Leisure Services**  
Goals for American Recreation studied in modern context; implications for the profession; historical background, concepts of work, leisure, recreation; trends, issues, and future directions. Cr 3.

**RLS 011 Leadership, Supervision and Program Planning in Recreation**

This course provides students with a basic knowledge of the theories, supervisory skills, techniques and specific communication skills for effective leadership and supervision in recreation. Cr 3.

**RLS 012 Organization and Administration of Recreation**

This course acquaints students with the need for, and nature of, recreational programs, with special consideration given to the skills and techniques necessary to organize and administer recreation programs. Cr 3.

**RLS 013 Pre-Professional Field Experience**

This course will provide the student with the opportunity to observe, analyze and evaluate Therapeutic Recreation programs in various settings. Three different experiences are required. The student maintains a daily log and is supervised by a faculty member. Must be taken in first semester of program. Graded on a Pass/Fail basis. Cr 3.

**RLS 016 Advanced First Aid and Emergency Care**

This course will cover the topics prescribed by the American Red Cross in their advanced first aid and emergency care course, including respiratory emergencies, artificial respiration, wounds, poisoning, water accidents, drugs, burns, emergency childbirth, emergency rescue and transfer, and other topics. Successful completion of the course requirements will lead to advanced Red Cross first aid and emergency care certification. Cr 3.

**RLS 020 Introduction to Therapeutic Recreation Services**

Concentrated study of recreation service to the aged and those who are ill, handicapped, or disabled. Inquiry into the elements of therapeutic recreation service; current treatment and care patterns; the nature of disability; how recreation service is related to disability. Cr 3.

**RLS 021 Development and Utilization of Therapeutic Resources**

This course is designed to provide basic instruction in audiovisual and media production techniques for people working with the handicapped and in homes for the elderly. It will include the basic operation of audiovisual equipment such as 16mm projectors, slide projectors and tape recorders. Hands on preparation of visual displays, bulletin boards, schedule boards, lettering techniques, duplication and mimeo techniques. The course will focus on locally available resources for program planning for the handicapped. Cr 3.

**RLS 022 Recreation Activities for Special Populations**

Adapted (indoor) physical recreation and leisure activities to meet the needs and abilities of special population. Students will have the opportunity to present these activities to special groups during some of the class sessions. Cr 3.

**RLS 030 Methods and Materials in Therapeutic Recreation**

Philosophy, motivational techniques, utilization of equipment, methods of instruction and organizing materials and groups relating to special populations. Cr 3.

**RLS 031 Arts and Crafts in Therapeutic Recreation**

This course will explore and assist students in learning how to make various crafts in a laboratory setting. Majors will be given the opportunity to work with macrame, block printing, tapestry weaving, crewel, basket weaving, decoupage, and leather work. Cr 3.

**RLS 033 Environmental Recreation for Special Populations**

Technical training and experiences in an outdoor environmental setting utilizing adapted recreation and education for special groups. Cr 3.

**RLS 095 Internship**

Pre-professional assignment in three recreation settings (e.g., nursing homes for the aged, institutions, agencies, half-way houses, hospitals, parks, camps, playgrounds, schools for the handicapped, penal institutions, and rehabilitation centers). Faculty supervision and guidelines provided. The student must maintain a daily log. Cr 9.

**CURRICULUM FOR THE BACHELOR OF SCIENCE IN THERAPEUTIC RECREATION DEGREE (120 Credit Hours)**

The four-year degree program with a major in Therapeutic Recreation prepares students to be administrators, supervisors, and program designers to work in a variety of human service settings dealing with the handicapped and the elderly.

This program consists of the following courses leading to the Bachelor of Science degree:

**General Foundation Courses**

	<b>Credits</b>
<b>Area I Humanities</b> .....	<b>9</b>
ENG 100 College Writing or ENG 101 Independent Writing	
ENG 120 Introduction to Literature	
ENG 204 Advanced Writing or another advanced writing course for Therapeutic Recreation majors	
<b>Area II Fine and Applied Arts</b> .....	<b>6</b>
MUS 100 Music Appreciation and History	
THE 170 Public Speaking	
<b>Area III Science and Mathematics</b> .....	<b>9</b>
BIO 101 Biological Principles	
BIO 111 Human Anatomy and Physiology plus Lab	
BIO 200 Human Heredity and Embryology	
<b>Area IV Social Sciences</b> .....	<b>12</b>
COM 102 Introduction to Communication or COM 250 Small Group Communication	
SWE 101 Introduction to Human Services	
SWE 266 Concept of Self and the Handicapped Person	
PSY 101 General Psychology	
<b>Area V General</b> .....	<b>6</b>
Any of the courses offered by the College of Arts and Sciences	

## Major Requirements

### Courses in Therapeutic Recreation

RLS 110	Introduction to Recreation and Leisure Services	3
RLS 113	Pre-Professional Field Experience	3
RLS 120	Introduction to Therapeutic Recreation Services	3
RLS 211	Leadership, Supervision, and Program Planning in Recreation	3
RLS 216	Advanced First Aid and Emergency Care	3
RLS 312	Organization and Administration of Recreation	3
RLS 314	Leisure Counseling for Life in a Contemporary Environment	3
RLS 330	Methods and Materials in Therapeutic Recreation	3
RLS 370	Therapeutic Recreation and Mental Health	3
RLS 380	Therapeutic Recreation and Physical Disabilities	3
RLS 390	Therapeutic Recreation and Developmental Disabilities	3
RLS 480	Seminar in Management, Supervision and Consultation in Therapeutic Recreation	3
RLS 490	Senior Seminar in Therapeutic Recreation	3
RLS 495	Internship	9
		48

### Elective Courses Inside the Department

(select 12 credit hours)

RLS 100	Recreation and Leisure Activities	1
	Advanced Lifesaving	
	Badminton	Physical Fitness for Women
	Bowling	Racquetball
	Circuit Training	Road Running
	Cycling	Sailing
	Figure Skating	Scuba Diving
	Gymnastics	Self Defense
	Handball	Ski Touring
	Horsemanship	Slimnastics
	Judo	Squash
	Karate	Swimming
	Lifeline Fitness	Tennis
		Yoga

Laboratory, 2 hours

Cr 1., per activity

RLS 124	Posture and Efficiency of Movement	1
RLS 215	Social Recreation	3
RLS 217	Small Boat Handling and Seamanship	2
RLS 201	Circuit Training for Women	2
RLS 218	Rhythmic Dance Activities	1
RLS 219	Personal Fitness	3
RLS 221	Development and Utilization of Therapeutic Recreation Resources	3
RLS 222	Recreation for Special Populations	3
RLS 223	Dance in Recreation/Leisure	3
RLS 225	Man and Leisure	3
RLS 226	Leadership in Recreation/Leisure Activities	3
RLS 231	Arts and Crafts for Special Populations	3
RLS 240	Personal and Community Health	3
RLS 250	Adapted Aquatics	3
RLS 333	Environmental Recreation for Special Populations	3
RLS 334	Environmental Recreation	3
RLS 335	Urban Recreation	3
RLS 343	Perceptual-Motor Learning	3
RLS 357	Parks and Recreation Facilities and Design	3
RLS 398	Independent Study in Recreation/Leisure	3
RLS 414	Sports, Culture and Society	3
RLS 415	Perspectives on Aging and Human Kinetics	3
		12

### Elective Courses Outside the Department

(select six)

#### Sample Listing

*BUS 101	Principles of Financial Accounting	3
COM 171	Interpersonal Communication	3
EDU 316	Introduction to Learning Disabilities	3

POL 101	Introduction to American Government	3
EDPY 331	Group Dynamics	3
EDPY 333	Human Growth and Development	3
*MS 120	Introduction to Statistics	3
MUS 110	Fundamentals of Music	3
PSY 220	Developmental Psychology	3
PSY 223	Child Development	3
PSY 232	Psychology of Adjustment	3
PSY 320	Psychology of Personality	3
PSY 333	Psychopathology	3
PSY 335	Deviations of Childhood	3
SOC 310	Social Change	3
SOC 354	Small Group Analysis	3
SOC 374	Sociology of Mental Health and Mental Illness	3
SOC 375	Sociological Perspectives on Deviance	3
SWE 351	Human Services and the Consumer	3
		<hr/>
		18

### Courses with Prerequisites

Course	Prerequisite
RLS 211, 312	RLS 110
RLS 221	RLS 120
RLS 231	RLS 120
RLS 330	RLS 120
RLS 333	RLS 120
RLS 495	Completion of 90 credit hours and RLS 113

\*Highly recommended

## Description of Courses in the Bachelor of Science Degree Program

### MAJOR REQUIREMENTS

#### RLS 110 Introduction to Recreation and Leisure Services

Goals for American Recreation studied in modern context; implications for the profession; historical background, concepts of work, leisure, recreation; trends, issues, and future directions. Cr 3.

#### RLS 113 Pre-Professional Field Experience

This course will provide the student with the opportunity to observe, analyze and evaluate Therapeutic Recreation programs in various settings. Three different experiences are required. The student maintains a daily log and is supervised by a faculty member. Must be taken in first semester of program. Graded on a Pass/Fail basis. Cr 3.

#### RLS 120 Introduction to Therapeutic Recreation Services

Concentrated study of recreation service to the aged and those who are ill, handicapped, or disabled. Inquiry into the elements of therapeutic recreation service; current treatment and care patterns; the nature of disability; how recreation service is related to disability. Cr 3.

#### RLS 211 Leadership, Supervision, and Program Planning in Recreation

This course provides students with a basic knowledge of the theories, supervisory skills, techniques and specific communication skills for effective leadership and supervision in recreation. Cr 3.

**RLS 216 Advanced First Aid and Emergency Care**  
This course will cover the topics prescribed by the American Red Cross in their advanced first aid and emergency care course, including respiratory emergencies, artificial respiration, wounds, poisoning, water accidents, drugs, burns, emergency childbirth, emergency rescue and transfer, and other topics. Successful completion of the course requirements will lead to advanced Red Cross first aid and emergency care certification. Cr 3.

#### RLS 312 Organization and Administration of Recreation

This course acquaints students with the need for, and nature of, recreational programs, with special consideration given to the skills and techniques necessary to organize and administer recreation programs. Cr 3.

#### RLS 314 Leisure Counseling for Life in a Contemporary Environment

The intent of this course is for students to study and learn how to assist people in planning for and finding enjoyment in leisure. Theories and techniques of counseling will be included. Students will also study problems which individuals and groups encounter in their search for recreation and leisure experiences which have intrinsic value and give meaning to their lives. Cr 3.

#### RLS 330 Methods and Materials in Therapeutic Recreation

Philosophy, motivational techniques, utilization of equipment, methods of instruction and organizing materials and groups relating to special populations. Cr 3.

**RLS 370 Therapeutic Recreation and Mental Health**  
A psycho-social analysis of the determinants and con-

sequences of leisure behavior as related to mental health. This course introduces the student to the broad perspectives of leisure in relation to mental health, then focuses upon specific uses of recreation as a behavioral-change agent. The format of the course involves lectures, discussions, as well as awareness exercises. Prerequisites: RLS 120, RLS 330. Cr 3.

#### **RLS 380 Therapeutic Recreation and Physical Disabilities**

The psycho-social aspects of physical disabilities with specific reference to planning, implementing, and evaluating leisure activities. Various approaches to human growth and development; to the handicaps that block typical development; and to ways in which experiential exercises will facilitate the learning process. Prerequisites: RLS 120, RLS 330. Cr 3.

#### **RLS 390 Therapeutic Recreation and Developmental Disabilities**

An analysis of the motor and psycho-social behavioral dimensions related to developmental disabilities. The specific and direct uses of recreation as a rehabilitation agent will be examined. Classroom and practical exercises will provide experience in supervision and programming techniques. Prerequisites: RLS 120, RLS 330. Cr 3.

#### **RLS 480 Seminar in Management, Supervision and Consultation in Therapeutic Recreation**

Open to fourth-year students in Therapeutic Recreation only. This course will examine management roles, therapeutic recreation service-delivery systems as well as supervision techniques for promoting the professional growth of personnel. Consultation in therapeutic recreation will be explored as a professional function. Cr 3.

#### **RLS 490 Senior Seminar in Therapeutic Recreation**

Open to fourth-year students in Therapeutic Recreation only. Intensive small-group discussions designed to integrate and synthesize previous learning as a unified, personal philosophy. This course will provide an overall perspective of the discipline, some insights into current issues, and a view of the future of Therapeutic Recreation. Cr 3.

#### **RLS 495 Internship**

This course is to be taken in the senior year. Students are required to work a minimum of 32 to 40 hours a week at a camp, recreation department, school, agency, hospital, institution, or nursing home. Students are expected to select three different experiences, approximately five weeks at each experience, when possible, and must keep a daily log of their experiences to be passed in to the instructor at the end of the semester. A University supervisor will visit and evaluate each student at least three times during the internship. Cr 9.

### **ELECTIVE COURSES INSIDE THE DEPARTMENT**

#### **RLS 124 Posture and Efficiency of Movement**

An introduction to exercise that helps to maintain good posture and correct faulty habits. Efficiency in the use of the body for lifting, carrying and performing various recreation sports movements will be emphasized. Requirement for nursing students. Lecture, 1 hour; laboratory 1 hour. Eight weeks. Cr 1.

#### **RLS 215 Social Recreation**

Techniques of leadership, participation, planning for

recreation in social settings for all ages — parties, programs, special events. Repertoire — mixers, dances, games, songs, and skits. Creativity stressed. Cr 3.

#### **RLS 217 Small Boat Handling and Seamanship**

The objective of this course is to inform the student on all phases of boating. Information on purchasing, annual and continual maintenance, equipment, safety, rules, piloting, and navigation. All of this should insure the student's full enjoyment of this popular recreational pursuit. Two hours lecture. Cr 2.

#### **RLS 201 Circuit Training for Women**

Lectures will cover how to start an individualized fitness program, components of fitness, maturation, aging, types of exercise programs, and personal evaluation. Effective and efficient movement patterns will also be explored. Practical application is an integral part of the course. Cr 2.

#### **RLS 218 Rhythmic Dance Activities**

An introduction to basic dance tempos including folk, social, and square dances. Co-ed. Two hours lab. Cr 1.

#### **RLS 219 Personal Fitness**

This course is designed to help the student understand the human organism, its structure, function, capabilities, and limitations in relation to physical activity. The student will be given personal assessments including tests of flexibility, body fat percentage, strength and oxygen uptake (cardiovascular endurance). The course involves one hour of lecture per week plus three exercise sessions designed to achieve an improved fitness level. Co-ed. Both semesters. One hour lec.; three hours lab. Cr 3.

#### **RLS 221 Development and Utilization of Therapeutic Resources**

This course is designed to provide basic instruction in audiovisual and media production techniques for people working with the handicapped and in homes for the elderly. It will include the basic operation of audiovisual equipment such as 16mm projectors, slide projectors and tape projectors. Hands on preparation of visual displays, bulletin boards, schedule boards, lettering techniques, duplication and mimeo techniques. The course will focus on locally available resources for program planning for the handicapped. Cr 3.

#### **RLS 222 Recreation for Special Populations**

Adapted (indoor) physical recreation and leisure activities to meet the needs and abilities of special populations. Students will have the opportunity to present these activities to special groups during some of the class sessions. Cr 3.

#### **RLS 223 Dance in Recreation/Leisure**

The student will be given an opportunity to learn how to plan, organize and administer various types of dance and movement programs as they pertain to a community recreation program. Cr 3.

#### **RLS 225 Man and Leisure**

The growth of leisure in modern society and the recognition of leisure and recreation as important aspects in the lives of individuals will be presented. Historical, philosophical, psychological, sociological, economical, educational, ecological, political and physiological. Cr 3.

#### **RLS 226 Leadership in Recreation/Leisure Activities**

This course will acquaint the student with a variety of recreation/leisure activities through actual participation. Also, the student will learn the rules and strategies of these activities. Cr 3.

**RLS 231 Arts and Crafts for Special Populations**

This course will explore and assist students in learning how to make various crafts in a laboratory setting. Majors will be given the opportunity to work with macrame, block printing, tapestry weaving, crewel, basket weaving, decoupage, and leather work. Cr 3.

**RLS 240 Personal and Community Health**

A lecture-discussion course for students interested in learning about the physical, mental, social, and spiritual dimensions of personal health. It examines how an individual goes about changing lifestyles in a contemporary society. This course will also help students to identify and understand quality personal and community health care programs. Cr 3.

**RLS 250 Adapted Aquatics**

This course is designed for Therapeutic Recreation majors who are interested in organizing swimming programs for the handicapped and for experienced swimming instructors desiring to update their background in this field. It will offer to students all the necessary skills and techniques for teaching handicapped youth how to swim and to discover the joys of participating in water activities. Cr 3.

**RLS 333 Environmental Recreation for Special Populations**

Technical training and experiences in an outdoor environmental setting utilizing adapted recreation and education for special groups. Cr 3.

**RLS 334 Environmental Recreation**

Instruction and practice of the skills involved in developing the various aspects of an environmental recreation program. The student will gain an understanding of theories and philosophies in organization, supervision and administration of environmental recreation programs related to home, school and community. Laboratory experiences in skill development will include: outdoor classroom construction, mountaineering, camping, and map and compass reading. Cr 3.

**RLS 335 Urban Recreation**

A course designed for those interested in exploring contemporary urban life in an experimental manner. Students will participate in a variety of field investigations in addition to lectures-discussions which address the problem of orientating oneself to new urban environments as well as the exploration of values held by each student that might affect their ability to meet the leisure time needs of urban residents. Cr 3.

**RLS 343 Perceptual-Motor Learning**

Introductory course to the field of perceptual-motor

learning including introduction to motor integration, psychological learning theories, measurement in research techniques in motor learning, and perceptual processes. Study of effects of practice, motivation, retention, and transfer. Cr 3.

**RLS 357 Parks and Recreation Facilities and Design**

An introduction to the general principles of modern design and maintenance of recreation and park facilities at the federal, state, municipal and commercial levels. Resource people, field trips and films are an integral part of this course as well as a written project. Cr 3.

**RLS 398 Independent Study in Recreation/Leisure**

This course is intended to provide students with an opportunity to pursue a project independently, charting a course and exploring an area of interest bearing upon it based on previous course experiences. A course outline must be prepared by the student and in addition a final written paper is required. By permission. Cr 3.

**RLS 414 Sports, Culture, and Society**

A lecture-discussion course for students on the social and cultural implications of sports in the "Seventies." Readings will be both far-ranging and specialized: the ritualistic side of competition and spectacle; the blurring of "professional" and "amateur," the fading of the hero-image; kid teams, kid champs, and adult aggressions; college conferences and academic values; racism, nationalism and the Olympics; thrills, violence, and gate-receipts; sport subcultures, from skateboarding to hang-gliding.

Additional readings will explore such contemporary issues in sports as winner-loser psychology, local pride and boosterism, mass *vs* elite values, sexual stereotypes, machismo politics, and "femlib." Students will weigh the *pros* and *cons* of today's fitness mania, current recruiting methods, the wide use of stimulants and drugs, and the reality of seven-figure salaries. Selected poetry and fiction will dramatize the joy and sadness of sports. Cr 3.

