1975

University of Maine at Portland-Gorham Catalog 1975-1976

University of Maine at Portland - Gorham

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UNIVERSITY OF MAINE AT PORTLAND-GORHAM CATALOG 1975-76
The University of Maine at Portland-Gorham

Catalog

Programs Available On or After September 3, 1975
And Until Further Notice

Prepared for the UMPG Office of Admissions
by the Office of Publications and Public Information
according to information available on May 1, 1975

Please address mail requests for catalogs
and other printed admissions material to:

ADMISSIONS OFFICE, U.M.P.G.
96 Falmouth Street
Portland, Maine 04103

The University of Maine fully supports and complies with Title VI of the Civil Rights Act of 1964 and subsequent Equal Opportunity legislation, and does not discriminate in any way in any of its policies on the basis of sex, creed, race, color, or national origin.
University of Maine at Portland-Gorham

Academic Calendar

FALL SEMESTER 1975

September 2 ......................... Registration
September 3 ....................... First Day of Classes
November 26—30 ..................... Thanksgiving Recess
December 12 ....................... Last Day of Classes
December 15—20 .................... Final Examinations

SPRING SEMESTER 1976

January 12 ......................... Registration
January 13 ......................... First Day of Classes
February 14—22 ...................... Recess
March 27—April 4 ..................... Recess
May 7 ............................. Last Day of Classes
May 10—15 ......................... Final Examinations
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ADMINISTRATIVE ORGANIZATION
UNIVERSITY OF MAINE AT PORTLAND-GORHAM

BOARD OF TRUSTEES and CHANCELLOR: Because of pending appointments at the time of printing, a listing is omitted from this issue of the UMPG Catalog. An updated listing may be obtained, when needed, from: Ms. Margaret R. Dexter, Clerk of the Board, University of Maine, 107 Maine Avenue, Bangor, Maine 04401.

Officers of Administration
of the
University of Maine at Portland-Gorham

PRESIDENT: N. Edd Miller, 102 Corthell Hall, Gorham Campus*
ASSISTANT TO THE PRESIDENT FOR ACADEMIC AFFAIRS: William B. Wise, 100 Corthell Hall, Gorham Campus*
VICE PRESIDENT FOR EDUCATIONAL SERVICES: Gordon S. Bigelow, 108-A Corthell Hall, Gorham Campus*
VICE PRESIDENT FOR FINANCE AND ADMINISTRATION: Walter P. Fridinger, 625 Research Center, Portland Campus†

Administrative Staff of the President

ADMINISTRATIVE ASSISTANT TO THE PRESIDENT: Virginia L. Emery, 102 Corthell Hall, Gorham Campus*
DIRECTOR OF PUBLICATIONS AND PUBLIC INFORMATION: Roger V. Snow, Jr., 120 Bedford Building, Portland Campus†
DEVELOPMENT OFFICER: Maurice E. Littlefield, Alumni House, Portland Campus†
DIRECTOR OF PHYSICAL EDUCATION AND INTERCOLLEGIATE ATHLETICS: Richard A. Costello, 108 Hill Gymnasium, Gorham Campus*
DIRECTOR OF CENTER FOR RESEARCH AND ADVANCED STUDY: Halsey Smith, 401 Research Center, Portland Campus†
DIRECTOR OF EQUAL EMPLOYMENT OPPORTUNITY: Anne Ladley, 7 Chamberlain Building, Portland Campus†
UNIVERSITY ARCHIVIST: Marjorie A. Duval, 614 Research Center, Portland Campus†

*For mail address, add: U.M.P.G., College Avenue, Gorham, Maine 04038. The telephone switchboard number for such addresses is (207) 839-3351.
†For mail address, add: U.M.P.G., 96 Falmouth Street, Portland, Maine 04103. The telephone switchboard number for such addresses is (207) 773-2981.
Administrative Staff
of the Assistant to the President for Academic Affairs

DIRECTOR OF ACADEMIC PLANNING AND ACTING DIRECTOR OF ASSOCIATE STUDIES: George P. Connick, 622 Research Center, Portland Campus†

UNIVERSITY LIBRARIAN: Clifton F. Giles, Jr., Portland Library, Portland Campus†

DIRECTOR OF CONTINUING EDUCATION AND PUBLIC SERVICE: William G. Mortensen, 119 Payson Smith Hall, Portland Campus†

Administrative Staff
of the Vice President for Educational Services

ASSOCIATE DEAN OF STUDENT LIFE: Kathleen M. Bouchard, 110-B Corthell Hall, Gorham Campus*

COORDINATOR OF RESIDENCE HALLS: Nancy E. Kane, 110 Corthell Hall, Gorham Campus*

COORDINATOR OF STUDENT ACTIVITIES AND UNIONS: Julie E. Motherwell, Portland or Gorham Student Centers†*

A.R.A. FOOD SERVICES: Mark Whitehead, Dining Center, Gorham Campus*

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REGISTRAR: David T. Sullivan, 113 Corthell Hall, Gorham Campus*

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of the Vice President for Finance and Administration

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DIRECTOR OF ENGINEERING AND PLANNING: Edward I. Salmon, 120 Portland Gym, Portland Campus†

DIRECTOR OF PERSONNEL: Mary A. Yalouris, 100 Payson Smith Hall, Portland Campus†, 105 Corthell Hall, Gorham Campus*

DIRECTOR OF PHYSICAL PLANT: John T. Kazenski, 3 Washburn Building, Portland Campus†
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INFORMATION SPECIALIST: Rosalie M. Young, 120 Bedford Building, Portland Campus†
INFORMATION SPECIALIST: Christine M. Rothenberg, 120 Bedford Building, Portland Campus†

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EXECUTIVE DIRECTOR, THE ALUMNI ASSOCIATION OF THE UNIVERSITY OF MAINE AT PORTLAND-GORHAM: Anne M. Theriault, Alumni House, Portland Campus†
ASSOCIATE EXECUTIVE DIRECTOR, THE ALUMNI ASSOCIATION OF THE UNIVERSITY OF MAINE AT PORTLAND-GORHAM: Bertha F. Higgins, 12 Robie Hall, Gorham Campus∗

Administrative Staff of the Director of Continuing Education and Public Service

ASSOCIATE DIRECTOR OF CONTINUING EDUCATION AND SUMMER SESSION: William U. Small, 119 Payson Smith Hall, Portland Campus†
ASSISTANT DIRECTOR OF CONTINUING EDUCATION AND SUMMER SESSION: Hollie L. Ingraham, 105 Corbell Hall, Gorham Campus∗
DIRECTOR OF COUNSELING, CONTINUING EDUCATION AND SUMMER SESSION: John N. Farrar, 119 Payson Smith Hall, Portland Campus†
SHORT COURSE COORDINATOR: Raymond P. Kane, 119 Payson Smith Hall, Portland Campus†
ADMINISTRATIVE ASSISTANT: Ellen M. Martel, 119 Payson Smith Hall, Portland Campus†

Academic Administrative Structure of Undergraduate Colleges and Schools

ASSOCIATE DEGREE STUDIES

DIRECTOR: George P. Connick, 622 Research Center, Portland Campus†
ASSISTANT DIRECTOR: Samuel G. Andrews, 615 Research Center, Portland Campus†
ASSISTANT DIRECTOR: Richard H. Sturgeon, 615 Research Center, Portland Campus†

*For mail address, add U.M.P.G., College Avenue, Gorham, Maine 04038. The telephone switchboard number for such addresses is (207) 839-3351.
†For mail address, add U.M.P.G., 96 Falmouth Street, Portland, Maine 04103. The telephone switchboard number for such addresses is (207) 773-2981.
COLLEGE OF ARTS AND SCIENCES

DEAN: Konnilyn G. Feig, 113 Luther Bonney Hall, Portland Campus†, 118 Bailey Hall, Gorham Campus*

ASSOCIATE DEAN: Constance M. Carroll, 113 Luther Bonney Hall, Portland Campus†, 118 Bailey Hall, Gorham Campus*

ASSISTANT DEAN: Waldeck E. Mainville, Jr., 113 Luther Bonney Hall, Portland Campus†, 118 Bailey Hall, Gorham Campus*

CHAIRMAN, ART DEPARTMENT: Juris K. Ubans, 205 Robie/Andrews Hall, Gorham Campus*

CHAIRMAN, BIOLOGY DEPARTMENT: Peter K. Holmes, 412 Science Building, Portland Campus†

CHAIRMAN, COMMUNICATION DEPARTMENT: Melvin E. Picl, 7 Chamberlain Building, Portland Campus†

CHAIRMAN, ENGLISH DEPARTMENT: William H. Slavick, 200 Bailey Hall, Gorham Campus*

CHAIRMAN, FOREIGN LANGUAGES AND CLASSICS: Frederick B. Rolfe, 418 Luther Bonney Hall, Portland Campus†

CHAIRMAN, GEOGRAPHY AND ANTHROPOLOGY: Judith Tizon, 320-B Bailey Hall, Gorham Campus*

CHAIRMAN, HISTORY DEPARTMENT: Eugene P. A. Schleh, 300 Bailey Hall, Gorham Campus*

CHAIRMAN, MATHEMATICS AND COMPUTER SCIENCE DEPARTMENT: Lincoln T. Fish, 115-C Bailey Hall, Gorham Campus*

CHAIRMAN, MUSIC DEPARTMENT: Harold F. Brown, 206-A Corthell Hall, Gorham Campus*

CHAIRMAN, PHILOSOPHY DEPARTMENT: William J. Gavin, 215 Luther Bonney Hall, Portland Campus†

CHAIRMAN, PHYSICAL SCIENCES AND ENGINEERING DEPARTMENT: Parnell S. Hare, 4 Bailey Hall, Gorham Campus*

CHAIRMAN, POLITICAL SCIENCE DEPARTMENT: John A. Peirce, 515 Luther Bonney Hall, Portland Campus†

CHAIRMAN, PSYCHOLOGY DEPARTMENT: Estelita L. Saldanha, 510 Science Building, Portland Campus†

CHAIRMAN, SOCIAL WELFARE DEPARTMENT: John M. Romanyszyn, 55 Exeter Building, Portland Campus†

CHAIRMAN, SOCIOLOGY DEPARTMENT: Donald F. Anspach, 120 Bedford Building, Portland Campus†

CHAIRMAN, THEATRE DEPARTMENT: William P. Steele, 7 Chamberlain Building, Portland Campus†

*For mail address, add U.M.P.G., College Avenue, Gorham, Maine 04038. The telephone switchboard number for such addresses is (207) 839-3351.
COORDINATOR, CRIMINAL JUSTICE PROGRAM: Peter M. Lehman, 7 Chamberlain Building, Portland Campus

DIRECTOR, ART GALLERY: Juris K. Ubans, 205 Robie/Andrews Hall, Gorham Campus

DIRECTOR, MUSEUM OF MAN: Robert J. French, 320-C Bailey Hall, Gorham Campus

DIRECTOR, SOUTHWORTH PLANETARIUM: George H. Ayers, 314 Bailey Hall, Gorham Campus

COLLEGE OF EDUCATION

DEAN: Harlan A. Philippi, 103 - 106 Bailey Hall, Gorham Campus

DIRECTOR, PRE-PROFESSIONAL DEVELOPMENT PROGRAMS: Bruce Allen, 506 Bailey Hall, Gorham Campus

DIRECTOR, ADVANCED STUDY PROGRAMS: George Hackett, 508-B Bailey Hall, Gorham Campus

DIRECTOR, IN-SERVICE EDUCATION PROGRAMS: A. Nye Bemis, 103 Bailey Hall, Gorham Campus

SCHOOL OF BUSINESS AND ECONOMICS

DEAN: John W. Bay, 120 Luther Bonney Hall, Portland Campus

CHAIRMAN, BACCALAUREATE PROGRAM IN BUSINESS ADMINISTRATION: Robert W. Findlay, 212 Luther Bonney Hall, Portland

CHAIRMAN, ASSOCIATE PROGRAM IN BUSINESS ADMINISTRATION: Richard L. McKeil, 518 Luther Bonney Hall, Portland Campus

CHAIRMAN, ECONOMICS DEPARTMENT: Leon J. Bien, 3 Washburn Building, Portland Campus

SCHOOL OF GENERAL AND INTERDISCIPLINARY STUDIES

ACTING DIRECTOR: James O'Neil, 11 Granite Building, Portland Campus

SCHOOL OF NURSING

DEAN: Mary Ann Eells, 39 Exeter Building, Portland Campus

CHAIRMAN, COMMUNITY HEALTH NURSING: Jacqueline Karabin, 57 Exeter Building, Portland Campus

CHAIRMAN, PSYCHIATRIC NURSING: Paula Balber, 57 Exeter Building, Portland Campus

CHAIRMAN, MEDICAL-SURGICAL NURSING: Jeanne G. Talbot, 61 Exeter Building, Portland Campus

CHAIRMAN, ADVANCED MEDICAL-SURGICAL NURSING: Judith T. Stone, 59 Exeter Building, Portland Campus

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DIRECTOR, FAMILY NURSE ASSOCIATE PROGRAM: Doris Pennoyer, 210 Portland Gymnasium, Portland Campus

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DIVISION OF PHYSICAL EDUCATION AND INTERCOLLEGIATE ATHLETICS

DIRECTOR: Richard A. Costello, 108 Hill Gym, Gorham Campus*

CHAIRMAN, DEPARTMENT OF RECREATION: Robert Folsom, 112 Portland Gym, Portland Campus†

COORDINATOR, WOMEN'S DANCE: Jeanette L. Goodwin, 207 Hill Gym, Gorham Campus*

COORDINATOR, WOMEN'S ATHLETICS: Paula D. Hodgdon, 203 Hill Gym, Gorham Campus*

Academic Administrative Structure of Graduate and Graduate Professional Schools

GRADUATE SCHOOL

DEAN: Robert M. York, 103-A Corthell Hall, Gorham Campus*

ADMINISTRATIVE ASSISTANT: Virginia M. Lewis, 103-A Corthell Hall, Gorham Campus*

SCHOOL OF LAW

DEAN: Bert S. Prunty, 105 Law School Building, Portland Campus†

ASSISTANT DEAN: William F. Julavits, 108 Law School Building, Portland Campus†

REGISTRAR: Doris M. Peters, 102 Law School Building, Portland Campus†

DIRECTOR, CLINICAL PRACTICE PROGRAM: Judy R. Potter, 109 Law School Building, Portland Campus†

LIBRARIAN, SCHOOL OF LAW: Donald L. Garbrecht, 212 Law School Building, Portland Campus†

*For mail address, add U.M.P.G., College Avenue, Gorham, Maine 04038. The telephone switchboard number for such addresses is (207) 839-3351.

†For mail address, add U.M.P.G., 96 Falmouth Street, Portland, Maine 04103. The telephone switchboard number for such addresses is (207) 773-2981.
The University of Maine at Portland-Gorham

The University of Maine at Portland-Gorham is a regional center of the University of Maine, offering a diversity of undergraduate and graduate courses in a variety of subject areas. The second largest institution of higher learning in the State of Maine, it comprises two campuses, both on State Route 25 which crosses the Maine Turnpike one block south of Turnpike Exit 8. The Portland Campus is three miles east of Exit 8, and the Gorham Campus is seven miles to the west of that exit.

Bus transportation between the two campuses is provided for students, Monday through Friday throughout the academic year whenever the regularly scheduled day classes are in session. Parking lots on both campuses are available for students commuting in their own automobiles. Dormitory facilities are provided only at the Gorham Campus, but dormitory students who pay for board and room at the Gorham Campus may obtain lunch without extra charge at the Portland Campus on days when their class schedules require them to be at the Portland Campus at lunch time.

Approximately 8,100 students are normally enrolled in various degree programs at UMPG. The courses offered in all these degree programs, with the exception of those offered by the graduate professional School of Law, are described on the following pages.

In addition to the range of day courses available at UMPG, the Continuing Education Division offers about 500 CED courses during late afternoon and evening hours throughout the academic year, making it possible for part-time students to earn undergraduate degrees in business administration, education, and various arts and sciences, as well as graduate degrees in business administration and education.

The Continuing Education Division is also responsible for the Summer Session, meeting the needs of an additional 3,000 students taking 280 or more day and evening summer courses. Many summer session courses are offered in three-week units of intensive study, some starting in June, some in July, and some in August. Other daytime summer courses are offered in six-week sessions, and a few are scheduled in five-week or two-week sessions. Summer evening courses are normally offered in an eight-week session, with classes meeting two evenings a week.

Although most of the courses offered by CED carry credits toward associate, bachelors', or masters' degrees, the Continuing Education Division also meets specialized interests of various groups of business and professional people through short courses, seminars, and workshops, which are offered at frequent intervals throughout the academic year. Such programs are not described in this catalog, but brochures and tabloid catalogs describing CED offerings may be obtained from the CED Office at UMPG, 96 Falmouth Street, Portland, Maine 04103.

Approximately 900 other part-time students were enrolled last year in late afternoon and evening courses held in public schools, churches, libraries, and private college facilities in York County, under associate degree programs of the York County Community College Services, offered by UMPG in cooperation with Southern Maine Vocational Technical Institute. Counseling centers of YCCCS are located in Biddeford, Eliot, and Sanford. Details may be obtained from the Associate Degree Studies Office, 615 Research Center, UMPG, 96 Falmouth Street, Portland, Maine 04103.
Admission—Undergraduate Studies

The approval of candidates seeking admission to the University is on a selective basis. Candidates must be graduates of approved secondary schools or hold the high school equivalency diploma. 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 freshman 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.

COLLEGE OF ARTS AND SCIENCES

The College of Arts and Sciences currently offers four-year programs leading to the degree of Bachelor of Arts, with the following majors:

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</thead>
<tbody>
<tr>
<td>Pre-Med., Pre-Dental</td>
<td></td>
<td></td>
<td>Psychology</td>
<td></td>
<td></td>
<td>Self-Designed major**</td>
<td>Mathematics and</td>
<td>Sociology</td>
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<tr>
<td>Pre-Vet.</td>
<td></td>
<td></td>
<td>Social Welfare</td>
<td></td>
<td></td>
<td></td>
<td>Computer Science</td>
<td>Theatre/Communication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liberal Studies*</td>
<td></td>
<td></td>
<td>Psychology</td>
<td></td>
<td></td>
<td>Self-Designed major**</td>
<td>Mathematics and</td>
<td>Sociology</td>
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<tr>
<td>Mathematics and</td>
<td></td>
<td></td>
<td>Social Welfare</td>
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<td></td>
<td></td>
<td>Computer Science</td>
<td>Theatre/Communication</td>
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<tr>
<td>Liberal Studies*</td>
<td></td>
<td></td>
<td>Psychology</td>
<td></td>
<td></td>
<td>Self-Designed major**</td>
<td>Mathematics and</td>
<td>Sociology</td>
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<tr>
<td>Pre-Vet.</td>
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<td></td>
<td>Psychology</td>
<td></td>
<td></td>
<td>Self-Designed major**</td>
<td>Mathematics and</td>
<td>Sociology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criminal Justice</td>
<td></td>
<td></td>
<td>Social Welfare</td>
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<td></td>
<td></td>
<td>Computer Science</td>
<td>Theatre/Communication</td>
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<td></td>
<td></td>
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<tr>
<td>(B.S. degree)</td>
<td></td>
<td></td>
<td>Psychology</td>
<td></td>
<td></td>
<td>Self-Designed major**</td>
<td>Mathematics and</td>
<td>Sociology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earth Science</td>
<td></td>
<td></td>
<td>Social Welfare</td>
<td></td>
<td></td>
<td></td>
<td>Computer Science</td>
<td>Theatre/Communication</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Economics</td>
<td></td>
<td></td>
<td>Psychology</td>
<td></td>
<td></td>
<td>Self-Designed major**</td>
<td>Mathematics and</td>
<td>Sociology</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| *Liberal Studies: Declaration of this 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 Universit.

ENGINEERING

This University offers the first year of the program common to all Engineering majors, and the first and second years in Engineering Physics. These offerings are identical in all respects to corresponding programs at the University of Maine at Orono. Students who complete either one or two years here continue their studies at UMO.

COLLEGE OF EDUCATION

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

Secondary Education majors include:

<table>
<thead>
<tr>
<th>Biology</th>
<th>French</th>
<th>Sciences Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth Science</td>
<td>History</td>
<td>Social Sciences</td>
</tr>
<tr>
<td>Economics</td>
<td>Mathematics and</td>
<td>Theatre/Communication</td>
</tr>
<tr>
<td>English</td>
<td>Computer Science</td>
<td></td>
</tr>
</tbody>
</table>

Other Programs of the College of Education include:

| Elementary Education         | Industrial Arts Education |
| Kindergarten-Primary Ed.     | Vocational-Technical Ed.  |
| Art Education                | Industrial Arts Technology|
| Music Education               | (non-teaching program)    |
| Language Communications*     | Vocational Technology    |
| Learning Disabilities*       | (non-teaching program)    |
| Physical Education Leadership*|                               |

*See College of Education for details.
SCHOOL OF BUSINESS AND ECONOMICS

Business Administration

The School of Business and Economics 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.

In addition to its four-year programs, the School of Business and Economics offers a two-year program leading to the degree of Associate of Science in Business Administration. Students in the Associate Degree Program may pursue a Management-Accounting Option, a Hotel, Motel, and Restaurant Option, or (through Continuing Education Division evening courses) a Real Estate Option.

SCHOOL OF NURSING

The School of Nursing offers a four-year program leading to the degree of Bachelor of Science, with a major in nursing.

In addition to the usual University fees and expenses, nursing students must purchase uniforms (approximately $55.00) during the sophomore year. They must also provide themselves with a car for one semester during the senior year for use in the course in Community Health Nursing.

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 at in-state tuition rates. The following fields of study are currently available in the New England Regional Student Program.

PROGRAM OPEN TO STUDENTS FROM:

Two-Year Program
Two-Year Business Administration (Associate Degree Program) Conn., R.I., Vt.

Four-Year Program
Art Education Conn., R.I.
Industrial Technology Conn., N.H., R.I.
Industrial Arts Education Vt.

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 established.

COLLEGE OF ARTS AND SCIENCES

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>*Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>**Sciences</td>
<td>2 Lab</td>
</tr>
<tr>
<td>History/Social Science</td>
<td>2</td>
</tr>
<tr>
<td>***Foreign Language</td>
<td>2</td>
</tr>
<tr>
<td>*Mathematics Majors</td>
<td>4</td>
</tr>
<tr>
<td>**Biology and Premedical Majors</td>
<td>3 Lab</td>
</tr>
<tr>
<td>***Foreign Language Majors</td>
<td>3</td>
</tr>
</tbody>
</table>

An Early Admission Program, described on the next 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.
SCHOOL OF BUSINESS AND ECONOMICS

Four-Year Baccalaureate Program

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Algebra</td>
<td>2</td>
</tr>
<tr>
<td>Geometry</td>
<td>1</td>
</tr>
<tr>
<td>Elective</td>
<td>9</td>
</tr>
</tbody>
</table>

Two-Year Associate in 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.

COLLEGE OF EDUCATION

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4 Units</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3 Units (2 Algebra, 1 Geometry)</td>
</tr>
<tr>
<td><strong>Sciences</strong></td>
<td>2 Lab Units</td>
</tr>
<tr>
<td>History/Social Science</td>
<td>2 Units</td>
</tr>
<tr>
<td><strong>Foreign Language</strong></td>
<td>Optional</td>
</tr>
</tbody>
</table>

*Mathematics majors in Secondary Education 4 Units
**Biology and Science Area majors in Secondary Education 3 Lab Units
***Foreign Language majors in Secondary Education 3 Units

SCHOOL OF NURSING

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4 Units</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3 Units (Algebra I, II, Geometry I)</td>
</tr>
<tr>
<td>Sciences</td>
<td>2 Lab Units (Biology, Chemistry)</td>
</tr>
<tr>
<td>History/Social Science</td>
<td>2 Units</td>
</tr>
<tr>
<td><strong>Foreign Language</strong></td>
<td>Optional</td>
</tr>
</tbody>
</table>

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 full-fledged 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, two years of Mathematics beginning at the introductory algebra level; one year of social science/history, one year of biology, chemistry, or physics, and one year of a 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.

The student should confer with his high school guidance counselor or principal regarding eligibility to participate in the Early Admission Program. The student...
and the principal/counselor will complete the Early Admission Application, and along with an official transcript, submit it to the Admissions Office at UMP.

The CAS Admissions Advisory Board will review each Early Admission Application. Those students approved for this program are assured admission to the University upon completion of the standard University admission form and receipt of the application fee. Students thus admitted under this program are accorded all the rights and privileges of entering freshmen. Special advising will be available 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. Under certain circumstances a student will be considered for other academic semesters. Application forms must be submitted as early as possible. For Fall Semester, all Early Admissions applications should be received by April 15.

Submit completed application forms and address questions to the Director of Admissions, University of Maine at Portland-Gorham, 96 Falmouth St., Portland, Maine 04103.

COLLEGE ENTRANCE EXAMINATION BOARD AND AMERICAN COLLEGE TESTING

1. STUDENT DESCRIPTIVE QUESTIONNAIRE/ADMISSION TESTING PROGRAM. As a member institution of the College Entrance Examination Board the University of Maine at Portland-Gorham endorses and strongly urges all freshman applicants to provide complete information on the Student Descriptive Questionnaire of the Admission Testing Program. Applicants for admission to UMP must have all test results reported directly from either the Educational Testing Service or the American College Testing program.

2. The University of Maine at Portland-Gorham Admissions Office will accept either Scholastic Aptitude Test & Achievement Test scores, or American College Test scores for candidates seeking admission. All candidates applying for admission must submit test scores from either the Scholastic Aptitude Test & Achievement Test battery or the American College Testing program unless arrangements for testing to be waived have been approved by the Director of Admissions.

3. Applicants should work with the high school guidance office in registering for and counseling in the preparation for the required testing.

4. Candidates submitting Scholastic Aptitude Test & Achievement Test results are required to submit two Achievement Scores in support of their application. One test should be either the English Composition Achievement or the Literature Achievement. When possible, the second test should relate to the student's field of study, such as history, mathematics, foreign language, a science, etc.

5. Veterans or applicants who have been out of school at least three years and students applying to the Associate Degree Program in Business Administration are not required to take the Achievement Tests.

6. High School juniors are encouraged to take achievement tests in non-continuing subjects on the June test date. Guidance Counselors should be consulted for details.

REPORTING TEST RESULTS

For equal consideration candidates are required to submit all test results no later than the January test date of the SAT/ACH 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.

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Dates for the Scholastic Aptitude Test and Achievement Tests 1975-76

November 1, 1975
December 6, 1975
January 24, 1976
April 3, 1976
June 5, 1976

Dates for the American College Testing Program 1975-76

October 18, 1975
December 13, 1975
February 14, 1976
April 10, 1976
June 12, 1976

*Both the SAT and the Achievement Tests will be available on each of these test dates in 1975-76. Candidates may select one of these dates for taking the SAT. They must select another of these dates for taking Achievement Tests.

APPLICATION PROCEDURE

1. Obtain a copy of the University brochure and the necessary application form from the Director of Admissions or from the high school principal or guidance counselor.

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

3. Mail the completed application and application fee of $10.00 (non-refundable) to the Director of Admissions, University of Maine at Portland-Gorham, 96 Falmouth Street, Portland, Maine 04103.

4. The high school should forward to the Admissions Office a transcript of academic work completed along with recommendations. Student copies cannot be accepted for evaluation.

5. Transfer applicants must have official transcripts sent to the Admissions Office for all post high school work attempted. Student copies cannot be accepted for evaluation.

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

7. 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-May for September admission. The Admissions Office will endeavor to contact students when documents are missing from files. However, the heavy work load often times delays correspondence to individual candidates.

8. To receive equal consideration with other candidates, applications to most undergraduate schools and departments along with supporting credentials should be on file with the Admissions Office by December 1st for January admission and by April 15th for September admission. Candidates to the School of Nursing and the departments of Art, Music, and Industrial Arts must apply much earlier in the admission year.

ADMISSION PROCEDURES

1. After the student's application has been reviewed and evaluated, the Director of Admissions will notify the applicant of the appropriate decision.

2. Upon acceptance, the student will be required to make appropriate deposits. A deposit of $55.00 will be required of each residence hall applicant. A deposit of $25.00 is required of all commuting students. Refund requests will be honored by the University to June 1 for September enrollment and to January 1 for the spring semester if the request is received in writing to the Director of Admissions.
3. Admission to the University is not final until the student has satisfactorily completed all Admissions Office requirements.

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 blindness 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 scheduled for an interview with the University Coordinator of Handicapped Services, who will in turn submit recommendations to the Director of Admissions. In consultation with other University offices the Admissions Office reserves the right to refuse admission to any candidate it feels that the University cannot adequately assist in the completion of degree work.

5. The University reserves the right to cancel the acceptance of any application it deems necessary for academic or personal reasons.

6. Interview: With the exception of candidates applying to the Art, Music, and Industrial Arts and Vocational-Technical programs, interviews are optional. If students desire an interview, they should arrange for one with the Admissions Office. Students are encouraged to visit the University and acquaint themselves with its facilities.

**DEPARTMENTAL REQUIREMENTS FOR ADMISSION**

**ART** Applicants for admission to the Art Program at the University are required to submit to the Art Department at the Gorham campus a portfolio of original art work. This portfolio should consist of 20 works in varying media, including one life-size self-portrait drawn from life in any media of the student's choice, together with a selection which indicates the applicant's current interests and abilities. Prints, drawings, paintings, posters, photographs, films, and slides may be included. Any sculpture or three-dimensional works may be represented by photographs.

The following dates have been established by the Art Department for the submission of the portfolio and the Student Art questionnaire for 1975-76.

Friday, November 5, 1975*
Friday, March 19, 1976

*The November 5th date is primarily for transfer students applying for the January admission. It is possible, however, that early candidates to the Art program for September admission may prefer to use the November date rather than waiting for the March 19 date.

**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. Written music aptitude and achievement tests will also be administered. Students will be notified by the Music Department of the appropriate procedures to follow and the dates available for on-campus visitations.