**RLS 415 Perspectives on Aging and Human Kinetics**

Study of prevalent aging theories and concepts affecting total fitness of the elderly, and analysis of exercise-activity patterns and programs for the aging. Bio-scientific aspects of motor efficiency and mobility pertinent to pre-retirement and retirement populations will be examined. Guidelines will be offered for appropriate program development and content for persons interested in fitness and well-being of senior citizens. Cr 3.

# School of Business, Economics and Management

DEAN  
John W. Bay

## Department of Business Administration

Chairman: Phillip Jagolinzer, 216 Bonney Hall, Portland.

Professors Findlay, Sturmer; Associate Professors Chandler, Clarey, Hodson, Jagolinzer; Assistant Professors B. Andrews, Carmichael, Cusack, Houlihan; Visiting Instructor Trombly.

## Department of Associate Business Administration

Chairman: Richard L. McKeil, 118 Bedford St., Portland.

Associate Professors S. Andrews, Gold, Gutmann, McKeil, Purdy, L. Taylor; Assistant Professor Coit; Visiting Instructor Lohmeyer.

## Department of Economics

Chairman: Robert C. McMahon, 227 Bonney Hall, Portland.

Professor Durgin; Associate Professors Bay, McMahon, Witherill; Assistant Professor Phillips.

The School of Business, Economics and Management offers a number of different programs to meet student needs. The School offers a two-year program in Business Administration leading to an Associate of Science in Business Administration degree. Four-year undergraduate programs are available in three areas of study: Accounting, Business Administration, and Economics. Upon successful completion of one of these fields the degree of Bachelor of Science in Business Administration or Economics is awarded. The School also provides a graduate program leading to the degree of Master of Business Administration.

## TWO-YEAR ASSOCIATE OF SCIENCE PROGRAM IN BUSINESS ADMINISTRATION

The two-year program in Business Administration is designed to serve two purposes: to prepare students who wish to complete their education in two years for employment in junior management positions in several different careers; and to provide a sound foundation for those students who perform well and who wish to transfer to the four-year business administration program at this University or at many other institutions.

While the program emphasizes business, it contains some courses in liberal studies such as English composition, literature, a social science, human relations and mathematics. Options within the associate program include Management-Accounting; Hotel, Motel, and

Restaurant Management; and Real Estate (offered only in the evening).

The freshman year is offered on both the Gorham and the Portland campuses. The second year is partially offered in Gorham. Bus service to Portland allows Gorham campus residents to take courses in Portland.

The Hotel, Motel, and Restaurant Management option is a cooperative and coordinated two-year program developed jointly by Southern Maine Vocational Technical Institute and the ABA program. The third semester is offered only on the SMVTI campus in their Culinary School. Students are enrolled at USM but attend at SMVTI and must provide their own transportation. Students return to the USM campuses to complete the fourth semester.

For persons employed in the banking industry, the University offers a banking option in the associate degree program in cooperation with the Portland Chapter of the American Institute of Banking. The program consists of a combination of AIB and USM courses. Those persons employed in the banking industry in the Greater Portland area should contact the Dean's office for further details.

## Options Offered in the Associate Degree Program

Upon completion of one of the following 60-hour programs with a grade point average of 2.0, a student will be awarded the degree of Associate of Science in Business Administration.

Graduates are equipped for employment at the junior management level in many fields of business. Some fields of business that graduates have entered are sales, retailing, banking, finance, management trainee programs, and accounting. Students who have a 3.0 cumulative average at the end of the first year or a 2.4 cumulative average at the end of their second year may transfer to the four-year business administration program. Students interested in transferring to the four-year business administration program at USM should contact the Dean to determine how courses taken in the associate program apply to the four-year program.

Any high school graduate may apply for admission to the two-year program. A college preparatory course is not required. Applicants should complete the regular University of Maine application form and specify the Associate in Business Administration program. Candidates must also complete the College Entrance Examination Board's general Scholastic Aptitude Test.

## Curriculum for the Associate of Science in Business Administration Degree

<b>The Freshman Year: Common to all Associate Programs, except as noted.</b>		<b>30 credit hours</b>
BUS 011 & BUS 012	Principles of Accounting .....	6
ECON 011 & ECON 012	Principles of Economics .....	6
ENG 010	Composition .....	3
ENG 120	Introduction to Literature .....	3
MS 010 & MS 011 or alternative math	Elementary & Intermediate Algebra .....	6
MS 109	Linear Systems	
MS 110	Elements of Mathematical Analysis	
BUS 095	Business and Society .....	3
Social Science Elective	.....	3

The following options require certain courses and completion of electives drawn from the following:

### ELECTIVES

- BUS 030 Investment Management
- BUS 013 Issues in Accounting
- BUS 015 Intermediate Accounting I
- BUS 016 Intermediate Accounting II
- BUS 190 Personal Finance
- BUS 064 Retailing
- BUS 067 Sales Management

#### A. The Management-Accounting Option

Accounting (30 credit hours)

- BUS 015 & BUS 016 Intermediate Accounting
- BUS 040 Principles of Management
- BUS 043 Problems of Small Business
- BUS 060 Marketing
- BUS 080 Business Law
- BUS 090 Introduction to Computers in Business
- BUS 093 Human Relations
- ENG 019 Expository Writing
- plus three hours from electives listed above

Management (30 credit hours)

- BUS 020 Business Finance
- BUS 040 Principles of Management
- BUS 043 Problems of Small Business
- BUS 060 Marketing
- BUS 080 Business Law
- BUS 090 Introduction to Computers in Business
- BUS 093 Human Relations
- ENG 019 Expository Writing
- plus six hours from electives listed above

#### B. The Hotel, Motel and Restaurant Option (30 credit hours)

\*Fall Semester at SMVTI, a block of 15 semester hours, second year:

- Front Office Management
- Hotel Law
- Food Fundamentals
- Food and Beverage Control
- Quantity Food

\*Limited Baccalaureate transfer credit

Spring Semester at USM:

- BUS 020 Business Finance
- BUS 040 Principles of Management
- BUS 060 Marketing or
- BUS 043 Problems of Small Business
- BUS 093 Human Relations
- ENG 019 Expository Writing



### C. The Real Estate Option (30 credit hours)

Omit Eng 120 from Freshman Year; replace it with:  
BUS 022 Real Estate Law

BUS 023 Real Estate Practice  
BUS 024 Real Estate Appraisal  
BUS 025 Real Estate Valuation  
BUS 026 Real Estate Finance  
BUS 040 Principles of Management  
BUS 043 Problems of Small Business  
BUS 060 Marketing  
BUS 093 Human Relations  
ENG 019 Expository Writing

## FOUR-YEAR UNDERGRADUATE PROGRAMS IN BUSINESS ADMINISTRATION AND ECONOMICS

The primary objective of the undergraduate program in Business Administration is to develop the student's abilities to assume the responsibilities of management. The program aims at developing skills and an attitude of mind that will enable the student to cope successfully with the changing problems of management in the years ahead.

The program is implemented in three general phases: First, the student acquires broad training in the arts and sciences for the necessary foundation upon which the student's future education will build. Second, the student pursues a program of study designed to provide an understanding of the major functional areas common to most business operations and a knowledge of certain fields which are particularly relevant to the study of management. This is referred to as the "core" program and includes basic courses in accounting, introduction to computers, economics, finance, business law, marketing, management and operations research. Third, the student undertakes to acquire a deeper knowledge of the selected major field. This is accomplished by taking 21 credit hours beyond the core program.

The undergraduate program in economics provides a broad preparation for a variety of careers as well as for graduate study in economics, business administration or law. Economics is a social science and as such must be studied in the perspective of a broad training in the liberal arts and sciences. Within the economics program, courses are available in such fields as: economic analysis, quantitative methods, international economics and the economics of monetary and fiscal policy.

### Applied Studies

Within the four-year programs in accounting, business administration, and economics, the following options are available to the student:

#### COOPERATIVE EDUCATION PROGRAM

The School of Business, Economics and Management offers a Cooperative Education Program in which students, while working in business or industry, may earn a maximum of 15 academic credits. This program combines the efforts of employers and educators in forming a meaningful educational experience in a wide range of areas including management, accounting, pro-

duction and marketing. Firms engaged in the Cooperative Education Program represent fields such as banking, public utilities, retailing and public accounting. Its primary value is educational, although it does provide the opportunity for students to earn money for college expenses. Students who desire further information should contact the School of Business, Economics and Management.

#### SMALL BUSINESS INSTITUTE

The School of Business, Economics and Management, through the Small Business Development Center, sponsors a program called the Small Business Institute. Juniors and seniors are selected to provide management counseling to the area's small businesses. Under the program, students working as a team, or individually, counsel and advise, in cooperation with a faculty adviser and representatives of the Small Business Administration, various businesses within southern Maine. The program provides an opportunity for relevant practice application of academic principles. Students may be involved in consulting in areas such as accounting, finance, management and marketing.

The course carries three hours of academic credit.

### Joint Programs with the College of Education and Department of Mathematics

In cooperation with the College of Education, the School of Business, Economics and Management offers an Economics Minor leading to the degree of Bachelor of Science in Education for students in the College of Education who wish to prepare themselves to teach economics in public and private schools.

In cooperation with the Mathematics Department, a minor in mathematics is available on an optional basis to all Economics Majors. The optional Mathematics Minor is: 21 credit hours (not to include statistics courses), with 12 of the credit hours in MS 152, 153, and 252. The remaining 9 credit hours are to be selected from the following: MS 290, 352, 354, 366, 380, 460; CS 260.

### General Graduation Requirements of the School of Business, Economics and Management for all Candidates for the B.S. Degree

All students are required to complete 120 hours.

To be eligible for a B.S. degree in the 4-year programs in the School of Business, Economics and Management, the student must have attained a cumulative grade point average of 2.0 or better:

- For all courses taken in 4-year programs at the University, and
- For all 4-year courses in business and economics.

## Requirements for a Bachelor of Science Degree in Business Administration

- A. General Foundation Courses** ..... 48 credit hours  
 Twelve hours of Humanities (Area 1)  
 Six hours of Fine and Applied Arts (Area 2)  
 Twelve hours of Social Sciences not to include Economics Courses (Area 4)  
 Six hours from Area 5: General  
 Twelve hours of Mathematics (Area 3) as noted below:  
   MS 109 Linear Systems  
   MS 110 Elementary Mathematical Analysis  
   MS 211 Probability  
   MS 212 Statistics
- B. Core Requirements in Business and Economics** ..... 30 credit hours  
 ECON 101 Principles of Economics I  
 ECON 102 Principles of Economics II  
 One 300 level ECON course  
 BUS 101 Principles of Financial Accounting  
 BUS 320 Business Finance  
 BUS 340 Principles of Management  
 BUS 360 Marketing  
 BUS 365 Operations Research/Management Science  
 BUS 380 Business Law  
 BUS 390 Introduction to Computers in Business
- C. Major Field Requirements** ..... 21 credit hours  
**Accounting Major**  
 BUS 301 Intermediate Accounting I  
 BUS 302 Intermediate Accounting II  
 BUS 305 Cost Accounting  
 BUS 310 Advanced Accounting I  
 BUS 311 Advanced Accounting II  
 BUS 313 Federal Tax Reporting  
 BUS 410 Auditing
- Business Administration Major**  
 BUS 102 Financial and Management Accounting  
 BUS 330 Investment Management  
 BUS 370 Managerial Marketing  
 BUS 450 Business Management and Policy  
 BUS 452 Dynamics of Organization and Behavior  
 Six hours of 300 level Business or Economics Electives
- D. Electives** ..... 21 credit hours

## Requirements for a Bachelor of Science Degree in Economics

- A. General Foundation Courses** ..... 36 credit hours  
 Six hours of Humanities (Area 1)  
 Six hours of Fine and Applied Arts (Area 2)  
 Six hours of Social Sciences not to include Economics Courses (Area 4)  
 Six hours from Area 5: General  
 Twelve hours of Mathematics (Area 3) as noted below:  
   MS 109 Linear Systems  
   MS 110 Elementary Mathematical Analysis  
   MS 211 Probability  
   MS 212 Statistics

(An optional, more rigorous mathematics sequence is available to those students who desire it. MS 152, MS 153, and MS 252 will substitute for MS 109 and MS 110. Students will still be required to take MS 211 and MS 212. Students who only wish to take MS 152 and MS 153 can substitute those two courses for MS 109 and MS 110. They still must take MS 211 and MS 212. An optional minor in mathematics is also available.)

It is recommended that students who have writing deficiencies take either ENG 009, Proficiency Writing or ENG 100, College Writing. Students having difficulty in communication should take THE 170, Public Speaking.

- B. Course Requirements in Economics and Business ..... 36 credit hours  
 Fifteen hours of core requirements:  
 ECON 101 Principles of Economics I  
 ECON 102 Principles of Economics II  
 ECON 301 Macroeconomic Analysis  
 ECON 302 Microeconomic Analysis  
 BUS 101 Principles of Financial Accounting

Completion of at least 21 additional hours in economics courses may also include HIST 338.

### Requirements for an Economics Minor for Students in the College of Education

#### Criteria For Admission and Retention of Students

Admission to the Education program by the College of Education plus a minimum of "C" grades in Economics courses.

#### Elementary Education — Economics Minor

ECON 101 & 102	Principles of Economics .....	6
ECON 350	Comparative Economic Systems .....	3
EC ED 300	Economic Concepts and Resource Materials for Educators .....	3
Additional Economic Electives .....		9
	<b>Total Credits</b>	<b>21</b>

Economics Minors will also meet all other requirements of the University and the College of Education.

### MASTER OF BUSINESS ADMINISTRATION

The School offers a Master of Business Administration degree. For those interested in this program a separate brochure is available at the School of Business, Economics and Management office, 228 Deering Avenue, Portland, Maine 04102.

#### DESCRIPTION OF COURSES IN THE ASSOCIATE DEGREE PROGRAM

##### **BUS 011 Principles of Accounting I**

An introduction to the accounting cycle, working papers, and financial statements. A practical emphasis on accounting methodology with coverage of inventory control, cash control, depreciation of plant assets and payroll. Cr 3.

##### **BUS 012 Principles of Accounting II**

A study of the procedures of accounting for owner's equity, long-term investments and the cost of manufacturing goods. The proprietorship, partnership, and corporation accounting techniques are developed in a practical approach. Prerequisite: BUS 011. Cr 3.

##### **BUS 013 Issues in Accounting**

This course provides a practical approach to general aspects of accounting not covered in more theoretical courses. Student involvement in applying accounting concepts and researching accounting problems is emphasized. Topics covered include financial statement use, auditing, budgeting, computer applications, cost management, tax requirements, and careers in accounting. Prerequisite: BUS 012. Cr 3.

##### **BUS 015 Intermediate Accounting I**

An intensive study of accounting theory including financial statements, the accounting for cash, temporary investments, receivables, and inventories. Prerequisite: BUS 012. Cr 3.

##### **BUS 016 Intermediate Accounting II**

The study of accounting theory including property, plant and equipment, intangible assets, current liabilities, long-term corporate capital, income tax allocation, and earnings per share. Prerequisite: BUS 015. Cr 3.

##### **BUS 020 Business Finance I**

A study of the promotion, organization, and financing of the single proprietorship, partnership, and corporation. Such topics as fund flows, ratio analysis, break-even analysis and leverage, time value of money concepts, cost of capital and capital budgeting are examined. Prerequisites: ECON 011, ECON 012, and BUS 012. Cr 3.

##### **BUS 022 Real Estate Law**

A study of real property law in general and Maine law in particular, land titles, acquisition and transfer, methods of ownership, rights of husband and wife, rights of landlord and tenant, easements, fixtures, land descriptions, mortgages, deeds, taxes, contracts, legal elements of brokerage relationship, selected environ-

mental and land use regulations, coastal island registry, physical regulations of subdivisions, zoning and selected federal laws. (Completion of this course with a grade of 75, or better, provides one-third of an approved course of study for those who wish to prepare for the State of Maine real estate brokers license examination.) Offered only in the evening. Cr 3.

#### **BUS 023 Real Estate Practice**

The course reviews the basic functions of the practicing real estate broker. Discussed are topics such as form of business organization, listing and sales procedures, financing, advertising, federal regulation through the Fair Housing Act and Truth-in-Lending Law, sources of financing, closing procedures, Realtor Code of Ethics, an introduction to tax aspects on real estate transactions. (Completion of this course with a 75, or better, provides one-third of an approved course of study for those who wish to prepare for the State of Maine real estate brokers license examination.) Offered only in the evening. Cr 3.

#### **BUS 024 An Introduction to Appraising Real Property**

This is an intensive course covering all real property appraising concepts and the technical skills employed in their applications to residential property. The course is designed for the beginning appraiser, real estate broker, lender, builder, and assessor. Included is a summary introduction to real estate economics and urban land studies. This is the first of three courses accepted by the Society of Real Estate Appraisers for credit toward a professional designation. Offered only in the evening. Cr 3.

#### **BUS 025 Real Estate Valuation**

This course develops a working knowledge of real estate value and valuation, a familiarity with construction methods and terms, working knowledge of the laws, codes and ordinances which control the development of real estate. (Completion of this course with a grade of 75, or better, provides one third of an approved course of study for those who wish to prepare for the State of Maine real estate brokers license examination.) Offered only in the evening. Cr 3.

#### **BUS 026 Principles of Real Estate Finance**

Methods of financing various types of real estate including sources of funds, analysis of lenders, risks, types of loans, government influences and participation, financing instruments, loan processing, defaults and foreclosures. Offered only in the evening. Cr 3.

#### **BUS 030 Investment Management**

Provides the planning and management of investment programs for all types of investors. Evaluates the various media of investments in terms of their risks and profits. The functions of the stock market and its behavior are examined. Prerequisites: ECON 011, ECON 012, and BUS 012. Cr 3.

#### **BUS 040 Principles of Management**

A comprehensive survey of all phases of the management of industrial and business enterprises. The influence of industrial relations is interspersed with the treatment of management's technical problems. Prerequisites: ECON 011 and ECON 012. Cr 3.

#### **BUS 043 Problems of Small Business**

Aspects of management that are uniquely important to small firms, in the interest of developing an understanding of the economic and social environment in which the small concern functions. Practice in decision-

making on the same types of problems that small businesses face utilizing actual case studies. Problems relevant to small business operations in Maine will be stressed. Prerequisite: BUS 011. Cr 3.

#### **BUS 060 Marketing**

A study of the marketing organization with a focus on product policies, distribution policies, promotional and pricing policies. Market research is implemented by getting students involved in casework, controversial issues, and local business community projects. Prerequisites: ECON 011, ECON 012, and BUS 011. Cr 3.

#### **BUS 064 Retailing**

Study of the retail distribution structure and of the problems involved in successful store operation under current conditions. Prerequisite: BUS 060. Cr 3.

#### **BUS 067 Sales Management**

Analysis of the problems facing marketing management in formulating sales policy and in managing the sales organization. Prerequisite: BUS 060. Cr 3.