**INDUSTRIAL ARTS** Applicants for the Industrial Arts program are required to take special aptitude tests at the University; they should have had a minimum of one unit in either industrial arts or drafting (graphics) in high school. Students will be notified by the Department of Industrial Arts of the appropriate procedures to follow and the dates available for on-campus visitations.

**VOCATIONAL-TECHNICAL** Applicants for the Vocational-Technical 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.

**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 Office of Handicapped Student Services, 108 Corthell Hall, Gorham campus.

**FOREIGN STUDENTS (Undergraduates)**

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.

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. Further details are given in the “Foreign Student Handbook” available from the International Student Adviser or the Admissions office.

**ADMISSION TO ADVANCED STANDING — TRANSFER STUDENTS**

Admission to the University of Maine at Portland-Gorham 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 learning beyond high school is classified as a transfer student even though the student may in the final analysis not transfer in credits. A student accepted for admission from an 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 Maine at Portland-Gorham 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.

Credits accepted from non-accredited institutions must be “B” grades or better and applicable to the student's program of study.

All 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.

Students seeking advanced standing must submit, in addition to the application, a high school transcript, Scholastic Aptitude Test results, and a character recommendation from the Dean of Students Office of the college or colleges previously attended.

**CREDIT BY EXAMINATION**

**Advanced Placement**

It shall be the policy of the University of Maine at Portland-Gorham 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 with a score of either four (well-qualified) or five (very well-qualified). A score of three will be examined for credit on an individual basis by the department concerned.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

1. General Examination

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

<table>
<thead>
<tr>
<th>Title of Examination</th>
<th>Credit For</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>ENG 100</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>General Education</td>
<td>6</td>
</tr>
<tr>
<td>Social Science</td>
<td>General Education</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics</td>
<td>General Education</td>
<td>6</td>
</tr>
<tr>
<td>Science</td>
<td>General Education</td>
<td>6</td>
</tr>
</tbody>
</table>

A score of 540 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.

2. Subject Examination (CLEP)

COLLEGE OF ARTS AND SCIENCES—Certain academic departments within the College of Arts and Sciences 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 AND ECONOMICS—The School of Business and Economics 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 and Economics.

SCHOOL OF NURSING—Available for advanced placement is credit in subject examinations offered through CLEP. Interested candidates should discuss their eligibility for taking these examinations with the Dean of the School of Nursing. The School of Nursing also offers credit-by-examination in certain courses of the nursing major for advanced placement. For more details, interested students should contact the Department Chairman of the specific courses to be challenged.

FINANCIAL AID

Students seeking admission to the University of Maine at Portland-Gorham who anticipate requesting financial aid must apply through the College Scholarship Service Program, Box 176, Princeton, New Jersey 08540. The Parents’ Confidential Statement may be secured through the local high school guidance office or by writing to the Financial Aid Office at the University of Maine at Portland-Gorham, College Avenue, Gorham, Maine 04038.

Married students applying for financial assistance must fill out the Student’s Financial Statement and return it to the College Scholarship Service, Box 1501, Berkeley, California 94701. This form is available in the Financial Aid office of the University of Maine at Portland-Gorham, College Avenue, Gorham, Maine 04038.

For additional information concerning financial aid please refer to the catalog section under “Financial Assistance”.

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READMISSION

Degree students attending days who withdraw from all course work at the University of Maine at Portland-Gorham during any semester must apply for readmission through the undergraduate Admissions Office, either personally at 228 Deering Ave., or by mail to:

ADMISSIONS OFFICE
UMPG
96 Falmouth Street,
Portland, Maine 04103

SPECIAL STUDENTS (Non-Degree)

Special Students are enrolled on a space-available basis each semester. Candidates interested in special student status must file a Special Student application with the University.

Please contact the following offices to secure further information:

College of Arts & Sciences — Undergraduate Admissions Office,
228 Deering Bldg., UMPG, 96 Falmouth St., Portland, Maine 04103

School of Business & Economics — Dean John Bay, 120 Luther Bonney Hall,
UMPG, 96 Falmouth Street, Portland, Maine 04103

College of Education — Dean Harlan Philippi, 103 Bailey Hall, UMPG,
College Avenue, Gorham, Maine 04038

School of Nursing — Dean Mary Ann Eells, 39 Exeter Bldg., UMPG,
96 Falmouth St., Portland, Maine 04103
Financial Information

STUDENT EXPENSES: Academic Year of 1975-76

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 that elects to pursue a degree program within the University 15.00

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

ANNUAL EXPENSES: FULL-TIME UNDERGRADUATE STUDENTS

Undergraduate Tuition for a Resident of Maine 500.00
(Tuition for Non-Residents, as defined below, is $1500.)

Student Activity Fee (required of all full-time 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 $100 to 200.00

Personal Expenses — Over and above food and lodging, recent estimates indicate an annual average of at least 350.00

Voluntary Health Insurance — Optional but strongly recommended 30.00

ADDED EXPENSES FOR RESIDENCE HALL STUDENTS

Room and Board charges had not been established when this catalog went to press, but they will probably approximate $1,400 for the academic year of 1975-76.

OPTIONAL MEALS FOR OFF-CAMPUS RESIDENTS

Available for the academic year; price not established when this catalog went to press.

LATE REGISTRATION

A Late-Registration Fee of $10.00 is charged a student who registers after the prescribed day of registration. Students must register each semester, one semester at a time. Registration is not complete until satisfactory financial arrangements have been made with the Business Office.

TUITION FOR OTHER CLASSIFICATIONS OF STUDENTS

Registration Fee — A registration fee of $5 per semester is charged each part-time daytime student, each Continuing Education student, and each Summer Session student.

Continuing Education Division and Summer Session — Summer Session students are charged $25 per semester hour (no maximum) for courses carrying degree credit. Continuing Education students are charged $25 per semester hour for courses carrying degree credit, up to a maximum of $250 per semester. The tuition, fees, and related maximums set forth herein do not apply to non-degree credit work. CED bulletins announce the fees for their non-degree courses.

Other Part-time Students — Registration fee of $5 per semester, plus tuition for residents of Maine of $25 per semester-hour up to a maximum of $250 per semester, or tuition for non-residents of Maine of $75 per semester-hour up to a maximum of $750 per semester.
School of Law — Tuition for residents of Maine and non-residents covered by the New England Pact is $600 per year; tuition for other non-residents is $1750 per year. The $15 Application Fee and $15 Matriculation Fee are also charged. For other expenses, see the School of Law catalog.

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.

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 persons over age sixty-five who wish to register for undergraduate courses on a non-credit basis 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 $30 is due. These deposits will be applied toward the student's account when the student registers. (They should not be confused with the matriculation fee of $15, which is a non-refundable charge, or prepayments made on accounts which are not refundable.)

The deposits are forfeited in case 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.

Upperclassmen desiring to live in a residence hall must pay a room deposit of $60 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, but prior to August, $30 will be non-refundable. After August 1 the full $60 is non-refundable.

PAYMENTS OF BILLS:

All University bills, including those for room and board in University buildings, are due and payable on or before August 15 for the Fall Semester and on or before January 5, 1976 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 the University of Maine.

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 following schedule:

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2 the total semester bill at registration</td>
<td>1/2 the total semester bill at registration</td>
</tr>
<tr>
<td>1/6 the total semester bill on October 3</td>
<td>1/6 the total semester bill on February 12</td>
</tr>
<tr>
<td>1/6 the total semester bill on November 3</td>
<td>1/6 the total semester bill on March 12</td>
</tr>
<tr>
<td>1/6 the total semester bill on December 3</td>
<td>1/6 the total semester bill on April 12</td>
</tr>
</tbody>
</table>

This installment program is not available for students taking less than 6 credit hours. The privilege of using this program will be withdrawn if payments are not made promptly as scheduled.

UNIFORM REFUND POLICY

I. Degree-Credit Programs (Other than Summer Session)

1. Tuition. Tuition may be refunded in accordance with the scale and provisions set forth below for students withdrawing during the first six weeks of a term.
a. Scale. Attendance period is counted from first day of class and includes weekends and holidays. The refund will be reckoned from the date on which the student notifies the Registrar.

<table>
<thead>
<tr>
<th>Refund Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st week</td>
</tr>
<tr>
<td>2nd week</td>
</tr>
<tr>
<td>3rd week</td>
</tr>
<tr>
<td>4th week</td>
</tr>
<tr>
<td>5th week</td>
</tr>
<tr>
<td>Over five weeks</td>
</tr>
</tbody>
</table>


1. In no case will tuition be reduced or refunded because of voluntary absence from classes.
2. Tuition adjustments attributable to involuntary absence, for example, extended illness or military service, will be processed by the respective campus of the University of Maine on a case-by-case basis.

II. Degree-Credit Programs (Summer Session)

1. Tuition. Tuition may be refunded in accordance with the scale and provisions set forth below for students withdrawing.

a. Scale. Attendance period is counted from first day of class and includes weekends and holidays. The refund will be reckoned from the date on which the student notifies the Registrar.

<table>
<thead>
<tr>
<th>Refund Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st week</td>
</tr>
<tr>
<td>2nd week</td>
</tr>
<tr>
<td>3rd week</td>
</tr>
<tr>
<td>After 3rd week</td>
</tr>
</tbody>
</table>

b. Provisions

1. In no case will tuition be reduced or refunded because of voluntary absence from classes.
2. Tuition adjustments attributable to involuntary absence, for example, extended illness or military service, will be processed by the respective campus of the University of Maine on a case-by-case basis.

2. Fees. University fees are not refunded.

III. Dining and Residence Activities. The board and room charges will be refunded in accordance with the following wherein the student is withdrawing from the institution:

1. Scale

a. Board. Board charges for a student leaving the residence halls or withdrawing from the University will be at the full daily rate through the date of clearance and for one-half the daily rate for the remaining full days.
b. Room

(1) Normal Academic Year (Fall & Spring Semesters)

<table>
<thead>
<tr>
<th>Refund Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st and 2nd weeks</td>
</tr>
<tr>
<td>3rd and 4th weeks</td>
</tr>
<tr>
<td>5th and 6th weeks</td>
</tr>
<tr>
<td>7th, 8th, and 9th weeks</td>
</tr>
<tr>
<td>Over 9 weeks</td>
</tr>
</tbody>
</table>

(2) Summer Session

(a) Six-week Courses

<table>
<thead>
<tr>
<th>Week</th>
<th>Refund Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st week</td>
<td>75%</td>
</tr>
<tr>
<td>2nd week</td>
<td>50%</td>
</tr>
<tr>
<td>3rd week</td>
<td>25%</td>
</tr>
<tr>
<td>After 3rd week</td>
<td>-0-</td>
</tr>
</tbody>
</table>

(b) Three-week Courses

<table>
<thead>
<tr>
<th>Week</th>
<th>Refund Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st week</td>
<td>50%</td>
</tr>
<tr>
<td>After 1st week</td>
<td>-0-</td>
</tr>
</tbody>
</table>

2. Exceptions. Exceptions will be made only in cases of illness, extreme hardship, or when an occupant leaves for the convenience of the University. The charges in these cases will be determined by the University according to the circumstances of each case.

RULES GOVERNING RESIDENCE

A student is classified as a resident or a non-resident for tuition purposes at a 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 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 (where applicable)
   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.
Financial Assistance

The Office of Student Financial Aid, located on the Gorham campus on the second floor of Corthell Hall, employs various federal, state, and private aid programs to assist students in financing their education. These programs assume that the primary responsibility of meeting the financial obligations of a college education rests with the parents and the student. It is important, therefore, that parents and students work out a financial plan for the period of time during which their sons or daughters will be attending the University. When such a plan indicates that there is need for financial aid, the University may assist with counseling directed toward better management of family resources and, if needed, supplement those resources with some combination of loans, scholarships, and part-time employment.

WHO MAY APPLY

Any undergraduate, graduate, or professional student enrolled in a program leading to a degree or any candidate applying for admission to the University may apply for financial aid.

HOW TO APPLY

Prospective First-Year Students should obtain a College Scholarship Service Parents' Confidential Statement from their high school guidance counselor or from any student aid office of the University of Maine. This application should be completed and forwarded to the College Scholarship Service as directed on the application. Transfer students may complete a Student Financial Statement in lieu of the Parents' Confidential Statement. No institutional application is required.

Applications for the Federal Basic Educational Opportunity Grant Program are available at the Financial Aid Office, high schools, post offices and other government agencies. All students who began their post-high school education after April 1, 1973, must apply for aid from this program.

Students who have already enrolled and have completed a semester or more of academic work at the University should obtain application through the Student Financial Aid Office.

WHEN TO APPLY

Just before the Christmas vacation the University Financial Aid Office usually conducts a series of student aid information meetings at which students may obtain applications. Students applying for admission to the University should submit their Financial Aid applications at the same time they submit their Admission application. Recipients will be notified prior to the time of billing, July 15. All students should remember that in order to be considered for aid applications must be completed each year.

CONDITIONS FOR AWARDS

Students may be granted financial assistance if a definite need is indicated by the Financial Statement and an evaluation made by the Financial Aid Officer.

SOURCES OF FINANCIAL ASSISTANCE

Grants and Scholarships

The University participates in the Supplementary Educational Opportunity Grants Program. Funds are provided by the federal government for grants to students who have exceptional financial need.
Basic Educational Opportunity Grants (BEOG)

The BEOG program is a federal program administered by the U.S. Office of Education. The intent of the program is to provide needy students with scholarships to assist them in attending an institution of higher education. Since the BEOG program was designed to form the foundation of all other student assistance programs, all potentially eligible students must apply prior to receiving aid from this University.

University Scholarships are granted annually to approximately 300 students who are in good academic standing, show strong academic promise, and have a definite financial need.

Nursing Scholarships are available for prior recipients with the prerequisite financial need.

Loans

The University participates in the National Direct Student Loan Program. Funds are provided by the federal government. Students may borrow funds from the government under this program with interest and payments deferred until after completion of their degree work. Loans average approximately $500 for an academic year. Limited funds require that loans be made on the basis of need.

Students at the University may secure loans through the federally insured student loan program. Under this program, students may borrow up to $2,500 annually for a total not to exceed $7,500 for undergraduates, and $10,000 for graduate students. Applications for these loans are to be secured directly from the participating banks, savings and loan offices, or credit unions and then submitted to the University Aid Office.

There is a revolving short-term emergency loan fund on both the Portland and Gorham campuses. These funds should be applied for through the Educational Services Office on either campus. Normally, short term loans are not made in excess of $30.

Nursing Loans are available to Nursing Students with demonstrated financial need. All interest and principal payments are deferred until the student completes the degree work.

Work Programs

The University participates in the College Work-Study Program. Funds are provided by the federal government and the University to employ students both on and off campus. Student earnings through this program are to be used to help defray educational costs. Special consideration in hiring is given to students with great financial need.

The University operates another work program referred to as Student Employment. This program is funded by the University and operates in the same way as the College Work-Study Program described above.

Law Enforcement Grants and Loans

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.
Student Life And Activities

STUDENT LIFE

The University supplements its academic curriculum by offering students a wide variety of services and activities ancillary to normal classroom educational experiences. Philosophically, the Student Life Division seeks to assist students toward educational fulfillment through (1) services to aid with personal, social, and vocational needs and (2) co-curricular experiences in the form of programs and assistance to student organizations to help maximize individual student development.

The unique physical arrangement of the University allows students to sample suburban and urban environments on both a predominantly residential and a primarily commuter campus. Students are encouraged to take an active role in the social and professional programs offered, as well as other extra-curricular activities including campus governance.

STUDENT ACTIVITIES

Extra-curricular activities form an important part of the educational experience of students on every university campus. The University encourages students to take advantage of the many opportunities to broaden intellectual horizons and to work together with other students either on university committees or through participation in campus clubs or other organizations. Not only is there value in social learning derived from participation, but many of the recognized functions of student organizations relate to the curriculum and classroom experiences of the students. Typical of the many extra-curricular activities and organizations available to students are the following:

Student Organizations

There are numerous student organizations which reflect a wide spectrum of honoraries, professional associations, university governance committees, and social or religious organizations. Such organizations include:


Musical Organizations — A Cappella Choir, Concert Band, Gorham Chorale, Chamber Singers, Chamber Orchestra, Portland Chorus.

Religious Organizations — Inter-varsity Christian Fellowship, Campus Ministry Club, Bahai Club, Student International Meditation Society.

Social and Service Organizations — Modern Dance Club, Portland Union Board.

Special Interest Organizations — Swim Club, Orientation Committee, Outing Club, Athletic Advisory Council, Insightation Committee, Greek Council.

Student Publications

The Presumpscot is a journal of creative art and literature which offers the entire campus community a forum for creative expression and presents the reader with a panorama of campus artistic and writing endeavors. The University Free Press, the weekly student newspaper, is staffed and published by students interested in various aspects of journalism. The Reflection, the UMPG yearbook, is published annually by students and represents a pictorial record of academic and social life.

Radio Station WMPG-FM

The radio voice of UMPG broadcasts at 91.1 on the FM dial and is located in the Student Center on the Gorham campus. WMPG serves the metropolitan area of Portland and Gorham with noncommercial programs of high quality. Students are encouraged to become part of this communications medium on campus.

Honor Societies

Epsilon Pi Tau is an international honor fraternity for industrial arts and industrial-technical education. Kappa Delta Epsilon is a professional sorority for education majors. Phi Kappa Phi is a national honorary organization which recognizes individuals at both the undergraduate and graduate levels for outstanding scholarly achievement. The chapter was installed on the UMPG campus in April 1975.

Fraternities and Sororities — The Greek system offers an additional aspect of development in social living and communication through objectives of group unity and close friendship. The Greek letter organizations on the Portland-Gorham campuses are Delta Chi, Phi Mu Delta, Tau Kappa Epsilon, Kappa Delta Phi and Sigma Nu fraternities, and Alpha Xi Delta, Delta Zeta, and Phi Mu sororities.

The Inter-Fraternity and Panhellenic Councils, governing units of fraternities and sororities respectively, are intended to insure the continuity of high ideals expressed by all fraternities and sororities through self-government.

Student Government

Students have the opportunity to help govern the campus community in close cooperation with the faculty and administration through the Student Senate. There are always openings on one of the major committees.

Students Activities Board — Coordinates concerts, films, special events, travel, major weekends, lectures.

Student Communications Board — Coordinates campus communications.

Appropriations Committee — Receives requests for organizational funding.
Ad-Hoc Committees — Many Ad-Hoc committees are organized to meet specific needs.

Volunteer Services

Interesting volunteer service projects to assist various aspects of the University, as well as local communities, are coordinated by the Student Life Department. These projects offer students an opportunity to become involved in areas of need in the Portland-Gorham communities. Typical projects include the recording of “talking books” for blind students, work with children at the Cerebral Palsy Center, and activities with children at the Pineland State Hospital. The Big Brother-Big Sister Program matches individual students with boys and girls who attend area schools and who may be having personal adjustment problems. The student serves as counselor, confidant, and friend to the child and, through the supportive relationship, helps the child work through his or her problems.

STUDENT SERVICES

Student Handbook

The Educational Services Office of the University compiles the official Student Handbook, which explains such matters as campus policies, the governance structure, and the functions of various campus offices. The handbook also contains the Disciplinary Code, which is designed to protect the rights of all individuals in the University. The handbook is distributed to all available students.

Student Union and Student Center

The University maintains a Student Activities office in both the Student Unions at Nos. 92 and 94 Bedford Street in Portland and a Student Center at Gorham, and also provides facilities for out-of-class activities or for leisure moments on campus, including lounge space, game rooms, study areas, snack facilities, and meeting rooms where organizations are able to schedule events.

Student Housing

The Gorham campus (only) provides living accommodations offering a variety of life-style options for approximately 370 men and women students. Students desiring on-campus housing should file an application and required
deposit with the Office of Residence Life, 110 Corthell Hall, Gorham. Space is designated according to date of application. Before a room is assigned to a student in a residence hall, the student will be required to sign a room contract for the academic year or the remaining part thereof, depending upon the date of admission to the hall. All residence hall students must also contract for meals.

Students living or desiring to live off-campus may obtain assistance from both the Educational Services Office in Payson Smith Hall, Portland and the Office of Residence Life, Corthell Hall, Gorham. Both offices maintain an up-to-date file of rooms, apartments, and homes for rent in the community.

Students living off-campus may contract for all their meals at the cafeteria at the standard rate, listed under "Financial Information," or they may make their own arrangements. Individual meals or snacks may be purchased at either the Gorham cafeteria or the Portland cafeteria.

Resident Student Government

The governing coordinating group for the residence halls is officially known as the Resident Student Government, commonly referred to as the RSG. Activities of individual hall councils are often aided and advised by RSG.

Student Health Services

To provide student health services, the Portland campus maintains a Health Center open 8:00 A.M. to 4:30 P.M., Monday through Friday, with a Family Nurse Associate in attendance who is available for first aid, consultation, and temporary emergency care. A physician is available from 11:00 A.M. to 12:30 P.M. Monday through Friday, for consultation.

On the Gorham campus, an Infirmary is maintained and open 24 hours a day, 7 days a week, with three full-time registered nurses and a Family Nurse Associate who are also available for consultation, emergency, and in-patient care. A physician is in attendance Monday through Friday from 1:00 P.M. to 2:30 P.M.

Health and Accident Insurance is available at a nominal fee.

Counseling and Testing Services

Students experiencing educational, vocational, emotional, and other personal concerns are offered individual attention by the University counseling specialists. Students may make appointments through the counseling and career development office in Portland although counseling services are provided at both campuses. The service is free of charge. Students are also assisted in whatever testing services they need. For example, they may receive specialized testing through interest inventories, personal preferences, aptitude tests, or tests required for admission to graduate school.

Career Development

This section of the counseling and career development department offers continuous assistance to undergraduates, graduates, and alumni. The office offers services in the area of business and industry, nursing, and education.

The Career Development Program:

—encourages early assessment by the individual of personal capabilities as they relate to vocational objectives;
—provides information on the broad range of careers available;
—offers counsel on specific vocational opportunities;
—assists the student in obtaining part-time employment, as well as full-time career employment;
—aids the individual in evaluating graduate study as an element of professional preparation;
—acquaints candidates with the recruiting process to the end that they will make a most effective presentation of their qualifications.
The Career Development Office keeps a complete, up-to-date set of credentials on all students who register with that office. The office sets up campus interviews, as well as duplicating credentials for recruiters. Credentials are also forwarded to graduate schools, government agencies, and prospective employers. Students seeking information about placement services are welcome to contact the Career Development Office.

The Educational Placement section is based in Bailey Hall, Gorham Campus, while business and industry, nursing and other general placement services are based in Payson Smith Hall, Portland campus.

**Handicapped Student Services**

The purpose of the Office of Handicapped Student Services is to enable the University to fulfill its obligations and commitment to educate and serve those students who need and desire additional services.

There are few architectural barriers that exist either at the Portland or Gorham campuses. In addition, residence halls are available for handicapped students.

Physical and mental health are basic considerations in admitting any applicant to the University. Therefore, we suggest that a prospective student make an appointment with the Admissions staff and plan to visit the campus to determine its accessibility and ask questions regarding admissibility, facilities, and services. This is usually done in conjunction with the Handicapped Student Advisor.

In addition to special services such as registration, transportation, parking, and physical education, the University will provide, when needed, special vocational counseling, and reading and attendant services. Also located at the University is a center for therapeutic recreation and leisure-time activities for the handicapped.

**International Student Adviser**

The University provides information to assist all students who are not citizens of the United States. An International Student Adviser, among other things, aids these students in interpreting the administrative regulations of the University; the local, state, and federal laws; and the expectations and reactions of other persons encountered in the University community.

**Veterans’ Services**

The University provides the veteran with supportive services through the Educational Services, the Registrar’s, and the Continuing Education Division offices. Professional advice concerning programs, laws, regulations, and educational benefits can be secured from the Veteran Coordinator, while the Registrar’s and the C.E.D. office provide enrollment certification in order that the veteran may receive all educational benefits.

**National Student Exchange**

In 1973 the University became a member of NSE which enables up to provide national educational outlets for up to one year to our undergraduate students. Similar to Junior Year Abroad, this program offers University students a year elsewhere at another member institution in the United States. Member institutions include the University of Hawaii, Morgan State College, University of Oregon, Ohio University, and 25 other similar institutions. The exchange program also allows students from member institutions in other parts of the United States to reciprocally attend the University. Information on this program may be obtained from the University Admissions Office.

**CAMPUS REGULATIONS**

**Disciplinary Code**

The University Disciplinary Officer and the Judiciary Committee enforce the campus rules and regulations as outlined in the Disciplinary Code, which is
Motor Vehicles

In the interest of safety for all students, all vehicles utilizing campus parking must be registered with the Department of Police and Security, and must show a valid parking sticker. Parking stickers may be obtained during regular business hours at the Department of Police and Security on either campus.

Because of limited parking space, freshmen and sophomores classified as resident students are not permitted to have or operate motor vehicles on the Gorham Campus.
Cultural Activities

ART GALLERY

The University maintains an Art Gallery (located on the Gorham Campus) which offers exhibitions showing current developments in all areas of the visual arts. Visiting exhibitors often give lectures, workshops, and informal seminars for students, faculty, and the general community. Students participate fully in the many aspects of running the main Art Gallery and also operate their own Student Art Gallery, located in the Student Center on the Gorham Campus. The Gallery exists to enrich the cultural life of the University and is open without charge to the public from 12 to 5 p.m. daily during shows. Exhibition and program schedules may be obtained from Prof. Juris Ubans or from the Office of the Dean of CAS.

SOUTHWORTH PLANETARIUM

The Southworth Planetarium was donated to the University by Mrs. Constant Southworth in memory of her husband. Located in the Science Building on the Portland Campus, the Planetarium is a mechanical-optical-electrical device that projects the night sky for any place on earth at any time: present, past, or future. Students and thousands of people from the Greater Portland Area visit the Planetarium each year. Schedules of showings may be obtained from Prof. George Ayers or the Office of the Dean of CAS. Schedules are also posted on principal bulletin boards and listed in calendars of events distributed on both campuses.

MUSEUM OF MAN

The University has a Museum of Man (located on the Gorham Campus) which provides a unique experience for students and the community. It is designed to tell the story of human culture through the works man has created 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 Prof. Robert French or from the Office of the Dean of CAS.
MUSIC

The Music Department offers opportunities for all students to participate in the experience of music. Every year it sponsors a large number of public concerts and recitals, always open to students at no cost. The Concert Band, the Brass Ensemble, the Gorham Chorale, the A Cappella Choir, and the Gorham Chamber Orchestra present a total of at least six regular concerts each year. In addition, the department presents about twenty student recitals per year and a weekly Recital Class each Friday at 11:00 a.m. Students are welcome to attend any of these events. There are occasional workshops of varied nature which students may attend, as well as several presentations by visiting high school vocal and instrumental groups. More information and performance schedules may be obtained from the Music Department or from the Office of the Dean of CAS.

THEATRE

The Theatre Department offers a wide variety of programs that are available to students and the community. In addition to being able to participate in quality theatre productions, students have the opportunity to attend a variety of plays during the year. The Art Theatre and the Treehouse Players offer a number of productions on a regularly scheduled basis. Play schedules and brochures may be obtained from the Department or from the Office of the Dean of CAS.

INTERNATIONAL FILM SERIES

Sponsored by the Cultural Affairs Committee, the weekly screenings of the International Films bring to the University community a broad range of films—from historically important masterpieces to the most recent developments in the film world. The screenings are at 7:30 P.M. on Thursday evenings in Bailey Auditorium (Gorham Campus) and are open to the public without charge. Schedules and further information may be obtained from Prof. Juris Ubans or from the Office of the Dean of CAS.

LIBRARY FACILITIES

The University has full library facilities on both of its campuses. Located in Bailey Hall on the Gorham Campus and in Bonney Hall on the Portland Campus, the libraries hold a combined total of over 200,000 volumes. In addition there are some 30,000 microfilms, 20,000 government documents and approximately 1900 periodical subscriptions. The campus collections are complementary; books and periodicals not found in one library may be in the other. Both libraries have specialized collections of old or unusual books as well as listening facilities for the libraries' record collections.

Students are encouraged to make use of the libraries both for assigned academic work and for cultural enrichment and esthetic enjoyment.
Recreation—Leisure Activities

DROP-IN RECREATION

The Department of Recreation sponsors programs of physical recreation for all University students, faculty, staff, and the general public. Most activities are centered at the Portland campus gymnasium on Falmouth Street. This building is a multi-purpose facility with three regulation basketball courts, squash, handball, and racquetball courts, a weight training room, dance room, an all-purpose room, and locker room facilities.

Equipment is available for a variety of activities, including: squash, handball, racquetball, dance activities, yoga, karate, wrestling, judo, badminton, tennis, volleyball, basketball, archery, golf, fencing, jogging, and weight training.

Physical Fitness: Indoor jogging facilities are excellent. The gym is 12 laps to a mile. The gym is equipped with circuit training machines and a variety of barbells and dumbbells. Written programs are available upon request. Group programs of controlled exercise are available at announced times. Diet control information may be obtained at the health center located in the gymnasium.

Squash, Racquetball and Handball Courts: These courts must be reserved in advance. Instruction in these sports can be arranged.

Sauna Baths: This convenience is available for both men and women. Instruction for their use is available upon request.

Equipment Issue: All equipment is issued from the equipment rooms upon presentation of I.D. cards. Balls, nets, table tennis equipment, etc. are available.

SCHEDULED ACTIVITIES

The following list includes activities that are available to the University Community on a regularly scheduled basis: youth gymnastics, gymnastic club (adults), dance exercise, karate, archery club, advanced level square dancing, volleyball league, coed recreational volleyball, racquetball clinic, classes in golf and tennis, wrestling club, circuit-training and weight-lifting programs, badminton club, swim club, table tennis, self-defense for women, and fencing. For days and times of these programs, call the Recreation Office at the Portland gym. All programs are open to faculty, staff, and students.

INTRAMURALS

Intramural activities are voluntary and are organized to provide activity in as many different sports as student interest warrants. Special-interest groups are encouraged to approach the intramural director for assistance in organizing club sports. When appropriate, competition will be arranged on an extramural basis to provide competition with intramural teams of other colleges and university campuses.

A partial list of intramural sports includes: soccer, tennis, golf, bowling, flag football, cross country, table tennis, basketball, wrestling, badminton, volleyball, softball, track and field, cycle racing, handball, squash, paddleball, foul-shooting, and archery.

Team play, sportsmanship, and individual participation are encouraged throughout the programs. Trophies are awarded to individual members of the championship team in each sport.
Intercollegiate Athletics

INTERCOLLEGIATE ATHLETICS FOR MEN

As a member of the National Association of Intercollegiate Athletics (District 5), the National Collegiate Athletic Association, the Eastern College Athletic Conference, and the New England College Athletic Conference, the University competes successfully in varsity cross-country, soccer, basketball, hockey, baseball, tennis, and golf.

INTERCOLLEGIATE ATHLETICS FOR WOMEN

Intercollegiate athletic teams for women are available to all who are fulltime undergraduates. Women may participate in field hockey, tennis, volleyball, basketball, gymnastics, softball, and lacrosse. The University is a member of the Maine Association for Physical Education and Intercollegiate Athletics for Women, the Eastern Association for Intercollegiate Athletics for Women, and the Association for Intercollegiate Athletics for Women. As a member of these organizations, the University teams have the opportunity to qualify for and participate in state, regional, and national tournaments.
UMPG Academic Policies
1975-76

GENERAL REQUIREMENTS FOR ALL BACCALAUREATE CANDIDATES

The General Education Requirement of the University consists of 30 semester hours, 24 hours of which consists 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, SCOGIS courses, CAS designation, or when school or college requirements permit, PE and REC Activity courses.

With the exception of K-P or GE majors, departmental courses in the student's major may not be applied toward fulfillment of the General Education Requirement.

### AREA 1: HUMANITIES — 6 credits from:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CLS</td>
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<tr>
<td>CPEN</td>
<td>Comparative Literature</td>
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<td>ENG</td>
<td>English</td>
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<td>FRE</td>
<td>(French)</td>
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<td>GMN</td>
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<td>PLY</td>
<td>(Philosophy)</td>
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<td>SPN</td>
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### AREA 2: FINE AND APPLIED ARTS — 6 credits from:

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<td>ARTS</td>
<td>(Art Studio Courses)</td>
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<td>COM</td>
<td>(Communication)</td>
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<td>DNCE</td>
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<td>(Theatre)</td>
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### AREA 3: SCIENCE AND MATHEMATICS — 6 credits from:

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### AREA 4: SOCIAL SCIENCES — 6 credits from:

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<td>SOC</td>
<td>(Sociology)</td>
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<tr>
<td>SWE</td>
<td>(Social Welfare)</td>
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### AREA 5: GENERAL — 6 credits from:

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

*Physical Education (PE) or Recreation (REC) courses

*The College of Arts and Sciences requires no Physical Education courses but accepts optional PE or REC credits in Area 5. The School of Business and Economics requires no PE courses but accepts optional PE or REC credits in Area 5 for 4-year Business Administration and Accounting majors only. The School of Nursing requires 2 credits of Physical Education and/or Recreation, and accepts in Area 5 not more than 2 added optional PE or REC credits. The College of
Education requires a year of Physical Education but accepts no PE credits as applicable to Area 5. (Certain students in the School of Nursing or College of Education may be exempted from all PE requirements under criteria described in the sections of this catalog having to do with the School of Nursing or College of Education.)

**UMPG SYSTEM OF COURSE CODING**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-99</td>
<td>No degree credit</td>
</tr>
<tr>
<td>000-099</td>
<td>Associate Degree program</td>
</tr>
<tr>
<td>100-199</td>
<td>Introductory level</td>
</tr>
<tr>
<td>200-299</td>
<td>Intermediate level</td>
</tr>
<tr>
<td>300-399</td>
<td>Intermediate level</td>
</tr>
<tr>
<td>400-499</td>
<td>Senior level, others by permission</td>
</tr>
<tr>
<td>500-599</td>
<td>Graduate level</td>
</tr>
<tr>
<td>600-699</td>
<td>Professional graduate level as in</td>
</tr>
<tr>
<td></td>
<td>the School of Law</td>
</tr>
</tbody>
</table>

**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. Whenever, in the opinion of the instructor, a student's absences impair the quality of work, the instructor will report this fact to the Dean of the appropriate School or College.

**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 that class. A final course-evaluation will be scheduled for all classes at a designated time and place during examination week.

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**

An absence from a final examination must be made up during the semester immediately following the one in which the absence occurred, unless the time limit has been extended by the Dean.

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**

Regular grade reports are sent to all students at their official addresses at the end of the semester. Final grades cannot be secured in advance from the Registrar.

**THE GRADING SYSTEM**

Grades at the University are given in terms of letters 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 under-graduate, 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 extra-ordinary circumstances, has failed to complete course requirements. Required work must be completed by arrangement with the instructor but not later than the end of the next regular academic semester follow-ing the Incomplete. At this time the "I" will be replaced by a grade of A,B,C,D, or F as determined by the instructor.
W—Withdrawal during the second five weeks of a semester. If a student has not officially withdrawn by the end of the tenth week of the course, one of the above regular grades, normally F, will be assigned. The W notation may be an option after the tenth week under unusual cir-cumstances if so determined by the instructor and the Dean.

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:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
</tbody>
</table>

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 two 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 carried 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.

REPEATING COURSES

If a student in the School of Business, School of Education, or School of Nurs-ing repeats a course, the initial grade remains on the record but does not count toward the grade-point average or for credit. When a student in the College of Arts and Sciences repeats a course, the second grade stands and the initial grade is removed from the transcript.

ADD-DROP

Once a student has completed registration, a period of one week is permitted for dropping or adding courses. This procedure permits a student to make the necessary course changes in the planned curriculum. Also, during the first five weeks of the term a student may drop any course without having a grade recorded. All Add-Drops are initiated at the Registrar's Office. All students who register for a course and withdraw will be graded WF unless they officially com-plete the procedure of dropping the course.
Any 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.

MINIMUM GRADE POLICY

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

<table>
<thead>
<tr>
<th>Cumulative Minimum Grade-Point Averages</th>
<th>Good Standing</th>
<th>Probationary Standing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.35</td>
<td>1.15</td>
<td></td>
</tr>
<tr>
<td>1.60</td>
<td>1.35</td>
<td></td>
</tr>
<tr>
<td>1.80</td>
<td>1.80</td>
<td></td>
</tr>
<tr>
<td>2.00</td>
<td>1.80</td>
<td></td>
</tr>
</tbody>
</table>

Students with majors or minors in English, History, or the Social Sciences Area, including both those in the baccalaureate program of the College of Arts and Sciences and also those in the Secondary Education program of the School 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.

Students in the nursing major must achieve a 2.0 cumulative grade-point average in order to enter the clinical courses. D grades will not count toward fulfillment of the major requirements in the Nursing Program.

SUSPENSION

Students may be suspended from the University either by the University Committee on Academic Standing 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 advisers to learn the standards that apply to them. For details about disciplinary suspension and dismissal, consult the "Disciplinary Code," published by the Educational Services Office.

PROBATION

A student may be placed on academic probation by the Committee on Academic Standing if the student is making unsatisfactory progress toward meeting graduation requirements. The student is liable to be suspended at the end of the following semester unless substantial progress is made. Since exact standards vary somewhat from college to college and from class to class, students are urged to discuss with advisers in the appropriate academic Dean's Office the record they should maintain to avoid probation or suspension.

A student may be removed from probation by earning satisfactory grades in Summer Session courses if the courses have been approved in advance by the adviser and the appropriate Dean.

WITHDRAWAL FROM THE UNIVERSITY

The procedure for withdrawal from the University is to secure an official withdrawal slip from the Registrar's Office. The student will then be instructed to seek an exit interview with a member of the Educational Services' staff.

If a student withdraws from the University during the first five weeks of the semester, there will be no course grade recorded. If a student withdraws from the University during the second five weeks, the student's record will show only "W" for the course in which the student was enrolled. When a student withdraws
from the University during the last five weeks of the semester, the student will receive a grade designation to be determined by the instructor.

Withdrawn students, in good standing with the University, who wish to return to school at a future date, must submit an application to return to the Admissions Office before July 1 for the fall semester and before November 15 for the spring semester.

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 adviser and the appropriate Dean if a student wishes to carry less than 12 or 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, except in the School of Nursing wherein the respective percentages are 25 percent, 50 percent, and 75 percent.

The requirements by classes, schools and college are:

<table>
<thead>
<tr>
<th>School or College</th>
<th>Required Number of Credit-Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sophomore</td>
</tr>
<tr>
<td>Arts and Sciences</td>
<td>23</td>
</tr>
<tr>
<td>Business and Economics</td>
<td></td>
</tr>
<tr>
<td>Baccalaureate Programs</td>
<td>23</td>
</tr>
<tr>
<td>Two-Year Business</td>
<td>23</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Music Education</td>
<td>26</td>
</tr>
<tr>
<td>Industrial Arts Technology</td>
<td>25</td>
</tr>
<tr>
<td>All Other Programs</td>
<td>23</td>
</tr>
<tr>
<td>Nursing</td>
<td>24</td>
</tr>
</tbody>
</table>

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.

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 least six weeks prior to the expected date 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 inclu-
sive 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.

DEPARTMENTAL HONORS PROGRAM

Students graduating in the University Departmental Honors Program will have the designation "with Honors in" the appropriate major.

Guidelines for graduation with departmental honors vary among University schools and colleges. Students should check with appropriate dean for details.

PASS-FAIL OPTION

Outside of courses in the major or minor area of concentration, or courses taken to satisfy the General Education Requirements, an undergraduate student is permitted to 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.

An undergraduate in the School of Education may register for a total of 18 hours of pass-fail credits in addition to possible pass-fail credits for Student Teaching and the related seminar. Student Teaching and the related seminar are considered as a single bloc for election of the pass-fail option. Required courses in the Core Curriculum and in the student's major may not be taken pass-fail; and only one course in the minor may be taken pass-fail. Students may exercise the Pass-Fail Option only during the registration period or during the add period each semester.

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 a school or college 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 second 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 must be obtained from the Dean'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.
College of Arts and Sciences

KONNILYN G. FEIG, Dean
CONSTANCE M. CARROLL, Associate Dean
WALDECK E. MAINVILLE, JR., Assistant Dean

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, as a constantly developing unit of the University, provides a quality liberal education for students. Students in the College have the opportunity to specialize and increase their knowledge of a particular discipline or area of interest. A broad range of department and program options and alternative educational methods allows students to get the maximum benefit from their college experience. With good advising, experimentation and commitment, all CAS students have the opportunity to follow a quality program suited to their present needs and future aspirations.

In addition to meeting the needs of its students, the College of Arts and Sciences offers programs of study and service to students in all other schools of the University. Students enrolled in the College of Education, the School of Nursing, or the School of Business and Economics all must take some or most of their required and elective course work in various departments of the College of Arts and Sciences.

CAS DEPARTMENTAL ORGANIZATION

The College of Arts and Sciences is composed of the following departments, each of which is described in the following pages:

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

Detail concerning the interdepartmental Criminal Justice Program is provided in this catalog in a subsection following the description of the courses offered by the Communication Department.

BACHELOR OF ARTS DEGREE PROGRAMS

Programs of study leading to a Bachelor of Arts (B.A.) degree are available for students who meet the admission standards for the specific program, who successfully complete the program requirements, and who satisfy the General Education Requirements of the University. B.A. degree programs are available in the following major areas:

Art
Biology
Earth Science
Economics
English
French
Geography-Anthropology
History
Mathematics
Music
Philosophy
Political Science
Psychology
Social Welfare
Sociology
Theatre/Communication

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BACHELOR OF SCIENCE DEGREE PROGRAM
IN CRIMINAL JUSTICE
A Bachelor of Science (B.S.) degree with a major in Criminal Justice may be earned through the Criminal Justice Program in the College of Arts and Sciences.

BACHELOR OF FINE ARTS DEGREE PROGRAM
A Bachelor of Fine Arts (B.F.A.) degree with a major in Art may be earned through the Art Department in the College of Arts and Sciences.

ASSOCIATE OF ARTS DEGREE PROGRAM
Students may opt for the A.A. in Liberal Arts, a two-year program in Liberal Arts disciplines, made available through the College of Arts and Sciences, the Continuing Education Division, and the York County Community College Services. Details of this program may be obtained from any of these three offices.

INTERDISCIPLINARY DEGREE OPTIONS
Students in Arts and Sciences have a number of options to choose from in planning their academic program. In addition to the major programs listed above, it is also possible for students to earn a B.A. degree through two other programs: the Self-Designed Major and the Liberal Studies Major. These programs are described in the following pages.

ACADEMIC MAJORS
PROVIDED BY THE COLLEGE OF ARTS AND SCIENCES
FOR THE COLLEGE OF EDUCATION
The College of Arts and Sciences as one of its services provides a number of programs which enable students in the College of Education to concentrate in various subject areas. The Major and Minor programs in CAS available to Education students are:

<table>
<thead>
<tr>
<th>Major Area</th>
<th>CAS Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art</td>
<td>Art Education</td>
</tr>
<tr>
<td>Biology</td>
<td>Biology Major (Secondary Education)</td>
</tr>
<tr>
<td></td>
<td>Biology Minor (Secondary Education)</td>
</tr>
<tr>
<td></td>
<td>(Certain biological sciences are also included in the Science Area Major</td>
</tr>
<tr>
<td></td>
<td>and Minor for students of Education, as listed under Physical Sciences.)</td>
</tr>
<tr>
<td>English</td>
<td>English Major and Minor (Secondary Education)</td>
</tr>
<tr>
<td></td>
<td>English Major and Minor (Elementary or Kindergarten-Primary Education)</td>
</tr>
<tr>
<td>Foreign Languages</td>
<td>French Major (Secondary Education)</td>
</tr>
<tr>
<td>Geography-Anthropology</td>
<td>Social Science Area Major (Secondary Education)</td>
</tr>
<tr>
<td></td>
<td>Social Science Area Major and Minor (Elementary or Kindergarten-Primary</td>
</tr>
<tr>
<td></td>
<td>Education)</td>
</tr>
<tr>
<td></td>
<td>Geography Minor (Elementary or Kindergarten-Primary Education)</td>
</tr>
<tr>
<td>History</td>
<td>History Major and Minor (Secondary Education)</td>
</tr>
<tr>
<td></td>
<td>History Major and Minor (Elementary or Kindergarten-Primary Education)</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Mathematics Major and Minor (Secondary Education)</td>
</tr>
<tr>
<td></td>
<td>Mathematics Major and Minor (Elementary or Kindergarten-Primary Education)</td>
</tr>
<tr>
<td>Music</td>
<td>Music Education</td>
</tr>
<tr>
<td>Physical Sciences and</td>
<td>Science Area Major (Secondary Education) (Certain biological sciences are</td>
</tr>
<tr>
<td>Engineering</td>
<td>included in this program.)</td>
</tr>
<tr>
<td></td>
<td>Science Area Minor (Elementary or Kindergarten-Primary Education) (Certain</td>
</tr>
<tr>
<td></td>
<td>biological sciences included)</td>
</tr>
<tr>
<td>Theatre/Communication</td>
<td>Theatre/Communication Major (Secondary Education)</td>
</tr>
</tbody>
</table>
PLANNING AN ACADEMIC PROGRAM IN CAS

Perhaps the most important component in planning an academic program in the College of Arts and Sciences is good advising. Students are encouraged and urged to stay in close contact with their academic advisers in order to choose or develop a program best suited to their needs and aspirations. CAS advisers can keep them posted about the latest developments in the College and University which may affect or interest them as well as the ever changing national picture. The adviser is the one resource a student always has for concerned evaluation, suggestions, and assistance in keeping an accurate record of accomplishments. Every student is assigned an adviser upon entering the College, although students always have the option of changing their adviser as interests grow and their academic program takes shape.

CHOOSING A MAJOR

Choosing a major is one of the difficult decisions all students have to make during their tenure in CAS. Since this is an important decision, students are encouraged to experiment fully during their freshman and sophomore years in the many disciplines available in the College before making a final decision at the end of the sophomore or the beginning of the junior year. With the help of their academic advisers, students should arrive at a choice which is both realistic and enjoyable. Although it is always possible for students to change their major, the most careful attention prior to their choice is urged to prevent students from limiting their exploration too early. All students may follow a major “track” in any department at any time. Fine Arts students, however, (especially in Art and Music) usually must begin their serious program early because of portfolio and audition requirements. Students planning to major in a science are advised to contact a major advisor and begin the required course sequences as soon as possible.

REQUIREMENTS FOR DEGREE PROGRAMS

Before students can qualify for a degree, they must fulfill three types of requirements which affect the total academic program: Departmental (or Program) requirements; College of Arts and Sciences requirements; and University requirements.

DEPARTMENTAL (or PROGRAM) REQUIREMENTS

Departments and Programs have specific requirements which must be met by students majoring in them as candidates for a baccalaureate degree. Students should consult the descriptions of the departmental or program requirements for the major under the appropriate headings in this catalog. Students should also keep in close contact with major advisers to stay abreast of changes and new directions in the curriculum sequence. Education students must be sure to consult both the CAS departmental sequence and the sequence for Education majors in this section of the catalog.

COLLEGE REQUIREMENTS

The College of Arts and Sciences requires that students successfully complete 120 credit hours and meet both departmental (or program) and University requirements in order to graduate with a baccalaureate degree. If, prior to the publication of the next catalog, the College adopts any additional requirements or changes the existing requirements, these will be announced and additional information may be obtained from the office of the Dean of Arts and Sciences.
UNIVERSITY GENERAL EDUCATION REQUIREMENTS*

All College of Arts and Sciences students must fulfill the General Education Requirement in order to graduate. This requirement consists of 30 credit hours selected from the following areas:

**AREA 1:—HUMANITIES** — 6 credits from:
- CLASSICS (CLS)
- COMPARATIVE LITERATURE (CPEN)
- ENGLISH (ENG)
- FRENCH (FRE)
- LATIN (LAT)
- GERMAN (GMN)
- PHILOSOPHY (PLY)
- GREEK (GRK)
- SPANISH (SPN)

**AREA 2: FINE AND APPLIED ARTS** — 6 credits from:
- ART HISTORY/APPRECIATION (ARTH)
- ART STUDIO COURSES (ARTS)
- COMMUNICATION (COM)
- DANCE (DNCE)
- MUSIC (MUS)
- THEATRE (THE)

**AREA 3: SCIENCE AND MATHEMATICS** — 6 credits from:
- ASTRONOMY (ASTR)
- BIOLOGY (BIO)
- CHEMISTRY (CHEM)
- EARTH SCIENCE (ESCI)
- GEOLOGY (GEOL)
- GENERAL SCIENCE (GSCI)
- Meteorology (MET)
- PHYSICS (PHYS)
- PHYSICAL SCIENCE (PSCI)
- MATHEMATICS (MS)

**AREA 4: SOCIAL SCIENCES** — 6 credits from:
- ANTHROPOLOGY (ANY)
- CRIMINAL JUSTICE (CJ)
- ECONOMICS (ECON)
- GEOGRAPHY (GEOG)
- HISTORY (HIST)
- NATIONAL SCIENCE (NAT)
- POLITICAL SCIENCE (POL)
- PSYCHOLOGY (PSY)
- SOCIAL WELFARE (SWE)
- SOCIOLOGY (SOC)

**AREA 5: GENERAL** — 6 credits from:
- ANY COURSES FROM THE ABOVE ACADEMIC GROUPINGS
- COLLEGE OF ARTS AND SCIENCES (CAS) COURSES
- SCOGIS COURSES (SCO)
- PHYSICAL EDUCATION COURSES (PE) or RECREATION COURSES (REC)

*Except for K-P or GE majors, department courses in the student's major area may not be applied toward fulfillment of the General Education Requirement. In addition, students in the School of Business Administration, the School of Education, or the School of Nursing may be further restricted in course selections from one or more of the five areas because of the specific requirements of the program in which they are enrolled.

A student who has matriculated before September 1971 may continue the program under the requirements in force at the time of matriculation or the student may elect to complete the General Education Requirements under the provisions stated above.

**Physical Education is not a requirement** for Arts and Sciences students, but may be elected under Area 5 of the General Education Requirements.

**CAS MAJORS, MINORS, AND PROGRAMS**

CAS Departments offer majors, minors, and concentrations in a number of different disciplines to allow students to follow the program which best suits their needs. In addition to those described under the following department headings, there are several other options that students may choose in planning their academic program: Honors, Self-Designed Major, Liberal Studies Major, Independent Study Term.

**HONORS**

Students with special interest in a subject and high achievement or potential may apply for the Honors Program in a department when they declare their
major. Since these programs vary according to the course requirements of a
given department, students may consult the department of their choice for guide-
lines, or they may obtain them from the office of the Dean of CAS.

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 departmental major and must provide breadth and depth
dimensions consistent with a College of Arts and Sciences Major. This Major
encourages a broad in-depth concentration and is structured by the individual
student in conjunction with faculty sponsors. Students may apply for this pro-
gram 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 CAS.

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 in-
terested 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 CAS.

INDEPENDENT STUDY TERM

The Independent Study Term is designed to be a productive and challenging
experience for mature, creative students. Students who have identified an acad-
emic project or program which they feel would contribute significantly to their
program may, with the approval of a faculty sponsor and the department in-
volved, apply for a semester of independent study. Students should discuss this
option with their academic adviser, since it may be a useful tool in many pro-
grams requiring serious projects, theses, or original work. General guidelines
may be obtained from departments or the office of the Dean of CAS.

CAS COURSES

Each semester the College of Arts and Sciences offers courses on a variety of
topics and themes which are not sponsored by individual departments. These
courses are listed as "CAS" courses in the schedules and special course descrip-
tion sheets every semester. Further information on these courses may be ob-
tained from the Office of the Dean of CAS.

UMPG SYSTEM OF COURSE CODING

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00-99</td>
<td>No degree credit</td>
<td>300-399</td>
<td>Intermediate level</td>
</tr>
<tr>
<td>010-099</td>
<td>Associate Degree program</td>
<td>400-499</td>
<td>Senior level, others by permission</td>
</tr>
<tr>
<td>100-199</td>
<td>Introductory level</td>
<td>500-599</td>
<td>Graduate level</td>
</tr>
<tr>
<td>200-299</td>
<td>Intermediate level</td>
<td>600-699</td>
<td>Professional graduate level</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>as in the School of Law</td>
</tr>
</tbody>
</table>
Art

Associate Professors Bearce, Franklin, Moore, Sawtelle, Ubans (chairman); Assistant Professors Ostrand, Rakovan.

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

Each applicant should first follow the standard admission procedures of the University, and then submit to the Department of Art (Gorham Campus) a portfolio of original art work. This portfolio should number approximately 12 works, consisting of one self-portrait drawn from life, and a selection of work which indicates the applicant's current interests and abilities. Prints, drawings, paintings, posters, photographs, and films may be included, but 35mm slides or photographs of three-dimensional and other bulky work should be submitted rather than the work itself. The Department cannot accept responsibility for damage, 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 UMFG 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 completed. 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 101</td>
<td>Introduction to Art</td>
</tr>
<tr>
<td>ARTS 102</td>
<td>Introduction to Studio Art</td>
</tr>
<tr>
<td>ARTH 113</td>
<td>Film as Image and Idea</td>
</tr>
<tr>
<td>ARTH 111</td>
<td>History of Art I (space permitting)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 112</td>
<td>History of Art II (with instructor's permission, space permitting)</td>
</tr>
<tr>
<td>ARTS 141</td>
<td>Design I (space permitting)</td>
</tr>
<tr>
<td>ARTS 151</td>
<td>Drawing I (space permitting)</td>
</tr>
</tbody>
</table>

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 coded DNCE, MUS, or THE, which are outside the art program.

REQUIREMENTS FOR ART MAJORS

REQUIREMENTS FOR BACHELOR OF ARTS (B.A.) DEGREE*

<table>
<thead>
<tr>
<th>Requirement Type</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART CORE (15 credits)</td>
<td>ARTS 141 Design I, ARTS 142 Design II, ARTS 151 Drawing I, ARTS 152 Drawing II, ARTH Elective (100 level)</td>
</tr>
<tr>
<td>ART HISTORY REQUIREMENT (9 credits)</td>
<td>ARTH 411 Philosophy of Art (may substitute PLY 220)</td>
</tr>
<tr>
<td>ART STUDIO REQUIREMENT (18 credits of ARTS Electives)</td>
<td>ARTH Elective, ARTH Elective</td>
</tr>
<tr>
<td>GENERAL EDUCATION REQUIREMENT (30 credits)</td>
<td></td>
</tr>
<tr>
<td>ELECTIVES* (48 credits)</td>
<td></td>
</tr>
</tbody>
</table>

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

REQUIREMENTS FOR BACHELOR OF FINE ARTS (B.F.A.) DEGREE

<table>
<thead>
<tr>
<th>Requirement Type</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART CORE (15 credits)</td>
<td>ARTS 141 Design I, ARTS 142 Design II, ARTS 151 Drawing I, ARTS 152 Drawing II, ARTH Elective (100 level)</td>
</tr>
<tr>
<td>ART STUDIO REQUIREMENT* (45 credits of Electives)</td>
<td></td>
</tr>
<tr>
<td>ART HISTORY REQUIREMENT (6 credits)</td>
<td>ARTH 411 Philosophy of Art (may substitute PLY 220)</td>
</tr>
<tr>
<td>GENERAL EDUCATION REQUIREMENT (30 credits)</td>
<td></td>
</tr>
<tr>
<td>ELECTIVES* (24 credits)</td>
<td></td>
</tr>
</tbody>
</table>

*A concentration of 12 credits in Painting, Printmaking, Ceramics, Drawing or Other (specified by the department) area is required.
ART EDUCATION PROGRAM REQUIREMENTS FOR 
BACHELOR OF SCIENCE (B.S.) DEGREE

ART CORE (15 credits)
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 141</td>
<td>Design I</td>
</tr>
<tr>
<td>ARTS 142</td>
<td>Design II</td>
</tr>
<tr>
<td>ARTS 151</td>
<td>Drawing I</td>
</tr>
<tr>
<td>ARTS 152</td>
<td>Drawing II</td>
</tr>
<tr>
<td>ARTH</td>
<td>Elective (100 level)</td>
</tr>
</tbody>
</table>

ART HISTORY REQUIREMENT (6 credits)
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 411</td>
<td>Philosophy of Art</td>
</tr>
</tbody>
</table>

ART STUDIO REQUIREMENT (27 credits)
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 232</td>
<td>Ceramics I</td>
</tr>
<tr>
<td>ARTS</td>
<td>Crafts</td>
</tr>
<tr>
<td>ARTS 261</td>
<td>Painting I</td>
</tr>
<tr>
<td>ARTS 271</td>
<td>Photography I</td>
</tr>
<tr>
<td>ARTS</td>
<td>Printmaking</td>
</tr>
<tr>
<td>ARTS 291</td>
<td>Sculpture I</td>
</tr>
<tr>
<td>ARTS</td>
<td>Elective</td>
</tr>
<tr>
<td>ARTS</td>
<td>Elective</td>
</tr>
<tr>
<td>ARTS</td>
<td>Elective</td>
</tr>
</tbody>
</table>

PROFESSIONAL EDUCATION REQUIREMENT (24 credits)
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTE 221</td>
<td>Practicum in Art Education</td>
</tr>
<tr>
<td>ARTE 321</td>
<td>Principles and Procedures in Art Education</td>
</tr>
<tr>
<td>EDU 350</td>
<td>Modern Philosophies of Education</td>
</tr>
<tr>
<td>EDPY 333</td>
<td>Human Growth and Development</td>
</tr>
<tr>
<td>EDU 324</td>
<td>Student Teaching (6-cr. course)</td>
</tr>
</tbody>
</table>

GENERAL EDUCATION REQUIREMENT (30 credits)

ELECTIVES (18 credits)

COURSES IN ART

ART HISTORY AND APPRECIATION

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. Prerequisite: permission of instructor.  
Three credit hours

ARTH 113 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.  
Three credit hours

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. Preference given to those matriculated in the Department of Art or those with permission of the instructor.  
Three credit hours

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 to those matriculated in the Department of Art or those with permission of the instructor.  
Three credit hours
ARTH 211  History of Architecture and the Urban Environment  Staff
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. Three credit hours

ARTH 312  History and Appreciation of the Graphic Arts  Bearce
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. Three credit hours

ARTH 314  Renaissance Art  Ostrand
The effects of the ideas of ancient Greece and Rome on the art forms of the 15th and 16th centuries in Florence, Rome, and other parts of Europe. Northern European ideas in conflict and resolution. Prerequisite: ARTH 112. Three credit hours

ARTH 316  Western Art from 1850-1900  Ostrand
A study of the major movements in the first half of the modern era. Prerequisite: ARTH 112. Three credit hours

ARTH 317  Western Art from 1900-1950  Staff
A continuation of ARTH 316 including the growth and development of the modern "isms". Prerequisite: ARTH 112. Three credit hours

ARTH 379  Topics in Film  Ubans
A selection of courses, dealing with the film, but varying in content from semester to semester. Each current course will have a course description on film in the Department of Art. Courses may concern national industries (The American Cinema, The Russian Film, The German Film, etc.); directors (Renoir, Brunel, Dreyer, etc.); genre (The Documentary, The Gangster Film, The Western, etc.); or similar topics. Prerequisite: ARTH 113. Three credit hours

ARTH 411  Philosophy of Art  Staff
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. Three credit hours

ARTH 412  Contemporary Art  Staff
Examination of current developments in all the visual media: 1950 to the present. Prerequisite: ARTH 112. Three credit hours

ARTH 418  Independent Study in Art History  Ostrand
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. One to six credit hours