#### **BUS 070-51 Introduction to Tax Opportunities in Real Estate**

This course is designed for real estate brokers, investors, and bankers. It covers Federal Income Taxation effects on purchasing, holding and selling of real property. The coverage includes tax aspects of owning a personal residence including basis, gain, deductible expenses, taxation, vacation homes and in-home office. Evening only, associate degree credit only. Cr 1.5

#### **BUS 071 Fundamental Principles of Real Estate Investment**

This course consists of a general study of internal rate of return, mortgage equity analysis and equity yield calculations. The student should have prior knowledge of practice, finance and valuation or possess equivalent experience. Evening only, associate degree credit only. Cr 1.5

#### **BUS 072 Landlord-Tenant Rights and Responsibilities**

This course covers the major Maine statutes and case law governing the landlord-tenant relationship and is directed primarily to the needs of residential income property owners and managers, as well as investors and attorneys. Evening only, associate degree credit only. Cr 1.5

#### **BUS 073 Practical Residential Property Management**

This course is designed for landlords, property managers, bankers and other real estate investors. It is intended to acquaint students with procedures for establishing real estate investment goals and practical daily operational procedures to achieve these goals. Evening only, associate degree credit only. Cr 1.5

#### **BUS 080 Business Law**

This course, an introduction to the study of business law, includes origins of the law, the conduct of a civil lawsuit, contract, agency, and property law, the law of negotiable instruments and secured transactions, and an overview of partnership and corporation law. Cr 3.

#### **BUS 090 Introduction to Computers in Business**

This course focuses on the role of the computer as an aid in managerial decision making. Computer operation and programming fundamentals including flow-charting and program writing in one of the common computer programming languages emphasizes business applications. Provides a basic knowledge of computer concepts; "hands on" problem solving with the computer; and the impact of computers on the busi-

ness world. Required for ABA program. Transfers to baccalaureate program, but does not replace BUS 390. Cr 3.

**BUS 093 Human Relations in Business**

Introduction to the behavioral sciences, emphasizing typical behavioral problems faced in business by employees and management. Lectures, case analysis, and outside readings are supplemented by involving the student in role playing and analyzing collected data. Cr 3.

**BUS 095 Business and Society**

An examination of the significant relationships between business and the social, political, and economic environment of our society for the purpose of evaluation of goals, values, ethics, and practices in the business world. Historical development of business and capitalism is covered. The industrial and commercial structures and functions in our society are described. Social relationships internal to the firms are explored. Special problems concerning mass production, automation, and employment are discussed along with other current and future issues and problems related to business and our society. Cr 3.

**ECON 011 Principles of Economics I**

A theoretical analysis of the basic characteristics, institutions, and operational activities of a modern capitalistic economy which is involved in the transformation of scarce economic resources into the goods and services demanded by consumers. Topics discussed include inflation, unemployment, government monetary and fiscal policy to achieve full employment, and economic growth. Cr 3.

**ECON 012 Principles of Economics II**

A theoretical analysis of the firm, and its role in the transformation of scarce economic resources into the goods and services demanded by consumers. Special attention is focused on the development of a market mechanism for the exchange of goods, services, and resources within a capitalistic economy. Topics discussed include consumer preferences and consumer behavior, production theory and production costs, the monopoly firm, and resource pricing. Cr 3.

**ENG 010 Composition**

Students will meet regularly in a lab setting to analyze professional writing samples as a way of sharpening their awareness of how to use language effectively. The writing assignments are organized to permit the student to manage his/her writing progress on an individualized basis and use the instructor as a critic and editor of his/her writing. Recommended for students in two-year programs. Prerequisites: ENG 009 or satisfactory completion of an approved test. Cr 3.

**ENG 019 Expository Writing**

Training in clear expository writing of formal reports, business communications, and related material. Cr 3.

**ENG 120 Introduction to Literature**

(See English Department course offerings) Cr 3.

**MS 010 Elementary Algebra**

(See Mathematics Department course offerings) Cr 3.

**MS 011 Intermediate Algebra**

(See Mathematics Department course offerings) Cr 3.

**MS 109 Linear Systems**

(See Mathematics Department course offerings) Cr 3.

**MS 110 Elementary Mathematical Analysis**

(See Mathematics Department course offerings) Cr 3.

**MS 211 Probability**

(See Mathematics Department course offerings) Cr 3.

**MS 212 Statistics**

(See Mathematics Department course offerings) Cr 3.

**BUS 190 Personal Finance**

(See Business Administration — Four-year course offerings) Cr 3.

## UNDERGRADUATE COURSES IN THE FOUR-YEAR PROGRAM IN BUSINESS AND ADMINISTRATION

**BUS 101 Principles of Financial Accounting**

An introduction to accounting principles and concepts. Emphasis is placed on understanding financial statements and the accounting for assets, liabilities, equities, revenue and expenses. Cr 3.

**BUS 102 Financial and Management Accounting**

(This course is designed for non-accounting majors.) It deals with the uses of accounting data for financial and management control. Emphasis is placed on the basic concepts associated with changes in financial position, consolidated financial statements, analysis of financial statements, income tax considerations, manufacturing operations, cost determinations and controls. Prerequisite: BUS 101. Cr 3.

**BUS 190 Personal Finance**

In dealing with the problems of managing personal finances, primary emphasis is placed on methods of measuring and evaluating expenditures to assure optimal benefit from the income. It includes an evaluation of typical occupations and incomes; of life insurance with the various types, investments and mutual funds; of the borrowing of money and use of credit; of taxes and estate plannings. The course work will be a series of readings with brief case problems in each of the major areas. (When taken by business or accounting majors, this course will give general elective credit.) Cr 3.

**BUS 199 Career Planning and Life Analysis**

The application of behavioral science approaches to the identification and achievement of personal and professional goals. Skill development exercises, diagnostic tests, and simulations help students explore and understand their personal profiles: their values, interests, abilities, accomplishments, patterns of wants and needs, and behavioral styles. Goal setting techniques project life-style preferences and profiles into strategies and action plans for professional and career development. Skill development approaches include the analysis of career outlets; learning how to plan; writing resumes; strategies for effective interviews; productive time management; and the building of contacts, information networks, and human support systems. Analyses, laboratory experiences, weekly logs of activities, group interactions, lectures, market analyses, and plans for personal and professional development. Cr 3.

**BUS 301 Intermediate Accounting I**

An intensive study of accounting theory including financial statements, the accounting for cash, temporary investments, receivables, and inventories. Prerequisite: BUS 101. Cr 3.

### **BUS 302 Intermediate Accounting II**

The study of accounting theory including property, plant and equipment, intangible assets, current liabilities, long-term corporate capital, income tax allocation, and earnings per share. Prerequisite: BUS 301. Cr 3.

### **BUS 305 Cost Accounting**

Concepts and analytical procedures necessary to the generation of accounting data for management planning and control and product costing. Emphasis is on job costing, process costing, standard costs, and variance analysis and direct costing. Prerequisite: BUS 101. (It is recommended that BUS 301 or BUS 102 be taken prior to BUS 305.) Cr 3.

### **BUS 310 Advanced Accounting I**

A study of accounting principles and theory related to changes in financial position, partnerships, consignment and installment sales, receiverships, and estates and trusts. Prerequisite: BUS 302. Cr 3.

### **BUS 311 Advanced Accounting II**

A study of accounting principles and theory related to home office and branch accounting; consolidations, mergers, parent and subsidiary accounting; governmental and institutional accounting. Prerequisite: BUS 302. Cr 3.

### **BUS 313 Federal Tax Reporting**

An overview of Federal tax laws as they affect individuals, partnerships, corporations, and related topics. Prerequisite: BUS 101. Cr 3.

### **BUS 320 Business Finance**

This course deals with the promotion, organization, and financing of the single proprietorship, partnership, and corporation. It also utilizes advanced cases and problems related to the above topics. Prerequisites: ECON 101 and ECON 102; BUS 101 and BUS 102 or BUS 301. Cr 3.

### **BUS 330 Investment Management**

Provides the planning and management of investment programs for all types of investors. Evaluates the various media of investments in terms of their risks and profits. The functions of the stock market and its behavior are examined. Prerequisite: BUS 320. Cr 3.

### **BUS 340 Principles of Management**

A comprehensive survey of all phases of management in public and private sectors. The influences of human, social and political factors are interspersed with the treatment of management's structural and technical processes. Analyses focus on such themes as planning, decision-making, organizational design, supervisory skills, communications, and information systems. Prerequisites: ECON 101 and ECON 102. Cr 3.

### **BUS 346 Personnel Management**

The selection, training, and management of personnel in private and public sectors, including elements of wage and salary administration, testing, training and labor relations. Designed for the student interested in administration, office management, or personnel work in education, business, engineering, public service, and other fields. Prerequisite: BUS 340 or permission of instructor. Cr 3.

### **BUS 348 Industrial Relations**

A study of industrial relations patterns in the U.S. Major focus is on the relationship between management and labor (organized and unorganized), and the bargaining, administration, and interpretation of contracts, the problem of dispute settlement, and a com-

parison of methods used in the U.S. and abroad. Attention is also given to industrial relations in unorganized firms and in the Civil Service. Prerequisite: BUS 340 or permission of instructor. Cr 3.

### **BUS 360 Marketing**

Explores the "marketing concept" and considers the effect of product place, promotion and price on strategic planning. Investigates the components of market research, target marketing, positioning and other related issues. Prerequisites: ECON 101 and ECON 102. Cr 3.

### **BUS 363 Advertising**

Students will explore the evolution of advertising; forms and medium used and their relationship to the product, the climate, the target market all within the framework of the marketing concept. Prerequisite: BUS 360. Cr 3.

### **BUS 365 Operations Research/Management Science**

A survey of quantitative methods and tools which are commonly used in sophisticated managerial decision-making. Mathematical models are constructed and applied, with the computer's aid, to a wide range of real-world business situations. Topical coverage includes decision analysis, inventory models, network analysis, simulation, queuing models, applied stochastic processes, dynamic programming and non-linear programming. Prerequisite: MS 212. Cr 3.

### **BUS 370 Advanced Marketing**

Emphasizes the integration of marketing strategies with other activities of a corporation. Through such activities as case studies and simulation exercises as well as careful analysis of current marketing literature, students are provided with the opportunity to develop decision-making skills in the marketing area. Prerequisite: BUS 360. Cr 3.

### **BUS 373 Market Research**

Consideration of market research as a management planning and evaluative tool. Emphasis on problem formulation, exploratory research, research design, basic observational and sampling requirements, data analysis, interpretation and sampling. Prerequisites: BUS 360 and MS 212. Cr 3.

### **BUS 380 Business Law**

This course, an introduction to the study of business law, includes a thorough survey of the preparation for and conduct of a civil lawsuit, a brief discussion of criminal law, and a broad overview of contracts, agency, negotiable instruments, partnerships, corporations, secured transactions, labor law, and bankruptcy. This course is intended to provide a broad overview of business law and the Uniform Commercial Code. Cr 3.

### **BUS 381 Business Law II**

An opportunity to continue the study of business law and to thoroughly evaluate selected topics such as corporate reorganizations and combinations, antitrust law, business organization, and tax planning and estate planning. This course is designed for students who want to do in-depth analysis of selected areas in business law. Prerequisite: BUS 380 or BUS 080 with permission of instructor. Cr 3.

### **BUS 390 Introduction to Computers in Business**

The role of the computer as an aid in managerial decision-making. Computer operation and programming fundamentals including flow charting and program writing in one of the common computer program languages emphasizing business applications. Cr 3.

**BUS 391 Computers and Decision Models in Business**  
A more in-depth examination of the role of the computer as an aid in managerial decision-making. Emphasis on strengthening the student's ability to build and properly utilize computerized decision-models for problem-solving in business and industry. Prerequisites: BUS 390, MS 211. Cr 3.

**BUS 395 Cooperative Education — Business Administration I**

The student has the opportunity to relate academic knowledge to practical experience in the business world. The University makes arrangements with certain institutions and/or industries to employ students to fill specific jobs on a semester basis. The student's work is in a related field, and the work experience increases in difficulty and responsibility as the student progresses through the academic curriculum. The work experiences are approved in advance by the faculty. Open to sophomores, juniors, and seniors in the School of Business, Economics and Management with permission. Cr 1-5.

**BUS 396 Cooperative Education — Business Administration II**

Open to sophomores, juniors, and seniors in the School of Business, Economics and Management with permission. Prerequisite: BUS 395. Cr 1-5.

**BUS 397 Cooperative Education — Business Administration III**

Open to juniors and seniors in the School of Business, Economics and Management with permission. Prerequisite: BUS 396. Cr 1-5.

**BUS 410 Auditing**

A study of auditing philosophy and theory relative to the examination of financial statements and other data. Coverage includes internal control, auditing standards and procedures, and the legal and ethical responsibilities of the independent auditor. Prerequisite: BUS 302. Cr 3.

**BUS 420 Seminar on Current Developments and Practices in Accounting**

A review of APB opinions, FASB statements, SEC role in accounting, and other current issues. Prerequisite: BUS 302 and senior standing, or permission of instructor. Cr 3.

**BUS 425 The Small Business Venture**

This course is designed to outline the excitement and problems encountered in the small business venture. It will integrate the areas of accounting, finance, management, and marketing as these relate to small businesses and to explain why certain businesses fail while others prosper. Forms of ownership, financing alternatives, recordkeeping requirements, management and marketing philosophies, personal characteristics necessary for success, and ethical and social responsibilities will be covered. The course utilizes case studies as well as outside experts who will assist the designated instructor. Prerequisites: BUS 320, 340, 360. Cr 3.

**BUS 450 Business Management and Policy**

Administrative practice at the higher levels of business management through case analysis and discussion. The course attempts to coordinate the background of business majors in the formulation and administration of sound business policy. Prerequisites: BUS 102 (or BUS 301), BUS 340, and BUS 360. Cr 3.

**BUS 452 Dynamics of Organization and Behavior**

An analysis of the interplay between individual and group behavior, leadership styles and the culture of an organization. The findings of behavior science are applied to such processes as motivation, influence, the structure of work, organizational design, leader-group relations and organizational change. Models, case studies, simulations and applications. Prerequisites: BUS 340 or BUS 348 or permission of the instructor. Cr 3.

**BUS 490 Independent Readings and Research in Business**

Selected topics in the various areas of accounting, finance, management, and marketing may be studied and researched on an independent basis. Prerequisites: senior standing and permission of the instructor and chairman of the department. Cr 1-6.

**BUS 491 Small Business Institute**

This course is designed to allow the student to apply the concepts of business administration, economics and accounting to operational problems in the field. Assignments are arranged by the School of Business, Economics and Management in conjunction with agencies such as the Small Business Administration for an off-campus consulting experience in a business firm or other appropriate institutional setting. Prerequisites: open to qualified juniors and seniors with approval. Cr 3.

## UNDERGRADUATE COURSES IN THE FOUR-YEAR PROGRAM IN ECONOMICS

**ECON 101 Principles of Economics I**

A theoretical analysis of the basic characteristics, institutions, and operational activities of a modern capitalistic economy which is involved in the transformation of scarce economic resources into the goods and services demanded by consumers. Topics discussed include inflation, unemployment, government monetary and fiscal policy to achieve full employment, and economic growth. Cr 3.

**ECON 102 Principles of Economics II**

A theoretical analysis of the firm and its role in the transformation of scarce economic resources into the goods and services demanded by consumers. Special attention is focused on the development of a market mechanism for the exchange of goods, services, and resources within a capitalistic economy. Topics discussed include consumer preferences and consumer behavior, production theory and production costs, the monopoly firm, and resource pricing. Cr 3.

**ECON 301 Macroeconomic Analysis**

A theoretical analysis of the basic forces that cause inflation, growth, and fluctuations in economic activity. The effects on employment and other factors are thoroughly treated. Stabilization policies are examined and evaluated. Prerequisites: ECON 101 and ECON 102. Cr 3.

**ECON 302 Microeconomic Analysis**

Price, income, and employment theory as tools in the study of economics. Prerequisites: ECON 101 and ECON 102. Cr 3.

**ECON 305 Mathematical Economics**

This course will cover the development and application

of contemporary quantitative methods to the analysis of economic theory. Primary emphasis will be placed upon optimization theory and techniques for solving systems of simultaneous equations. These tools will be developed within the framework of economic models. Prerequisites: ECON 101, 102 and MS 109 and 110.

Cr 3.

#### **ECON 306 Econometrics**

Econometrics is a special field of economics in which models are used to test the validity of hypothesized theoretical relationships against actual data. Topics covered include: the bivariate linear regression model, heteroscedasticity, multicollinearity, serial correlation of errors, and two-stage least squares. Econometric forecasting and simultaneous equation estimation will be discussed. Prerequisites: ECON 101, 102 and MS 212.

Cr 3.

#### **ECON 310 Money and Banking**

An extensive examination of the operation and performance of the American banking and financial system. Includes a study of monetary theory and policy. Debt management and present international monetary problems are discussed briefly. Prerequisites: ECON 101 and ECON 102.

Cr 3.

#### **ECON 320 Labor Economics**

A discussion of labor in an industrial society serves as background for an examination of the origins and structure of the labor movement, the theories of the labor movement, the theories of wages and labor's income, the process of collective bargaining in industrial relations, and the development of labor legislation and social security laws. Prerequisites: ECON 101 and ECON 102. (Not offered every year.)

Cr 3.

#### **ECON 350 Comparative Economic Systems**

The structures and operating principles of the major contemporary economic systems are examined and compared. Prerequisite: ECON 101.

Cr 3.

#### **ECON 351 Economic Systems of the Soviet Union**

A study of the development, institution, and structure of the Soviet economy. Emphasis on current theories and problems of central planning. Prerequisites: ECON 101 and ECON 102.

Cr 3.

#### **ECON 360 Economic Development**

The theories and practices of interregional and international economic development. Special attention is

given to developmental problems of emerging nations. Prerequisite: ECON 101.

Cr 3.

#### **ECON 370 International Trade**

The principles and practices of international trade and finance are thoroughly treated. Special emphasis is given to current trends in the international economy and to United States commercial policy. Prerequisites: ECON 101 and ECON 102.

Cr 3.

#### **ECON 380 Public Finance and Fiscal Policy**

Public expenditure theory; principles of taxation; the federal budget and alternative budget policies; federal tax policy; fiscal policy for stabilization; federal debt. Prerequisites: ECON 101 and ECON 102.

Cr 3.

#### **ECON 390 Energy Economics**

The purpose of this course is to assist the student in analyzing the "energy crisis" from an economic perspective. Topics to be covered include: the concepts of energy and efficiency, the role energy plays in the U.S. economy, stocks of energy resources and the role of the government in creating and/or curing the crisis. Various energy related policies will be reviewed. Some time will be devoted to an analysis of alternate energy sources and technologies. Prerequisites: ECON 101 and 102.

Cr 3.

#### **ECON 450 Readings in Economics**

A series of readings and discussions of important books of a socio-economic and politico-economic nature — books with which the well-informed economics major should be familiar but which, due to time constraints, have not been integrated into the student's formal course work. Prerequisites: nine hours of economics.

Cr 3.

#### **ECON 490 Independent Readings and Research in Economics**

Selected topics in the various areas of economics may be studied and researched on an independent basis. Prerequisites: senior standing and permission of the instructor.

Cr 1-3.

#### **ECED 300 Economic Concepts and Research**

##### **Materials for Educators**

A study of the simplification of economics concepts for presentation at elementary and secondary grade levels; also the study and preparation of various resource materials used in presenting economic concepts at these levels. Prerequisite: permission of the instructor. (Offered through independent study.)

Cr 3.



# School of Nursing

## DEAN

Audrey J. Conley

## ASSISTANT DEAN

Carla H. Mariano

### FACULTY:

Babeau, Constance	Instructor
Bailow, Judith	Instructor
Bellone, Rosemary	Associate Professor
Bergstrom, Linda	Instructor
Brannigan, Claire	Assistant Professor
Burson, Janet	Instructor
Coolidge, Jane	Assistant Professor
Cotton, Jean	Associate Professor
Curtis, Nancy	Assistant Professor
Czupryna, Louise	Instructor
DeRestie, Steven	Instructor
Drew, Judith	Instructor
Dubowick, Dorothy	Associate Professor
Fournier, Margaret	Assistant Professor
Garmey, Madeleine	Lecturer
Healy, Phyllis	Assistant Professor
Henderson, Joyann	Assistant Professor
Hill, Meredith	Instructor
Jensen, Helena	Associate Professor
MacDonald, Susan	Visiting Instructor
MacPherson, Kathleen	Associate Professor
MacVane, Rhoda	Assistant Professor
Mirochnick, Linda	Instructor
Nicoll, Leslie	Instructor
Normandeau, Jeanne	Associate Professor
Péake, Helen	Instructor
Shoobs, Dorothy	Associate Professor
Thurber, Louise	Lecturer
Tryon, Phyllis	Associate Professor
Tukey, Geraldine	Associate Professor
Ullman, Sallie	Instructor
Walton, Rowena,	Instructor
Yuson, Merrian	Instructor
Dorbacker, Beatrice	Associate Professor (Co-Project Director B.U. Outreach Masters Program)
Ellis, Ann	Associate Professor (Coordinator, Baccalaureate Nursing Education at Extended Sites)

**NURSING LAB:** Sarah Whitney, Director

**ADJUNCT FACULTY:** Agnes Flaherty, Carolyn Fish, Cheryl Ciechomski, Eleanore Irish.

**BUREAU OF CONTINUING EDUCATION FOR NURSING:** Mary Ann Rost, Director.

**FAMILY NURSE ASSOCIATE PROGRAM:**  
Director: To be announced; Nurse Director: Mildred Roche.

The School of Nursing offers a variety of programs that are in keeping with its defined aims. The School's aims are to:

1. provide a baccalaureate education in nursing within a state institution for higher education
2. prepare a beginning professional nurse for practice in a variety of settings
3. prepare a beginning professional nurse who can respond to community health needs
4. provide a program for the continued learning needs of practicing nurses
5. provide a foundation for advanced study in nursing

Programs offered by the School of Nursing are a baccalaureate program which leads to the Bachelor of Science degree with a major in nursing, short-term educational programs for practicing nurses throughout the State of Maine through the Bureau of Continuing Education for Nursing, and a certificate post-professional program — Family Nurse Associate. The School has an agreement with Boston University whereby Boston University graduate courses in nursing are offered at sites in Maine.

## BACCALAUREATE PROGRAM IN NURSING

The University of Southern Maine School of Nursing offers a baccalaureate nursing program with an upper division major for professional study. Each nursing student must complete 120 credits which include nursing, general education, liberal arts and other supportive courses. Upon successful completion of the program the student is awarded a Bachelor of Science degree with a major in nursing, and is eligible to take the State Board Examination for R.N. licensure. The School of Nursing is approved by the Maine State Board of Nursing and is accredited by the National League for Nursing.

The Philosophy of Nursing for the baccalaureate program incorporates these beliefs:

Man<sup>1</sup> is a biological, psychological, social and cultural being who is constantly growing and developing throughout the life cycle. Man has the right to set his own goals and the potential to work toward their attainment. His ability to do this is enhanced by his

awareness and acceptance of self. Man relates dynamically with his environment which includes his family, groups, the community, and the world in which he lives. This environment includes stressors that facilitate or inhibit Man's ability to grow and develop.

Health is a state that exists when Man is free to grow and develop toward his life goals with minimum possible inhibiting stressors and maximum facilitating stressors. Health is relative to the individual and the society in which he lives. When inhibiting stressors impede growth and development and the ability to attain life goals and when facilitating stressors are not sufficient to promote growth and development, then illness occurs. When Man is aware that his potential to reach his life goals is impeded, he may choose to utilize the health care system.

Nursing's goal is to enhance MAN's<sup>2</sup> ability to grow and develop by maximizing facilitating stressors and minimizing inhibiting stressors. To reach this goal, nursing's role is one of health promotion. This role enables nursing to maximize facilitating stressors and minimize inhibiting stressors, even if MAN has not entered the health care system. To carry out these functions accountably and responsibly, nursing uses the nursing process which is a systematic, dynamic method of problem solving requiring well-defined communication skills.

Scientific and medical knowledge is rapidly expanding and societal demands are constantly changing; therefore, the nurse must function in a flexible way to meet these changing demands. To be flexible, the nurse must think critically and function as a leader. As a critical thinker, the nurse uses the nursing process as a research base. As a leader, the baccalaureate nurse directs, guides, and evaluates the nursing care provided by other team members. The baccalaureate nurse identifies changes needed in the health care system and assists in bringing about the changes to improve health care.

The emerging role of the baccalaureate nurse graduate, in addition to the leadership role, requires sophisticated assessment of facilitating and inhibiting stressors that affect MAN's growth and development. The baccalaureate nurse graduate will function in this emerging role in any setting with an increase in practice in the community. The graduate will be prepared to deliver primary nursing care in rural as well as urban communities.

It is essential that each baccalaureate nurse graduate define a personal nursing philosophy which includes a synthesis of personal view, the views of the School and of the profession. As a responsible individual, the nurse is a contributing member of the community both personally and professionally and is committed to continue learning and professional development.

Learning is a process of interaction between the individual and the environment which results in a change in behavior. The learning relationship requires a shared commitment to identify program and course objectives clearly. The learner has an opportunity to develop personal learning objectives within the framework of the program and to select personal learning experiences in order to meet program objectives. Commensurate with

students' needs and abilities, the teacher serves as a guide by presenting alternatives, raising questions, noting incomplete and inconsistent data, stimulating interest, helping students identify relationships and validating student decisions, presenting content, summarizing content formatively and summatively. Throughout the entire learning process, evaluation is shared by the teacher and learner based on mutually agreed upon learning objectives.

<sup>1</sup>Man — Individual Man

<sup>2</sup>MAN — Individuals, Families, Groups and Communities

## ADMISSION POLICY

Students interested in pursuing a Bachelor of Science in nursing first must be admitted to the University, and upon admission will be classified as pre-nursing candidates. Admission to the University of Southern Maine is through the Admissions Office of the University, and prospective students should refer to the sections in this catalog on admissions policies required by the University. Admission of pre-nursing candidates to the School of Nursing is determined by the School of Nursing Admissions Committee. Pre-nursing candidates will be evaluated for admission to the nursing major on the basis of their grade point average, academic standing, standardized test results, letters of recommendation, a personal interview, and successful completion of all prerequisites (63.5 credits) outlined in the School of Nursing section of this catalog entitled Prerequisites for the Nursing Major.

## ADMISSION PROCEDURE

Applicants for admission to the School of Nursing must:

1. Have successfully completed a minimum of 30 credits in the prescribed prerequisites.
- \*2. File an application with the School of Nursing by November 15 of the year prior to desired admission to the upper division nursing major.

To complete the application file, the following documents must be received by the School of Nursing Admissions Committee prior to January 15 of the year in which admission to the School of Nursing is desired:

1. Official transcripts of all college courses completed.
2. Current scores (taken within the last five years) on the Scholastic Aptitude Test.
3. Three letters of recommendation.
4. The completed Medical History and Physical Examination Form.

Courses from other colleges or universities are evaluated by the Admissions Office of the University of Southern Maine for transfer credits.

**APPLICATIONS CANNOT BE PROCESSED UNTIL ALL THE ABOVE DOCUMENTS HAVE BEEN RECEIVED.**

After receipt of all the appropriate documents, the Admissions Committee reviews the applicant's credentials. A personal interview is then scheduled. When the Committee has acted upon an application, the applicant is advised by letter of the Committee's decision prior to pre-registration of the Fall semester. All admissions are contingent upon successful completion of all prerequisites.

\*Applicants planning to take senior level courses at an extended site should refer to the School of Nursing section of this catalog entitled Baccalaureate Nursing Education at Extended Sites.

### CHALLENGE POLICY

After admission to the School of Nursing, students may wish to challenge junior level courses. The following policy must be followed in each case:

1. The applicant must:
  - a. Meet general admission requirements of the University of Southern Maine.
  - b. Complete the prerequisites of the nursing major.
  - c. Be admitted to the University of Southern Maine School of Nursing.
  - d. Be a registered nurse who has graduated from an NLN accredited program.
2. Challenge exams will be offered during the first summer session.
3. The fee for challenge exams will be the same as the tuition for the courses challenged.
4. A challenge exam may be taken only once for each course.
5. When challenging exams for courses which include a clinical component:
  - a. The written exam is worth 50% of the final grade.
  - b. The clinical performance is worth 50% of the final grade.
  - c. The written exam must be passed prior to taking the clinical exam.
  - d. Each component of the challenge exam must be passed with a score of 70% or more; otherwise no credit will be given.
6. The student who fails the challenge exam may take the course in keeping with the University policy on repeating courses. The applicant who subsequently fails the course will be withdrawn from the School of Nursing.
7. Both credit and quality points will appear on the transcript of a student who challenges junior level courses.

### PREREQUISITES FOR THE NURSING MAJOR

Prerequisite courses to the upper division nursing major consist of general education courses required by the University, physical and behavioral sciences, humanities, and Introduction to Nursing. Pre-nursing candidates must achieve a minimum of 2.25 cumulative grade point average in order to be eligible to apply for admission to the upper division nursing major. D grades or below are not acceptable in courses cited as specific requirements for the nursing major.

NOTE: Upon applying to the upper division nursing major, pre-nursing candidates must have completed their science requirements within the last eight (8) years.

### Prerequisite Courses

#### FRESHMAN YEAR

	<b>Credit Hours</b>
BIO 101	Biological Principles . . . . . 3
BIO 102	Biological Experiences . . . . . 1
BIO 111	Human Anatomy and Physiology . . . . . 3
BIO 112	Practical Human Anatomy and Physiology . . . . . 1.5
CHEM 101	Chemistry for Health Sciences . . . . . 3
CHEM 102	Introduction to Laboratory Measurement . . . . . 1
CHEM 103	Introduction to Organic and Biochemistry . . . . . 3
CHEM 104	Introduction to Organic and Biochemistry Lab . . . . . 1
PSY 101	General Psychology . . . . . 3
HUMANITIES	Classics, Literature, English, Philosophy, Foreign Languages: French, German, Greek, Latin, Spanish . . . . . 3 (ENG 100 does not meet Humanities requirements)
FINE ARTS	Art, Art History, Music, Theatre, Dance . . . . . 3
*GENERAL ELECTIVES (Any area)	. . . . . 6

#### SOPHOMORE YEAR

BIO 281	Human Microbiology and Human Disease . . . . . 3
BIO 282	Human Microbiology and Human Disease Lab . . . . . 2
SOC 100	Introduction to Sociology . . . . . 3
SOC ELECTIVES	May be Anthropology, Sociology or Political Science course: ANY 101, POL 101, SOC elective . . . . . 3
INTRO. TO STATISTICS	. . . . . 3
FN 352	Human Nutrition . . . . . 3

NSG 200	Introduction to Nursing, (to be taken Sophomore - Spring Semester) . . . . .	3
HUMANITIES	Classics, Literature, English, Philosophy, Foreign Languages: French, German, Greek, Latin, Spanish . . . . .	3
	(ENG 100 does not meet Humanities requirements)	
FINE ARTS	Art, Art History, Music, Theatre, Dance . . . . .	3
*GENERAL ELECTIVES (Any area)	. . . . .	6
	<b>TOTAL</b>	<b>63.5</b>

NOTE: A & P Lab credit discrepancies may allow 63-64 credits.

\*Of the 12 credits in General Electives, students may have only 3 credits in PE/RLS in this area.

### UPPER DIVISION NURSING MAJOR

The upper division nursing major (junior and senior years) is offered at the University of Southern Maine and selected extended sites and consists of clinical nursing courses, courses supportive to nursing content, and elective courses. Clinical nursing courses are organized in a manner that facilitates the integration of nursing and other disciplines. These courses focus on the use of the Nursing Process to promote and maintain the health of clients. Students have experiences which involve assessment, planning, implemen-

tation and evaluation of care for individuals of all ages, families, groups of clients, and communities on all spectra of the health/illness continuum. Inpatient and outpatient hospital settings, community health agencies, community experiences, nursing homes, and schools are used for clinical experience.

Nursing majors must purchase uniforms for approximately \$100 before entry into the junior year. It is the students' responsibility to provide his/her own transportation for junior and senior year clinical experiences.

#### JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
NSG 300 Nursing Process I	7	NSG 305 Nursing Process II	7
NSG 301 Growth & Development	3	Pathophysiology	3
NSG 302 Pharmacology	3	General Elective	3
General Elective	3	NSG 306 Nursing Elective	
	<u>16</u>	or 307 or	
		NSG 395 Nursing Independent Study	2-3
			<u>15-16</u>

#### SENIOR YEAR

	Credits		Credits
NSG 400 Nursing Process III	7	NSG 405 Nursing Process IV	6
NSG 401 Health-Related Research	2-3	NSG 406 Community Health	3
NSG 402 Patterns of Emotional Disorders	3	NSG 407 Leadership in Health Care	5
NSG 403 Nursing Elective		NSG 408 Nursing Elective	
or 404 or		or 409 or	
General Elective	3	NSG 495 Nursing Independent Study	2-3
	<u>15-16</u>	or General Elective	
<b>TOTAL</b>	<b>(62-65)</b>		<b>16-17</b>

NOTE: Students who successfully challenge the entire junior level must take a minimum of one (1) Nursing Elective at the senior level.

#### CLASS OF 1981

Students in the Class of 1981 refer to the School of Nursing section in the University of Southern Maine Catalog 1979-1980.

### ACADEMIC POLICIES — UPPER DIVISION NURSING MAJOR

1. **Retention/Progression:** It is expected that students remain with their class. To do so, the student must maintain a class standing with a semester grade-point average of 2.00. The courses in the nursing major are sequential and must be passed with a minimum grade of C before progressing to the next level. A student who is unable to maintain this average will be either suspended from

the University in accordance with University policies or required to change his/her major to a different program.

2. **Repeating:** A "D" grade in the nursing course interferes with or prevents the student from progressing to the next level. A student who receives a "D" grade in a nursing course but is able to maintain a semester grade point average of 2.00 will be allowed to repeat the course one time when that course is offered again. A student who receives a

“D” grade but is unable to maintain a semester grade point average of 2.00 will either be suspended from the University in accordance with University policies or required to change his/her major to a different program.

**3. Grading System:**

A = 4.00 quality points = 90-100  
B+ = 3.33 quality points = 86-89  
B = 3.00 quality points = 80-85  
C+ = 2.33 quality points = 76-79  
C = 2.00 quality points = 70-75  
D = 1.00 quality point = 60-69  
Not acceptable for progression  
F = 0.00 quality points = below 60  
Automatic School of Nursing Withdrawal

**4. Incomplete Grades:** A temporary grade given by the faculty when a student, because of extraordinary circumstances, has failed to complete course requirements in a nursing course. The courses in the nursing major are sequential. The incomplete grade must be replaced by a letter grade before progressing into the next level. Failure to progress sequentially in the program will result in either suspension from the University in accordance with University policies or a requirement to change the major to a different program.

**6. Leave:** A student who has a health problem or need may apply for a leave of absence. With the progression policies in mind and the availability of spaces, each case will be reviewed for readmission on an individual basis.

**6. Withdrawal:** A student may elect to withdraw from a major nursing course following the University policy. With the progression policies in mind and the availability of spaces, each case will be reviewed for readmission on an individual basis. If the student wishes to withdraw from the program, the student will either be suspended from the University in accordance with University policies or required to change his/her major to a different program. \*\*N.B.

**7. Graduation Requirements:** To be eligible for graduation the student must have successfully completed the 120 credit hours with a cumulative point average of at least 2.00.

**8. Student Appeal Policy:** A student who feels there is a just cause for an academic grievance regarding grades or unfair discrimination may initiate an academic appeal. A copy of the Policy and Procedure is available in the Dean's office.

\*\*N.B. Major nursing courses refer to all nursing courses offered in the upper-division with the exception of nursing electives and independent studies.

## COURSE DESCRIPTIONS

### NSG 200 Introduction to Nursing

This course introduces the student to the School of Nursing philosophy and curriculum as well as concepts in the nursing major which are MAN, growth and development, health, role, stressors, and nursing process. Historical perspectives and processes of profes-

sional nursing are explored. Prerequisites: sophomore standing in the University or permission of faculty.

Cr 3.

### FN 352 Human Nutrition

A course designed to show wherein the given nutrients serve to meet the metabolic processes required for life. Herein a physiologic and biochemical approach is used. Prerequisites: Anatomy and Physiology; General and Organic Chemistry; Biochemistry. N.B.

Cr 3.

N.B. For challenge information, contact Helena Jensen. Challenge arrangements must be made by October 1.

### NSG 300 Nursing Process I

Introduces the student to basic cognitive, affective and psychomotor skills fundamental to nursing practice. Utilization of the nursing process is emphasized in relation to promotion and maintenance of health of the well individual. Concepts and selected theories provide a basis for understanding the effects of facilitating and inhibiting stressors on MAN's growth and development. Didactic classroom and experiential learning in the Learning Resource Lab provides the opportunity to practice and develop basic skills which will be applied in selected clinical settings. Prerequisites: NSG 200. Junior level standing in the SON. Concurrent: NSG 301, 302.

Cr 7.

### NSG 301 Growth and Development

This course focuses on the human growth and developmental processes throughout the life cycle. Developmental theories will be explored with an emphasis on biological, psychological, social and cultural concepts and their relationship to health. Prerequisites: General Psychology; concurrent: NSG 300, 302. Open to other than nursing students with permission of faculty.

Cr 3.

### NSG 302 Pharmacology

Basic concepts in pharmacology including major drug categories, drug interactions, the use of the nursing process in the therapeutic administration of drugs, legal implications and the physical and psychological effects of drugs on various age groups will be emphasized. Concurrent: NSG 300, 301. Open to other than nursing students with permission of faculty.

Cr 3.

### NSG 305 Nursing Process II

Utilizes the nursing process in promotion, restoration and maintenance of health with individuals and families experiencing stressors which do not significantly impede growth and development but which do require nursing and/or other intervention. Concurrent: Pathophysiology.

Cr 7.

### NSG 306 or 307 Nursing Elective

Study of a selected area in nursing. Open to other than nursing students with permission of faculty.

Cr 3.

### NSG 395 Nursing Independent Study

Individualized study in an area of nursing with the permission of the instructor.

Cr 2-3.