ART STUDIO COURSES

ARTS 141  Design I  Staff
A coordinated series of experiments with basic design problems directed toward developing a sense of personal integrity, an awareness of the design potential, and the confidence, imagination, and skill needed to realize these potentials. Problems in color and light, systems of space, and visual design of graphic symbols stressing the presentation and use of basic tools. Preference given to those matriculated in Department of Art or those with permission of instructor. Three credit hours
ARTS 142  Design II
Basic problems in two-dimensional design with relation to painting, sculpture, graphic arts, and architecture. Problems deal with elements of composition, color, space, time, movement, symbolic representation, and communication. Prerequisite: ARTS 141.
Three credit hours

ARTS 143  Design III
Problems in three-dimensional design utilizing the systematic study of order and space. Construction and analysis of basic forms in various materials (paper, wood, clay, plaster, and plastics). Prerequisite: ARTS 142.
Three credit hours

ARTS 151  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. Preference given to Art or Art Education majors or those with permission of instructor.
Three credit hours

ARTS 152  Drawing II
Continuation of Drawing I with drawing from the model. Prerequisite: ARTS 151.
Three credit hours

ARTS 153  Drawing III
Extensive combining of media. Stress on role of images, both object and model. Prerequisite: ARTS 152.
Three credit hours

ARTS 231  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 143 and 153 or permission.
Three credit hours

ARTS 232  Ceramics I
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.
Three credit hours

ARTS 234  Weaving I
An introduction to basic fabrics including a study of terms, tools, and procedures used in weaving. Problems may include tie dye, batik, mochrene, stenciling, and black print on various fibers. Prerequisite: Art core courses.
Three credit hours

ARTS 241  Design IV
Investigation of advanced design problems with emphasis on presentation. Prerequisite: ARTS 143.
Three credit hours

ARTS 251  Drawing IV
Continued drawing with emphasis on independent direction. Prerequisite: ARTS 153.
Three credit hours

ARTS 261  Painting I
An introduction to pigments, grounds, and methods of painting in varying media. Emphasis on technical and formal problems. Prerequisite: Art core courses.
Three credit hours

ARTS 271  Photography I
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.
Three credit hours
ARTS 281 Printmaking—Relief
Introduction to Relief Printmaking: Woodcut, Linoleum Block, Wood Engraving. Prerequisite: Art core courses. Three credit hours

Moore

ARTS 282 Printmaking—Stencil
Introduction to silk screen printing, including photo-mechanical reproduction. Prerequisite: Art core courses. Three credit hours

Rakovan

ARTS 283 Printmaking Intaglio I
Introduction to Intaglio printmaking, using etching, engraving, aquatint, mezzotint, and drypoint. Prerequisite: Art core courses. Three credit hours

Bearce

ARTS 284 Printmaking Lithography I
Introduction to the process of lithographic printing from stones. Prerequisite: Art core courses. Three credit hours

Rakovan

ARTS 291 Sculpture I
Clay modeling with emphasis on structure and anatomy of figure, and their relationship to sculptural form, including the building of an armature and a finished plaster cast. Prerequisite: Art core courses. Three credit hours

Franklin

ARTS 332 Ceramics II
Application of design principles in production of ceramicware with a concentration on advanced problems in wheel-thrown forms and hand-building sculptures. Prerequisite: ARTS 232. Three credit hours

Franklin

ARTS 334 Weaving II
Advanced work on hand and foot treadle looms; how to design and produce pattern weaves; the practical application of various fibers used in weaving. Prerequisite: ARTS 234. Three credit hours

Staff

ARTS 351 Drawing V
Making personal and complete drawings and series of drawings. Emphasis on individual concepts and personal expression. Prerequisite: ARTS 251. Three credit hours

Staff

ARTS 361 Painting II
Studies, principally from tangible situations, in the organization of pictorial ideas, the derivation of forms, and the control of space. Use of various painting media. Prerequisite: ARTS 261. Three credit hours

Staff

ARTS 362 Painting III
Exploration of the concepts and techniques of painting with emphasis on individual expression. Prerequisite: ARTS 361. Three credit hours

Staff

ARTS 363 Watercolor
Watercolor, wash, dry-brush, ink and wash, gouache, and other techniques in water media. Emphasis on individual concepts and personal expression. Prerequisite: Art core courses. Three credit hours

Staff

ARTS 371 Photography II
Exploration of concepts and techniques of photography with emphasis on individual forms of expression. Prerequisite: ARTS 271. Three credit hours

Ubans

ARTS 383 Printmaking Intaglio II
Continuation of Intaglio I with emphasis on viscosity techniques. Prerequisite: ARTS 283. Three credit hours

Bearce

ARTS 384 Printmaking Lithography II
Continuation of Lithography I with emphasis on color printing. Prerequisite: ARTS 284. Three credit hours

Rakovan
ARTS 391 Sculpture II
Franklin
The theory and practice of sculptural composition using a variety of techniques with traditional and new materials. Prerequisite: ARTS 291. Three credit hours

ARTS 408 Independent Study in Art Studio
Staff
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. One to six credit hours

ARTS 432 Ceramics III
Franklin
Investigation and realization of Advanced Ceramics projects with an emphasis on personal development and professional attitudes. Prerequisite: ARTS 332. Three credit hours

ARTS 461 Painting IV
Staff
Continuation of Painting III. Emphasis on individual concepts and personal expression. Prerequisite: ARTS 362. Three credit hours

ARTS 462 Painting V
Staff
Continuation of Painting IV. Investigation of advanced painting problems with emphasis on individual expression. Prerequisite: ARTS 461. Three credit hours

ART EDUCATION

ARTE 121 Introduction to Art Education
Sawtelle
A study of growth and development in the creative abilities of children; how to utilize art projects to foster initiative, imagination, cooperation, and appreciation in the classroom. Prerequisite: Permission of instructor; not for students accepted as Art Education majors. Three credit hours

ARTE 122 Handcrafts
Sawtelle
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. Three credit hours

ARTE 221 Practicum in Art Education
Sawtelle
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. Three credit hours

ARTE 321 Principles and Procedures in Art Education
Sawtelle
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. Three credit hours

ARTE 428 Independent Study in Art Education
Staff
An opportunity for the student who has demonstrated competence in a specific area of study to work independently with scheduled tutoring for a faculty member of the student’s choice. Prerequisite: Permission of instructor and Art Department chairman. One to six credit hours
Biology

Professor Najarian; Associate Professors Greenwood, Holmes (Chairman), Kern, Mazurkiewicz, Riciputi, Schwinck; Assistant Professors Dorsey, Hartman.

A four-year program is offered in biological sciences. The program is designed so that upon completion, a student may enter public school teaching, graduate school, or professional school programs in medicine, dentistry, veterinary medicine, or allied health fields.

A Biological Science minor, requiring 18 credit hours in basic and advanced Biology, is available in Secondary Education.

Students who are in the Elementary or Kindergarten-Primary programs of the College of Education, and who are interested in the Biological Sciences, are referred to the Science Area program described in the section of the catalog dealing with Physical Sciences and Engineering. This program includes both physical and biological sciences and offers either an 18-hour academic minor or a 30-hour academic major for such students.

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.

Arts and Sciences Biology majors are also required to have a reading knowledge of a foreign language. Advanced Placement and Credit by Examination will be decided on an individual basis.
<table>
<thead>
<tr>
<th><strong>Requirements for a Biology Major in Arts and Sciences</strong>&lt;br&gt;<strong>or a Biological Science Major in Secondary Education</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Credit hours</strong></td>
</tr>
<tr>
<td><em>MS 152</em> Calculus A</td>
</tr>
<tr>
<td>PHYS 121 and 122 General Physics (5 credits each semester) to be taken as a two-semester sequence</td>
</tr>
<tr>
<td>CHEM 113 Qualitative Principles of Chemistry</td>
</tr>
<tr>
<td>CHEM 114 Qualitative Laboratory Techniques</td>
</tr>
<tr>
<td>CHEM 115 Quantitative Principles of Chemistry</td>
</tr>
<tr>
<td>CHEM 132 Introduction to Analytical Laboratory Techniques</td>
</tr>
<tr>
<td>CHEM 251 and 253 Organic Chemistry I and II</td>
</tr>
<tr>
<td>CHEM 252 and 254 Organic Chemistry Laboratory I and II</td>
</tr>
<tr>
<td><strong>Foreign Language</strong> through Intermediate Level (Arts and Sciences only)</td>
</tr>
<tr>
<td>Physical Education</td>
</tr>
<tr>
<td>BIO 101 and 102 Biological Principles (3 credits) plus Biological Experiences (1 credit) to be taken together</td>
</tr>
<tr>
<td>BIO 103 and 104 Biological Diversity (3 credits) plus Survey of Animals and Plants (1 credit) to be taken together</td>
</tr>
<tr>
<td>BIO 201 Principles of Genetics</td>
</tr>
<tr>
<td>BIO 203 and 204 Developmental Biology (2 credits) plus Comparative Vertebrate Embryology (2 credits) to be taken together</td>
</tr>
<tr>
<td>BIO 311 and 312 Microbiology (3 credits) plus Microbiological Laboratory (2 credits) to be taken together</td>
</tr>
<tr>
<td>Choice:</td>
</tr>
<tr>
<td>BIO 331 &amp; 332 Ecological Principles (2 credits) plus Field Ecology (2 credits) to be taken together</td>
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<tr>
<td>or</td>
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<tr>
<td>BIO 341 &amp; 342 Principles of Limnology (2 credits) plus Limnological Methods (2 credits) to be taken together</td>
</tr>
<tr>
<td>Choice:</td>
</tr>
<tr>
<td>BIO 401 &amp; 402 General Physiology (2 credits) plus General Physiology Laboratory (2 credits) to be taken together</td>
</tr>
<tr>
<td>or</td>
</tr>
<tr>
<td>BIO 411 &amp; 412 Plant Physiology (3 credits) plus Plant Physiology Laboratory (1 credit) to be taken together</td>
</tr>
<tr>
<td>BIO 421 Biology Seminar I</td>
</tr>
<tr>
<td>BIO 431 Biology Seminar II</td>
</tr>
<tr>
<td><em>Students not prepared for MS 152 should precede this course with MS 140, Pre-Calculus Mathematics (3 credits).</em></td>
</tr>
<tr>
<td><strong>Credits to be earned depend upon the language proficiency of the student. Challenge examinations are available.</strong></td>
</tr>
</tbody>
</table>

**Note:** Every student, in order to graduate with a B.A. in Biology must take the Graduate Record Examination in Biology. 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.
# COURSES IN BIOLOGICAL SCIENCES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 101</td>
<td>Biological Principles</td>
<td>Staff</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>A study of the structure and function of cells and</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>a consideration of multicellular organisms, in</td>
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<tr>
<td></td>
<td>terms of heredity, evolution, and ecology.</td>
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<tr>
<td>BIO 102</td>
<td>Biological Experiences</td>
<td>Staff</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>A laboratory study of the structure, function,</td>
<td></td>
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<tr>
<td></td>
<td>and reproduction of cells and the examination</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>of representative animals and plants. Prerequisite:</td>
<td>BIO 101,</td>
<td></td>
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<tr>
<td></td>
<td>or concurrent with BIO 101.</td>
<td></td>
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<tr>
<td>BIO 103</td>
<td>Biological Diversity</td>
<td>Staff</td>
<td>3</td>
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<tr>
<td></td>
<td>Studies of the structure, function, and behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>of animals and plants. Prerequisite: BIO 101.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIO 104</td>
<td>Survey of Animals and Plants</td>
<td>Staff</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Laboratory examination of the structure and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>function of representative animals and plants.</td>
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<td></td>
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<td>Prerequisite: BIO 103, or concurrent with BIO 103.</td>
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<tr>
<td>BIO 111</td>
<td>Human Anatomy and Physiology</td>
<td>Kern</td>
<td>3</td>
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<tr>
<td></td>
<td>The structure and function of the human body.</td>
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<td></td>
<td>Prerequisite: BIO 101.</td>
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<tr>
<td>BIO 112</td>
<td>Practical Human Anatomy and Physiology</td>
<td>Kern</td>
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<tr>
<td></td>
<td>A laboratory study of the structures and functions</td>
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<td></td>
<td>of the human body, including microscopy and</td>
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<td></td>
<td>physiological experiments. Prerequisite: BIO 102,</td>
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<td></td>
<td>or equivalent and BIO 111 or concurrent with BIO</td>
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<td></td>
<td>111.</td>
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<td>BIO 151</td>
<td>Neurobiological Basis of Behavior</td>
<td>Hartman</td>
<td>3</td>
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<tr>
<td></td>
<td>Comparative analysis of neural elements and</td>
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<td></td>
<td>processes with emphasis on reception,</td>
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<td></td>
<td>integration, and simple behaviors in lower and</td>
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<td></td>
<td>higher animals. Prerequisite: A Biology course or</td>
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<td>consent of the instructor.</td>
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<tr>
<td>BIO 201</td>
<td>Principles of Genetics</td>
<td>Greenwood</td>
<td>3</td>
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<tr>
<td></td>
<td>A study of heredity through a discussion of the</td>
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<td></td>
<td>mechanism and control of gene action. Current</td>
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<td></td>
<td>research on the nature of mutations and the role</td>
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<td></td>
<td>of genes in development, behavior, and</td>
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<td></td>
<td>populations will be examined. Prerequisite: BIO 101.</td>
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<td>BIO 202</td>
<td>Experimental Genetics</td>
<td>Greenwood</td>
<td>2</td>
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<tr>
<td></td>
<td>Practical laboratory experience in techniques</td>
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<td></td>
<td>used in genetics. Prerequisite: BIO 201, or</td>
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<td></td>
<td>concurrent with BIO 201.</td>
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<tr>
<td>BIO 203</td>
<td>Developmental Biology</td>
<td>Greenwood</td>
<td>2</td>
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<tr>
<td></td>
<td>A study of the embryology of several organisms,</td>
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<td></td>
<td>including man, and an analysis of the mechanisms</td>
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<td>which influence development. Current research in</td>
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<td>the fields of aging, regeneration, and</td>
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<td></td>
<td>metamorphosis will also be considered. Prerequisite:</td>
<td>BIO 101.</td>
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<tr>
<td>BIO 204</td>
<td>Comparative Vertebrate Embryology</td>
<td>Greenwood</td>
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<tr>
<td></td>
<td>Laboratory experiments and observations on</td>
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<td></td>
<td>amphibian, chick, and mammalian embryos.</td>
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<td></td>
<td>Prerequisite: BIO 203 or concurrent with BIO 203.</td>
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<tr>
<td>BIO 205</td>
<td>Evolution</td>
<td>Dorsey</td>
<td>3</td>
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<tr>
<td></td>
<td>A study of the processes and evidences of organic</td>
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<tr>
<td></td>
<td>evolution.</td>
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<tr>
<td>BIO 209</td>
<td>Vertebrate Zoology</td>
<td>Riciputi</td>
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<td></td>
<td>The form, structure, and life processes of the</td>
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<td>major groups of vertebrates are considered in</td>
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<td>respect to the animal's adaptation to its</td>
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<td>environment. Prerequisite: BIO 103.</td>
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</tbody>
</table>
BIO 210  Vertebrate Zoology Lab
Investigations into the classification, form, structure, and functioning of the major groups of vertebrates. Prerequisite: BIO 104. Two credit hours

BIO 215  Vascular Botany
A study of the major groups of vascular plants with emphasis on morphology, life cycles, and ecology. Prerequisites: BIO 101, and BIO 103. Three credit hours

BIO 216  Vascular Field Botany
Laboratory and field studies on the vascular plants of Maine. Prerequisites: BIO 215, or concurrent with BIO 215. One credit hour

BIO 225  Non-Vascular Botany
A study of the major groups of non-vascular plants with emphasis on morphology, life cycles, and ecology. Prerequisites: BIO 101 and BIO 103. Three credit hours

BIO 226  Non-Vascular Field Botany
Laboratory and field studies on the non-vascular plants of Maine. Prerequisite: BIO 225, or concurrent with BIO 225. One credit hour

BIO 251  History of Biology
A chronological survey of developments in biological investigations from earliest records to the present day. Emphasis will be placed on the methods of scientific discovery and the relationship between past milestones in biological investigations and modern understanding. Prerequisite: 9 credit hours in biology. Three credit hours

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: BIO 101, or BIO 103. Two credit hours

BIO 311  Microbiology
A consideration of protozoa, fungi, bacteria, and viruses of biological and medical importance. Prerequisites: BIO 101, CHEM 115, and CHEM 132. Three credit hours

BIO 312  Microbiological Laboratory
The laboratory isolation and examination of micro-organisms by various techniques. Prerequisite: BIO 311, or concurrent with BIO 311. Two credit hours

BIO 321  Histology
A laboratory course which studies the microscopic anatomy of animal tissues and methods of preparing biological material. Prerequisite: BIO 101. Two credit hours

BIO 331  Ecological Principles
The interrelationships of living organisms and their environments, including man's role as a modifier of ecosystems. Prerequisite: BIO 101. Two credit hours

BIO 332  Field Ecology
Laboratory and field studies which demonstrate the basic concepts of ecology. (Numerous field trips.) Prerequisite: BIO 331, or concurrent with BIO 331. Two credit hours

BIO 341  Principles of Limnology
Geological, physical, chemical, and biological interrelationships of inland waters, including man's impact on these relationships. Prerequisite: BIO 101. Two credit hours
BIO 342  Limnological Methods  Mazurkiewicz
Laboratory and field methods of investigating the ecological attributes and significance of inland waters. Prerequisite: BIO 341, or concurrent with BIO 341.
Two credit hours

BIO 351  Invertebrate Zoology  Najarian
The morphology, physiology, and phylogenetic relationships of non-backboned animals. Prerequisite: BIO 101.
Two credit hours

BIO 352  Survey of Invertebrates  Najarian
Laboratory experience on the anatomy, physiology, and behavior of invertebrate animals. Prerequisite: BIO 351, or concurrent with BIO 351.
Two credit hours

BIO 361  Parasitology  Najarian
The life histories and host-parasite relationships of animal parasites, with emphasis on those of men. Prerequisite: BIO 101.
Two credit hours

BIO 362  Parasitological Laboratory  Najarian
The morphology and life cycles of parasitic protozoa, helminths, and arthropods. Prerequisite: BIO 361, or concurrent with BIO 361.
Two credit hours

BIO 381  Ichthyology  Riciciputi
The structure, origin, evolution, natural history, classification, zoogeography, and economic importance of fishes, with particular emphasis on species found in the northeastern United States. Prerequisites: BIO 103 and BIO 104.
Two credit hours

BIO 382  Field Ichthyology  Riciciputi
Laboratory methods and techniques of collecting and identifying fishes. Extensive field-collecting at various habitats. Prerequisite: BIO 381, or concurrent with BIO 381.

BIO 401  General Physiology  Hartman
A study of physiological processes and their regulation in single-cell and multicellular organisms. Prerequisites: BIO 101, CHEM 253, and CHEM 254.
Two credit hours

BIO 402  General Physiology Lab  Hartman
Laboratory examination of physiological mechanisms of single-cell and multicellular organisms. Concurrent with BIO 401.
Two credit hours

BIO 411  Plant Physiology  Schwinck
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, 1 year chemistry.
Three credit hours

BIO 412  Plant Physiology Laboratory  Schwinck
Laboratory examination of phenomena in plant physiology. Prerequisite: concurrent with BIO 411.
One credit hour

BIO 421  Biology Seminar I  Staff
Weekly oral reports and discussions by students and staff, on biological topics of current interest. Prerequisite: Biology seniors.
One credit hour

BIO 431  Biology Seminar II  Staff
A continuation of BIO 421. Prerequisite: Biology seniors.
One credit hour

BIO 441  Problems in Biology  Staff
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  
A study of physiological processes and regulatory mechanisms in vertebrates and invertebrates. Prerequisite: BIO 401 or consent of instructor.  
Two credit hours

BIO 452 Comparative Physiology Lab  
Laboratory examination of the physiological processes and regulatory mechanisms of vertebrate and invertebrate animals. Prerequisite: Concurrent with BIO 451.  
Two credit hours

BIO 461 Cell Mechanisms  
A physico-chemical analysis of cell processes, with emphasis on mechanisms controlling growth, differentiation, and cell division. Prerequisites: BIO 101 and CHEM 253.  
Three credit hours

BIO 481 Cell Biology  
Structure and function of cells on the cellular, subcellular, and molecular levels. Prerequisites: BIO 101, BIO 102, and CHEM 253, or instructor's permission.  
Three credit hours
Communication

Professors Hansen, Miller; Associate Professor Pic'l (Chairman); Assistant Professor Kivatsisky.

Undergraduates desiring to major in Theatre/Communication may do so in either the Bachelor of Arts program of the College of Arts and Sciences, or under programs leading to the degree of Bachelor of Science in the School of Education. All students are reminded that, in addition to meeting departmental requirements for a major, they must also meet the University’s General Education Requirements.

REQUIREMENTS FOR THEATRE/COMMUNICATION MAJORS
IN THE COLLEGE OF ARTS AND SCIENCES

Theatre/Communication majors desiring a Bachelor of Arts degree are required to complete 36 hours of Theatre and/or Communication courses, which are to include THE 101 (Introduction to Theatre) or COM 102 (Introduction to Communication). At least 18 additional hours must be selected from courses designated THE and/or COM. To complete this major, the remaining 15 hours or less may be selected from Allied Areas or from courses at the 200 level or above in any Department, School or College, with the adviser’s permission. Students are reminded that prerequisites to courses in Allied Areas must be satisfied as prescribed by the appropriate Department, School or College.
REQUIREMENTS FOR THEATRE/COMMUNICATION MAJORS IN SECONDARY EDUCATION

Theatre/Communication majors desiring a secondary education credential are required to follow the above program in Theatre and Communication courses and specialized requirements in the School of Education where applicable.

REQUIREMENTS FOR MINORS

Theatre/Communication minors are required to complete 18 hours of courses designated THE and/or COM, to include THE 101 or COM 102.

ALLIED AREAS OF COGNATE STUDIES FOR COMMUNICATION MAJORS

<table>
<thead>
<tr>
<th>Subject</th>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIO 151</td>
<td>Neurobiological Basis of Behavior</td>
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<tr>
<td>ENG 381</td>
<td>Modern Grammars</td>
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<td>ENG 382</td>
<td>Introduction Linguistics</td>
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<td>ENG 384</td>
<td>Structural Linguistics and Culture</td>
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<td>ENG 387</td>
<td>Semantics</td>
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<td>ANY 101</td>
<td>Cultural Anthropology</td>
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<td>CS 158</td>
<td>Introduction to Computer Science</td>
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<td>PLY 200</td>
<td>Symbolic Logic</td>
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<td>PLY 370</td>
<td>Linguistic Analysis</td>
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<td>PSY 330</td>
<td>Social Psychology</td>
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<td>PSY 350</td>
<td>Psychology of Learning</td>
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<td>PSY 351</td>
<td>Psychology of Motivation</td>
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<td>PSY 360</td>
<td>Cognitive Processes</td>
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<td>PSY 361</td>
<td>Sensation and Perception</td>
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<td>SOC 101</td>
<td>Introduction to Sociology</td>
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<td>SOC 355</td>
<td>Social Structure and Politics</td>
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</table>

Students desiring a concentration in Theatre are referred to the catalog entry under the Theatre Department for a description of Theatre courses and Allied Areas for majors emphasizing Theatre.

COURSE DESCRIPTIONS COMMUNICATION

**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.
Three credit hours

**COM 102 Introduction to Communication**
A lecture-discussion course designed to provide students with a conceptual framework of the basic elements of communications. Topics discussed will include the history and criticism of public address, communication theories, types of communications, educational practices and related topics germane to communications. Course includes a discussion of career and professional options for communication majors.
Three credit hours

**COM 150 Business Communication**
A lecture-discussion course in Organizational Communication, emphasizing industrial, managerial, and labor communication. Investigation of communication, theory, models, nets, barriers to communication, and other topics, including basic methods and techniques of internal business communication.
Three credit hours

**COM 171 Interpersonal Communication**
A lecture-discussion course designed to acquaint the student with the elemental components of speech communication, its basic nature and function. The course involves a study of the potential of human speech communication; the phenomenon of communication through a study of logic, dialectic, and critical and creative thinking. These topics are brought to focus upon the problems of misunderstanding and their remedy.
Three credit hours
COM 250 Small Group Communication  Kivatisky
A discussion-participation course designed to familiarize students with the theories and techniques of small group communication, with an emphasis upon practical application. Students will examine role behavior, group norms, conflict, group development, problem solving, communication flow, and other relevant variables in actual small-group interactions. A final in-depth analytical paper is required. Three credit hours

COM 272 Persuasion  Pic'l
A lecture-discussion-performance course in art of influencing human behavior by means of speech communication. A study of the art of persuasion as a means of defense against the multitude of persuasive messages to which a member of contemporary American society is subjected. Investigation of the ethics of persuasion; beliefs; attitudes and values; and the persuasive impact of motivational appeals and other psychological factors. Practice in persuasive speaking. Three credit hours

COM 290 Organizational Communication  Kivatisky
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, decision-making, leadership, and the nature of organizational change. Three credit hours

COM 320 Intercultural Communication  Hansen
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 on topics such as agricultural consultants, exhibits, and similar cross-cultural relationships. Three credit hours

COM 380 Rhetorical Theory  Staff
A lecture-discussion course designed to investigate the literature in rhetorical theory from Aristotle to Kenneth Burke and I. A. Richards. Emphasis is placed upon the study of rhetoric as the art of discourse adapted to its end. Students will be required to complete a series of short critical research projects and to report the results in class. Final paper required. Prerequisite: any 3-credit speech course. (Not offered in 1975-76) Three credit hours

COM 420 Communication and Cognition  Pic'l
A lecture-discussion course designed to explore the relationships and interactions of the 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. Three credit hours

COM 491 Independent Study  Staff
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. Three to six credit hours
Criminal Justice

PETER M. LEHMAN, Coordinator

The Criminal Justice Program is a four-year program leading to the baccalaureate degree. The program is designed to present Criminal Justice students with a broad interdisciplinary perspective on Criminal Justice institutions and the social systems within which they operate. Students in the program become thoroughly acquainted with all three sub-fields of Criminal Justice — police, corrections and courts — and are thus provided a broad range of post-graduation employment opportunities, as well as a valid foundation for graduate study in the social sciences and law.

REQUIREMENTS

The minimum requirement for a major in Criminal Justice is 42 hours of course work of which 15 hours are in the Criminal Justice major's unit and 27 hours are in the related areas of philosophy, sociology, social welfare, political science, and psychology. The Criminal Justice major's unit consists of the following courses:

- CJ 215 Introduction to Criminal Justice
- CJ 301 Occupations and Occupational Roles in the Criminal Justice System
- CJ 302 Criminal Law
- CJ 310 Comparative Criminal Justice Systems
- CJ 350 Topics of Criminal Justice
- CJ 397 Independent Projects
- CJ 410 Internship
- CJ 412 Research in Criminal Justice
- CJ 425 Senior Seminar

*required

In addition to the core courses listed above, each student is required to complete satisfactorily at least three courses from each of the following areas.

UNITS OF CRIMINAL JUSTICE

1) **The Social Context of Criminal Justice Systems** (9 hours required)
   - HIST 273 History, Literature & Drama of Nazi Germany
   - 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 Prisons
   - SOC 357 Formal Organization
   - SWE 351 Human Services and the Consumer
   - SWE 364 Comparative Social Welfare Systems

2) **Deviance** (9 hours required)
   - PLY 102 Introduction to Philosophy: Counter Culture
   - PLY 103 Introduction to Philosophy: Alienation of Man
   - PSY 224 Psychology of Adolescence
   - PSY 326 Mental Deficiency
   - PSY 333 Psychopathology
   - SOC 200 Social Problems
   - SOC 372 Juvenile Delinquency
   - SOC 374 Sociology of Mental Health and Mental Illness
   - SOC 375 Social Disorganization
3) **Law and Social Control** (9 hours required)

- PLY 210 Ethical Theories
- POL 284 American Civil Liberties
- POL 305 Comparative Judicial Behavior
- SOC 314 Social Control
- SOC 336 Law and Society
- SOC 371 Race and Culture Conflict
- SWE 350 Social Problems and Social Welfare Policy

**NOTE:** There are prerequisites for most of these courses. See the departmental course listings for particulars. Other courses may be added from time to time to the Units of Criminal Justice areas. Upon petition to the Coordinator, a student may be allowed substitute courses in the Units of Criminal Justice areas.

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**COURSE DESCRIPTIONS**

**CJ 215 Introduction to Criminal Justice**

An analytical survey of the structure and operation of the American criminal justice system as an institution embedded in a social, political, economic and cultural context, with emphasis upon the use of historical and comparative materials. (Prerequisite: SOC 101 or POL 102) Three credit hours

**CJ 301 C.J. Occupations and Occupational Roles in the Criminal Justice System**

An analysis of the various occupations and professions that function within the criminal justice system. The relationships among police, lawyers, social service and correctional personnel, and the impact of organizational and social variables that define occupational functions and issues will be examined. (Prerequisite: CJ 215) Three credit hours

**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. (Prerequisite: CJ 215) Three credit hours

**CJ 310 Comparative Criminal Justice Systems**

A cross-national analysis of the form and substance of modern criminal justice systems including the varieties of social, economic and political contexts in which these systems exist, as well as their historical development. Emphasis is placed on underlying differences in theories of infraction and the role of corrections, in an attempt to understand the differences criminal justice systems and their personnel play in a variety of nation states. (Prerequisite: CJ 215) Three credit hours

**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. By permission of instructor. Three credit hours

**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. One to three credits
**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) Variable credit

**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.

One to three credit hours

**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.

Three credit hours
English

Professors Bernard, Hanna, Jaques (on leave Spring Semester, 1976), Rutherford, Weeks; Associate Professors Baier, Burke (on leave Spring Semester, 1976), Carper, Coffin, O'Reilly, Reuter (on leave, 1975-76), Rosen, Slavick (Chairman); Assistant Professors Carner, Selkin, Vincent, Wilson, Wolf; Visiting Assistant Professor Mirto.