### NSG 400 Nursing Process III

Applies the nursing process with individuals, families, and groups experiencing stressors in acute situations which have life threatening and/or long term health implications. Collaborates and consults with health team members in a variety of settings. Prerequisites: NSG 305, Pathophysiology. Concurrent: NSG 401, 402.

Cr 7.

### **NSG 401 Health-Related Research**

Various types and methods of research, concepts basic to the research process including sampling, validity, reliability and ethics will be introduced. The student evaluates and utilizes health-related research and considers implications for nursing practice and the nurse as a researcher. (Students may register for one extra credit if they plan to participate in a selected research project individually or as part of a group.) Prerequisites: Statistics. Open to other than nursing students with permission of faculty. Cr 2-3.

### **NSG 402 Patterns of Emotional Disorders**

Examines the etiology, development and manifestations of emotional disorders in MAN (individual, group, community) from biological, psychological, social and cultural perspectives. Prerequisites: Growth and Development, General Psychology. Cr 3.

### **NSG 403 or 404 Nursing Elective**

Study of a selected area in nursing. Open to other than nursing students with permission of faculty. Cr 3.

### **NSG 405 Nursing Process IV**

Synthesizes concepts from nursing theory and practice and behavioral and physical sciences, and humanities in applying nursing process with individuals, families, groups and communities experiencing multiple and/or complex stressors. Collaborates, consults and coordinates with health team members in any setting. Prerequisites: NSG 400, 401, 402. Concurrent: NSG 406, 407. Cr 6.

### **NSG 406 Community Health**

Concepts and principles basic to the development and maintenance of community health. Emphasis is on population aggregates in the community as the unit of service. The epidemiological approach is stressed in surveying current major health issues. Concurrent: NSG 405. Open to other than nursing students with permission of faculty. Cr 3.

### **NSG 407 Leadership in Health Care**

Theories of leadership, organizations and planned change are presented. The student will analyze systems and methods of health care delivery and identify factors and strategies which inhibit or facilitate change. Professional and ethical issues, legislation and emerging role in nursing will be analyzed. Prerequisites: NSG 400. Concurrent: NSG 405. Cr 5.

### **NSG 408 or 409 Nursing Elective**

Study of a selected area in nursing. Open to other than nursing students with permission of faculty. Cr 3.

### **NSG 495 Nursing Independent Study**

Individualized study in an area of nursing with the permission of the instructor. Cr 2-3.

### **FN 300 Child Nutrition Seminar**

A seminar dealing with nutritional needs of the child. Discussion will focus on the critical evaluation of and reporting of current research articles describing nutritional requirements of the growing child. Permission of faculty will be needed. Cr 3.

## **BACCALAUREATE NURSING EDUCATION AT EXTENDED SITES**

The University of Southern Maine School of Nursing offers the nursing program junior level challenge and senior level course work at extended sites. The course offerings at extended sites are consistent with the

nursing program at the University of Southern Maine. Students are provided the opportunity to challenge junior level courses. Entry to senior level status is contingent upon successful challenge of junior level courses.

Additional information regarding the program at extended sites may be obtained through: Ann Ellis, Program Coordinator, Baccalaureate Nursing Education at Extended Sites, University of Southern Maine School of Nursing, 96 Falmouth Street, Portland, ME 04103, Tel (207) 780-4130

## **SCHOOL OF NURSING CONTINUING EDUCATION PROGRAMS — THE BUREAU OF CONTINUING EDUCATION FOR NURSING**

The objective of the Bureau is to provide education programs for nurses in Maine that are designed to (1) stimulate and create an interest in extending their basic education, (2) update their knowledge within specialized areas of nursing care, (3) enhance the leadership capability of nurses, (4) promote better health care to consumers by enhancing the knowledge and skills of nurses, and (5) create an awareness of the total system of health-care delivery and how their special nursing knowledge and skills can serve imaginatively the health-care delivery system.

The planning and implementation of such programs are based upon identified and projected needs of the learner and society, and are conducted in concert with related health agencies and key advisory people in the State of Maine.

Program information may be obtained by contacting Mary Ann Rost, Director, B.C.E.N., University of Southern Maine, Portland campus, (207) 780-4150.

## **THE FAMILY NURSE ASSOCIATE PROGRAM**

The Family Nurse Associate Program is conducted as a non-credit certificate program through the School of Nursing at this University. It is designed to enable the professional nurse to assume an expanded role in providing health care to the family.

The Program has two phases: a six-month pre-phase of directed home study and a subsequent twelve-month period consisting of formal coursework and supervised field experience.

The curriculum is devoted to history-taking, physical examination, simple laboratory procedures, common health problems, public health nursing principles, intensive clinical teaching, and physician and nurse practitioner supervised clinical practice in community health facilities.

Program information may be obtained by contacting Mildred Roche, Nurse Director, 25 Bramhall Street, Portland, Maine 04102, tel. 871-2574 or 871-2575.

## **GRADUATE EDUCATION IN NURSING**

Boston University School of Nursing in cooperation with the University of Southern Maine School of Nursing will be offering its full program of study leading to the Master's Degree in Nursing. Interested persons holding the prerequisite baccalaureate degree in nursing may make contact with: Beatrice M. Dorbacker, R.N., Ed.D., Co-Project Director — B.U. Outreach Program, University of Southern Maine School of Nursing, 96 Falmouth Street, Portland, ME 04103, Tel (207) 780-4150.

# Division of Basic Studies

## DIRECTOR

George P. Connick

## COORDINATOR, DEVELOPMENTAL STUDIES

Robert Lemelin

## COORDINATOR, INSTRUCTIONAL SYSTEMS

Caroline Hendry

The Division of Basic Studies, an academic unit of the University established in 1973, has the responsibility for developing and offering less-than-baccalaureate programs. Basic Studies offers courses and associate degree programs in a number of locations in Southern Maine.

### Portland (In-Town Learning Center)

The Division of Basic Studies offers two programs — Selected Studies and Human Services (Gerontology) at the In-Town Learning Center, located at 68 High Street in the heart of downtown Portland. In-Town Learning Center offerings meet the needs of adult learners who would otherwise find the doors to higher education closed to them. Support services are provided, and a careful program in developmental studies (English, math, and basic learning skills) has been worked out, tailor-made to meet the needs of the adult learner. For more information about the In-Town Learning Center and programs:

In-Town Learning Center  
68 High Street  
Portland, Maine 04101  
Telephone 780-4470

### Biddeford, Sanford, and York (York County Community College Services)

The Division of Basic Studies, in cooperation with Southern Maine Vocational-Technical Institute, offers off-campus programs through York County Community College Services (YCCCS). This joint venture provides less than baccalaureate degree opportunities and comprehensive academic counseling services for residents of York County. With centers located in Biddeford, Sanford, and York, the community college offers a variety of Associate Degree options.

Programs currently available from the University of Southern Maine are Liberal Arts, Selected Studies, Business Administration, Therapeutic Recreation, and Human Services (Gerontology). Southern Maine Vocational-Technical Institute has available programs and/or selected courses in Law Enforcement, Building Construction, Electronics Technology and Secretarial Science.

Courses are offered in the morning, late afternoon and evening for the convenience of students who work or who wish to attend college part-time. Arrangements made with private colleges, local education agencies, churches, and public libraries generally allow courses to be offered in locations and at times convenient for students.

### Learning Centers

#### Biddeford

John Pence  
11 Adams Street  
Biddeford, Maine 04005  
Tel. 282-4111

#### Sanford

Lorraine Masure  
195 Main Street  
Sanford, Maine 04073  
Tel. 324-6012

#### York

Robin Mellin  
Adult Learning Co-op.  
Rt. 1 South  
York, Maine 03909  
Tel. 363-6220

### Pineland Center

The Division of Basic Studies also offers for employees of the Pineland Center in Gray/New Gloucester a Human Services (Developmental Disabilities) program through the cooperation of Bangor Community College which is designed to up-grade skills of paraprofessional workers.

## ADMISSION INFORMATION

Interested persons holding a high school diploma (or its equivalent) or who are 18 years of age or older may enroll by contacting the local learning centers. Information or literature regarding any of the available programs may be obtained by contacting:

Advising and Information Department  
Payson Smith Hall  
96 Falmouth Street  
Portland, Maine 04103  
Telephone 780-4040

## DEVELOPMENTAL STUDIES

### ENG 009 Writing Lab

Designed to help students who need assistance in basic writing skills. Students who are enrolled will receive individualized instruction in their diagnosed areas of deficiency: grammar, vocabulary, punctuation, paragraphing, etc. Students in Selected Studies can apply credits toward their degree. This course is taken on a Pass-Fail basis, and it is a prerequisite for ENG 010 for those students who are deficient in basic writing skills. Four-year students may be required by the English Department to take this course before taking College Writing. Cr 3.

### MS 009 Math Skills Lab

The Math Lab is a course designed for students who require a review of math fundamentals. Instruction in this mathematics course takes into consideration the individual differences people have in learning. This course is offered in a self-pacing format with a great deal of individual assistance. Cr 3.

## PROGRAMS

### Selected Studies

This program is designed for:

- 1) Those students who wish to have maximum flexibility in planning their own degree program and have specific educational or career goals, but do not have the required educational background for admission to an occupational or parallel degree program.
- 2) Students who may not yet have determined their educational or career objectives at the time of admission.

**ADMISSION:** Open to high school graduates and persons 18 years or older.

#### TRANSFER:

- A) Students may change to the Liberal Arts Associate Degree program after completing 30 hours of general education requirements of the Liberal Arts program with a 2.00 cumulative grade point average.
- B) Students may change from Selected Studies to other Associate Degree programs provided they are in good standing.

### SELECTED STUDIES CORE REQUIREMENTS

Courses	Credit Hours
Composition	3
Humanities elective	3
Fine Arts elective	3
Social Science elective	3
Math elective	3
Science elective	3
Free electives	42
<b>TOTAL</b>	<b>60</b>

In the selection of core requirements and electives, students should refer to program requirements of the college at which they may intend to pursue a baccalaureate degree.

### Human Services: Gerontology

The program (offered through the University of Southern Maine and extended from Bangor Community College) will provide substantial education and career-oriented supervised work experience for a number of existing and new entry-level or para-professional jobs in programs for the elderly and related specialization within the broad spectrum of the human services.

Graduates of the program will be qualified to:

- Interview clients and families to obtain and record factual information and to initially identify the clients' problems so that appropriate assistance can be provided.
- Help people get to, and make use of, services available and help provider agencies and clients understand each other's needs, procedures, and systems.
- Reach out to people by phone or visit to detect problems or to follow up.
- Counsel, under professional supervision, individuals and groups.
- Serve as a role model to assist clients to learn new or more effective behavior.
- Plan, organize, promote, and lead activity or recreational programs for the elderly, shut-in, or handicapped individuals and groups.
- Communicate to clients and public the available resources and functioning of human services delivery systems.

Candidates for admission must demonstrate the ability to do college level academic work and be committed to a career in working with the elderly. Mature individuals and those changing their careers are encouraged to apply.

### HUMAN SERVICES: GERONTOLOGY PROGRAM REQUIREMENTS

Courses	Credit Hours
<b>Semester I</b>	
ENG 010 Composition	3
PSY 101 Introduction to Psychology	3
SOC 100 Introduction to Sociology	3
HSV 011 Introduction to Human Services	3
BIO 019 Biological Basis for Human Activity	3
	<b>15</b>
<b>Semester II</b>	
THE 170 Public Speaking or	3
COM 171 Interpersonal Communication	3
HSV 010 Group Processes	3
HSV 013 Intro. to Gerontology	3
PSY 032 Psychology of Adjustment	3
HSV 020 Gerontology Practicum	4
	<b>16</b>



<b>Semester III</b>		
HSV 012	Interviewing-Counseling	3
HSV 015	Pathology of the Elderly	3
HSV 014	Behavioral Research Methodology or	
HIST 200	Reference, Research & Report Writing	3
	Elective	3
HSV 021	Gerontology Practicum	4
		<u>16</u>

<b>Semester IV</b>		
HSV 026	Activity/Recreation Leadership or	2
RLS 015	Social Recreation	3
SWE 275	Developmental Services for the Elderly	3
SOC 200	Introduction to Social Problems	3
	Elective	3
HSV 023	Gerontology Practicum	6
		<u>17 or 18</u>
<b>TOTAL CREDIT HOURS</b>		<u>64 or 65</u>

Additional associate degree programs are available in liberal arts (College of Arts and Sciences), business administration (School of Business, Economics and Management), and therapeutic recreation (College of Education).

## ASSOCIATE DEGREE STUDIES COURSES

**ADS 011 Science and Society: A Humanistic View**  
Course is an attempt to explain how science has influenced and is influencing man's destiny. The approach is eclectic; it is not designed to provide either an anti-science or pro-science viewpoint, but to lead to a better understanding of the impact, possibilities and limitations of science and its accompanying technology. After a brief overview, the course examines the inner circle which is man's search for his own identity. The second ring of concern is the quality of life itself and the third will deal with man's physical world. From there, the fourth level of concern (concern for the total society) and the fifth level of concern (the future) are approached. Cr 3.

**ADS 012 Ascent of Man**  
The Ascent of Man is an interdisciplinary general education course. It is intellectual history, tracing the major events in the biological and cultural evolution of *Homo sapiens*. The course traces the development of science and art as expressions of the special gifts that characterize man and that have made him unique among the animal species. Emphasis is placed on the processes of thought and imagination which are involved in the various attempts made by man to analyze and understand the nature of the universe and of himself. Cr 3.

**ADS 013 The Adams Chronicles 1750-1900**  
A social history of the U.S. from 1750 to 1900, centered around 13 television dramatizations of the lives of four generations of the Adams family, showing their role in major events of the period. Cr 3.

**ADS 015 African Roots in American Soil**  
"Roots" is an interdisciplinary general education

course. With its adherence to chronology, it is history. It is based on the drama of one family which unfolds into a universal drama. It begins in pre-colonial Africa and describes the diversity of land and people, the history and the culture of that vast continent. It then moves to the horrors of the "Middle Passage" from Africa to America and focuses on the institution of American slavery. Finally the course relates the difficulties posed for blacks by the Civil War, emancipation, reconstruction and post-reconstruction. Cr 3.

### **ADS 016 Biosurvival**

This course presents material to help the individual develop basic skills and knowledge for a greater enjoyment of the out-of-doors and, if necessary, a better chance of survival. The course consists of lectures, demonstrations, student participation and individual projects. Besides written exams, students will be expected to participate in a cooking demonstration involving common wild edibles. A 48-hour survival experience will be offered as an optional part of the work. Examples of topics covered are: alternatives in fire-making, shelter and clothing, traps and tracks, survival tools and first aid. There is a strong emphasis on the proper identification and use of wild plants for food. Cr 3.

### **ADS 017 Marine Biology of the Southern Coast of Maine**

This course, a basic though intensive introduction to the animals and plants commonly found along the Maine coast, will emphasize field collections and laboratory identification. Trips to rocky coast, mud flat, sand beach and tidal marsh habitats are planned. This will permit students to collect, describe, identify and compare the organisms found in several distinct marine habitats. In this way, students will develop an understanding of how different environmental characteristics select the different animal and plant communities found. Classroom discussions, audio-visual presentations and lab exercises will supplement the field work where appropriate. Car-pooling for field trips will be arranged in class. Cr 3.

### **ADS 029 The French in North America**

This course is designed to increase the level of awareness of the Franco-American heritage and the French contribution to North American culture. It aims at familiarizing the student with the history and cultural values of the French in North America, through both fictional and non-fictional sources. Cr 3.

### **BIO 015 Wildlife Biology**

The course covers principles of wildlife management and its relationship to ecological principles, federal land agencies, and land use planning. The role of law enforcement and politics is discussed. Special areas of interest include waterfowl, exotic and specific habitat, and management of a few representative species. Cr 3.

### **ENG 009 Writing Lab**

Designed to help students who need assistance in basic writing skills. Students who are enrolled will receive individualized instruction in their diagnosed areas of deficiency: grammar, vocabulary, punctuation, paragraphing, etc. Students in Selected Studies can apply credits toward their degree. This course is taken on a Pass-Fail basis, and it is a prerequisite for ENG 010 for those students who are deficient in basic writing skills. Four-year students may be required by the English Department to take this course before taking College Writing. Cr 3.

### **ENG 010 Composition**

Students will meet regularly in a lab setting to analyze professional writing samples as a way of sharpening their awareness of how to use language effectively. The writing assignments are organized to permit the students to manage their writing progress on an individual basis and use the instructor as a critic of their writing. Recommended for students in two-year programs. Prerequisites: ENG 009 or satisfactory completion of an approved test. Cr 3.

### **ENG 019 Written Business Communications**

Training in clear expository writing of formal reports, business communications, and related material. Prerequisite: ENG 010. Cr 3.

### **FRE 018 Bilingual Oral Communication**

An individualized approach to social and professional communication with Franco-Americans, emphasizing the delivery of bilingual/bicultural human services. The social and intellectual history of Franco-Americans in New England will be considered in order to develop the human service workers' rapport and identification with the Franco-American life style, particularly among the elderly. Cr 3.

### **HSV 010 Group Processes**

Directed to an understanding of group functioning and leadership. This course considers factors involved in group cohesions and group conflict. Attention is given to communication systems, emotional styles, and role functions in groups. Techniques of role playing, psychodrama, and socio-drama are considered. During the laboratory experience, the small group studies itself and puts communication and sensitivity skills into practice. Prerequisite: Gen PSY. Lec. 3, Lab 1. Cr 3.

### **HSV 011 Introduction to Human Services**

A non-theoretical course designed as an orientation to the national, state and local human service delivery system. The human service specialty areas, the human service models, and the human service profession will be presented. Inter-relationships within all human service and health professions will be discussed in addition to professional ethics, confidentiality and relevant professional terminology. Basic helping skills will be presented and practiced. This course is designed to afford the student more confidence entering the practicum situation and is a prerequisite to all practicum placements. Cr 3.

### **HSV 012 Interviewing-Counseling**

An examination of and practice with the techniques of psychological interviewing for the purposes of gathering data and/or modifying human behavior. Current theories and techniques of counseling and psychotherapy will be studied and experience with interviewing and counseling techniques will be gained under professional supervision. Lec. 2. Cr 3.

### **HSV 013 Introduction to Gerontology**

An introduction to the theory and practice of gerontology. This course will (1) trace the historic, legal and political aspects of services to the elderly; (2) consider the economic, physiological, psychological adjustments of older persons, as well as the transportation, communication, learning and social aspects; (3) give consideration to the unique cultural, social and communication needs of ethnic minorities, and (4) provide understanding of the role and function of a gerontology specialist. Cr 3.



### **HSV 014 Behavioral Research Methodology**

An introduction to the nature, methods, principles and techniques of behavioral research. Emphasis is placed upon understanding the journal reports of research and the potential application of research to human services. Cr 3.

### **HSV 015 Physiology and Pathology of the Elderly**

This course is designed to familiarize the student with the developmental physiological process of aging and commonly occurring pathophysiology of the elderly. The signs and symptoms, diagnosis, treatment and prognosis of geriatric illnesses are presented. Emergency treatment procedures and referral mechanisms are discussed. Cr 3.

### **HSV 020 Practicum in Human Service**

This course offers experiential learning in three of the functional human service areas (e.g. mental health, mental retardation, gerontology, chemical addiction, child development, etc.). The student begins to practice skills of objective observing, reporting and recording, interpersonal relationships, interviewing and other helping relationship skills under professional supervision. In a small weekly group seminar with the course instructor, each student should acquire an in-depth understanding of the human service delivery system, and explore topics such as confidentiality, ethics, professionalism, values, and human rights and dignity. Each student will spend five weeks within three different agencies. Prerequisites: open only to students who are HSV degree candidates; HSV 011 and permission of the instructor. Lec. 2, 8 hours field experience per week. Cr 4.

### **HSV 021 Practicum in Human Service**

This second practicum course is designed to offer students experiential learning within the human service options of their choice. This course begins a specialization within a functional area (e.g., gerontology, chemical addiction counseling, mental health) as a generalist. Students are exposed to the delivery system of their human service options with consideration to four ele-

ments of the system: prevention, non-residential care, residential care, and aftercare services. Within this context students continue to refine helping relationship skills and acquire functional specialization. A weekly conference will provide interaction sessions in which students will share experiences, and demonstrate acquisition of helping skills. Students will be assigned to two human service agencies within their service option. Prerequisites: open only to students who are HSV degree candidates, HSV 020 and permission of the instructor. Lec. 2, 8 hours field experience per week. Cr 4.

#### **HSV 023 Practicum in Human Service**

This is the third sequential experiential learning practicum course. Students spend the entire semester in a human service agency related to their chosen functional area. Students gain a deeper understanding of the delivery system within their specialty area and an increased sophistication in helping relationship skills. A weekly seminar provides interaction sessions in which the student will share experiences and demonstrate the acquisition of the helping and changeagent skills. Prerequisites: open only to students who are HSV degree candidates; HSV 021 and permission of the instructor. Lec. 2, 16 hours field experience. Cr 6.

#### **HSV 025 Activity/Recreational Leadership**

This course introduces the student to the procedures, practices, and aids for organizing and conducting programs to maintain the physical, social, and emotional functioning of the elderly. A variety of existing programs sponsored by a range of public and private agencies, organizations, and community groups will be ex-

amined in order to understand the underlying goals that guide those in position to direct and influence services provided for the elderly. Prerequisite: HSV 013 or permission of the instructor. Cr 2.

#### **HSV 026 Community Services for the Elderly**

This course provides individuals concerned with services to older Americans with descriptions, organizational approaches, and financing alternatives for a wide range of social and rehabilitation services. Federal and state legislation such as social security, Medicare/Medicaid, and the Older Americans Act will be covered in depth as applied to the aged. Prerequisite: HSV 013 or permission of the instructor. Cr 2.

#### **MS 009 Math Skills Lab**

A study of the basic math skills with attention given to operations with whole numbers, fractions, decimals, ratio and proportion, signed numbers and measurement. A developmental course for students who need a review of math fundamentals. May not be applied toward graduation requirements of A.A. in Liberal Arts or A.S. in Business Administration degrees. Cr 3.

#### **MS 010 Elementary Algebra**

The first course of a two-course sequence designed for students who are deficient in high school algebra. Topics covered include number systems, functions, graphs, the solution of equations, and the solution of problems with a business orientation. No prerequisites. Cr 3.

#### **MS 011 Intermediate Algebra**

A continuation of MS 010. Prerequisite: MS 010 or one year of high school algebra. Cr 3.



# Department of Conferences and Special Programs

**DIRECTOR**  
Raymond P. Kane

**ASSOCIATE DIRECTOR — SPECIAL PROGRAMS**  
Joanne K. Spear

**ASSOCIATE DIRECTOR — CONFERENCES**  
Kevin Russell

The Department of Conferences and Special Programs offers a variety of seminars, institutes, workshops, conferences and short courses throughout the school year. These programs are frequently developed at the request of a group representative, university staff member, or an interested individual.

## AN INTRODUCTION TO CONFERENCES

The primary goal of the Department of Conferences is to bring together groups of participants with qualified resource people to share information, develop ideas, upgrade professional skills, and develop a greater understanding of current problems. The Department will provide specialized services to governmental agencies, professional organizations, private business and community groups in the areas of program design, planning and development.

### Conference Planning Service

Department of Conferences and Special Programs offers a total conference planning service. The conference office staff will help in planning a program and its content. It can assist in selecting the following facilities and services:

- University residence/dining halls
- University recreation facilities
- Cultural resources such as art galleries, summer theater, and concerts in the Greater Portland area
- Classroom, auditorium facilities
- Referral to local motels for housing during academic year
- Area tourist facilities
- CEU's and certificates

The conference planner will also assist in:

- Promotion and publicity
- Meeting facilities
- Registration services
- Special arrangements, including the selection of resource people
- Post conference evaluations, reports, and financial statements

Conference fees are determined by the Department of Conferences and Special Programs with the assistance of the conference sponsor's planning committee. Pro-

gram costs will vary with the number of participants, length of program, and special requirements. The staff will prepare a budget to include cost of service desired and will be responsible for collection of fees, payment of expenses and preparation of a financial statement at the successful completion of the conference.

## AN INTRODUCTION TO SPECIAL PROGRAMS

Many members of the community will be enrolling in non-credit or special program courses with no interest in academic credit. These persons are interested in their own personal enrichment, an enjoyable evening in a "fun" course, or are looking for information today which can be used tomorrow at home or at work. All courses reflect our concern for quality and integrity.

Within the past few years, special programs have gained increased acceptance by business and professional interests and the general public as a means of continuing their education.

Adults with full-time or career responsibilities often find that non-credit special programs enable them to reach their goals in a minimum amount of time. The majority of short courses will meet one evening a week for six to ten weeks. The instruction is geared to the practical rather than the theoretical and the instructors are professionals in their field. Many courses utilize the "case-study" approach, and as a result participants can apply the knowledge and skills obtained to their specific problem.

Unless the topic is in a specialized area, a special program is open to all interested adults without regard to previous education or experience.

Special Programs are divided into two groups:

- A. Professional programs (CEU):
  - Certificate Program in Small Business Management
  - Certificate Program for Legal Assistants
  - Certificate Program for Chartered Life Insurance Underwriters
  - Certificate Program for Practicing Secretaries
  - Certificate Program for Quality Control
  - Medical Terminology

## B. Personal enrichment courses:

Parapsychology	Yoga
Estate Planning	Calligraphy
Dance	Photography
Antiques	Assertiveness
Basketball	Soccer

Each lecturer or seminar leader is a professional in the given field, and speakers are often recruited from other areas of the United States and Canada. Since this type of public service must be self-supporting, a nominal tuition fee is charged.

Information regarding specialized courses is available from the Department of Conferences and Special Programs, 96 Falmouth Street, Portland, Maine 04103 (Telephone: 780-4045).

### **Certificate Course "CEU" Award System**

Students completing individual courses in the following Certificate Programs receive Continuing Education Unit (CEU) awards rather than semester-hour credit on grade sheets and permanent records. The CEU is a nationally accepted unit of measurement applicable to non-credit continuing education. CEU courses are generally designed for a specific audience and are often used for professional development in a particular industry or profession. The CEU permits the individual to participate in many kinds of programs while accumulating a uniform record available for future reference.

A CEU is awarded for 10 hours of participation in a program of continuing education.

The CEU system for grade sheets and permanent records has been officially adopted by the New England Council of Deans and Directors of Continuing Education.

### **Certificate Program for Quality Control**

This series of courses is designed for those who are interested in quality control as it applies to either small or large business.

The program is planned to benefit all personnel engaged in controlling quality and maintaining quality assurance, including working crew leaders as well as supervisory personnel and managers. Individual courses will be of special interest and benefit to manufacturing and product engineers, purchasing agents, production control personnel, material expeditors, inspectors and operators interested in improving their skills and contributing to the manufacture of quality products.

The following subjects are offered in the program:

CSQ 11-51 ( 12 wks)	Total Quality Control
CSQ 12-51 ( 12 wks)	Basic Statistics and Inspection Sampling
CSQ 13-51 ( 10 wks)	Managing Quality Costs
CSQ 14-51 ( 8 wks)	Purchased Material Control
CSQ 15-51 ( 6 wks)	Inspection Tools and Gauging
CSQ 16-51 ( 6 wks)	Govt. Specifications & ASME Quality Requirements

CSQ 17-51 ( 4 wks)	Quality Problem Solving
CSQ 18-51 ( 4 wks)	Quality Audits
CSQ 19-51 (4-6 wks)	ASQC Certification Preparation
CSQ 20-51 ( 8 wks)	Basic Principles of Effective Technical Writing
CSB 12-51 ( 10 wks)	Human Relations

Courses are designed to be flexible and practical, and are specially directed to assist the small business community. Subjects are aimed at providing basic tools and techniques for setting up new quality assurance systems, and improving effectiveness of already existing programs. Persons engaged in producing quality in the field of manufacturing or production will find selected courses beneficial.

Selected courses from the Certificate Program in Small Business Management have been incorporated into this program. The class size in all subjects is limited depending upon the type of course offered.

### **Certificate Program in Small Business Management**

This program is designed to meet the specific needs of the small business community. Developed through consultations with educational and professional leaders in the small business field, it provides a comprehensive and pragmatic plan for managing a business. Techniques transmitted should enable the small business entrepreneur to operate a more efficient business, develop the potential of employees, and plan more effective strategies for the future.

Subjects of the program are designed to be flexible and practical from the standpoint of the needs of small business. For the most part, courses will be directed to the practical as opposed to the theoretical aspects of current business practices. A "Certificate of Completion" rather than degree credit will be awarded to those who successfully complete the Certificate Program.

A total of 12 CEU's must be earned as well as successful completion of two seminars to obtain a certificate.

The following courses are offered in the program:

CSSB 10-51	Management Topics
CSSB 11-51	Maintaining Financial Control of Your Business
CSSB 13-51	Human Relations
CSSB 14-51	Advertising-Marketing: Business Communications
CSSB 15-51	Small Business Operations
CSSB 16-51	Increase Your Sales and Profits as You Improve Your Managerial Attitudes and Skills
CSSB 20-51	Preparing Work for the Printer

The above program will be supplemented by one-day seminars developed at the request of students and applicable to the Certificate in Small Business Management.

## **Certificate Program for Practicing Secretaries**

The Department of Special Programs' non-credit Certificate Program for Practicing Secretaries is designed primarily for secretaries who have mastered basic skills such as typing and shorthand and are seeking to upgrade present abilities. This program will allow the student not only to update general skills and knowledge but also to focus on the special areas of interest most relevant to her/his job. After completing the basic requirements, a secretary may concentrate on courses in the legal or health fields, insurance, travel, management, personnel or other appropriate areas. Required curriculum includes the following:

Modern Office Procedures  
Communication Techniques for Secretaries  
Improving Your Writing and Speaking Abilities  
Time Management

## **Certificate Program for Legal Assistants**

This para-professional program will provide a sequence of training leading to a certificate in the broad range of legal services known as general practice, in addition to more in-depth study in several areas of specialization.

The Legal Assistant Program is designed primarily for part-time students and courses are offered either twice a week in the evenings or in a one or two-day seminar format.

Those wishing to obtain the certificate must apply for acceptance to the program and meet admission requirements. Those who do not plan to earn the certificate but wish to take selected courses need not apply for admission. The curriculum for beginning and advanced levels includes the following courses:

### **LEVEL I**

Orientation to the Legal Assistant Profession  
Introduction to Law and Paralegalism  
Legal Research and Source Materials  
Legal Writing Practicum  
General Practice Skills I & II  
Interpersonal Skills/Interview Techniques  
Business Organizations  
Bankruptcy/Secured Transactions  
Domestic Relations  
Real Estate  
Estates, Wills and Trusts  
Litigation

### **LEVEL II**

#### **Possible Areas of Specialization\***

Litigation (Criminal & Civil)  
Corporations  
Law Office Management  
Estates and Trusts  
Domestic Relations  
Real Estate  
Bankruptcy

\*Availability will be determined by demand.

## **Certificate Program for Chartered Life Underwriters**

CLU is a non-credit professional program designed for those who wish to achieve greater job stability and higher income in a variety of fields including life and health insurance sales, insurance company management, corporate risk management, and other professions engaged in estate planning and financial counseling.

Each course in the ten-course sequence is designed to prepare students for the semi-annual national examinations held by the American College of Life Underwriters. Candidates who successfully complete all ten examinations and who meet ethical and experience requirements are awarded the coveted Chartered Life Underwriter designation.

Those who are not candidates for the CLU designation may also take advantage of these professional courses. Continuing Education Units are awarded for each course completed.

### **Program Listing**

CLU 11 Economic Security and Individual Life Insurance  
CLU 12 Life Insurance Law and Mathematics  
CLU 13 Group Insurance and Social Insurance  
CLU 14 Economics  
CLU 15 Accounting and Finance  
CLU 16 Investments and Family Financial Management  
CLU 17 Income Taxation  
CLU 18 Pension Planning  
CLU 19 Business Insurance  
CLU 20 Estate Planning and Taxation

# Reserve Officers Training Corps (ROTC)

ROTC offers male and female students at USM an opportunity to earn a commission in the United States Army at the same time as they earn the baccalaureate degree. USM students are able to opt for an Army ROTC program with courses given on the USM campus under the auspices of the University of Maine at Orono's Department of Military Science. Students register for approximately two hours a week of Military Science courses as part of their regular USM curriculum. However, grades and credits are issued through the University of Maine at Orono. For further information on Army ROTC at USM, contact the ROTC Extension Center in Corthell Hall on the Gorham campus, 780-5255. Contact your USM School or College Dean to determine applicability of ROTC credits toward your degree.

## CURRICULUM

The complete ROTC program consists of a Basic Course and an Advanced Course. Normally, the Basic Course is taken during the student's freshman and sophomore years. However, other students may enroll in the Basic Course by receiving permission from the Professor of Military Science. Students who have received previous military training (veterans, military academies, Junior ROTC, etc.) may be granted credit for the Basic Course or portions thereof as determined by the Professor of Military Science.

Students who complete or receive credit for the Basic Course may apply to the Professor of Military Science for admission to the Advanced Course. If admitted, the student is enlisted in the Army Reserves and receives \$100 per month during the junior and senior years. Students who complete the Advanced Course are appointed second lieutenants in the United States Army.

## COURSE DESCRIPTIONS

### The Basic Course

To complete the Basic Course, the student must complete the core curriculum or the student must complete ROTC Basic Camp (MT 29). The core curriculum consists of MT 11, 12, 21, and 22. The student may enter the Basic Course by taking any of the courses listed below, provided the course is listed in the Schedule of Classes for the semester concerned.

#### UMO-MT 11 Introduction to ROTC and the U.S. Army

The purpose and organization of the ROTC Program. The role of officers. Customs, courtesies and traditions. An overview of the defense establishment. The importance of the Reserve Components (U.S. Army Reserve and Army National Guard). Future direction of the U.S. Army. Participation in Leadership Laboratory is required. Cr 1.

#### UMO-MT 12 National Security

The principles of war. Technological advances and their influence on warfare. Organization of the U.S. Army and the national defense structure. Factors and instruments of national power and the attainment of national objectives. Participation in Leadership Laboratory on occasional weekends is required. Cr 1.

#### UMO-MT 21 Map Reading and Squad Tactics

Reading and interpreting maps and aerial photo-

graphs. Marginal information, map grid coordinates, scale and distance, directions, use of the compass, intersection/resection, elevation and relief, GM angle, and map substitutes. Rifle squad organization. Squad movement techniques and actions on contact. Hand and arm signals, field fortifications, camouflage and concealment, and techniques of fire. Estimate of the situation, rifle squad in the attack, and rifle squad in the defense. Infantry-tank teams. Patrolling. Participation in Leadership Laboratory on occasional weekends is required. Cr 2.

#### UMO-MT 22 American Military History

Development of the United States military system from colonial times, to present. Examination of the principles of war and how they impact on military organizations and tactics. Participation in Leadership Laboratory on occasional weekends is required. Cr 2.

#### UMO-MT 27 Winter Survival School

A five-day school conducted at Brunswick Naval Air Station and in the Rangeley area by the U.S. Navy. Transportation is provided by the Army. Instruction and practical experience in winter survival equipment and techniques. Enhancement of the student's self-confidence in his/her ability to survive in an extremely rigorous environment. Offered during January. Students apply for enrollment to the Professor of Military Science during December. Cr 0; Pass/Fail

#### UMO-MT 28 Airborne School

A three-week school conducted at Fort Benning, Georgia. Available only to students in the ROTC program. Students who graduate are awarded the Army Parachutist Badge. Cr 0; Pass/Fail

#### UMO-MT 29 ROTC Basic Camp

A six-week summer camp conducted at Fort Knox, Kentucky. The student receives pay, and travel costs are defrayed by the Army. The environment is rigorous, and is similar to Army Basic Training. No military obligation incurred. Training includes the role and mission of the U.S. Army, map reading and land navigation, first aid, marksmanship, leadership, physical training, drill and parades, and tactics. Completion of MT 29 satisfies all Basic Course requirements. Three different cycles offered during the summer, but candidates are accepted only during the first two months of the spring semester. Participation in a physical fitness program during the spring semester is required. Students apply for enrollment to the Professor of Military Science. Selection for attendance is based on qualifications and merit. Cr 0.

## The Advanced Course

The courses listed below are required for completion of the Advanced Course. In addition, students are required to attend a six-week ROTC Advanced Camp at Fort Bragg, North Carolina between their junior and senior year. In exceptional cases, ROTC Advanced Camp may be deferred by the Professor of Military Science until the student completes the senior year. Selected students may attend Ranger School in lieu of ROTC Advanced Camp.

### UMO-MT 31 Leadership

Exposure to the branches of the Army. How to plan and conduct military instruction. Exposure to the various leadership theories and to the leadership environment. Fundamentals of leadership, human behavior, communication, and contemporary human problems. Participation in Leadership Laboratory on occasional weekends is required. Cr 3.

### UMO-MT 32 Advanced Tactics

Exposure to military equipment and military tactics at the squad, platoon, and company level. Completion of Advanced Camp prerequisites. Participation in Leadership Laboratory on occasional weekends is required. Cr 2.

### UMO-MT 41 Military Management

Exposure to military law. Analysis of legal problems

facing small unit leaders. The Code of Conduct. Management theory. Motivation theory. Training, personnel, and logistics management practices. Management by Objective (MBO) and Organizational Effectiveness (OE). The Modern Volunteer Army (MVA) and total Army goals. Participation in Leadership Laboratory on occasional weekends is required. Cr 2.

### UMO-MT 42 Operations and Seminar

Exposure to larger unit operations at the brigade and battalion level. Sequence of command and staff actions — the problem-solving process. Organization of the division, brigade, and battalion. Preparation of combat orders. Discussion of current military problems in the leadership/management area. Case studies. Participation in Leadership Laboratory on occasional weekends is required. Cr 3.

### UMO-MTL Leadership Laboratory

Leadership Lab is a requirement for all regular program cadets. The purpose of Leadership Lab is to provide the environment wherein each cadet can develop and improve military leadership skills. Continuous counseling and periodic evaluation of cadet performance are the primary methods used. (In case of class conflicts, an alternate Leadership Lab will be arranged to meet student requirements.) Cr 0.