As Aristotle says, the knowledge found in literature is limited neither by facts, as in history, nor by abstraction, as is philosophy. In literary art, facts and ideas meet in significant experience. Literature orders and represents reality in an understandable form. It does so through the transforming powers of the imagination and words.

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 must begin with English 120. Most courses numbered between 121 and 400 may be elected as a second Humanities course without further prerequisites. Students in other College disciplines and the Schools may elect any English course. Prerequisites are indicated in the course description.

The English major begins with a course in writing (100 or 101), an introduction to the study of literature (120), and an introduction to great works in Western literature from The Bible to Don Quixote (121). The major is then free to satisfy area, genre, and the 36-English credit requirements in a variety of ways: a student may exercise a preference for major figure, genre, or historical period courses and may choose several writing or criticism courses. Experimental courses and independent study credit are also available. Majors may count certain courses in other departments toward the English major.

While there is no College core and 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), 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).

GENERAL REQUIREMENTS AND WAIVER POLICIES

1. ENG 120 must be taken before any other courses numbered above ENG 120, with the exception of courses listed under Category IV, Linguistics and Related Courses, and English 121, which may be taken concurrently with English 120.
2. ENG 120 may be waived for a few exceptional students who can pass a qualifying examination administered by the English Department.

3. The requirements of the English Major Program defined below may be waived in favor of a self-designed major that is approved in advance by the English Department Curriculum Committee.

ENGLISH MINOR PROGRAM IN SECONDARY EDUCATION

Secondary Education students in the College of Education may complete an English minor by passing 12 credits with at least a C and six credits with at least a B, for a total of 18 credits from the distributive categories listed below.

- Category III — 3 credits
- Category IV — 3 credits
- Category VI — 6 credits

Categories VII and VIII — 6 credits

ACADEMIC MAJORS AND MINORS IN KINDERGARTEN-PRIMARY AND ELEMENTARY EDUCATION

Students in Elementary Education or Kindergarten-Primary 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 advisors in the College of Education.

ENGLISH MAJOR PROGRAMS IN ARTS AND SCIENCES OR SECONDARY EDUCATION

In addition to meeting English Departments, the B.A. or B.S. candidate must also meet any college or school requirements and the general education requirements of the University.

Both Arts and Sciences and Secondary Education 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. English 100 or 101, English 120, and English 121.

2. At least 36 hours of courses acceptable for English major credit (numbered 200 or above)

3. One course in each of the following categories:
   - Category II, Category III, Category IV, Category VI-A, VI-B Shakespeare,
   - a second VI-B course, Category VI-C, Category VI-D, Category VII, and
   - Category VIII.

4. Major credit courses in each of the following genres:
   - (a) poetry or prose and poetry, (b) drama other than Shakespeare,
   - (c) fiction, (d) major figure other than Shakespeare. Courses satisfying area requirements in item 3 above may also satisfy the genre requirements of item 4.

COURSE DESCRIPTIONS

I — INTRODUCTORY COURSES

WRITING COURSES

UMPG is committed to helping students achieve a high level of writing ability. The writing courses listed below will serve those who recognize that an effective style of expression is valuable in all college courses and in life. These basic courses cannot be used to satisfy a Humanities requirement.

ENG 01 Writing Laboratory

A Writing Laboratory is available on both campuses for any student who needs help with any writing problem, from organizing a term paper to preparing a job application. (Every semester) No credit
ENG 50 Remedial Writing  Staff
This non-credit course will help those whose present writing skills are likely to be a handicap in their college work. Emphasis is on basic mechanics, including agreements, simple patterns of organization, and logical structures for sentences and paragraphs. (Every semester) No credit

ENG 100 College Writing  Staff
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. (Every semester) Three credit hours

ENG 101 Independent Writing  Staff
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. (Every semester) Three credit hours

ENG 119 Expository Writing  Staff
Training in clear expository writing of formal reports, business communications, and related material. Limited to Associate Degree Business students. (Every semester) Three credit hours

LITERATURE COURSES

ENG 120 Introduction to Literature  Staff
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—six papers, two in each of the genres.
N.B. Prerequisite for all English courses numbered above 120. May be taken concurrently with English 121. (Every semester) Three credit hours

ENG 121 Literary Masterpieces  Staff
A study of selected major works of classical and continental literature which will provide students with a background for understanding the most influential books of our culture. Required for all English majors. (Every semester) Three credit hours

II — WRITING COURSES

ENG 202 Poetry Workshop I  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. (Fall 1975)

ENG 203 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. (Spring 1976)

ENG 204 Advanced Writing  Selkin, Vincent
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) Three credit hours

ENG 205 Creative Writing  Vincent
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. (Spring 1976) Three credit hours
ENG 210 Expository Writing
Joques
Primarily for juniors and seniors majoring in Business Administration. Training in clear expository writing of formal reports, business communications, and related materials.
Three credit hours

III — CRITICISM COURSES

ENG 364 Critical Approaches to Literature
Wilson
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. (Fall)
Three credit hours

ENG 365 Study of Literature and Literary Criticism
Carner, Wilson
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 relations 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 to seniors who want an overview. (Annually)
Three credit hours

ENG 367 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. (Fall 1975)
Three credit hours

IV — LINGUISTICS AND RELATED COURSES

ENG 220 Old English
Coffin
The student develops Old English reading ability by working with the best Old English poems and prose. Modern techniques of rapid language acquirement are used. (Fall, even years)
Three credit hours

ENG 380 History of the English Language
Bernard, Rutherford
This course includes a survey of the pre-history 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)
Three credit hours

ENG 381 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. (Spring 1976)
Three credit hours

ENG 382 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 1976)
Three credit hours
ENG 384  Structural Linguistics and Culture  Coffin
The course starts with the analysis of the structure of many languages. Knowledge of structure is then used to analyze art, religion, poetry. American Indian language and cultures constitute part of the course. Recommended for English and language teachers. (Annually, fall) Three credit hours

ENG 387  Semantics  Coffin
Interpretation of literature by means of analysis of the language used. Recommended for prospective teachers of literature and English. (Spring, odd years) Three credit hours

V — NON-REQUIRED MAJOR CREDIT COURSES

ENG 200  Topics in Literature  Staff
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 office. These courses may be offered in a two-semester sequence, and more than one section may be taken for credit. For the Fall of 1975 these topics will be offered: Values in the Modern World; Utopian literature; Comedy. Spring 1976 topics will include Existentialism in Literature. Three credit hours

ENG 226  Dante  Staff
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. (Spring, odd years) Three credit hours

ENG 312  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. Douglass, Stowe, Melville, Twain, Whitman, Cable, Chesnutt, 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. (Spring, odd years) Three credit hours

ENG 351  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. Prerequisites: ENG 100 or 101, 120, and 121. (Fall 1975) Three credit hours

ENG 361  The Principles of Poetry  Corper
This course is intended to give students a thorough grounding in skills for reading poetry well and discussing it intelligently. It is recommended for those whose earlier experience with poems has been limited and who wish to learn how to understand and enjoy them. Frequent short analytical papers and several verse-writing exercises will be required. Prerequisite: sophomore standing or permission of the instructor. (Fall, 1975) Three credit hours

ENG 362  Poetry in English: A Survey  Corper
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. (Fall, annually) Three credit hours

ENG 366  Literature and the Visual Arts  Wilson
This course will examine in chronological sequence the relationship between leading English writers or schools and the movements in European painting, architecture, and sculpture to which they most closely correspond. (Spring 1976) Three credit hours
ENG 374 Writers of Maine

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. (Spring 1976)

Three credit hours

ENG 410 Independent Study in English

Individual study programs as arranged with an instructor. Prerequisite: permission of instructor.

One to three credit hours

CPEN 294 Three Continental Humanists

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.

Three credit hours

CPEN 298 Great Continental Novelists

A study and interpretation of eight representative works of European fiction and of underlying literary and historical trends. Students will read four French and four Russian novels: Stendhal, The Red and the Black; Balzac, Pere Goriot; Gogol, Dead Souls; Flaubert, Madame Bovary; Turgeniev, Fathers and Sons; Dostoevsky, Crime and Punishment; Tolstoy, Anna Karenina; and Zola, L’Assommoir. Oral reports, class discussion, short critical papers.

Three credit hours

CPEN 371 Greek Tragedy and Comedy

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. Prerequisite: the Iliad or the Odyssey. Oral reports, class discussions, short critiques. (Fall 1975)

Three credit hours

CPEN 387 Oriental and Primitive Masterpieces

The course starts with primitive literature of Black Africa and the American Indian and continues to early epic and other literature of Egypt, Babylonia, and Israel.

Three credit hours

CPEN 388 Oriental and Oceanic Masterpieces

The course introduces the best of Chinese lyrical poetry and the spiritual epics of India. Related material of interest will be used from Tibet and Oceania.

Three credit hours

NOTE: Up to six hours of specific courses offered by such other CAS departments as Foreign Languages and Classics, History, Theatre, Communication, etc., may be elected for English major credit.

VI — ENGLISH LITERATURE

A — OLD AND MIDDLE: 600-1450

ENG 220 Old English (See Category IV)

ENG 221 Beowulf

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. 220. (Spring, odd years)

Three credit hours
ENG 223 Medieval Literature
Extensive readings in major philosophical background texts and the literature of 14th century England exclusive of Chaucer. (Fall 1975) Three credit hours

ENG 224 Chaucer
Selections from the early poetry and intensive reading in the Canterbury Tales. Attention also given to the literary and historical background. Recommended for Juniors, Seniors, and English majors. Prerequisites: ENG 100 or 101, 120, and 121. (Fall, 1975) Three credit hours

ENG 225 Medieval Epic and Romance
The background and development of the medieval epic and romance, including English, Germanic, French, and Italian works. (Fall, even years) Three credit hours

B — RENAISSANCE: 1450-1660

ENG 231 16th Century Prose and Verse
The prose and non-dramatic poetry of the 16th century. Major authors of the Tudor Age (1485-1603) in their cultural setting from Skelton to Donne. (Spring 1976) Three credit hours

ENG 232 Spenser
Readings in the works of Edmund Spenser with special emphasis on The Faerie Queene.

ENG 242 Shakespeare I
A study of representative early and middle comedies, histories, and early tragedies. Reading and discussion of Elizabethan dramatic traditions, poetic modes, critical approaches, and current productions. (Every semester) Three credit hours

ENG 243 Shakespeare II
Continuation of Shakespeare I. A study of representative dark comedies, major tragedies, and dramatic romances. (Every semester) Three credit hours

ENG 244 Shakespeare Special Studies
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, chronic histories, "problem" plays. A previous course in Shakespeare or the English Renaissance is recommended. (Not offered in 1975-76) Three credit hours

ENG 246 British Drama to 1642
Shakespeare's predecessors, contemporaries, and followers to 1642. (Annually, fall) Three credit hours

ENG 249 17th Century Prose and Poetry to 1660
A study of major non-dramatic writers of the 17th century exclusive of Milton and Dryden. Included will be Bacon, Donne, Jonson, Hobbes, Burton, Herrick, Herbert, Vaughan, Marvell, Suckling, Lovelace, Crashaw, Carew, Browne. (Annually, fall) Three credit hours

ENG 250 Milton
Study of Milton's major poetry and selected prose with attention to critical and historical background. (Spring 1976) Three credit hours

C — RESTORATION THROUGH 18TH CENTURY: 1660-1798

ENG 262 Restoration and Early 18th Century Prose and Poetry
An exploration of representative writings of the English Neo-classical period, including works by such writers as Dryden, Swift, Pope, Gay, Addison, and Steele. (Annually, fall) Three credit hours
ENG 263 Later 18th Century Prose and Poetry
Johnson and Boswell and their circle, poetry from Smart and Collins to Burns and Blake, and other works of the period. (Spring 1977) Three credit hours

ENG 264 Swift
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." Three credit hours

ENG 266 Restoration Drama
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. (Spring 1976) Three credit hours

ENG 267 The Development of the Novel
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. (Spring 1977) Three credit hours

ENG 268 The Earlier English Novel
The principal novelists from the beginnings to Sir Walter Scott. (Annually, Fall) Three credit hours

ENG 271 Masterpieces of English Satire
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*. Three credit hours

ENG 273 The Poetry of Alexander Pope
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*. (Spring 1976) Three credit hours

D — ROMANTIC AND VICTORIAN: 1798-1900

ENG 281 Prose and Poetry of the Romantic Period
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. (Annually, Spring) Three credit hours

ENG 282 William Blake
Examination of Blake's writings and visual art, attempting to develop a comprehensive understanding of Blake's system and intellectual contexts. (Fall 1976) Three credit hours

ENG 286 Fiction of the Romantic Period
The novels of Jane Austen; readings in Maturin, Peacock, Edgeworth, Lewis, Godwin, Mary Shelley, Scott. (Spring, odd years) Three credit hours
ENG 291 Victorian Prose and Poetry  
Hanna  
Selections from the poetry of Tennyson, Browning, Arnold, Swinburne, Clough, the Rossetti's, Meredith, Hardy, Hopkins and Housman. Critical and controversial essays by Macaulay, Carlyle, Arnold, Huxley, Newman, Mill, Ruskin, Morris, Pater, and Wilde. Victorian backgrounds: rich and poor, the Industrial Revolution, Utilitarianism, religious crises, democracy and culture, artistic alienation, and aestheticism. Oral reports and brief papers. (Fall 1976).

ENG 293 From Pre-Raphaelitism to the Bloomsbury Group  
Wilson  
This course will study the poetry, novels, paintings, and criticism of the Pre-Raphaelites, John Ruskin, William Morris, Art Nouveau, the Beardsley period, and the Bloomsbury Group. Three credit hours

ENG 296 Tennyson and Browning  
Hanna  
Extensive reading in the poetry of two major Victorian figures, Alfred Lord Tennyson and Robert Browning. 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. (Spring 1976).

ENG 297 The Later English Novel  
Section A  
Bernard  
The principal novelists from Austen to Hardy. (Spring, even years)

Section B  
Hanna  
The influence of Henry James on selected modern novelists. George Eliot's pioneer work, Middlemarch (1871), called "the first adult novel in English." Four novels by Henry James: Daisy Miller (1878), The Portrait of a Lady (1880), What Maisie Knew (1894), and The Awkward Age (1898). Five modern novels reflecting the impact of James in style, technique, structure or theme: E. M. Forster's Howard's End (1910), D. H. Lawrence's Sons and Lovers (1913), Ford Madox Ford's The Good Soldier (1915), Virginia Woolf's To the Lighthouse (1927) and Elizabeth Bowen's The Death of the Heart (1939). Class roundtables, open-book quizzes, two essay-exams. (Spring, odd years). Three credit hours

VII — AMERICAN LITERATURE: Colonial to 1900

ENG 342 American Literature I  
Jaques  
A survey of American literature through the 18th and 19th centuries, with emphasis on the principal writers. (Fall, annually) Three credit hours

ENG 344 The American Renaissance  
O'Reilly, 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. (Annually, fall) Three credit hours

ENG 345 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. (Spring 1977) Three credit hours

ENG 348 The American Novel I  
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, and there are these prerequisites: ENG 100 or 101, 120, and 121. (Annually, fall; and spring, even years) Three credit hours

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ENG 355 Hawthorne and Melville  
O'Reilly, Slavick  
The chief works of two major figures in American literature. Emphasis will be on Melville. Some supplementary reading will be required. (Spring 1977)  
Three credit hours  

ENG 358 Twain and James  
O'Reilly, 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. (Spring 1976, Fall 1977)  
Three credit hours  

VIII — MODERN LITERATURE: 1900 to the Present  

ENG 299 Modern Poetry  
Rosen  
Three credit hours  

ENG 302 20th Century British and American Poetry I  
O'Reilly  
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. (Annually, fall)  
Three credit hours  

ENG 303 20th Century British and American Poetry II  
O'Reilly  
A continuation of English 302. First semester poets are not duplicated in II. (Annually, spring)  
Three credit hours  

ENG 305 D. H. Lawrence: The Search for Being  
Wilson  
By studying the paintings, poetry, novels, letters, and critical writings of David Herbert Lawrence in chronological sequence, this course will explore his search for being. This search will involve the class in an examination of Lawrence's attitude to the unconscious life, myth, archetypes, and sexuality, his criticism of western civilization and the 20th century, and his turning to the mystical experience. It will also involve a study of his development of a language appropriate to this awareness and his acting out the dynamics of this view of the world in his art. Student evaluation will be based on small group discussions and three individual class essays (Fall 1975)  
Three credit hours  

ENG 306 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. (Spring 1976)  
Three credit hours  

ENG 307 Modern Short Story  
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. (Spring, annually)  
Three credit hours
ENG 308 Modern Novel  
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. (Fall 1976)  
Three credit hours

ENG 309 The Southern Renaissance  
Three credit hours

ENG 310 The Fugitive Poets  
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. Prerequisites: ENG 100 or 101, 120, and 121. (Spring 1977)  
Three credit hours

ENG 311 Twentieth Century British Literature  
Selected novels, plays, poetry from the late 19th century to the present. The course will study naturalism, impressionism, and symbolism, as well as the political and existential implications of British literature of the 20th century.  
Three credit hours

ENG 326 Fitzgerald, Hemingway, Faulkner  
Studies in the fiction of three 20th century American writers. (Spring, even years)  
Three credit hours

ENG 343 American Literature II  
A continuation of American Literature I. (Spring 1977)  
Three credit hours

ENG 349 The American Novel II  
An historical survey of the American novel since 1900. In Professor Burke's sections a term paper is required for an honor grade, and there are these prerequisites: ENG 100 or 101, 120, and 121. (Fall, 1976; Spring, 1977)  
Three credit hours

IX — EXPERIMENTAL COURSES

Occasionally the English Department will offer special courses not listed individually in the catalog but listed and described (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 approaches to literature, testing new alignments of figures or materials, or trying out courses before installing them permanently in the catalog.
Foreign Languages and Classics

Associate Professors Crochet, Dalvet, Duclos, Lepelley, Rolfe (Chairman); Assistant Professors Carroll, Di Benedetto, Ubans; Instructors Hernandez, 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. French courses in this category may be credited toward the French major or minor if the work of the course, including papers and readings, is undertaken in French.

II. BILINGUAL STUDENTS

Franco-American students and other bilingual students will find two French courses especially devised for them (although not exclusively). They are numbered FRE 181 and FRE 381.

III. LANGUAGE PROGRAMS

The department offers programs in French, German, Classical Greek, Latin, and Spanish. Elementary courses (101-102) are for students who have never studied the language. Intermediate-level courses (131-132 for modern languages; 201-202 for the ancient languages) are for students with two successful years of high school language study. Students who do not feel prepared to enter the intermediate course in a modern language must begin with the review course numbered 103. Students whose aim is exclusively the ability to read a modern language should enroll in courses numbered 111-112, which are also a preparation for language tests required by graduate schools.

IV. CONVERSATION

Besides the oral practice in the classroom, any student interested in acquiring the ability to speak fluently is invited 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. Students enrolled in language courses (101-132) may register for a supervised language practice twice a week in the laboratory; they will receive an extra credit for regular and active attendance. 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.

V. 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 231, FRE 251, FRE 252, and FRE 203. 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.

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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.

VI. FRENCH MAJOR AND MINOR FOR STUDENTS IN THE COLLEGE OF EDUCATION

More than any other students, future teachers of French need a very solid foundation in the language so that they will be ready to teach it with accuracy. The following programs are devised to assure that they reach such a goal:

**French Major** 30 credits above the 200 level

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<th>Required courses:</th>
<th>Credit Hours</th>
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<tr>
<td>FRE 201 or 202 Composition I, II</td>
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<tr>
<td>FRE 203 or 204 Conversation I, II</td>
<td>3</td>
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<tr>
<td>FRE 231 or 232 Introduction to French Literature</td>
<td>3</td>
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<tr>
<td>FRE 205 Phonetics</td>
<td>3</td>
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<tr>
<td>FRE 251 or 252 French Civilization</td>
<td>3</td>
</tr>
<tr>
<td>FRE 401 or 402 Advanced French Grammar</td>
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Elective courses:
- Any course listed above as required, beyond the 18 credits...
- Students must also take the professional course FLED 301 — The Teaching of Foreign Languages.

**French Minor** 12 credits above the 200 level. (18 including FRE 131-132)

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<tr>
<td>FRE 231 Introduction to French Literature</td>
<td>3</td>
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</table>

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

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. (Not offered in 1975-76)

Three credit hours

**CLS 252 The Tragic Hero in Ancient Literature**
Duclos

Intensive reading of selected plays in English translation by Aeschylus, Sophocles, Euripides, Seneca; discussion; papers. (Not offered in 1975-76)

Three credit hours

**CLS 255 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. (Not offered in 1974-75)

Three credit hours
CLS 256 Rome, from Republic to Empire
The literature, history, politics, philosophy, art, and architecture of Rome in the first century B.C. Lectures, discussion, papers, museum trip.

Three credit hours

CLS 257 Greek Tragedy in Translation: Philosophy or Politics?
This course examines a selection of Greek Tragedies in English translation from a literary, philosophical, and historical point of view. It involves students in developing a multi-level approach to a complex and often misunderstood art form. In keeping with this ultimate objective, several modern "tragedies" on Greek themes will be explored during the semester, to enhance understandings of Classical drama and to demonstrate the "Classical elements" in contemporary forms.

Three credit hours

FRE 251 French Civilization: An Historical Approach
Aspects of the society, institutions, arts, literature, and religion of France, from the origins to the end of the XIX century.

Three credit hours

FRE 252 French Civilization: Contemporary France
Institutions, education, society, economy, politics of France. Requires reading knowledge of French, but no French is spoken in the classroom. Prerequisite: FRE 112.

Three credit hours

FRE 261 Masterpieces of French Literature (in English Translation) I
Novels and plays representative of French Literature from the beginning of the XIXth century to the present. No knowledge of French is necessary.

Three credit hours

FRE 262 Masterpieces of French Literature (in English Translation) II
Novels and plays representative of French Literature from the Middle Ages to the end of the 18th century. No knowledge of French is necessary. (Not offered in 1975-76)

Three credit hours

FRE 263 Contemporary French Thinkers (in English Translation)
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. (Not offered in 1975-76)

Three credit hours

FRE 264 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.

Three credit hours

FRE 268 18th Century Literature in France and England
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.

Three Credit hours

CLASSICS: GREEK AND LATIN

GRK 101 Elementary Greek I

Three credit hours

GRK 102 Elementary Greek II
Selections from Euripides' Alcestis. Prerequisite: GRK 101. Three credit hours

GRK 201 Intermediate Greek I
A study of Plato's Apology, Crito and selections from the Phaedo. Prerequisite: GRK 101 or equivalent.

Three credit hours
GRK 202 Intermediate Greek II
A study of selected books from Homer's Odyssey.
Carroll
Three credit hours

LAT 101 Elementary Latin I
Fundamentals of the Latin language
Duclos
Three credit hours

LAT 102 Elementary Latin II
Continuation of LAT 101.
Duclos
Three credit hours

LAT 201 Intermediate Latin I
Selected readings from masters of Latin prose and poetry. Prerequisite: LAT 101 or equivalent.
Duclos
Three credit hours

LAT 202 Intermediate Latin II
Continuation of LAT 201.
Staff
Three credit hours

LAT 231 Readings in Latin Literature I
Readings in the prose and poetry of the late Republic and Early Empire, with emphasis upon literary values. (Not offered in 1975-76)
Duclos
Three credit hours

LAT 232 Readings in Latin Literature II
Continuation of LAT 231. (Not offered in 1975-76)
Duclos
Three credit hours

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). Three credit hours. (With lab, four credit hours.)
Staff

FRE 102 Beginning French II
Continuation of FRE 101. Three credit hours. (With lab, four credit hours.)
Staff

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). Three credit hours. (With lab, four credit hours.)
Staff

FRE 111 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. Three credit hours.
Dolvet, Di Benedetto

FRE 112 Readings in French
Further practice of the skill acquired in FRE 111 through an accelerated reading of books on various topics (fiction, history, science, etc). Prerequisite: FRE 111. Three credit hours.
Dolvet, Di Benedetto

FRE 131 Intermediate French I
Development of the language skills through an analysis of contemporary texts: Camus, Sartre, Anouilh, or others. Students are encouraged to register also for laboratory practice (one more credit). Prerequisite: FRE 102, FRE 103, or equivalent. Three credit hours. (With lab, four credit hours.)
Crochet, Lepelley

FRE 132 Intermediate French II
Continuation of FRE 131. Three credit hours. (With lab, four credit hours.)
Crochet, Lepelley
FRE 181 French for Franco-Americans
An analysis of the French language (grammar, vocabulary, pronunciation) spoken in French communities of New England. The course is also recommended for French majors who plan to teach in such communities. (Not offered in 1975-76)
Three credit hours

FRE 201 French Composition I
Advanced study of the French language based on grammatical review, regular compositions, some translation and vocabulary analysis.
Three credit hours

FRE 202 French Composition II
Continuation of FRE 201.
Three credit hours

FRE 203 French Conversation
Intensive oral practice, expository reports, debates, class discussions. Prerequisite: FRE 132.
Three credit hours

FRE 204 French Conversation II
Continuation of FRE 203.
Three credit hours

FRE 205 French Phonetics
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.
Three credit hours

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. One credit hour per semester

FRE 208 The Practice of Conversation II
Continuation of FRE 207
One credit hour per semester

FRE 231 Introduction to French Literature I
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.
Three credit hours

FRE 232 Introduction to French Literature II
Continuation of FRE 231.
Three credit hours

FRE 301 The French Novel Between the World Wars
Study of important novels by Gide, Proust, Mauriac, Malraux, Giono, and others. Student participation through group discussion and individual oral reports. Prerequisite: FRE 291.
Three credit hours

FRE 302 The French Novel from World War II to the Present
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. (Not offered in 1975-76)
Three credit hours

FRE 303 French Theatre in the Twentieth Century
Plays by Giraudoux, Claudel, Montherlant, Genet, Ionesco. Prerequisite: FRE 231. (Not offered in 1975-76)
Three credit hours
FRE 304 Women in Contemporary French Literature
The course examines, through fictional and semi-autobiographical works, womanhood as seen by well-known women writers of the 20th century. Works to be studied are: *La Vagabonde*, Colette; *Memoires d'une jeune fille rangee*, Simone de Beauvoir; *Une Femme heureuse*, Celia Bertin; *Les Stances a Sophie*, Christiane Rochefort; *Journal d'une bourgeoise*, Genevieve Gennari; *Le Rempart des beguines*, Francoise Mallet-Jovis; *L'Astragale*, Albertine Sarrasin. Prerequisite: FRE 231. (Not offered in 1975-76) Three credit hours

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.

FRE 325 The XIXth Century Novel: Balzac and Stendhal
Dolvet
Representative novels and short stories of Balzac, Stendhal, and contemporaries. Prerequisite: FRE 231.

FRE 326 The XIXth Century Novel: Flaubert and Zola
Lepelley
Representative novels of Flaubert, Zola, and contemporaries. Prerequisite: FRE 231. (Not offered in 1974-75) Three credit hours

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 321.

FRE 332 The XVIIIth Century French Novel
Dolvet
Readings from Prevost, Marivaux, Rousseau, Laclos, and others. Prerequisite: FRE 231. (Not offered in 1975-76) Three credit hours

FRE 335 French Literature of the 17th Century until 1660
Lepelley
Readings from Malherbe, Scarron, Descartes, Pascal, Corneille. Prerequisite: FRE 231. (Not offered in 1975-76) Three credit hours

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. (Not offered in 1975-76) Three credit hours

FRE 345 French Literature of the Medieval Period
Lepelley
*Chansons de Geste*, *Romans courtois*; theatre, lyric, poetry. In modern French translation. Prerequisite: FRE 231.

FRE 381 Franco-Canadian Literature
Crochet
Readings from the younger generations of French Canadian novelists Gabrielle Roy, Jean-Guy Pilon, Rejean Ducharme, Marie-Claire Blais, Jacques Godbout. Selections of French Canadian poetry. Prerequisite: FRE 231. (Not offered in 1975-76) Three credit hours

FRE 401 Advanced French Grammar I
Rolfe
Designed to provide prospective teachers with an adequate foundation in French grammar. Prerequisite: FRE 202.

FRE 402 Advanced French Grammar II
Rolfe
Continuation of FRE 401.

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. Three credit hours
GERMAN

GMN 101 Elementary 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).  
Three credit hours. (With lab, four credit hours.)

GMN 102 Elementary German II  
Continuation of GMN 101.  
Three credit hours. (With lab, four credit hours.)

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).  
Three credit hours. (With lab, four credit hours.)

GMN 111 Reading German I  
Beginner's course in German aiming exclusively at a reading knowledge of the language. No German spoken. Recommended also as preparation for language tests required by graduate schools.  
Schwanauer  
Three credit hours

GMN 122 Reading German II  
Further practice of the skill acquired in GMN 111 through an accelerated reading of books on various topics (fiction, history science, etc). Prerequisite: GMN 111.  
Schwanauer  
Three credit hours

GMN 131 Intermediate German I  
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. Three credit hours. (With lab, four credit hours.)

GMN 132 Intermediate German II  
Continuation of GMN 131.  
Ubans  
Three credit hours. (With lab, four credit hours.)

GMN 201 Composition and Conversation in German I  
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. (Not offered in 1975-76)  
Ubans  
Three credit hours

GMN 202 Composition and Conversation in German II  
Continuation of GMN 201. (Not offered in 1975-76)  
Ubans  
Three credit hours

GMN 231 Introduction to German Literature I  
Reading and discussion of selected works representing the major literary movements from Enlightenment to Realism. Prerequisite: GMN 132 or GMN 112 or an equivalent reading ability of German.  
Ubans  
Three credit hours

GMN 232 Introduction to German Literature II  
Reading and discussion of selected works representing the major literary movements from Naturalism to the present. Prerequisite: GMN 132 or GMN 112 or an equivalent reading ability of German.  
Ubans  
Three credit hours

SPANISH

SPN 101 Elementary 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).  
Three credit hours. (With lab, four credit hours.)
SPN 102 Elementary Spanish II  
Continuation of SPN 101. Three credit hours. (With lab, four credit hours.)