## Center for Research and Advanced Study

The purpose and intent of the Center for Research and Advanced Study of the University of Southern Maine is to enhance the University's public service obligations and to make significant contributions to Maine's greater development by serving and assisting the governments, institutions, industries and people of Maine, through quality research, study and technical assistance designed to maximize economic develop-

ment, health, education, environment and the general well-being of the region and the state.

By focusing the expertise of the University of Maine through multi-disciplinary practical and applied research on the present and potential problems of the area, significant contributions can be made to the present and future well-being of the region and state.

## USM Alumni Association

The Alumni Association of the University of Southern Maine, under the leadership of Executive Director Anne M. Theriault, enrolls more than 17,000 members, representing alumni of Gorham Normal School, Gorham State Teachers College, Portland Junior College, Portland University, University of Maine in Portland, Gorham State College, Gorham State College of the University of Maine, University of Maine at Portland-Gorham, and the University of Southern Maine.

The Association is governed by a sixteen-member Board of Directors and a thirty-member Advisory Council.

The Alumni Center is maintained at the Alumni House on the Portland campus. The Alumni Association of

USM works to expand the tradition of service both to the alumni and to the USM community, carrying on a tradition established some 90 years ago at the Gorham campus, and more recently at the Portland campus. Students are urged to visit the Alumni Center and to get acquainted with the personnel and programs of the Alumni Association of USM before graduation. All students, as well as former students, are cordially welcomed.

The Alumni House on the Portland campus, also known as the Deering Farmhouse, is an approved Greater Portland Landmark. Criteria for such approval are: minimum age of fifty years, physical condition displaying original architectural intent and reasonable documentation of the date of construction and history.



# School of Law

The University of Maine School of Law is a small school that has long offered a high quality of legal education to a carefully selected student body. With a fine faculty, topnotch library resources and a nationally oriented curriculum strong in basic legal courses, the Law School takes pride in educating men and women who will become capable and motivated attorneys.

The academic program at Maine, like that at all good law schools, is rigorous and demanding. Thanks to Maine's size, however, its students have the benefit of small classes, frequent and informal contact with the faculty, and a friendly atmosphere. These factors do much to ease the strains attendant upon entry into an exacting profession.

The school averages 70-75 students per class, of whom approximately 45 percent are women; the number of students in the school is about 225, making it one of the smallest in the country. The student body is remarkably varied in age, professional and academic experience, and social background.

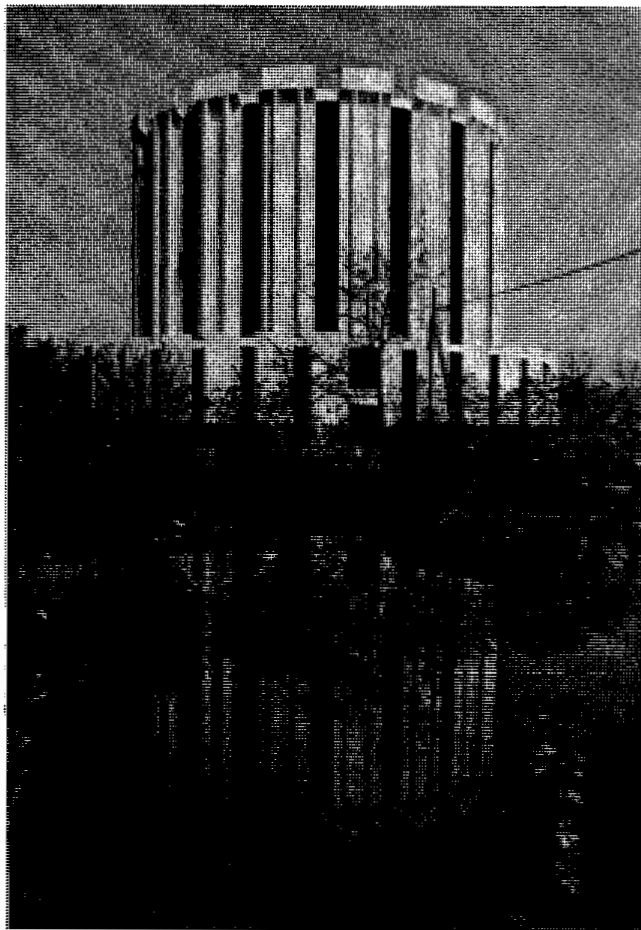
The school's excellent faculty consists of 14 full-time and a number of part-time instructors. It is drawn

from many specialties and represents a diversity of backgrounds and interests.

The school is fully accredited by the American Bar Association and is a member of the Association of American Law Schools.

Established at Portland in 1961, the Law School is the successor to the University of Maine College of Law which existed in Bangor from 1898 to 1920. It is a collegial unit of the University of Southern Maine, but has responsibilities to the statewide University system. The school is located in a modern building, fully accessible for handicapped students, that provides excellent facilities for classroom and seminar discussion, library research, moot court participation, clinical practice, legal publications, and student activities. The Law School shares the building with the University of Southern Maine's Center for Research and Advanced Study and administration.

For more information on the Law School, contact the Office of the Dean, University of Maine School of Law, 246 Deering Avenue, Portland, Maine 04102 (207) 780-4340.



# OFFICERS OF ADMINISTRATION OF THE UNIVERSITY OF SOUTHERN MAINE

Administrative Organization as of August 1, 1980

## President

Robert L. Woodbury, 6th floor Research Center, Portland† tel: 780-4480

## Provost

Edward J. Kormondy, 6th floor Research Center, Portland† tel: 780-4485

## Executive Assistant to the President

William B. Wise, 6th floor Research Center, Portland† tel: 780-4482

## Executive Director for Budget and Institutional Research

Samuel G. Andrews, 6th floor Research Center, Portland† tel: 780-4484

## Executive Director for Employee Relations

Beth I. Warren, 6th floor Research Center, Portland† tel: 780-4488

## Administrative Staff of the President

Administrative Assistant to the President: Virginia L. Emery, 6th floor Research Center, Portland† tel: 780-4480  
Coordinator of Development: Walter P. Fridinger, 228 Deering Avenue, Portland† tel: 780-4444  
Director of Intercollegiate Athletics: Richard A. Costello, 108 Hill Gymnasium, Gorham\* tel: 780-5430  
Director of Public Information: Roger V. Snow, Jr., 228 Deering Avenue, Portland† tel: 780-4200  
Director of the University of Southern Maine Alumni Association: Anne M. Theriault, Alumni House, Portland† tel: 780-4110

## Administrative Staff of the Provost

Acting Assistant in the Office of the Provost: Susan Silvernail, 408 Research Center, Portland† tel: 780-4481  
Dean of College of Arts and Sciences: Robert J. Hatala, 113 Bonney Hall, Portland† tel: 780-4220  
Dean of College of Education: Loren W. Downey, 408 Bailey Hall, Gorham\* tel: 780-5371  
Dean of School of Business, Economics and Management: John W. Bay, 228 Deering Avenue, Portland† tel: 780-4020  
Dean of School of Law: L. Kinvin Wroth, 105 Research Center, Portland† tel: 780-4344  
Dean of School of Nursing: Audrey J. Conley, 55 Exeter Street, Portland† tel: 780-4130  
Dean for Educational Services: Gordon S. Bigelow, 117 Payson Smith Hall, Portland† tel: 780-4035  
Acting Director of Center for Research and Advanced Study: Stephen P. Simonds, 401 Research Center, Portland† tel: 780-4411  
Director of Division of Basic Studies: George P. Connick, 68 High Street, Portland† tel: 780-4470  
Director of Educational Media: Allen W. Milbury, Bailey Hall Basement, Gorham\* tel: 780-5356  
Director of the Office of Admissions and Records: John F. Keysor, 110 Corthell Hall, Gorham\* tel: 780-5236  
Director of Public Service: William G. Mortensen, 100 Payson Smith Hall, Portland† tel: 780-4092  
University Librarian: Clifton F. Giles, Jr., Gorham Campus Library, Gorham\* tel: 780-5340

## Administrative Staff of the Executive Assistant to the President

Acting Director of Facilities Management: Arthur O. Berry, 103 Industrial Education Building, Gorham\* tel: 780-5440  
Director of Police and Safety: Horatio A. Quinn, Corthell Hall, Gorham\* tel: 780-5211

## Administrative Staff of the Executive Director for Budget and Institutional Research

Business Manager: William B. Bullock, 114 Payson Smith Hall, Portland† tel: 780-4026

## Administrative Staff of the Executive Director for Employee Relations

Acting Director of Equal Employment Opportunity: Eleanor W. Law, 120 Bonney Hall, Portland† tel: 780-4156  
Director of Personnel: Mary A. Yalouris, 106 Payson Smith Hall, Portland† tel: 780-4030

# ACADEMIC ADMINISTRATIVE STRUCTURE OF THE PROVOST'S OFFICE

## COLLEGE OF ARTS AND SCIENCES

Dean: Robert J. Hatala, 113 Bonney Hall, Portland† tel: 780-4220  
Chairman, Art Department: Michael G. Moore, 201 Academy Building, Gorham\* tel: 780-5460  
Chairman, Biology Department: Helen L. Greenwood, 314 Science Building, Portland† tel: 780-4265  
Chairman, Chemistry Department: Alan G. Smith, 363-A Science Building, Portland† tel: 780-4232  
Chairman, Communication Department: Leonard Shedletsy, 3 Washburn Street, Portland† tel: 780-4108  
Chairman, Earth Sciences, Physics and Engineering Department: Parnell S. Hare, 117 Bailey Hall, Gorham\* tel: 780-5352  
Chairman, English Department: Thomas R. Carper, 200 B Bailey Hall, Gorham\* tel: 780-5330  
Chairman, Foreign Languages and Classics Department: Yves F. Dalvet, 520 Bonney Hall, Portland† tel: 780-4336  
Chairman, Geography-Anthropology Department: Robert J. French, 320 C Bailey Hall, Gorham\* tel: 780-5320  
Chairman, History Department: Joel W. Eastman, 325 Bonney Hall, Portland† tel: 780-4287  
Chairman, Mathematics & Computer Science Department: Maurice J. Chabot, 230 Science Building, Portland† tel: 780-4247  
Chairman, Music Department: Ronald F. Cole, 310 Corthell Hall, Gorham\* tel: 780-5265  
Chairman, Philosophy Department: Joseph Grange, 224 Science Building, Portland† tel: 780-4241  
Chairman, Political Science Department: Oliver Woshinsky, 317 Bonney Hall, Portland† tel: 780-4294  
Chairman, Psychology Department: John S. Bishop, 512 Science Building, Portland† tel: 780-4254  
Chairman, Social Welfare Department: Joseph D. Kreisler, 7 Chamberlain Ave., Portland† tel: 780-4120  
Chairman, Sociology Department: David C. Fullam, 120 Bedford Street, Portland† tel: 780-4100  
Chairman, Theater Department: Walter R. Stump, Russell Hall, Gorham\* tel: 780-5481  
Coordinator, Criminal Justice Program: Peter M. Lehman, 120 Bedford Street, Portland† tel: 780-4100  
Director, Art Gallery: Juris K. Ubans, Ground Floor, Robie-Andrews Hall, Gorham\* tel: 780-5467  
Director, Museum of Man: Robert J. French, 320-C Bailey Hall, Gorham\* tel: 780-5320

## COLLEGE OF EDUCATION

Dean: Loren W. Downey, 408 Bailey Hall, Gorham\* tel: 780-5300  
Assistant Dean: George F. Hackett, 407 Bailey Hall, Gorham\* tel: 780-5306  
Director, Clinical Experiences: Melissa H. Costello, 504 Bailey Hall, Gorham\* tel: 780-5300  
Director, Educational Placement: David Morrill, 402 Bailey Hall, Gorham\* tel: 780-5336  
Director, In-Service Programs: A. Nye Bemis, 119 Bailey Hall, Gorham\* tel: 780-5326  
Chairman, Early Childhood/Elementary Education Department: Charles M. Lyons, 400 B Bailey, Gorham\* tel: 780-5310  
Chairman, Education and Technology Department: Arthur O. Berry, 103 Industrial Education Center, Gorham\* tel: 780-5440  
Chairman, Physical Education Department: Patricia D. Raybould, 204 Hill Gymnasium, Gorham\* tel: 780-5431  
Chairman, Recreation/Leisure Studies Department: James V. Sullivan, 220 Portland Gymnasium, Portland† tel: 780-4172

## SCHOOL OF BUSINESS, ECONOMICS AND MANAGEMENT

Dean: John W. Bay, 228 Deering Avenue, Portland† tel: 780-4020  
Chairman, Baccalaureate Degree Program in Business Administration: Philip Jagolinzer, 216 Bonney Hall, Portland† tel: 780-4304  
Chairman, Associate Degree Program in Business Administration: Richard L. McKeil, 118 Bedford Street, Portland† tel: 780-4181  
Chairman, Economics Department: Robert McMahon, 121 Bonney Hall, Portland† tel: 780-4330

## SCHOOL OF LAW

Dean: L. Kinvin Wroth, 105 Research Center, Portland† tel: 780-4344  
Assistant Dean: Holly E. Bruno, 103 Research Center, Portland† tel: 780-4345  
Assistant to the Dean: Karen Abrami, 104 Research Center, Portland† tel: 780-4340  
Director of Clinical Practice Program: Judy R. Potter, 112 Research Center, Portland† tel: 780-4376  
Director of Placement and Alumni Relations: John Ackerman, 113 Research Center, Portland† tel: 780-4358  
Librarian of School of Law: Penny A. Hazelton, 214 Research Center, Portland† tel: 780-4352  
Registrar: Frances Tucker, 101 Research Center, Portland† tel: 780-4346

## SCHOOL OF NURSING

Dean: Audrey J. Conley, 55 Exeter Street, Portland† tel: 780-4130  
Assistant Dean: Carla H. Mariano, 55 Exeter Street, Portland† tel: 780-4130  
Faculty: Please refer to School of Nursing section of this catalog

## EDUCATIONAL SERVICES

Dean: Gordon S. Bigelow, 117 Payson Smith Hall, Portland† tel: 780-4035

Director of Advising and Information Department: Richard Sturgeon, Payson Smith Hall, Portland† tel: 780-4040

Coordinator of Academic Counseling Services: John N. Farrar, Payson Smith Hall, Portland† tel: 780-4040

Coordinator of Information Services: Cyrus Hendren, Payson Smith Hall, Portland† tel: 780-4040

Coordinator of Off-Campus Center Development: Deborah Daeris, YCCCS Learning Center, 11 Adams Street, Biddeford tel: 282-4111

Director of Counseling and Career Development: Ira Hymoff, 122 Payson Smith Hall, Portland† tel: 780-4050

Associate Director (Placement): Harold Menninger, Payson Smith Hall, Portland† tel: 780-4050

Coordinator of Handicapped Services: Dexter Huntoon, Payson Smith Hall, Portland† tel: 780-4050

Director of Student Affairs: Kathleen Bouchard, Upton Hall, Gorham\* tel: 780-5240

Coordinator of Residence Life: Charles H. Lamb, Upton Hall, Gorham\* tel: 780-5240

Coordinator of Student Activities/New Student Programs: Domenica Cipollone, Student Union, Portland† tel: 780-4090; Student Center, Gorham\* tel: 780-5470

A.R.A. Food Services: Mark Whitehead, Dining Center, Gorham\* tel: 780-5420

## OFFICE OF ADMISSIONS AND RECORDS

Director: John F. Keysor, 110 Corthell Hall, Gorham\* tel: 780-5236

Director of Admissions: William J. Munsey, Corthell Hall, Gorham\* tel: 780-5215

Director of Student Financial Aid: Bruce S. Johnson, 202 Corthell Hall, Gorham\* tel: 780-5250

Registrar: Lawrence Braziel, 113 Corthell Hall, Gorham\* tel: 780-5230

## ADMINISTRATION OF THE UNIVERSITY OF MAINE

### UNIVERSITY OF MAINE BOARD OF TRUSTEES

Stanley J. Evans, M.D., Chairman, 417 State Street, Bangor, Maine 04401

Joseph G. Hakanson, Vice Chairman, Box 465, Westbrook, Maine 04092

Severin M. Beliveau, 1 Memorial Circle, Augusta, Maine 04330

Francis A. Brown, P.O. Box 414, Calais, Maine 04619

Patricia H. DiMatteo, 403 Blackstrap Road, Falmouth, Maine 04105

Alan M. Elkins, M.D., 22 Bramhall Street, Portland, Maine 04101

Thomas F. Monaghan, P.O. Box 4863, Portland, Maine 04101

Patricia H. DiMatteo, 403 Blackstrap Road, Falmouth, Maine 04105

Alan M. Elkins, M.D., 22 Bramhall, Portland, Maine 04101

Thomas F. Monaghan, P.O. Box 4863, Portland, Maine 04101

Richard I. Morin, P.O. Box 32, Fort Kent, Maine 04743

Ellen W. Platz, 99 Grandview Avenue, Auburn, Maine 04210

Harold Reynolds, Jr., Commissioner of Educational and Cultural Services, State House, Augusta, Maine 04330

Harrison L. Richardson, Jr., 465 Congress Street, Portland, Maine 04101

John D. Robinson, Box 189, Franklin, New Hampshire 03235

Elizabeth S. Russell, The Jackson Laboratory, Bar Harbor, Maine 04609

Thaxter R. Trafton, Arizona Coliseum, Expo Center, 1826 West McDowell Road, Phoenix, Arizona 85005

### OFFICE OF THE CHANCELLOR, 107 MAINE AVENUE, BANGOR, MAINE

Patrick E. McCarthy, Chancellor of the University of Maine

Robert B. Binswanger, Vice Chancellor for Academic Affairs

William J. Sullivan, Vice Chancellor for Administration

Mary Ann Haas, Assistant Vice Chancellor

Samuel J. D'Amico, Associate Vice Chancellor for Employee Relations

\*For mailing address, add: USM, College Avenue, Gorham, Maine 04038

†For mailing address, add: USM, 96 Falmouth Street, Portland, Maine 04103

The University has a CENTREX telephone system which allows direct access to individuals and departments. When these numbers are not known, the main switchboard telephone number is (207) 780-4141

# UNIVERSITY OF SOUTHERN MAINE PERSONNEL LISTINGS

## EMERITI

- Bailey, Francis L.** (1940-1960) B.A., M.A., Ph.D., President Emeritus of Gorham State College of the University of Maine
- Bonney, Luther Isaac** (1957-1958) Bates College, B.A., 1906; M.A. (Hon.), 1951; University of Maine, Sc.D., 1959; Dean Emeritus, University of Maine in Portland
- Bowman, James A.** (1949-1974) Gorham State Teachers College, B.S., 1947; Boston University, Ed.M., 1951; Associate Professor Emeritus of Educational Psychology
- Clark, Elmer Banks Fred** (1946-1975) University of Florida, B.A.E., 1935; M.A., 1937; Associate Professor Emeritus of French and Spanish
- Clarke, Alfred** (1946-1971) Dartmouth College, A.B., 1928; Admissions Director Emeritus
- Dickey, Edna F.** (1946-1973) University of New Hampshire, B.A., 1933; M.A., 1936; Associate Professor Emerita of History
- Kern, Abraham K.** (1959-1977) Bowdoin College, A.B., 1936; University of Maine, M.Ed., 1956; Professor Emeritus of Biology
- Kerr, Elizabeth F.** (1957-1974) Marygrove College, B.S., 1939; Columbia University, A.M., 1946; Ed.D., 1956; Professor Emerita of Education
- Lawrence, Harold Merrill** (1946-1972) Boston University, B.S., 1940; Business Manager Emeritus
- MacLean, Jean** (1958-1975) Boston University, B.S., 1930; Yale University, B.N., 1933; University of Chicago, M.S., 1948; Professor Emerita of Psychiatric Nursing
- Miller, Robert N.** (1946-1977) Colby College, A.B., 1936; Professor Emeritus of Geology
- Mitchell, John** (1947-1977) Fitchburg State College, B.S., 1939; University of Minnesota, M.A., 1947; Pennsylvania State University, Ed.D., 1954; Professor Emeritus of Industrial Arts
- Peabody, Mildred** (1952-1973) Gorham State College, B.S., 1939; Boston University, Ed.M., 1952; Associate Professor Emerita of Education
- Sawtelle, Gwen D.** (1938-43; 1953) University of Minnesota, B.S., 1935; George Peabody College for Teachers, M.S., 1939; Associate Professor Emerita of Art
- Sawyer, C. Elizabeth** (1943-1971) University of Maine, B.A., 1928; Boston University, M.A., 1943; Middlebury College, M.A., 1963; Assistant Professor Emerita of English.
- Wood, Esther E.** (1930-1972) Colby College, A.B., 1926; Radcliffe College, M.A., 1929; Associate Professor Emerita of Social Sciences

*Numbers in the left hand margin are coded as follows:  
1 on leave, Fall semester, 1980  
2 on leave, Spring semester, 1981  
3 on leave, Academic year, 1980-81*

## PERSONNEL

*The following list includes both teaching faculty and administrative personnel. Dates in parentheses indicate initial year of appointment.*

- Abrami, Karen A.** (1979) Assistant to the Law School Dean; State University of New York at Buffalo, B.A., 1974
- Abrams, Richard H.** (1979) Assistant Professor of English; McGill University, B.A., 1964; University of Pennsylvania, M.A., 1965; University of New York, Ph.D., 1968
- Ackerman, John R.** (1980) Law School Placement and Alumni Director; University of Maine, B.A., 1966; M.Ed., 1971
- Adelman, Thomas G.** (1980) Adjunct Associate Professor of Biology; LaSalle College, B.A., 1966; Purdue University, Ph.D., 1972
- (2) **Albee, Parker B., Jr.** (1966) Associate Professor of History; Dartmouth College, A.B., 1961; Duke University, M.S., 1964; Ph.D., 1968
- (2) **Allen, Bruce A.** (1970) Associate Professor of Mathematics Education; Gorham State College, B.S., 1960; M.S., 1967; Boston University, Ed.D., 1973
- Anderson, Andrew L.** (1975) Assistant Professor of Graphic Communication; University of Wisconsin at Platteville, B.S., 1973; M.S., 1975
- Andrews, Bruce H.** (1974) Assistant Professor of Business Administration; University of Connecticut, B.A., 1967; Polytechnic Institute of New York, M.S., 1969; Ph.D., 1980
- Andrews, Samuel G.** (1966) Executive Director for Budget and Institutional Research; Babson College, B.S., 1964; University of Maine, M.S., 1966
- Anspach, Donald F.** (1970) Associate Professor of Sociology; Franklin and Marshall College, A.B., 1964; Western Reserve University, M.A., 1966; Case Western Reserve University, Ph.D., 1970
- Armentrout, Charles E.** (1960) Associate Professor of Physics; University of Maine, B.A., 1955; Wesleyan University, M.A., 1958; Columbia University, M.S., 1970
- Ashley, Kathleen M.** (1978) Assistant Professor of English; Duke University, B.A., 1969; M.A., 1970; Ph.D., 1973
- Ayers, George H.** (1959) Associate Professor of Physical Science; University of Maine, B.A., 1951; Ohio State University, M.A., 1959
- Babeau, Constance I.** (1979) Instructor, School of Nursing; University of Maine, B.S., 1970; Boston University, M.S.N., 1975
- Baier, Lee S.** (1966) Associate Professor of English; Reed College, A.B., 1948; Columbia University, M.S., 1952; Ph.D., 1965
- Bailow, Judith K.** (1978) Instructor, School of Nursing; Ohio State University, B.S., 1961; Boston University, M.S.N., 1967
- Banner, Gerald T.** (1968) Reference Librarian; New School for Social Research, B.A., 1965; Pratt Institute, M.L.S., 1967

- Barnard, Linda S.** (1979) Assistant Professor/Reality Therapy Trainer in Counselor Education; Huntington College, B.A., 1973; Ball State University, M.A., 1977; Southern Illinois University, Ph.D., 1979
- Bay, John W.** (1965) Dean, School of Business, Economics and Management and Associate Professor of Economics; Saint Ambrose College, B.A., 1961; Boston College, M.A., 1964; Ph.D., 1966
- Bazinet, Gregory P.** (1979) Instructor in Energy/Transportation; University of Maine at Portland-Gorham, B.S., 1977
- Bearce, Jeana Dale** (1965) Associate Professor of Art; Washington University, B.F.A., 1951; New Mexico Highlands University, M.A., 1954
- Bellone, Rosemary** (1972) Associate Professor, School of Nursing; Virginia Commonwealth University, B.S.N., 1970; Catholic University of America, M.S.N., 1971
- Bemis, A. Nye** (1970) Assistant Professor of Education and Director, In-Service Education; Gorham State College, B.S., 1964; M.S., 1969
- Benamati, Dennis C.** (1979) Assistant Law Librarian for Technical Services; St. Francis College (PA), B.A., 1970; Fordham University, M.A., 1974; Southern Connecticut State College, M.L.S., 1975
- Bergstrom, Linda** (1980) Instructor, School of Nursing; Gustavus Adolphus College, B.A., 1973; Teacher's College, Columbia University, M.Ed. 1980
- Berry, Arthur O.** (1955) Acting Director of Facilities Management and Professor of Metals Technology; Gorham State College, B.S., 1950; Pennsylvania State University, Ed.M., 1954; University of Connecticut, Ph.D., 1967
- Bibber, Joyce K.** (1967) Associate Professor of History; Westbrook Junior College, A.A., 1956; Barnard College, B.A., 1958; Stanford University, M.A., 1962; Ph.D., 1969
- Bigelow, Gordon S.** (1971) Dean for Educational Services; Brown University, A.B., 1954; University of Maine, Ed.M., 1962; Brigham Young University, A.M., 1966; Ph.D., 1967
- Bishop, John S.** (1968) Professor of Psychology; University of New Brunswick, B.A., 1953; Dalhousie University, M.A., 1957; University of London, Ph.D., 1958
- Boothby, Alice W.** (1953) Supervisor of Nurses, Student Health Services; Maine Eye and Ear Infirmary, R.N., 1945; University of Maine at Portland-Gorham, Family Nurse Associate, 1974
- Bouchard, Joey A.** (1968) Associate Professor of Physical Education; Springfield College, B.S., 1960; M.Ed., 1961; Boston University, C.A.S., 1968
- Bouchard, Kathleen H.** (1969) Director of Student Affairs; Western Michigan University, B.A., 1966; Indiana University, M.S., 1969
- Bowder, Jerry L.** (1960) Professor of Music; University of Washington, B.A., 1952; Lewis and Clark College, M.M., 1956; Eastman School of Music, Ph.D., 1960
- Brady, James B.** (1969) Head of Library Acquisitions; State University of New York at Albany, B.S., 1967; M.L.S., 1969; University of Illinois, C.A.S., 1977
- Brannigan, Claire N.** (1975) Assistant Professor, School of Nursing; McGill University, B.N., 1970; Boston University, M.S., 1975
- Brazil, Lawrence** (1977) Registrar; Southwest Missouri State University, B.S., 1966; Florida State University, M.A., 1974
- Briggs, Wayne F.** (1965) Chief Accountant and Director of Purchasing; University of Maine at Portland-Gorham, B.S., 1975
- Brown, William A.** (1960) Associate Professor of Mathematics and Computer Science; Bowdoin College, B.A., 1954; University of Maine, M.A., 1959
- Bruno, Holly E.** (1978) Assistant Dean, School of Law; Douglass College, B.A., 1967; University of North Carolina, M.A.T., 1970; University of Maine School of Law, J.D., 1976
- Bullock, William B.** (1970) Business Manager; Cornell University, B.S., 1953; M.B.A., 1959
- Burke, L. Morrill, Jr.** (1959) Associate Professor of English; Bowdoin College, A.B., 1949; University of Washington, M.A., 1951; Columbia University, Ph.D., 1971
- Burson, Janet Z.** (1978) Instructor, School of Nursing; Syracuse University, B.S., 1964; Oregon State University, M.S., 1975
- Burtchell, Veda** (1972) Coordinator of Space and Scheduling
- Callender, Willard** (1962; 1972) Senior Researcher; Bates College, A.B., 1958; University of Connecticut, M.A., 1960; Ph.D., 1967
- Campbell, Anne B.** (1978) Project Coordinator/Child Development Specialist, Maine Children's Resource Center and Assistant Professor of Education; Vermont College, A.A., 1961; Scarritt College, B.A., 1965; George Peabody College, M.A., 1967; Ed.S., 1969; University of Illinois, Ph.D., 1975
- Campbell, Richard R.** (1973) Associate Director, Student Financial Aid Office; University of Maine at Portland-Gorham, B.S., 1974
- Carmichael, Peter** (1975) Director, Cooperative Education, School of Business, Economics and Management; Director, Small Business Institute; and Assistant Professor of Business Administration; University of Maine, B.S., 1971; University of Massachusetts, M.B.A., 1973
- Carner, Frank K.** (1970) Associate Professor of English; Temple University, B.S., 1964; M.A., 1967; Ph.D., 1976
- Carper, Thomas R.** (1967) Associate Professor of English; Harvard University, A.B., 1958; New York University, M.A., 1967; Boston University, Ph.D., 1973
- Carson, Loftus C., II** (1980) Associate Professor of Law; Cornell University, B.S., 1968; Princeton University, M.P.A., 1970; Harvard University, J.D., 1973; University of Pennsylvania, M.B.A., 1980
- Carter, Richard H.** (1964) Associate Professor of Power Technology; Gorham State College, B.S., 1954; University of Maine, Ed.M., 1964; Boston University, C.A.S., 1971
- Caswell, Robert S.** (1980) Information Specialist; University of Southern Maine, B.A., 1974
- Chabot, Maurice J.** (1965) Associate Professor of Mathematics and Computer Science; University of Maine, B.A., 1961; Bowdoin College, M.A., 1965

*Numbers in the left hand margin are coded as follows:*  
 1 on leave, Fall semester, 1980  
 2 on leave, Spring semester, 1981  
 3 on leave, Academic year, 1980-81

- Chandler, Joseph** (1968) Associate Professor of Business and Economics; Bowdoin College, A.B., 1942; University of Maine, M.B.A., 1967; University of New Hampshire, M.A., 1971
- Chronister, Floyd B.** (1966) Coordinator of Professional Teacher Program and Associate Professor of Education; Conservatory of Music, U.M.K.C., Missouri, B.M., 1953; University of Kansas, B.M.E., 1955; M.M.E., 1959; Ed.D., 1969
- Ciechowski, Cheryl** (1980) Adjunct Faculty, School of Nursing; Fitchburg State College, B.S., 1972; Boston University, M.S.N., 1976
- Cipollone, Domenica** (1977) Coordinator, Student Activities/New Student Programs; University of Cincinnati, B.A., 1969; University of the Americas (Mexico), M.A., 1974
- Clarey, Richard J.** (1979) Associate Professor of Management; Bowdoin College, B.A., 1961; Dartmouth College, M.B.A., 1963; Cornell University, Ph.D., 1968
- Clarke, Carolyn K.** (1968) Head of Periodicals Services; University of Maine, B.A., 1968; M.L.S., 1974
- Clegg, Kenneth R.** (1977) Associate Professor, School of Law; Brown University, B.A., 1967; Hastings College of Law, J.D., 1972
- Cluchey, David P.** (1979) Visiting Associate Professor, School of Law; Yale University, B.A., 1968; State University of New York, M.A., 1970; Harvard Law School, J.D., 1973
- Cobb, Merrill E.** (1966) Professor of Education and Coordinator of Educational Administration; University of Maine, B.S., 1949; Ed.M., 1953; University of Massachusetts, Ed.D., 1968
- Coffin, Richard N.** (1964) Associate Professor of English; Bowdoin College, B.A., 1951; Harvard University, A.M., 1952; Boston University, Ph.D., 1962
- Cohen, Alan M.** (1977) Associate Director, Business and Industry, New Enterprise Institute; New York University, B.S., 1949; M.B.A., 1951
- Cohen, Libby G.** (1980) Assistant Professor of Special Education; University of Connecticut, B.A., 1967; Russell Sage College, M.S., 1971; Boston University, D.Ed., 1977
- Coit, Charles S.** (1977) Director, Center for Real Estate Education and Assistant Professor of Associate Business Administration; Yale University, B.S., 1966; Boston College, J.D., 1971
- Cole, Phillip A.** (1957) Professor of History; Boston University, B.S., 1954; M.A., 1955; Ph.D., 1963
- Cole, Ronald F.** (1963) Associate Professor of Music; Bowdoin College, B.A., 1961; Eastman School of Music, M.A., 1963; Indiana University, Ph.D., 1975
- Colucci, Nicholas D., Jr.** (1969) Associate Professor of Education; Gorham State College, B.S., 1963; University of Connecticut, M.A., 1964; Ph.D., 1969
- Conley, Audrey J.** (1979) Dean and Professor, School of Nursing; Case Western Reserve University, M.S., 1957; Columbia University, Ed.D., 1972
- Connick, George P.** (1966) Director, Division of Basic Studies and Associate Professor of History; Stanford University, B.A., 1957; San Jose State College, M.A., 1960; University of Colorado, Ph.D., 1969
- Connolly, James B.** (1977) Assistant Director, Applied Studies, School of Business, Economics and Management; University of Maine at Portland-Gorham, B.S., 1977
- Conway, Jeremiah P.** (1978) Assistant Professor of Philosophy; Fordham University, B.A., 1970; Yale University, M. Phil. 1974; Yale University, Ph.D., 1978
- Coogan, William H., III** (1972) Associate Professor of Political Science; Boston College, B.A., 1963; Rutgers University, M.A., 1964; University of North Carolina, Ph.D., 1971
- Coolidge, Jane** (1977) Assistant Professor, School of Nursing; University of Maine at Portland-Gorham, F.N.A., 1974; Boston University, M.S., 1975
- Corson, Doane B.** (1970) Superintendent of Buildings and Grounds, Gorham Campus; Southern Maine Vocational Technical Institute, 1958
- Costello, Melissa H.** (1953) Associate Professor of Education and Director of Clinical Experiences; Gorham State College, B.S., 1952; University of Maine, Ed.M., 1957; C.A.S., 1960
- Costello, Richard A.** (1953) Director, Intercollegiate Athletics and Professor of Health and Physical Education; University of Alabama, B.S., 1952; University of Illinois; M.S., 1953; Springfield College, D.P.E., 1965
- Cotton, Jean** (1967) Associate Professor, School of Nursing; Simmons College, B.S., 1960; Boston University, M.S., 1962
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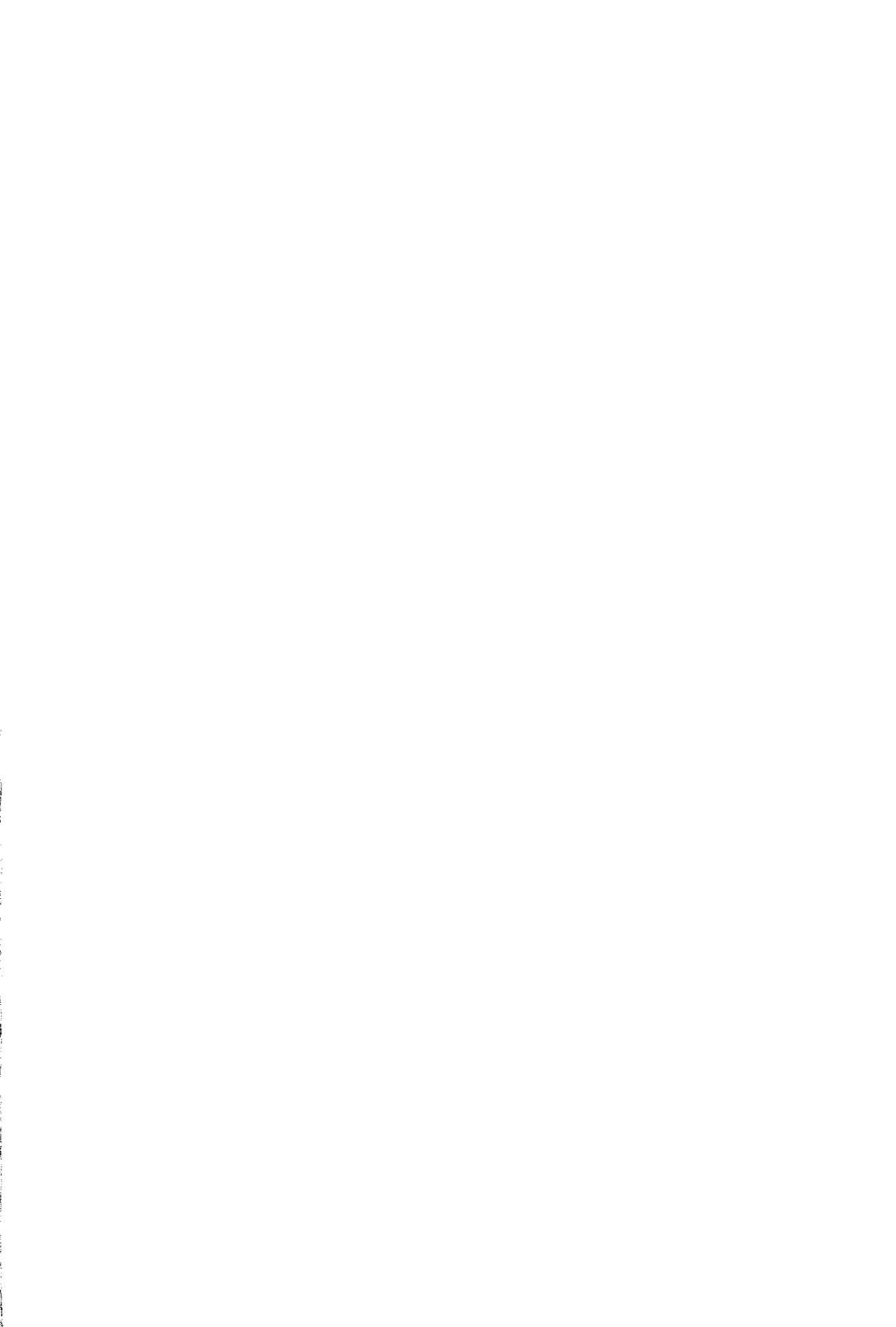
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