SPN 103 Review of Elementary Spanish  
Elementary Spanish for students with some previous study of the language who feel the need for a refresher course before entering SPN 131. If possible, register also for laboratory practice (one more credit). Three credit hours. (With lab, four credit hours.)

SPN 131 Intermediate Spanish I  
For students who have completed SPN 101 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. Three credit hours. (With lab, four credit hours.)

SPN 132 Intermediate Spanish II  
Continuation of SPN 131. Three credit hours. (With lab, four credit hours.)

SPN 201 Composition and Conversation in Spanish I  
Advanced study of the Spanish language. Frequent practice of composition, conversation and oral reports. Prerequisite: SPN 132 or equivalent. (Not offered in 1975-76) Three credit hours

SPN 202 Composition and Conversation in Spanish II  
Continuation of SPN 201. (Not offered in 1975-76) Three credit hours

SPN 231 Readings in Spanish Literature I  
A survey of the important periods and trends in Spanish literature with reading of representative works. Prerequisite: SPN 132. Three credit hours

SPN 232 Readings in Spanish Literature II  
Continuation of SPN 231. Three credit hours
Geography-Anthropology

Associate Professors French, Hodges; Assistant Professor Tizon (Chairman); Instructor Perlman.

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) A 24-hour concentration of Geography courses as part of one of 3 alternative programs providing a 51 hour Social Science Area Major for Secondary Education students in the College of Education;
An 18-hour minor in Geography or Anthropology for all students in the School of Education, including Kindergarten-Primary, Elementary, and Secondary 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 required to take courses from the two disciplines of Geography and Anthropology. It will be possible for a student to concentrate his interest in Anthropology and take a few Geography courses, or the opposite. At least 33 hours in the major must be Geography-Anthropology courses. Six hours may be obtained from related disciplines after the student has consulted with the department and the relevance of the six hours has been demonstrated.

In the 33 hours of required courses, there must be at least 9 hours taken from the discipline in which the student is not concentrating; and there must be a concentration of at least 24 hours in one of the disciplines.

The options for students will be:

Option A
33 hours of Geography-Anthropology courses with 24 hours in Geography, 9 hours in Anthropology, and 6 hours of electives as specified in Option B.

Option B
24 hours in Anthropology, and 9 hours in Geography, and 6 hours of electives from either Geography or Anthropology or another discipline relevant to the student’s major to be agreed upon in consultation with the faculty of the department of Geography-Anthropology.

GEOGRAPHY-ANTHROPOLOGY MAJOR

College of Arts and Sciences

Required

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ANY 101</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>ANY 102</td>
<td>Physical Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 105</td>
<td>Principles of Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 105</td>
<td>The Local Environment</td>
<td>3</td>
</tr>
<tr>
<td>ANY 103</td>
<td>Origins of Man</td>
<td>3</td>
</tr>
</tbody>
</table>

Required

16 hours of intermediate-level courses with at least 3 hours from each of the categories of Regional, Methods, Concepts and Comparisons from:

Regional:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ANY 201</td>
<td>South American Culture History</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 201</td>
<td>World Cultural Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 310</td>
<td>Geography of Asia</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 311</td>
<td>Geography of North America</td>
<td>3</td>
</tr>
<tr>
<td>ANY 310</td>
<td>Latin American Cultural Ecology</td>
<td>3</td>
</tr>
<tr>
<td>ANY 351</td>
<td>Man in the Northeast</td>
<td>4</td>
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</tbody>
</table>
Methods:

- GEOG 104 Cartography
- ANY 412 Methods of Anthropological Investigation
- GEOG 221 Spatial Organization
- GEOG 301 Geomorphology
- GEOG 105 The Local Environment
- GYAY 100 Museum Aide
- ANY 351 Man in the Northeast

Concepts and Comparisons:

- ANY 314 Magic, Religion, and Witchcraft
- ANY 301 Culture Contact and Culture Change
- ANY 300 Independent Study in Anthropology
- GEOG 300 Independent Study in Geography
- GEOG 304 Political Geography
- GEOG 303 Economic Geography
- GEOG 302 Urban Geography
- ANY 203 North American Archaeology
- ANY 204 North American Indians

Required

6 hours of advanced-level courses from:

- ANY 402 The History of Anthropology
- ANY 300 Independent Study in Anthropology
- GEOG 300 Independent Study in Geography

Honors—Directed Research in Geography or Anthropology

or integrated

6 hours of electives from Geography or Anthropology courses, or from another discipline relevant to the student’s major to be agreed upon in consultation with the faculty of the department of Geography-Anthropology.

TOTAL

39 hours

SOCIAL SCIENCES AREA MAJOR—College of Education

With a 24-hour Concentration in Geography

Required

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>HIST 101-102</td>
<td>6</td>
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<tr>
<td>HIST 131-132</td>
<td>6</td>
</tr>
<tr>
<td>HIST 133-134</td>
<td>6</td>
</tr>
<tr>
<td>SOC 101</td>
<td>3</td>
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<td>POL 101</td>
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<td>ANY 101</td>
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<td>ANY 103</td>
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<tr>
<td>ECON 101</td>
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<tr>
<td>ECON 102</td>
<td>3</td>
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<tr>
<td>ECON 201</td>
<td>6</td>
</tr>
</tbody>
</table>

SUBTOTAL OF NON-GEOGRAPHY COURSES 27

A total of 24 hours to be selected from the following Geography courses:

- GEOG 101 Principles of Geography
- GEOG 104 Cartography
- GEOG 105 The Local Environment
- GEOG 201 World Cultural Geography
- GEOG 221 Spatial Organization
- GEOG 302 Urban Geography
GEOG 303 Economic Geography 3
GEOG 304 Political Geography 3
GEOG 310 Geography of Asia 3
GEOG 311 Geography of North America 3

SUBTOTAL OF GEOGRAPHY COURSES 24

TOTAL REQUIREMENTS IN THE SOCIAL SCIENCES 51 hours

GEOGRAPHY MINOR
For Kindergarten-Primary, Elementary or Secondary Education Students

Required  Credit Hours
GEOG 101 Principles of Geography 3
At least one course in regional geography from:
GEOG 201 World Cultural Geography 3
GEOG 310 Geography of Asia
GEOG 311 Geography of North America
12 hours of electives from the remaining geography courses 12

TOTAL REQUIREMENTS FOR A MINOR IN GEOGRAPHY 18

OTHER OPTIONS
Students in the College of Education may also select the following options which are described below:

1. A 51-hour Social Science Area Major for Secondary Education Majors, with a 24-hour concentration in History courses.
2. A 51-hour Social Science Area Major for Secondary Education Majors, with a 27-hour concentration in Economics courses.
3. A 30-hour Social Science Area Major for Kindergarten-Primary or Elementary Education Majors.
4. An 18-hour Social Science Area Minor for Kindergarten-Primary Majors.

SOCIAL SCIENCES AREA MAJOR—College of Education
With a 24-hour Concentration in History

Required  Credit Hours
HIST 101-102 Western Civilization I and II 6
HIST 131-132 U. S. History to 1877; U. S. History Since 1877 or 6
HIST 133-134 American History I and II
Any additional 12 hours in HIST courses 12
SOC 101 Introduction to Sociology 3
POL 101 Introduction to American Government 3
ECON 101 Principles of Economics I and either 3
ECON 102 Principles of Economics II or 3
ECON 201 Current Economic Problems 6
Total of 6 hours from any combination of the following:
GEOG 101 Principles of Geography
GEOG 201 World Cultural Geography
ANY 101 Cultural Anthropology
ANY 103 Origins of Man 6

SUBTOTAL OF SPECIFICALLY REQUIRED COURSES 42
ELECTIVES
A minimum of 9 credit-hours in any HIST, SOC, POL, ANY, ECON, GEOG courses
TOTAL REQUIREMENTS IN THE SOCIAL SCIENCES 9

SOCIAL SCIENCES AREA MAJOR
With a 27-hour Concentration in Economics

Required
HIST 101 & 102 Western Civilization 6
HIST 131 & 132 U. S. History to 1877; U. S. History Since 1877
or
HIST 133 & 134 American History I and II 6
GEOG 101 Principles of Geography 3
SOC 101 Introduction to Sociology 3
POL 101 Introduction to American Government 3
ANY 101 Cultural Anthropology 3
ECON 101 & 102 Principles of Economics 6
or
ECON 150 & 201 Elementary Economics and Current Economic Problems 6
ECON 350 Comparative Economic Systems 3
EC ED 300 Economic Concepts and Resource Materials for Educators 3
 Additional Electives from Economics 15

TOTAL REQUIREMENTS IN THE SOCIAL SCIENCES 51

(Practice teaching should be arranged to provide practice in the teaching of economics classes, if possible.)

SOCIAL SCIENCES MAJOR
For Kindergarten-Primary or Elementary Education Students
A minimum of 30 credit-hours of HIST, SOC, POL, ANY, ECON, GEOG courses.

SOCIAL SCIENCES MINOR
For Kindergarten Primary Education Students
A minimum of 18 credit-hours of HIST, SOC, POL, ANY, ECON, GEOG courses.

COURSE DESCRIPTIONS
Anthropology

ANY 101 Cultural Anthropology
Tizon
The nature of culture. A survey of such human institutions as social organization, kinship, political and economic systems, religion and values with cross-cultural examples; a brief history of anthropology and the growth of cultural relativism; modern approaches to the study of culture. Three credit hours

ANY 102 Physical Anthropology
Perlman
Physical Anthropology; a look at the theories of human evolution, fossil man, the mechanisms of inheritance and natural selection; a discussion and evaluation of the concept of race; primate behavior and what it tells us about our ancestors, the relationship between biology and culture in man's evolution. Three credit hours
ANY 103 Origins of Man
Perlman

This course considers the uniqueness of the human species through an examination of its biological and cultural beginnings. The processes of human evolution and variation are approached from the perspective of physical anthropology, and human culture is explored through the archaeological record from the earliest evidence to the rise of urban civilization.

Three credit hours

ANY 201 South American Culture History
Tizon

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. (Offered every other fall)

Three credit hours

ANY 203 North American Archaeology
Perlman

An examination of the stages 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 103 or permission.

Three credit hours

ANY 204 North American Indians
Perlman

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.

Three credit hours

ANY 300 Independent Study in Anthropology
Staff

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.

Three credit hours

ANY 301 Culture Contact and Culture Change
Tizon

This course reviews the factors involved in different types of culture change (e.g., acculturation, autonomous “evolution”), typologies of culture-contact situation, the part played by “cultural brokers,” and the effects of different kinds of contact. The arguments for and against applied anthropology with respect to culture change will be explored, as well as the analysis and definitions of exploitation, as complex technologically advanced societies come into contact with small, homogeneous “primitive” cultures. Both forces favoring and those working against assimilation will be considered. Prerequisite: ANY 101.

Three credit hours

ANY 310 Latin American Cultural Ecology
Tizon

An examination of the relationship between culture and environment in Latin America; presentation of current controversy in cultural-ecological theory as it relates to Latin America, with particular emphasis on the tropical forest zone; comparison of land-use patterns, as well as perceptions of space and land; environment viewed as involving other cultures as well as physical surroundings. Prerequisite: ANY 101 or 102 or permission.

Three credit hours

ANY 314 Magic, Religion, and Witchcraft
Tizon

Belief in the supernatural as a cultural universal; definition and function of religion cross-culturally; comparison of “primitive” beliefs with those of Judaeo-Christian tradition; discussion of the origin and evolution of religious systems; parapsychological studies and problems. Prerequisite: ANY 101 or 102 or permission.

Three credit hours
ANY 351 Man in the Northeast Perlman
A detailed study of the sequence of aboriginal cultures in the American Northeast with special reference to central New England. It correlates directly with archeological research being conducted by the department of Geography-Anthropology and emphasizes the classification and interpretation of archeological data. Lab required. Prerequisites: ANY 101 or 102 or permission of instructor.
Four credit hours

ANY 402 The History of Anthropology Tizon
This course traces the development of the field of anthropology from its early roots in philosophy, through its popularism with the discovery of the New World, to present-day schools of thought. The course deals with such questions as whether or not anthropology can be considered a science, if it is a legitimate pursuit or merely a piecing together of other social sciences, and what are the ultimate goals of the discipline. The course is primarily designed for students who are contemplating graduate work in anthropology, and will focus on the critical analysis of anthropological approaches and the definition of the student's own goals in anthropology. Prerequisites: ANY 101 plus 3 hours ANY over 100 level.
Three credit hours

ANY 412 Methods of Anthropological Investigation Tizon
This course covers the range of methods used by anthropologists in their studies. The focus is on ethnology and field work although archaeological techniques are reviewed. Attention will be paid to the role of the ethnologist during fieldwork, a much-neglected factor in the analysis of data. Students will be expected to become proficient in one or more investigative techniques during the course and sensitive to the kinds of problems which might arise in field situations. This course is recommended for those who plan to continue studies in cultural and physical anthropology, or archaeology. Prerequisite: ANY 101, 102 plus 3 hours ANY over 100 level.
Three credit hours

Geography

GEOG 101 Principles of Geography French, Hodges
Surveys the field of geography and presents an introduction to the several approaches to the discipline. Geographic theory, methods of investigation, and concepts are examined. Physical and cultural factors are interrelated to present the man and environment relationship from the point of view of the geographer. The course is a prerequisite for all advanced courses in geography. (Offered every semester)
Three credit hours

GEOG 104 Cartography Fletcher
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, cartographic tools, and air photograph interpretation will be included.
Three credit hours

GEOG 105 The Local Environment French
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. (Offered only in summer sessions)
Three credit hours

GEOG 201 World Cultural Geography French
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 occupancy. Environmental quality, perception of environment, the dynamics of process, and new methods in the teaching of geography are among the areas receiving special emphasis. Prerequisite: GEOG 101. (Offered every semester)
Three credit hours
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. Three credit hours

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 301 Geomorphology (cross-listed with GEOL 301)
Description and interpretation of landform development in terms of geologic structure, process, and stage. Field trips. Laboratory. Prerequisite: GEOL 201 or permission. (Offered every spring of even years.) Three credit hours

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. (Offered every fall) Three credit hours

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. (Offered every spring) Three credit hours

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. (Offered every spring) Three credit hours

GEOG 310 Geography of Asia
The course examines the regions of South Asia, Southeast 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. (Offered every fall) Three credit hours

GEOG 311 Geography of North America
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. Three credit hours

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 compliment the goals of the Museum of Man. A minimum of 30 hours of service each semester is required for credit. ½ credit hour
History

Professors Cole, Emerson, Hunt, Schleh (Chairman), York, Young; Associate Professors Albee, Bibber, Connick, Dietrich, Eastman, Feig, Ventresco, Whitmore; Assistant Professors Ganzevoort, Padula.

The courses offered by the history department are intended to provide broad acquaintance with the past experience of human society. The history curriculum offers the student an opportunity to participate in and investigate the procedures and methods of historical study through lectures, discussion, research, and the writing of history; or, combined with the necessary academic credits in education, the program will provide certification for teaching at the secondary level.

It is hoped that students from many departments, schools, and colleges will take history courses in which they are interested. For students wishing to major in history, as part of the B.A. program or as part of a Secondary Education program, the following minimum program has been structured. Students will probably take more elective courses than the minimum, and should distribute them among the three areas (American, European, and non-Western).

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 to outstanding history majors. Any student interested in applying to this program may contact the History Department Chairman for details.

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.

MINOR IN HISTORY FOR STUDENTS IN SECONDARY EDUCATION

A student in Secondary Education may elect to minor in History. A minimum of 18 credit-hours, including HIST 101-102 and HIST 131-132 or HIST 133-134 and elective history courses, is needed for this minor. Details of this program may be obtained from the student's faculty advisor.

ACADEMIC MAJORS AND MINORS IN KINDERGARTEN-PRIMARY AND ELEMENTARY EDUCATION

Students in Kindergarten-Primary or Elementary Education in the College of Education may complete 30 hours of History in an approved program for an academic major or 18 approved hours for an academic minor. HIST 101-102 and HIST 131-132 or HIST 133-134 are required courses in either the Academic Major or Academic Minor Program.

ARTS AND SCIENCES OR SECONDARY EDUCATION REQUIREMENTS FOR HISTORY MAJORS

<table>
<thead>
<tr>
<th>Credit hours</th>
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<tbody>
<tr>
<td>HIST 101 and 102 Western Civilization I and II (3 credits each semester) to be taken as a two-semester sequence</td>
</tr>
</tbody>
</table>
Choice of one of the two-semester sequences in U.S. History listed below, each offering 3 credits each semester

HIST 131 and 132  U.S. History to 1877 and U.S. History Since 1877
or
HIST 133 and 134  American History I and American History II

HIST 131-132 and HIST 133-134 are both introductory courses, though class procedures differ. Credit will be given for one or the other, not both (i.e., not for both HIST 131 and HIST 133 or for both HIST 132 and HIST 134.)

Choice of two courses from the introductory sequences in non-western history listed below:

HIST 161 and 162 Introduction to African History to Partition and Introduction to African History since Partition
or
HIST 171 and 172 Traditional East Asia and Modern East Asia
or
HIST 181 and 182 Latin America I and II

HIST 200 Methodology in History

Other History Courses

Minimum Total to Meet Major Requirements

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.

It is strongly recommended that history majors, especially those expecting to do graduate study, acquire proficiency in a foreign language.

COURSE DESCRIPTIONS

HIST 101  Western Civilization I

An introduction to the intellectual and political heritage of Western man from prehistoric times to the late 17th century. Divergent concepts of the theories and writing of history as a systematic explanation of past events form an integral part of the course.

Three credit hours

HIST 102  Western Civilization II

A survey of the experiences, ideas, and major creative works of Western man from the 17th century to recent times. The course interweaves political, intellectual, social, and economic developments. It considers international relations, the changing power balance among leading states, and contacts with non-Western civilizations.

Three credit hours

*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.

Three credit hours

*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.

Three credit hours

*HIST 133  American History I

A team-taught 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.

Three credit hours
*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.
Three credit hours

HIST 161 Introduction to African History to Partition
Survey of African history from early migrations to the beginning of the Colonial era. Approach is both regional, stressing selected countries representative of their regions, and topical, cutting across political boundaries (e.g. states of the Sudan, city states of East Africa), role of Islam, conduct and impact of the slave trade, exploration, and partition.
Three credit hours

HIST 162 Introduction to African History Since Partition
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.
Three credit hours

HIST 171 Traditional East Asia
The history and culture of China and Japan from earliest times to about 1700, with emphasis on the composition of the "traditional" societies.
Three credit hours

HIST 172 Modern East Asia
China and Japan since about 1700, emphasizing contrasting moves toward modernization in two traditional societies.
Three credit hours

HIST 181 Latin America I
The Spanish and Portuguese colonial empires in America from their establishment to their achievement of independence in the early 19th century.
Three credit hours

HIST 182 Latin America II
A survey of modern Latin America beginning with the Latin American wars of independence in the early 19th century and extending to the present.
Three credit hours

HIST 195 History of Canada I
Canada's history from the earliest settlements in New France to 1867. Emphasis on the evolution of Canada within the British Empire-Commonwealth, relations with the United States, and on the background of contemporary constitutional, economic, and cultural problems. (Not offered in 1975-76.)
Three credit hours

HIST 196 History of Canada II
Canada's history since 1867. Continuation of HIST 195. (Not offered in 1975-76.)
Three credit hours

HIST 198 Revolution in the 20th Century: Russia, China, Cuba
A study of revolution in the 20th Century through a comparative analysis of the Russian, Chinese, and Cuban experiences. The course attempts to afford the student an understanding of conditions under the old regime, a familiarity with the revolutionary events themselves and a knowledge of the effects of revolution upon the three societies. No prerequisites. Offered once every two years.
Three credit hours

HIST 200 Methodology in History
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.)
Three credit hours

*HIST 131-132 and HIST 133-134 are both Introductory courses, though class procedures differ. Credit will be given for one or the other, (i.e., not for both HIST 131 and HIST 133 or for both HIST 132 and HIST 134.)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>HIST 231</td>
<td>Ancient History I</td>
<td>Staff</td>
<td>The political, social, and economic history of the civilizations of the ancient Mediterranean world, with Egypt, the Near East, and Greece being studied. (Not offered in 1975-76)</td>
<td></td>
<td>Three credit hours</td>
</tr>
<tr>
<td>HIST 232</td>
<td>Ancient History II</td>
<td>Staff</td>
<td>A continuation of HIST 231 concentrating upon an examination of ancient Rome. (Not offered in 1975-76)</td>
<td></td>
<td>Three credit hours</td>
</tr>
<tr>
<td>HIST 235</td>
<td>Medieval Civilization</td>
<td>Cole</td>
<td>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.</td>
<td></td>
<td>Three credit hours</td>
</tr>
<tr>
<td>HIST 241</td>
<td>Early Modern Europe</td>
<td>Ventresca</td>
<td>A political, social, and intellectual study of Europe from the era of Martin Luther to the age of Sir Isaac Newton. One of the major themes of this course is the development of the state, and the rise of the great powers within the broader context of international struggles. Prerequisite: six hours of history. (Not offered in 1975-76)</td>
<td></td>
<td>Three credit hours</td>
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<tr>
<td>HIST 242</td>
<td>French Revolution and Napoleon</td>
<td>Young</td>
<td>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, the influence of the American 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.</td>
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<td>Three credit hours</td>
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<tr>
<td>HIST 243</td>
<td>Europe in the Nineteenth Century</td>
<td>Ventresca</td>
<td>An intensive survey of the history of Europe's major powers and their international relations. Major topics also included are liberalism, nationalism, socialism, and imperialism. Intellectual and cultural developments are stressed. Prerequisite: HIST 102.</td>
<td></td>
<td>Three credit hours</td>
</tr>
<tr>
<td>HIST 244</td>
<td>20th Century Europe</td>
<td>Albee, Ventresca, Young</td>
<td>An intensive survey of European developments in the twentieth century national relations. Major topics also included are liberalism, nationalism, socialism, and imperialism. Intellectual and cultural developments are stressed. Prerequisite: HIST 102.</td>
<td></td>
<td>Three credit hours</td>
</tr>
<tr>
<td>HIST 256</td>
<td>European Diplomacy of Two World Wars</td>
<td>Albee</td>
<td>A study of the origins, diplomacy, and peace settlements of the First and Second World Wars. The questions of inevitability and responsibility, the nature of wartime diplomacy, and the problems of peacemaking are among the subjects to be considered. Prerequisite: HIST 102 or HIST 244, or permission.</td>
<td></td>
<td>Three credit hours</td>
</tr>
<tr>
<td>HIST 261</td>
<td>History of England</td>
<td>Cole, Ventresca</td>
<td>A survey of England from Anglo-Saxon times to the beginning of the twentieth century, with emphasis on the nature of English monarchy, the development of political institutions, and evolving constitutionalism. Particular attention is given to broad movements such as the Reformation, the Industrial Revolution, and Imperialism. Prerequisite: HIST 101 and 102.</td>
<td></td>
<td>Three credit hours</td>
</tr>
<tr>
<td>HIST 263</td>
<td>England in the 20th Century</td>
<td>Albee</td>
<td>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.</td>
<td></td>
<td>Three credit hours</td>
</tr>
</tbody>
</table>
HIST 265 Modern Italy I
Ventresca
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, Verdi, and Carducci. Prerequisites: HIST 101 and HIST 102. (Not offered in 1975-76.) Three credit hours

HIST 266 Modern Italy II
Ventresca
A continuation of Italian History from World War I to contemporary times. The political aspects will stress the rise of the Fascist State, the fall of Mussolini, and the post-war era. The literature of such figures as Pirandello, Svevo, Levi, and Moravia will be examined; as well as Italian historical writings. Prerequisites: HIST 101 and 102. (Not offered in 1975-76.) Three credit hours

HIST 272 Germany in the 20th Century
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. Includes a study of cultural and social factors which help explain Germany's role in the modern world. Prerequisite: HIST 102 or permission.

HIST 273 History, Literature, and Drama of Nazi Germany
Feig
A combined study of the literature, drama, films, history, and internal institutions relating to Hitler Germany for a comprehensive social/political/historical analysis of the Third Reich. Prerequisite: Sophomore standing except with permission.

HIST 274 The Holocaust
Feig
A case-study seminar of the process and conditions which led to the harassment, expulsion and extermination of the European Jews during World War II. Based in history, the course draws heavily upon literature, diaries, personal accounts, and deals extensively with the methodology and bibliography of various social science disciplines. Prerequisite: One course in European history. No freshmen.

HIST 275 History of Russia I
Young
Political, social, cultural, and economic history of the Russian people to 1801. Surveys geographic backgrounds, the influence of Byzantine civilization, the impact of invasions, and the development of Russia's unique social, cultural, and political institutions through the reign of Catherine the Great. Prerequisite: one survey or permission.

HIST 276 History of Russia II
Young
A continuation of Russian history from 1801 to today. The course deals with pressures for reform and weaknesses in imperial Russia, role of the intelligentsia, and revolutionary parties, the Bolshevik Revolution, and the history of Communist Russia since 1917. Prerequisite: one survey or permission. Three credit hours

HIST 301 American Colonial History
Ganzvoort
Half the semester is devoted to discovery, exploration, and colonization. New Spain, New France, New Netherland, and New Sweden are compared with the English settlements (13 colonies), each of which is considered in detail. Second half of semester emphasizes social and intellectual topics (e.g. - religion, law, medicine, painting, literature, and music). Prerequisite: HIST 131 and 132 or HIST 133 and 134.

HIST 302 The American Revolution
Ganzvoort
The Anglo-French conflict, the series of inter-colonial wars, and the “Old Imperial System” are considered as background to the American Revolution. Subsequently, the period 1763-1789 is treated in detail, including leading personalities, military campaigns, social aspects of the war, and the Constitution (origins, constitutional convention and ratification). Historiography of the period is emphasized. Prerequisites: HIST 131 and 132, or HIST 133 and 134.

Three credit hours
HIST 305  Hamilton and Jefferson  Staff
Special emphasis on Hamilton and Jefferson to include: biographical information, the Jefferson-Hamilton political dichotomy, and its subsequent influence. Following this, a general analysis of social, intellectual, political, economic, and diplomatic problems facing the “New Nation” between 1789-1815 is presented. Prerequisites: HIST 131 and 132, or HIST 133 and 134, or permission.

Three credit hours

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. Prerequisites: HIST 131 or 133 or permission.

Three credit hours

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 or 133.

Three credit hours

HIST 308  The Gilded Age in America, 1869-1898  Hunt
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 133 or permission. (Not offered in 1975-76)

Three credit hours

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 or 134.

Three credit hours

HIST 310  America Since 1938  Eastman, 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 134 or permission.

Three credit hours

HIST 321  History of Maine  York
A survey of Maine’s social, economic, and political life from primitive times to the present.

Three credit hours

HIST 323  History of the South  Whitmore
A survey of the social, political, economic, intellectual, cultural, and racial elements of the American South from the colonial period to the present. Prerequisite: HIST 131 and 132 or HIST 133 and 134.

Three credit hours

HIST 325  History of the American Frontier  Staff
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 HIST 133 and 134, or permission. (Not offered in 1975-76.)

Three credit hours
HIST 331 History of Black Americans

The experience of black people within American society from the colonial period to the present is treated through their interaction with the nation's 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. Prerequisite: HIST 131, or HIST 133 or permission.

Three credit hours

HIST 335 American Urban History

The American city is surveyed in regard to this history of its 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 or 133.

Three credit hours

HIST 337 American Economic and Business History, 1607-1860

Economic and business developments in the United States from the first settlements to the Civil War with coverage of the British mercantile system, the colonial economy, the Transportation Revolution, the Southern plantation system, and the beginnings of American industrialization; and with in-depth analysis of selected topics of special interest. Prerequisite: HIST 131, or HIST 133, or permission. (Not offered in 1975-76.)

Three credit hours

HIST 338 American Economic and Business History Since 1860

Economic and business developments in the United States from the Civil War to the present with coverage of 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; and with in-depth analysis of selected topics of special interest. Prerequisites: HIST 131 and 132, or HIST 133 and 134, or permission.

Three credit hours

HIST 339 American Labor in the Twentieth Century

A chronological examination of the efforts of American corporate society. Topics will include the emergence of the AFL, labor radicalism, labor and immigration, the nature and role of labor leadership, racketeering labor and the New Deal, and the rise of Big Labor. The focus will be on organized labor but attention will also be given to white-collar workers, blacks, migrants, and other fringe groups. Emphasis will be placed on labor theory. Prerequisite: HIST 132, or HIST 134, or permission.

Three credit hours

HIST 341 American Social and Intellectual History I

An analysis of the evolution of American religious, political, economic, social, and scientific thought from the colonial period to 1865 emphasizes major principles, assumptions, and values; the relation of American thought to class structure, ethnic and racial associations, mobility, and immigration; and its relation to contemporary intellectual patterns in the western world.

Three credit hours

HIST 342 American Social and Intellectual History II

A continuation of HIST 341 from 1865 to the present.

Three credit hours

HIST 343 Diplomatic History of the United States I

This course covers the development of key United States foreign policies from the Revolution to the Spanish-American War. Prerequisite: HIST 131 or HIST 133. (Not offered in 1975-76.)

Three credit hours

HIST 344 Diplomatic History of the United States II

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 or HIST 134.

Three credit hours
HIST 345 American Character
Emerson
A course focusing on a particular problem of historical analysis; the interpre-
tation of the national character as revealed in sources ranging from the earliest
accounts of foreign travellers to the most recent works of social psychologists.
Authors to be considered in discussions, reports, and papers include Toqueville,
Bryce, Adams, Turner, Siegfried, Mead, Potter, Riesman, and others. Prereq-
quisite: HIST 131, or HIST 133, or permission. Three credit hours

HIST 347 Viewpoints in American History
Biber
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. Three credit hours

HIST 348 A History of Religion in America
Whitmore
A study of religion in American society from the colonial era to the present
examines theological patterns, forms of religious organization, major figures and
movements in the criticism and/or advocacy of religion, and the religious con-
tribution to the American heritage. Prerequisites: HIST 131 and 132, or HIST
133 and 134, or permission. Three credit hours

HIST 351 Canada and the U.S.
Gonzevoot
This is a seminar course designed to examine past and present relationships
between the two most important powers on the American continent. It will
examine various aspects of this relationship from a social, political, and economic
viewpoint. Prerequisites: Six hours of either Canadian History survey,
American History or a combination of the two. Three credit hours

HIST 361 The United States and Africa
Schleh
A history of United States' interests in and relations with Africa from the
early seventeenth century to the present. Areas covered include commerce,
social and humanitarian contacts, America's role in the exploration of Africa, and
diplomacy. Prerequisite: 9 hours of history or permission. Three credit hours

HIST 362 Contemporary Africa
Schleh
Seminar to examine major interdisciplinary elements in today's Africa in-
cluding: literature and the arts, social change, development and adaption in
African politics, economic development, race relations, and international politics.
Three credit hours

HIST 371 The United States and Asia
Bibber
A history of the United States' interests in the Far East from 1789 to the 1960's,
considering economic and social contacts as well as diplomatic. Prerequisites:
HIST 131 and 132 or HIST 133 and 134. HIST 172 strongly recommended.
Three credit hours

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 con-
tributed 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.
Three credit hours

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, im-
perialism, revolution, warlordism, Japanese aggression, civil war, and the pres-
ent communist regime. Prerequisite: HIST 172 recommended.
Three credit hours
HIST 376 History of Modern Japan

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 non-western nations. The problems which this development has created will also be considered. Prerequisite: HIST 172 recommended. Three credit hours

HIST 377 Chinese Intellectual History

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. Three credit hours

HIST 381 Latin America and the United States

A survey of United States' participation in Latin American affairs from the recognition of independence and the enunciation of the Monroe Doctrine to the Good Neighbor policy and the present day. Prerequisite: HIST 182 recommended. Three credit hours

HIST 382 Social Revolution in Latin America

A comparative history of social revolution in Latin America with emphasis on the Mexican, Argentine, Cuban, and Chilean revolutions. Substantial student participation will be expected; substantial reading for each weekly session will be required. Three credit hours

HIST 383 A Cultural History of Latin America

This course attempts to divine the principal characteristics of the Latin American character and society through a reading of classic works of fiction, poetry and autobiography by leading Latin American authors. Three credit hours

HIST 386 Modern War and Its Images

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 with particular personal experiences, academic interest or both. Three credit hours

HIST 392 Problems in Contemporary History

An analysis in depth 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. Three credit hours

HIST 394 Selected Topics in History

An analysis in depth 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. Three credit hours

HIST 410 The European Revolutionary Tradition Since 1789

A seminar analyzing modern European revolutions, revolutionary theory, revolutionary leadership, and the dynamics of revolution, including the role of the revolutionary crowd. Open to seniors and others by permission. Prerequisite: At least six hours of European history or equivalent in unusual cases. Three credit hours
HIST 415 Recent Literature in European History
Staff
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. Three credit hours

HIST 445 Recent Literature in United States History
Staff
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. Three credit hours

HIST 495 Historiography
Staff
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. (Not offered in 1975-76.) Three credit hours

HIST 498 Independent Study in History
Staff
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. One to three credit hours
Professors Estes, Fish (Chairman), Guay, P. Rogers; Associate Professors Brown, Kratzer, MacDonald, Mainville, Moulton; Assistant Professors Chabot, Foster, Irish, Soyachak.

The Department of Mathematics and Computer Science offers a four-year program leading to a baccalaureate degree in mathematics, and provides courses to meet the requirements of a number of undergraduate and graduate programs. Students may follow a traditional mathematics program as outlined in Option 1 below, or they may choose to concentrate in applied mathematics or computer science as described in Options 2 and 3.
The Department offers programs of Cooperative Education in both Mathematics and Computer Science. Students interested in Cooperative Education/Field Experience may obtain a brochure which gives further details on the program from the Mathematics and Computer Science Department offices.

Mathematics majors intending to pursue graduate work should choose Option 1 and are urged to take Real Analysis I and II, Abstract Algebra, Topology, and one year of French, German, or Russian. Those interested in teaching at the secondary level should also follow Option 1 and are encouraged to 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 second digit 5 or greater with a grade-point average of at least 2.0 in these courses and have successfully completed MsEd 345.

Those majors intending to enter industry or other applied fields should consider the applied mathematics or computer-science option. Majors who plan to prepare for the actuarial profession should be certain to include in their programs Linear Algebra, Probability and Statistics I and II, Numerical Analysis, and the appropriate courses in the School of Business.

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.

I. REQUIREMENTS FOR ALL MATHEMATICS MAJORS

A. MS 152, Calculus A, MS 153 Calculus B, MS 252 Calculus C, MS 290 Foundations, and CS 160 Computer Programming I. These courses should normally be completed by the end of the sophomore year.

B. 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.

C. Each student must also complete one of the three options below.

1. Option for Mathematics Majors Intending to Teach or Pursue Graduate Work.
   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
      (3) Applied Mathematics: MS 350 Differential Equations
          MS 362 Probability & Statistics I
          MS 361 Numerical Analysis
      (4) Geometry: MS 370 College Geometry
          MS 372 Non-Euclidean Geometry
          MS 371 Projective Geometry
      Any exceptions to the above requirements must be approved by the Department.
   b) Successful completion of at least nine additional hours of MS courses with second digit 5 or greater, not to include courses with numbers ending in 99 without written permission of the Department.

2. Option for Mathematics Majors Who Intend to Specialize in the Area of Applied Mathematics.
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 361 Numerical Analysis.

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.

3. Option for Mathematics Majors Who Intend to Specialize in the Area of Computer Science.

a) Successful completion of five of the following ten courses: MS 350 Differential Equations, MS 354 Topics in Advanced Calculus, MS 355 Complex Analysis, MS 361 Numerical Analysis, MS 362 Probability & Statistics I, MS 363 Probability & Statistics II, MS 366 Linear Programming, MS 380 Linear Algebra, MS 450 Partial Differential Equations, MS 460 Mathematical Modeling.

b) Successful completion of five of the following courses: CS 169 Computer Organization and Programming, CS 260 Computer Programming II, CS 269 Machine and Assembler Language, MS 361 Numerical Analysis, if not taken in (a) above, CS 368 Data Structures, CS 369 Systems Programming, CS 497 Independent Study in Computer Science (at least three credits).

II. REQUIREMENTS FOR MATHEMATICS MINOR AND EDUCATION MAJORS

A. A minor in mathematics may be obtained by successfully completing 18 hours of mathematics courses in which the second digit is 5 or greater.

B. Kindergarten-Primary 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.

C. Kindergarten-Primary 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.

III. RECOMMENDED COURSES FOR NON-MAJORS

Students who desire an introductory course to satisfy the Area 3 general education requirement should consider MS 104 and MS 105. 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. Topics will include: history of data processing, terminology, study of the tools and methods, the application of computers and their economic and social implications, and an introduction to a programming language. Three credit hours
CS 160 Computer Programming I
A study of programming techniques and applications using the Fortran language.  
Three credit hours

CS 260 Computer Programming II
A continuation of CS 160. A further study of programming languages and techniques to include Cobol and PL/1. Prerequisite: CS 160. Three credit hours

CS 169 Computer Organization and Programming
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  
Three credit hours

CS 269 Machine and Assembler Language
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 169.  
Three credit hours

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 260.  
Three credit hours

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.  
Three credit hours

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. Prerequisite: Junior or Senior standing and permission of the department chairman and instructor.  
One to three credit hours

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.  
One to five credit hours per semester

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.  
Three credit hours

MS 11 Intermediate Algebra
A continuation of MS 10. Prerequisite: MS 10 or one year of high school algebra.  
Three credit hours
**MS 100 College Algebra**

Soychok

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. Prerequisites: 2 years high school algebra.

Three credit hours

**MS 101 Trigonometry**

Soychok

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: 2 years of high school algebra.

Three credit hours

**MS 102 Basic Technical Mathematics I**

Soychok

This course includes the traditional topics of college freshman mathematics: slide rule, functions, graphs, equations, systems of linear equations, determinants, trigonometry. Prerequisites: one year of high-school algebra and geometry, or permission of instructor.

Three credit hours

**MS 103 Basic Technical Mathematics II**

Soychok

A continuation of MS 102 including more trigonometry, vectors, complex numbers, logarithms, analytic geometry, derivatives with applications, and integrals with applications. Prerequisite: MS 102 or permission of instructor.

Three credit hours

**MS 104 Topics in Mathematics I**

Staff

The first course of a two-course sequence designed for students not majoring in mathematics. The emphasis will be on applications of mathematics as well as the basic concepts encountered in mathematics. The topics presented may be inter-disciplinary in nature.

Three credit hours

**MS 105 Topics in Mathematics II**

Staff

This course has the same format as MS 104 and should be a continuation of it. However, since the topics need not be related, MS 105 may be taken independently of MS 104. Prerequisite: Permission of the instructor if topics are a continuation. Consult the Mathematics Department for topics offered each semester.

Three credit hours

**MS 109 Linear Systems**

Staff

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.

Three credit hours

**MS 110 Elementary Mathematical Analysis**

Staff

A unified treatment of the elementary functions of analysis: their analytical properties including derivatives, integrals, and series; introduction to multivariate calculus; applications. Prerequisite: three years of high-school college-preparatory mathematics.

Three credit hours

**MS 120 Introduction to Statistics**

Fish

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.

Three credit hours

**MS 131 Mathematics for Elementary Teachers I**

Staff

This is the first course in a basic two-course sequence of special interest to prospective primary and elementary teachers. The course places major emphasis on an intuitive approach to the structure of the real number system. Topics covered: sets and logic, system of whole numbers, integers, rationals, numeration systems, elementary number theory. Restricted to students majoring in elementary or primary education. Prerequisites: one year of high-school algebra and geometry.

Three credit hours
MS 132 Mathematics for Elementary Teachers II
Staff
Continuation of MS 131. Topics covered: decimals and real numbers, mathematical systems of modern mathematics, probability, elementary statistics, informal geometry, algebra concepts. Prerequisite: MS 131 or permission of instructor.
Three credit hours

MS 140 Pre-Calculus Mathematics
Staff
A brief review of elementary algebra followed by a study of the algebraic, exponential, logarithmic, and trigonometric functions. Prerequisite: Two years of high-school algebra.
Three credit hours

MS 152 Calculus A
Staff
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. Prerequisite: Two years of high school algebra plus geometry and trigonometry, or MS 140.
Four credit hours

MS 153 Calculus B
Staff
A continuation of Calculus A. Calculus B will usually include infinite series and an introduction to vectors. Prerequisite: MS 152.
Four credit hours

MS 211 Probability
Staff
Discrete and continuous sample spaces; common probability laws; expected values; sampling distributions. Prerequisites: MS 110 or MS 152.
Three credit hours

MS 212 Statistics
Staff
Sampling distributions; estimation; hypothesis testing; introduction to regression analysis and analysis of variance. Applications primarily in business and economics. Prerequisite: MS 211.
Three credit hours

MS 231 Algebra for Elementary Teachers
Fish
A course as recommended by the Committee on the Undergraduate Program, Mathematical Association of America, to follow the two-course sequence on number systems; emphasis on generalization and abstraction, algebraic properties, linear equations and inequalities in two variables, quadratics, systems of equations and inequalities, modular arithmetic, group, field, complex numbers, functions. Prerequisite: MS 131 or permission of instructor.
Three credit hours

MS 232 Geometry for Elementary Teachers
Staff
To provide the prospective elementary teacher with the common core of geometric knowledge; congruence, measurement, parallelism, and similarity; presented at first intuitively, then as part of a deductive system; applications. Follows recommendations of CUPM, Mathematical Association of America. Prerequisite: MS 131 or permission of instructor.
Three credit hours

MS 233 Probability for Elementary Teachers
Kratzer
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 232.
Three credit hours

MS 235 History of Mathematics for Elementary Teachers
Estes
A history of certain topics in number theory, geometry, and elementary algebra. Prerequisite: MS 132 or permission of instructor.
Three credit hours

MS 252 Calculus C
Staff
Multivariate calculus and vector calculus. Prerequisite: MS 153.
Four credit hours
MS 264 Statistical Methods for Research
An applied methods course. Selected topics from analysis of variance and
covariance, regression, correlation, non-parametric methods, factor analysis. The
computer system is utilized, but programming is not necessary. Prerequisite:
MS 120.
Three credit hours

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.
Three credit hours

MS 291 The Real Numbers
An axiomatic construction of the real number system. Prerequisite: MS 290
or permission of instructor.
Three credit hours

MS 292 Theory of Numbers
Basic course in number theory, including such topics as divisibility properties
of integers, prime numbers, congruences, multiplicative number theoretic func-
tions, and continued fractions. Prerequisite: two years of high-school algebra.
Three credit hours

MS 350 Differential Equations
A study of various methods for solving ordinary differential equations and
initial value problems including transform, numerical, and series methods. Pre-
requisite: MS 252.
Three credit hours

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.
Prerequisite: MS 252, and MS 290.
Three credit hours

MS 353 Real Analysis II
A continuation of Real Analysis I. Prerequisite: MS 352.
Three credit hours

MS 354 Topics in Advanced Calculus
Selected topics on multivariate functions, vectors, transformations, line inte-
grals, and surface integrals. Prerequisite: MS 252 and MS 290.
Three credit hours

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
formula, Taylor and Laurent series, singularities and residues, conformal map-
pings. Prerequisite: MS 252 or permission of instructor.
Three credit hours

MS 361 Numerical Analysis
A study of the theory and application of computational algorithms for inter-
polation, equation solving, matrix methods, integration; error analysis. Prereq-
usite: MS 252, CS 160, and permission of the instructor.
Three credit hours

MS 362 Probability and Statistics I
Probability laws, random variables and distributions, correlation, regression,
estimation and hypothesis testing. Prerequisite: MS 252.
Three credit hours

MS 363 Probability and Statistics II
Continuation of MS 362. Sampling, hypothesis testing; non-parametric meth-
ods, analysis of variance, decision theory, topics in random processes. Prereq-
usite: MS 362.
Three credit hours

MS 366 Linear Programming
A study of matrix algebra applied to the problem of optimizing a linear func-
tion subject to linear inequity constraints, utilizing the simplex procedure. Pre-
requisite: MS 290.
Three credit hours
**MS 370 College Geometry**  
Selected topics from Euclidean geometry. Prerequisite: MS 290. 
Mainville  
Three credit hours

**MS 371 Projective Geometry**  
Synthetic and analytic projective geometry, including finite projective planes. Prerequisite: MS 290. 
Staff  
Three credit hours

**MS 372 Non-Euclidean Geometry**  
A development of one or more of the non-Euclidean geometrics. Prerequisite: MS 290. 
Moulton

**MS 380 Linear Algebra**  
An introduction to the theory of vector spaces and linear transformations. Prerequisite: MS 290. 
Staff  
Three credit hours

**MS 382 Abstract Algebra**  
Algebraic structures, such as groups, rings, integral domains, and fields. Prerequisite: MS 290. 
Brown  
Three credit hours

**MS 390 History of Mathematics**  
The development of mathematics from ancient to modern times. Prerequisites: MS 152 and MS 290. 
Estes  
Three credit hours

**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. Prerequisite: Junior Elementary Education Major and permission of the instructor. 
Kratzer  
Three credit hours

**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. Prerequisite: Junior Elementary Education Major and permission of the instructor. 
Kratzer  
Three credit hours

**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. 
Staff  
Three credit hours

**MS 460 Mathematical Modeling**  
An introduction to the process of formulating problems in mathematical terms, solving the resulting mathematical model and interpreting and evaluating the solutions. Examples will be chosen primarily from the behavioral and biological sciences. Prerequisites: Multivariate calculus and some knowledge of basic probability and matrix algebra. 
Rogers  
Three credit hours

**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 MS 290. 
MacDonald  
Three credit hours

**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: MS 290. 
Guay
MS 495 Mathematical Problem Solving Techniques
Estes
Study of a variety of techniques used in the solution of verbal problems from algebra and calculus, geometric problems, non-verbal problems, and the use of analogies. Special emphasis will be given to Polya's Method. Prerequisite: Calculus or the permission of the instructor. Three credit hours

MS 497 Independent Study in Mathematics
Staff
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. Prerequisite: junior or senior standing, permission of the instructor and permission of the department chairman. One to three credit hours

MS 498 Topics
Staff
Selected topics in advanced mathematics. Prerequisite: permission of instructor. Three credit hours

MSCE 200-201, 300-301, 400-401 Cooperative Education in Mathematics
Staff
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. One to five credit hours per semester

MATHEMATICS EDUCATION

MSED 345 Teaching Mathematics in the Secondary School
Moulton
Critical study of programs and techniques for teaching and learning mathematics in grades 7-12 for the slow, average and advanced pupil. Prerequisite: junior or senior standing. Three credit hours
**Music**

Professors Bowder, H. Brown (Chairman), Chamberland; Associate Professors R. Cole, Heel, Duopolo; Part-Time Instructors Aldrich, Barker, Bennett, Garland, Gold, Tainter, Torrey, Trefry.

**APPLIED MUSIC INSTRUCTORS**

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Names</th>
</tr>
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<tbody>
<tr>
<td>Piano</td>
<td>Donna Aldrich, Majorie Arnold, Nina Bailey, Naydene Bowder, Thomas Bucci, Ronald Cole, Ocy Downs, Robert Glover, Elizabeth Volstad, Robert Roberts</td>
</tr>
<tr>
<td>Voice</td>
<td>Harold Brown, Gerard Chamberland, Jeannette Chamberland, Stewart Shuster, Johanna von Tiling</td>
</tr>
<tr>
<td>Organ</td>
<td>Malcolm Cass, John Fay, Douglas Rafter, George Whitney</td>
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<tr>
<td>Violin</td>
<td>Rebecca Garland, Stephen Kecskemethy, Ronald Lantz</td>
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<tr>
<td>Viola</td>
<td>Julia Mosely</td>
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<tr>
<td>Cello</td>
<td>Katherine Graffam, Paul Ross</td>
</tr>
<tr>
<td>Bass</td>
<td>Katherine Graffam</td>
</tr>
<tr>
<td>Flute</td>
<td>Harold Brown, Frances Drinker</td>
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<tr>
<td>Oboe</td>
<td>Roberta Barker, Clinton Graffam</td>
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<tr>
<td>Clarinet</td>
<td>Burchard Tainter, Dean Rhodes</td>
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<tr>
<td>Saxophone</td>
<td>Burchard Tainter, Robert Rabassa</td>
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<tr>
<td>Bassoon</td>
<td>Donald Curry</td>
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<tr>
<td>Trumpet</td>
<td>Calvin Torrey</td>
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<tr>
<td>French Horn</td>
<td>James Bennett, Robert Miller, Katherine Schmidt</td>
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<tr>
<td>Trombone</td>
<td>James Bennett, Donald Doane</td>
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<tr>
<td>Tuba</td>
<td>James Bennett</td>
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<tr>
<td>Percussion</td>
<td>George Bookataub, Donna Trefry</td>
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<tr>
<td>Harp</td>
<td>Deidre Carr</td>
</tr>
<tr>
<td>Classical Guitar</td>
<td>Thomas Hoffman, Walter Spalding, Robert Sullivan</td>
</tr>
</tbody>
</table>

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). In addition, a minor in music is offered for students majoring in Elementary Education.

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. For most teachers the fee is $60.00 for one credit or $120.00 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:

A. The applicant's high school record, including recommendations, College Board and SAT scores.

B. 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.
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.

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) Modern Philosophies of Education.

In addition to the regular curriculum, all music education majors will meet the following requirements:

1. Participation in at least two recitals a year, and presentation of a solo recital in the senior year (or junior year with special permission).
2. Fulfillment of minimum requirements in both voice and piano, regardless of major instrument.
3. Participation in at least one instrumental and one vocal organization each semester. Non-instrumentalists will be in two vocal groups.
4. Successful completion of seven semesters of major applied lessons.
5. Successful completion of recital class in each semester when registered for major applied lessons.

Piano Proficiency Requirement

Each student must successfully complete the piano-proficiency requirement before the semester of 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 on or after Septem-
ber 1, 1974, 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:

Minimum requirements for Voice Minors:

A. Principles of
   1. Posture
   2. Breathing
   3. Tone production
   4. Articulation

B. Repertoire will include music of all periods, specifically:
   - 6 Italian songs
   - 6 German songs
   - 6 French songs
   - 12 English songs

At least half of the above selections will be memorized.

C. Voice proficiency will include a demonstration of principles of singing outlined above. Students will be prepared to perform from memory one selection from each language category.

If proficiency is not passed in two years, students will continue study at their own expense.

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)
- EDPY  Any EDPY course (3 credits)

In addition to the basic 18 credit-hours in professional education, Music Education majors will complete the following:

- MUED 220  Woodwind Class
- MUED 221  Brass Class
- MUED 222  Percussion Class
- MUED 320 and 321  String Class
- MUED 322 and 323  Music Education Methods
- MUED 420  Music Administration and Supervision

Student teaching is the culmination of a comprehensive pre-professional, 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.

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
- MUS 140, 141, 240, 241, 340, 341, 440, 441  Instrumental and Vocal Conducting Ensembles
MUSIC EDUCATION CURRICULUM

**Freshman Year**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MUS 120 and 121</td>
<td>History of Music I and II</td>
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<td>MUS 130 and 131</td>
<td>Theory I and II</td>
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<td>MUS 132 and 133</td>
<td>Solfeggio I and II</td>
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<td>MUS 140 and 141</td>
<td>Instrumental and Vocal Conducting Ensemble</td>
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<td>MUS 142 and 143</td>
<td>Recital Class</td>
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<td>MUS 150 and 151</td>
<td>Applied Music</td>
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**Sophomore Year**

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<td>MUS 220 and 221</td>
<td>History of Music III and IV</td>
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<td>MUS 230 and 231</td>
<td>Theory III and IV</td>
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<td>MUS 232 and 233</td>
<td>Solfeggio III and IV</td>
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<td>MUS 240 and 241</td>
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<td>MUS 250 and 251</td>
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<td>Brass Class</td>
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**Junior Year**

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<td>MUS 345</td>
<td>Vocal Conducting</td>
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<td>MUS 340 and 341</td>
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<td>MUS 342 and 343</td>
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**Senior Year**

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<td>MUS 420</td>
<td>Orchestration</td>
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<td>MUS 440 or 441</td>
<td>Instrumental or Vocal Conducting Ensemble</td>
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<td>MUS 442 or 443</td>
<td>Recital Class</td>
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<td>MUS 450 or 451</td>
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<td>MUED 420</td>
<td>Music Administration and Supervision</td>
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<td>EDU 350</td>
<td>Modern Philosophies of Education</td>
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The Music Education Curriculum requires a total of 137 hours.
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.

UMPG General Education Requirement

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 4
MUS 332 Counterpoint 2
Applied Music 4
Ensembles 4
Music Electives 9

The Bachelor of Arts in Music Curriculum requires a total of 124 hours:

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 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:

MUS 100 Music History and Appreciation
MUS 130, 131 Theory I and II
MUS 132, 133 Solfeggio I and II
MUED 200 Music for the Classroom Teacher
MUED 322 Elementary Music Methods and Materials
MUS 150, 151 Applied Music
Ensembles

The Minor in Music Education Program requires a total of 24 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.

Three credit hours
MUS 110 Fundamentals of Music
Puopolo
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. Three credit hours

MUS 202 Music in America
Staff
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. Three credit hours

MUS 203 Music in the Twentieth Century
Staff
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. Three credit hours

MUS 204 Symphonic Literature
Staff
A survey of music for the symphony orchestra from the Pre-Classical period of K.F.E. Bach to the present. Three credit hours

MUS 211 Class Piano
Cole
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. Two credit hours

MUSED 200 Music for the Classroom Teacher
Staff
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. Three credit hours

Music Performance Groups Open to all Students

MUS 400 Chamber Orchestra
Bowder
One-half credit hour

MUS 401 The Gorham Chorale
Chamberland
A choral group of a hundred students from all departments; specializes in larger choral works with orchestral accompaniment; several campus performances and occasional tours. One-half credit hour

MUS 402 University Concert Band
Bennett
One-half credit hour

MUS 403 A Cappella Choir
Brown
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. One-half credit hour

MUS 404 Brass Ensemble
Cole
One-half credit hour

MUS 405 The Chamber Singers
Chamberland
A select group of twenty-five singers specializing in music from the Renaissance to the Contemporary. Extensive touring throughout the state. One-half credit hour

Music History and Theory

MUS 120 History of Music I
Brown
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. Three credit hours
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. Three credit hours

MUS 130 Music Theory I
Major and minor scales; intervals, triads, and chord connection; cadences; harmonization of soprano and bass lines utilizing primary triads. Three credit hours

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). Three credit hours

MUS 132 Solfeggio I
A course in sight singing and ear training. Primarily for majors, but open to others with permission of the instructor. Two one-hour meetings per week. One credit hour

MUS 133 Solfeggio II
A continuation of MUS 132. One credit hour

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. Three credit hours

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. Three credit hours

MUS 230 Music Theory III
Diatonic seventh chords; modulation; expansion of non-harmonic 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. Three credit hours

MUS 231 Music Theory IV
Contemporary techniques of composition; 20th century harmony, theory, and related studies. Three credit hours

MUS 232 Solfeggio III
An advanced course in sight singing and ear training. Two one-hour meetings per week. One credit hour

MUS 233 Solfeggio IV
A continuation of MUS 232. One credit hour

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.

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. Two credit hours
MUS 331  Form and Analysis II  Staff
Study and analysis of music of the Baroque and Contemporary periods with
emphasis on contrapuntal forms and styles. Prerequisite: Theory II.
Two credit hours

MUS 332  Counterpoint  Bowder
Tonal counterpoint. The process of invention and fugue as exemplified in the
music of the Baroque era. Prerequisite: Theory III.
Two credit hours

MUS 420  Orchestration  Bowder
A study of the nature of the various instruments. Practice in scoring for in-
strumental combinations, orchestra, and band.
Three credit hours

MUS 460  Independent Study in Music  Staff
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.
One to three credit hours

Music Performance Courses

MUS 140  Instrumental Ensemble or Freshmen  Bowder
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 freshmen.
One-half credit hour

MUS 141  Vocal Ensemble for Freshmen  Chamberland
Emphasizing singing technique and interpretation and exploration of choral
literature of various periods and styles. Principles of choral training are ex­
emplified. The repertoire is varied from year to year so that the course covers a
considerable range during a given student's attendance.
One-half credit hour

MUS 142  Recital Class for Freshmen I  Brown
Performance in major field, stage deportment, and evaluation of performances.
Restricted to freshmen.
One-half credit hour

MUS 143  Recital Class for Freshmen II  Brown
A continuation of MUS 142.
One-half credit hour

MUS 150  Applied Music for Freshmen I  Staff
May be taken in piano, voice, organ 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.
One credit hour

MUS 151  Applied Music for Freshmen II  Staff
A continuation of MUS 150.
One credit hour

MUS 160  Applied Music for Freshmen II  Staff
May be taken in piano, voice, organ or any orchestra or band instrument. A
one-hour lesson per week in the major performance area (2 credits) in ful-
fillment of applied music requirements. Restricted to freshmen.
Two credit hours

MUS 161  Applied Music for Freshmen II  Staff
A continuation of MUS 160.
Two credit hours

MUS 240  Instrumental Ensemble for Sophomores  Bowder
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.
One-half credit hour
MUS 241  Vocal Ensemble for Sophomores  Chamberland
   Emphasizing singing technique and interpretation and an exploration of choral
   literature of various periods and styles. Principles of choral training are ex-
   emplified. The repertoire is varied from year to year so that the course covers
   a considerable range during a given student's attendance.  One-half credit hour

MUS 242  Recital Class for Sophomores I  Brown
   Performance in major field, stage deportment, and evaluation of performances.
   Restricted to sophomores.  One-half credit hour

MUS 243  Recital Class for Sophomores II  Brown
   A continuation of MUS 242.  One-half credit hour

MUS 250  Applied Music for Sophomores I  Staff
   May be taken in piano, voice, organ or any orchestra or band instrument.  One
   half-hour lesson per week in the minor performance area (1 credit) in ful-
   lfillment of applied music requirements.  Restricted to sophomores.
   One credit hour

MUS 251  Applied Music for Sophomores II  Staff
   A continuation of MUS 250.  One credit hour

MUS 260  Applied Music for Sophomores II  Staff
   May be taken in piano, voice, organ or any orchestra or band instrument.  A
   one-hour lesson per week in the major performance area (2 credits) in ful-
   lfillment of applied music requirements.  Restricted to sophomores.
   Two credit hours

MUS 261  Applied Music for Sophomores II  Staff
   A continuation of MUS 260.  Two credit hours

MUS 340  Instrumental Ensemble for Juniors  Bowder
   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 juniors.  One-half credit hour

MUS 341  Vocal Ensemble for Juniors  Chamberland
   Emphasizing singing technique and interpretation and an exploration of choral
   literature of various periods and styles.  Principles of choral training are ex-
   emplified.  The repertoire is varied from year to year so that the course covers
   a considerable range during a given student's attendance.  One-half credit hour

MUS 342  Recital Class for Juniors I  Brown
   Performance in major field, stage deportment, and evaluation of perform-
   ances.  Restricted to juniors.  One-half credit hour

MUS 343  Recital Class for Juniors II  Brown
   A continuation of MUS 342.  One-half credit hour

MUS 344  Instrumental Conducting  Bowder
   Practical conducting experiences; score reading, basic beat patterns, and in-
   terpretation.  Two credit hours

MUS 345  Vocal Conducting  Chamberland
   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.  Two credit hours

MUS 350  Applied Music for Juniors I  Staff
   May be taken in piano, voice, organ or any orchestra or band instrument.  One
   half-hour lesson per week in the minor performing area (1 credit) in fulfill-
   ment of applied music requirements.  Restricted to juniors.  One credit hour

125
MUS 351 Applied Music for Juniors II
A continuation of MUS 350.
Staff One credit hour

MUS 360 Applied Music for Juniors I
May be taken in piano, voice, organ 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.
Staff Two credit hours

MUS 361 Applied Music for Juniors I
A continuation of MUS 360.
Staff Two credit hours

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.
Bowder One-half credit hour

MUS 441 Vocal Ensemble for Seniors
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.
Chamberland One-half credit hour

MUS 442 Recital Class for Seniors I
Performance in major field, stage deportment, and evaluation of performances. Restricted to seniors.
Brown One-half credit hour

MUS 443 Recital Class for Seniors II
A continuation of MUS 442.
Brown One-half credit hour

MUS 450 Applied Music for Seniors I
May be taken in piano, voice, organ 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.
Staff One credit hour

MUS 451 Applied Music for Seniors II
A continuation of either MUS 450 or MUS 351.
Staff One credit hour

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.
Brown One-half to two credit hours

MUS 460 Applied Music for Seniors I
May be taken in piano, voice, organ 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.
Staff Two credit hours

MUS 461 Applied Music for Seniors II
A continuation of either MUS 460 or MUS 361.
Staff

Music Education

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.
Staff Three credit hours

MUED 220 Woodwind Class
Methods of teaching woodwind instruments; practical experience on various woodwinds; and elements of transposition.
Tainter Two credit hours
MUED 221  Brass Class
Methods of teaching brass instruments including practical experience on the
diverse instruments; elements of transposition. Three credit hours

MUED 222  Percussion Class
Practical experience on and methods of teaching percussion instruments.
One credit hour

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. Two credit hours

MUED 321  String Class — Ensemble
String ensemble methods and materials for beginning strings. Fundamentals
of violin, cello, and string bass. Rudiments of fingering, bowing, and tone pro-
duction. Two credit hours

MUED 322  Elementary Music Methods and Materials
Study of methods and materials in present elementary school music education,
including those of Kodaly and Orff. Three credit hours

MUED 323  Secondary Music Methods and Materials
Study of approved methods and materials of music education in junior and
senior high schools. Continuation of MUED 322. Three credit hours

MUED 420  Music Administration and Supervision
Designed to present an integrated picture of philosophies of administration,
and to resolve problems encountered in student teaching. Three credit hours
Philosophy

Professor F. Schwanauer; Associate Professors Gavin (Chairman), Grange

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. 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.

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.

All philosophy majors must take four History of Philosophy courses from the following seven courses offered by the Department:

- PLY 310—Ancient Philosophy
- PLY 320—Medieval Philosophy
- PLY 330—Early Modern Philosophy
- PLY 340—Late Modern Philosophy
- PLY 350—American Philosophy
- PLY 360—Existentialism
- PLY 370—Linguistic Analysis

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.

Any introductory Philosophy course is a prerequisite to all other courses in philosophy.

COURSE DESCRIPTIONS

PLY 101 Introduction to Philosophy: Man and His Will

Schwonauer

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.

Three credit hours

PLY 102 Introduction to Philosophy: The Myth of Certainty

Gavin

An examination of the supposed connection between technocracy, impartiality and objectivity. The history of philosophy will be utilized to trace the identification of true knowledge with certainty. Serious doubts will be raised as to whether this procedure is either feasible or beneficial to the human person. An analysis of twentieth century alternatives, including existentialism and pragmatism, will be undertaken.

Three credit hours
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.

Three credit hours

PLY 104 Introduction to Philosophy: Ways of Knowing
Mackensen

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.

Three credit hours

PLY 105 Introduction to Philosophy: Man and Morals
Picl

This discussion course, based on the theme of how one should live, is designed to actively engage the student in the critical examination and the justification of personal values within the context of possible alternative values suggested by Plato, Zen Buddhism, Kant, existentialism, and others.

Three credit hours

PLY 200 Symbolic Logic
Schwanauer

Techniques of modern deductive logic; properties of formal systems; logical implications and paradoxes of language. Prerequisite: any PLY 100-level course.

Three credit hours

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.

Three credit hours

PLY 220 Aesthetics
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.

Three credit hours

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.

Three credit hours

PLY 240 Political Philosophy
Staff

Critical evaluation of political philosophies, classical and contemporary; extensive reading in original texts; analysis of contemporary political issues. Prerequisite: any PLY 100-level course.

Three credit hours

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.

Three credit hours

PLY 290 Problems of Philosophy
Staff

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.

Three credit hours

PLY 299 (see HIST 377)

This course meets the requirements for a major either in history or philosophy.

PLY 310 History of Ancient Philosophy
Gavin

Philosophic thought from the pre-Socrates to the late Hellenistic period, with major emphasis on Plato and Aristotle. Prerequisite: any PLY 100-level course.

Three credit hours
PLY 320 History of Medieval Philosophy  
Grange  
The merger of the philosophic with the religious stream; ideas of Augustine, Thomas Aquinas, Duns Scotus, and others critically examined; determining cultural factors explored. Prerequisite: a PLY 100 course, PLY 310.  
Three credit hours

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.  
Three credit hours

PLY 340 History of Late Modern Philosophy  
Schwanauer  
Development of German idealism; emergence of social and scientific philosophies; contributions of Kant, Hegel, Schopenhauer, Nietzsche, Feuerbach, and others. Prerequisite: any PLY 100-level course.  
Three credit hours

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.  
Three credit hours

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.  
Three credit hours

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.  
Three credit hours

PLY 398 Independent Study  
Staff  
Independent study undertaken under the mentorship of a professor in the department. Prerequisite: A minimum of two (2) philosophy courses plus written permission of the instructor involved. Credit hours to be arranged

PLY 400, 401, 402 Seminar in Philosophy  
Staff  
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. In 1975-76 the following seminars will be given: William James; Josiah Royce and American Idealism; Alfred North Whitehead.  
Three credit hours

PLY 410 Senior Tutorial  
Staff  
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. Credit hours to be arranged
Physical Sciences and Engineering

Professors Miller, A. Smith, Sottery, M. Whitten; Associate Professors Armstrong, Ayers, Grass, Hare (Chairman), Hopkinson, Novak, Walkling; Assistant Professor Pendleton.

Courses offered by the Department of Physical Sciences and Engineering are grouped under the following headings:

<table>
<thead>
<tr>
<th>ASTRONOMY</th>
<th>ENGINEERING</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEMISTRY</td>
<td>GEOLOGY</td>
</tr>
<tr>
<td>EARTH SCIENCE (including Meteorology, and Oceanography)</td>
<td>PHYSICAL SCIENCE</td>
</tr>
<tr>
<td>PHYSICS</td>
<td></td>
</tr>
</tbody>
</table>

A degree program in Earth Science is offered in the College of Arts and Sciences.

C.A.S. students who ultimately desire to major in Chemistry, Geology, Engineering, or Physics, can complete the first two years of work here and finish the third and fourth years at the Orono campus of the University of Maine.

A Science Area Major in Secondary Education, including a selection of both biological and physical sciences is coordinated by this department.

An Earth Science Area Major in Secondary Education is coordinated by the department also.

Students in the Kindergarten-Primary or Elementary programs of the School 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 below, immediately after the outline for the Secondary Education major program.

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 MAJOR IN ARTS AND SCIENCES

A four-year program is offered in Earth Science as a major in the College of Arts and Sciences. This program is designed to give Arts and Sciences students a working knowledge of the fundamental principles of the Earth Science disciplines. The Earth Science Major requires the completion of a minimum of 68 credit-hours in addition to the University's General Requirements.

REQUIRED COURSES FOR ALL EARTH SCIENCE MAJORS IN THE COLLEGE OF ARTS AND SCIENCES

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 111</td>
<td>Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 112</td>
<td>Historical Geology</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 111-112</td>
<td>General Chemistry or Chemical Principles</td>
<td>8-10</td>
</tr>
<tr>
<td>PHYS 111-112</td>
<td>Elements of Physics or General Physics</td>
<td>8-10</td>
</tr>
<tr>
<td>Course</td>
<td>Title</td>
<td>Credits</td>
</tr>
<tr>
<td>----------</td>
<td>------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>ASTR 100</td>
<td>Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>MET 100</td>
<td>Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>OCN 100</td>
<td>Oceanography</td>
<td>3</td>
</tr>
</tbody>
</table>

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

Of the following courses, 31-33 credits are required: (Each major must take a minimum of 15 credits of 200 and 9 credits of 300 level courses. PSCI 498, Independent Study (1-3 credits) is required of all majors).

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 210</td>
<td>Observational Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 141</td>
<td>Environmental Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>ESC! 200</td>
<td>Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>ESC! 201</td>
<td>Conservation</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 114</td>
<td>Environmental Geology</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 201</td>
<td>Structural Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 203</td>
<td>Mineralogy</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 205</td>
<td>Geological Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>or GEOL 301</td>
<td>Geomorphology (also GEOG 301)</td>
<td>3</td>
</tr>
<tr>
<td>or GEOL 302</td>
<td>Sedimentology</td>
<td>3</td>
</tr>
<tr>
<td>or GEOL 310</td>
<td>Glacial and Pleistocene Geology</td>
<td>3</td>
</tr>
<tr>
<td>or PSCI 310</td>
<td>History of Science</td>
<td>3</td>
</tr>
<tr>
<td>or PSCI 498</td>
<td>Independent Study</td>
<td>1-3</td>
</tr>
</tbody>
</table>

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.

**REQUIREMENTS FOR A SCIENCE AREA MAJOR IN SECONDARY EDUCATION**

The Science Area Major in Secondary Education requires completion of a minimum of 50 credit-hours and provides for a broad preparation in several fields. This major is intended primarily for those students planning to teach in grades seven through nine. Completion of this program and required courses in education, including those needed to meet the University’s General Requirements, enables one to receive the State of Maine Secondary Science Area Certificate.

**Freshman Year**

Chemistry or Physics. Freshmen should take one of the following eight- or ten-credit sequences. At the end of the Sophomore year, the student should have at least eight hours of Physics and at least eight hours of Chemistry.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 111 and 112</td>
<td>General Chemistry</td>
<td>8</td>
</tr>
<tr>
<td>or CHEM 113 and 114</td>
<td>Chemical Principles</td>
<td>10</td>
</tr>
<tr>
<td>or PHYS 111 and 112</td>
<td>Elements of Physics</td>
<td>8</td>
</tr>
<tr>
<td>or PHYS 121 and 122</td>
<td>General Physics</td>
<td>10</td>
</tr>
</tbody>
</table>

It is recommended that the six hour General Education Mathematics-Science requirement be met by taking six hours of Mathematics.

**Sophomore Year**

BIO 101 and 102 Biological Principles (3 credits) plus Biological Experiences (1 credit) to be taken together 4
**Freshman, Sophomore, Junior, or Senior Years**

**Group A — 12 Credit Hours Required**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 111</td>
<td>Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 112</td>
<td>Historical Geology</td>
<td>3</td>
</tr>
<tr>
<td>ASTR 100</td>
<td>Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>MET 100</td>
<td>Meteorology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Group B — Credit Hours Required**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 215</td>
<td>Vascular Botany (3 credits) plus Vascular Field</td>
<td>4</td>
</tr>
<tr>
<td>or BIO 225</td>
<td>Non-vascular Botany (3 credits) plus Non-vascular</td>
<td>4</td>
</tr>
<tr>
<td>BIO 209</td>
<td>Vertebrate Zoology</td>
<td>3</td>
</tr>
<tr>
<td>or BIO 351</td>
<td>Invertebrate Zoology (3 credits) plus Survey of</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Vertebrates (1 credit) to be taken together</td>
<td></td>
</tr>
</tbody>
</table>

**Or other course(s) in Biology acceptable to the adviser** 4

**Group C — 3 Credit Hours Required**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESCI 202</td>
<td>Conservation</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 310</td>
<td>History of Science</td>
<td>3</td>
</tr>
<tr>
<td>BIO 251</td>
<td>History of Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

To complete the required 50 hours for the major, the student may choose from previously listed courses which have not been taken before and from the following electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 210</td>
<td>Observational Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>BIO 103 and 104</td>
<td>Biological Diversity (3 credits) plus Survey of Animals and Plants (1 credit) to be taken together</td>
<td>4</td>
</tr>
<tr>
<td>BIO 111 and 112</td>
<td>Human Anatomy and Physiology (3 credits) plus Practical Anatomy and Physiology (1 credit) to be taken together</td>
<td>4</td>
</tr>
<tr>
<td>BIO 201</td>
<td>Principles of Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIO 205</td>
<td>Evolution</td>
<td>3</td>
</tr>
<tr>
<td>BIO 292</td>
<td>Ornithology</td>
<td>2</td>
</tr>
<tr>
<td>BIO 311 and 312</td>
<td>Microbiology (3 credits) plus Microbiological Laboratory (2 credits) to be taken together</td>
<td>5</td>
</tr>
<tr>
<td>BIO 331 and 332</td>
<td>Ecological Principles (2 credits) plus Field Ecology (1 credit) to be taken together</td>
<td>3</td>
</tr>
<tr>
<td>BIO 372</td>
<td>Biological Techniques</td>
<td>2</td>
</tr>
<tr>
<td>BIO 381 and 382</td>
<td>Ichthyology (2 credits) plus Field Ichthyology (2 credits) to be taken together</td>
<td>4</td>
</tr>
<tr>
<td>BIO 481</td>
<td>Cell Mechanisms</td>
<td>3</td>
</tr>
<tr>
<td>BIO 481</td>
<td>Cellular Biology</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 151</td>
<td>Environmental Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 201</td>
<td>Organic Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 202</td>
<td>Introduction to Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 251 and 261</td>
<td>Organic Chemistry (3 credits) plus Organic Chemistry Laboratory (2 credits) to be taken together</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 252 and 262</td>
<td>Organic Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>ESCI 200</td>
<td>Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>ESCI 201</td>
<td>Natural Science</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 114</td>
<td>Environmental Geology</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 201</td>
<td>Structural Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 203</td>
<td>Mineralogy</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 205 or OCN 205</td>
<td>Geological Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 301</td>
<td>Geomorphology (also GEOG 301)</td>
<td>3</td>
</tr>
<tr>
<td>OCN 100</td>
<td>Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 210</td>
<td>Introductory Modern Physics</td>
<td>4</td>
</tr>
</tbody>
</table>
PHYS 221 and 222 Intermediate Physics 8
PHYS 390 Independent Physics Laboratory 3

NOTE: In addition to the 50 hours of course work selected above, EDU 318, Teaching Science in the Secondary School, is required of all Science Area Majors in Secondary Education.

REQUIREMENTS FOR A SCIENCE AREA MINOR AND MAJOR FOR STUDENTS IN THE KINDERGARTEN-PRIMARY 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 advisers 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 109 Intro to Astronomy
BIO 103 Biological Diversity
BIO 104 Survey of Animals and Plants
CHEM 101 Chemistry for Health Sciences I
CHEM 111 General Chemistry I
ESCI 120 Concepts of Earth Science
ESCI 200 Environmental Science
ESCI 202 Conservation
GEOL 111 Physical Geology
GEOL 112 Historical Geology
PSCI 310 History of Science
MET 100 Meteorology
OCN 100 Intro to Oceanography
PSCI 110 Elements of Physical Science
PHYS 100 Descriptive Physics

REQUIREMENTS FOR AN EARTH SCIENCE AREA MAJOR IN SECONDARY EDUCATION

The Earth Science Area Major requires completion of a minimum of 50 credit hours. This major is intended primarily for those students planning to teach Earth Sciences in the ninth grade. Completion of this program, required courses in Education, and those needed to meet the University's General Requirements, enables one to receive the State Certification.

Suggested Earth Science Sequence For Secondary Education Majors

Freshman Year

GEOL 111 Physical Geology 3
or
GEOL 112 Historical Geology 3
Chemistry or Physics. Freshmen should take one of the following eight or ten credit sequences. At the end of the Sophomore year, the student should have eight to ten hours of Physics and eight to ten hours of Chemistry.

CHEM 111 and 112 General Chemistry 8
or
CHEM 113 and 114 Chemical Principles 8
and
PHYS 111 and 112 Elements of Physics 8
PHYS 121 and 122 General Physics 8

It is recommended that the six hour General Education Mathematics-Science requirement be met by taking six hours of Mathematics.
### Sophomore Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 203</td>
<td>Mineralogy</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Chemistry or Physics, whichever subject has not been taken in the Freshman year</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Science Area Major Elective (List A)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Junior Year and Senior Year

| Science Area Major Electives, (List A) | 6 |
| Science Area Major Electives, (List B) | 16 |

#### List A (9 Hours Required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 100</td>
<td>Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>MET 100</td>
<td>Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>OCN 100</td>
<td>Oceanography</td>
<td>3</td>
</tr>
</tbody>
</table>

#### List B (12-16 Hours Required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTR 210</td>
<td>Observational Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 141</td>
<td>Environmental Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>ESCI 200</td>
<td>Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>ESCI 201</td>
<td>Conservation</td>
<td>3</td>
</tr>
<tr>
<td>ESCI 300</td>
<td>Independent Study</td>
<td>1-3</td>
</tr>
<tr>
<td>GEOL 114</td>
<td>Environmental Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 201</td>
<td>Structural Geology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 205 or OCN 205</td>
<td>Geological Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 301</td>
<td>Geomorphology (also GEOG 301)</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 302</td>
<td>Sedimentology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 310</td>
<td>Glacial and Pleistocene Geology</td>
<td>3</td>
</tr>
<tr>
<td>OCN 310</td>
<td>Applied Marine Service</td>
<td>4</td>
</tr>
<tr>
<td>PSCI 310</td>
<td>History of Science</td>
<td>3</td>
</tr>
</tbody>
</table>

**NOTE:** EDU 318 — Teaching Science in the Secondary School does not count in the required 50 hours.

### Astronomy

#### COURSES IN ASTRonomy

**ASTR 100 Astronomy**

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 are included. No prerequisites. Offered Fall and Spring Semester. Three credit hours

**ASTR 101 Astronomy in the Planetarium**

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. Three credit hours

**ASTR 210 Observational Astronomy**

Star charts, atlases, binoculars, 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. Three credit hours
Chemistry

The field of chemistry is concerned with the structure of matter and its transformations. Undergraduate training in chemistry programs is designed to equip students for careers in industry, teaching or government service. Students who intend to proceed to a baccalaureate in chemistry should consult with the chemistry coordinator and plan to transfer into the chemistry program at the Orono campus of the University or elsewhere after completion of the sophomore or junior year.

This University does not presently offer a four-year program in chemistry. However, a major program in applied chemistry is being designed; the main purpose of this program is to prepare students for employment in one of the many chemistry-related occupations upon graduation.

OPPORTUNITIES

Among the industrial positions for which training 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. Science courses at these levels are changing in content and approach.

For one who thrills to new discoveries, 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.). The university instructor has opportunity to balance teaching and research.

A degree in chemistry provides excellent preparation for dentistry or medicine, and may provide a powerful combination with business, I - w (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 but 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 usually difficult 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, geo-chemistry, 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.

C.A.I. Facility

Using the statewide university computing system, the Chemistry discipline has implemented an extensive facility of Computer Assisted Instruction modules for providing remedial assistance to students in freshman chemistry courses. These C.A.I. modules provide individualized and self-paced tutorial, drill and practice assistance to any student who wishes it. Interactive typewriter-like computer terminals located on both the Portland and Gorham campuses provide ready access to the computing facility; a knowledge of typing is not necessary, since most student responses consist of only a few letters and/or numbers. Further information, including a C.A.I. User’s Guide, is available from any CAPS (Computing and Data Processing Services) office or from Dr. Alan G. Smith of the Chemistry faculty.
COURSES IN CHEMISTRY

CHEM 101 Chemistry for Health Sciences
Smith
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. Three credit hours

CHEM 102 Introduction to Laboratory Measurement
Wiggleworth
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 every fall semester. Corequisite: CHEM 101. Laboratory fee: $5.00. Not appropriate for applied chemistry or biology majors. Two credit hours

CHEM 103 Introduction to Organic and Biochemistry
Smith
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. Two credit hours

CHEM 104 Introductory Organic and Biochemistry Laboratory
Wiggleworth
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 every spring semester. Corequisite: CHEM 103. Laboratory fee $5.00. Not appropriate for applied chemistry or biology majors. Two credit hours

CHEM 105 General Chemistry
Whitten
A presentation of general topics of chemistry. This presentation is designed to broaden the student's knowledge in chemistry beyond the selected principles introduced in CHEM 113. This course is preferred for those students who do not require extensive involvement with the computational techniques of chemistry. CHEM 105 is designed to provide an expanded base for the future study of organic and biochemistry for students who have completed CHEM 113. Two hours of lecture, one hour of recitation, (usually concurrent with CHEM 106). Prerequisite: a C grade or better in CHEM 113. Not appropriate for applied chemistry or biology majors. Offered each spring semester. Three credit hours

CHEM 106 General Chemistry Laboratory
Whitten
Experiments designed to illustrate the principles presented in CHEM 105, which should be taken concurrently. Topics to be covered will include (but not be limited to): elementary kinetics, acid-base titrations, electrochemistry, determination of equilibrium constants, pH and selective-ion potentiometry, and fundamental reactions of organic and biochemistry. One hour of recitation and two hours of laboratory per week. Offered every spring semester. Corequisite: CHEM 105. Not appropriate for applied chemistry or biology majors. Laboratory fee: $5.00. Two credit hours
CHEM 111 General Chemistry I
Whitten
A study of selected fundamental concepts and theories of chemistry. Atomic structure, periodic classification, chemical bonding, molecular structure, chemical reactions, and equilibria are discussed. (Offered only in C.E.D.)
Four credit hours

CHEM 112 General Chemistry II
Whitten
A continuation of the topics presented in CHEM 111. Prerequisite: CHEM 111. (Offered only in C.E.D.)
Four credit hours

CHEM 113 Qualitative Principles of Chemistry
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. Offered each fall semester.
Three credit hours

CHEM 114 Qualitative Laboratory Techniques
Wigglesworth
A study in the laboratory of experiments specifically designed to illustrate the principles which are concurrently presented in CHEM 113 lectures. One recitation and two laboratory hours per week. Corequisite: CHEM 113. Laboratory fee: $5.00. Offered every fall semester.
Two credit hours

CHEM 115 Quantitative Principles of Chemistry
Sottery or Provencher
A quantitative presentation of the selected chemical principles introduced in CHEM 113. 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 and CHEM 132 (normally taken concurrently) should be elected by all applied chemistry majors, physics majors and engineers. Prerequisite: CHEM 113 (*) Corequisite: MS 152 or equivalent. Three recitations per week. Offered each spring semester.
*Recommended only for students who achieve a grade of B or better in CHEM 113.
Three credit hours

CHEM 132 Introduction to Analytical Laboratory Techniques
Wigglesworth or Provencher
This course will normally be taken concurrently with CHEM 115. Laboratory work will consist of a study of those quantitative techniques which are in current use including volumetric and gravimetric measurement, spectroscopy, acid-base and specific-ion potentiometry, and chromatography. One hour of recitation and two hours of laboratory per week. Corequisite: CHEM 115. Laboratory fee: $10.00. Offered every spring semester.
Two credit hours

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.
Three credit hours

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 and CHEM 132. Offered every fall semester.
Two credit hours
CHEM 232 Basic Laboratory Techniques of Analytical Chemistry

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. Corequisite: CHEM 231. Offered every fall semester. Four credit hours

CHEM 251 Fundamentals of Organic Chemistry

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 105. Offered each fall semester. Three credit hours

CHEM 252 Basic Laboratory Techniques of Organic Chemistry

Experiments will be performed to illustrate such techniques as: thin-layer, column, and gas chromatography; distillation; melting and syntheses; identification and characterization of organic compounds; kinetic and thermodynamic control of reaction rates. One recitation and three laboratory hours per week. Offered each fall semester. Pre- or corequisite: CHEM 251. Laboratory fee: $10.00. 2.5 credit hours

CHEM 253 Organic Chemistry II

A continuation of CHEM 251, but with a more extensive (and intensive) investigation of the principal categories of organic reactions. Extensive problemsolving 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 every spring semester. Prerequisite: a grade of C or better in CHEM 251. Three credit hours

CHEM 254 Organic Chemistry Laboratory II

Experiments will be performed to demonstrate some chemical properties of representative substances from the classes described in CHEM 253, which is a corequisite. Among the techniques demonstrated by experiment will be adsorption chromatography; gas chromatography; ultraviolet/visible and infrared spectrophotometry; NMR spectroscopy; polarimetry, and determination of specific rate constants by various methods. One hour of recitation and three lab hours per week. Pre- or corequisite: CHEM 253. Offered every spring semester. Laboratory fee: $10.00. 2.50 credit hours

CHEM 531 Instrumentation in General Chemistry

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. Three credit hours
Earth Science

COURSES IN EARTH SCIENCE

ESCI 120 Concepts of Earth Science
A one semester course introducing students to basic processes as they apply to Geology, Astronomy, Meteorology and Oceanography. Man's relationship to these processes is emphasized. 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 four earth science areas. Prerequisite: two years of high school science or permission of instructor. Two one-hour lectures and one two-hour lab weekly.
Three credit hours

ESCI 200 Environmental Science
A study of basic relationships of plants, animals, and men to their physical and biotic environment. This includes a study of biomes, habitats, and communities interpreted in varying stages of succession or stratification as influenced by the limiting factors of their environment. Some emphasis is placed on species dynamics and population changes. Weekly field trips when weather permits.
Two hours, lect., Two hours, lab. Each Semester.
Three credit hours

ESCI 201 Natural Science
A course primarily for teachers in the elementary school, it includes a variety of topics in the area of biology: insect metamorphosis, bird migration, fossil records, animal communities, plant communities, animal behavior, reproduction, survival foods, fungi and man, and related subjects. Emphasis is on obtaining an understanding and appreciation of the flora and fauna of New England.
Three lectures.

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.
Three credit hours

MET 100 Meteorology
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.
Three credit hours

OCN 100 Introduction to Oceanography
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.
Three credit hours

OCN 205 Geological Oceanography (also GEOL 205)
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. Spring Semester, Odd Years.
Three credit hours
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.)

Four credit hours

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Engineering

This University offers the first year of the program common to all Engineering majors, and the first and second years in Engineering Physics. These offerings are identical in all respects to corresponding programs at the University of Maine at Orono. Students who complete either one or two years here continue their studies at UMO.

**ENGINEERING FRESHMAN YEAR**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit hours</th>
<th>Subject</th>
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<tbody>
<tr>
<td>CHEM 113</td>
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<td>CHEM 114</td>
<td>5</td>
</tr>
<tr>
<td>GEE 101</td>
<td>2</td>
<td>GEE 102</td>
<td>2</td>
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<tr>
<td>GEE 105</td>
<td>1</td>
<td>GEE 106</td>
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<tr>
<td>MS 152</td>
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<td>PHYS 121</td>
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<td>PHYS 122</td>
<td>5</td>
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<td>Total 17</td>
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<td>Total 17</td>
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**ENGINEERING PHYSICS SOPHOMORE YEAR**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Credit hours</th>
<th>Subject</th>
<th>Credit hours</th>
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<tr>
<td>GEE 207</td>
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<td>MEE 211</td>
<td>3</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>3</td>
<td>Humanities Elective</td>
<td>3</td>
</tr>
<tr>
<td>MEE 255</td>
<td>3</td>
<td>MS 350</td>
<td>3</td>
</tr>
<tr>
<td>MS 252</td>
<td>4</td>
<td>PHYS 210</td>
<td>4</td>
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<tr>
<td>PHYS 221</td>
<td>4</td>
<td>PHYS 222</td>
<td>4</td>
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<td>Total 17</td>
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<td>Total 17</td>
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</table>

**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.

Two credit hours

**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.

Two credit hours
GEE 105 Engineering Orientation I
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.
One credit hour

GEE 106 Engineering Orientation II
A continuation of GEE 105.
One credit hour

GEE 207 Computer Programming
Numerical analysis and digital computer programming using FORTRAN. Theory and implementation of algorithms for zero-searching, solution of linear systems, interpolation, integration, differentiation and the solution of differential equations. Prerequisite: MS 252 (may be taken concurrently).
Three credit hours

MEE 211 Engineering Metallurgy
Methods of defining the microstructure of metals, phase diagrams, and mechanical properties. Thermal, mechanical, and chemical manipulation of microstructure. Prerequisites: Physics and Chemistry one year each.
Three credit hours

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.
Three credit hours

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.
Three credit hours

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.
Three credit hours

ELE 201 Circuit Analysis I
Basic laws and theorems of electric circuits; solution of circuits represented by first and second order differential equations. Prerequisite: PHYS 122.
Five credit hours

ELE 202 Circuit Analysis II
Phasor solution of a-c circuits and coupled circuits; balanced three-phase systems; introduction to complex frequency. Prerequisite: ELE 201.
Three credit hours

ELE 209 Electrical Engineering Materials
A study of the principles of materials science with emphasis on electrical properties. Diffusion, oxidation, electrochemistry, energy bands, emmission, thermal properties, conduction theory, semiconductor junctions, thermoelectricity, magnetic properties, dielectric properties, optical properties.
Three credit hours

ELE 212 Basic Electrical Laboratory
Use of techniques developed in ELE 201 and 202 for the analysis of circuits containing linear, non-linear, passive and active elements; includes analysis of simple electronic circuits and the use of the oscilloscope. Prerequisite: ELE 202 required concurrently.
Two credit hours
Geology

COURSES IN GEOLOGY

GEOL 111 Physical Geology
A study of the ever-changing earth by wind, water, volcanism, crustal movement, and glaciation. The identification of common rocks and minerals is included. Weekly field trips when weather permits. Two Hours Lecture. Two Hours Lab. Each Fall. Three credit hours

GEOL 112 Historical Geology
Study of the earth's history in terms of physical, chemical, and biological change from its origin to the present time. Focus upon the methods of determining chronology and conditions through fossils and structural characteristics. Two Hours Lecture. Two Hours Lab. Each Spring. Three credit hours

GEOL 114 Environmental Geology
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 or permission of the instructor. Two 75-min. Lecture Sessions, One Two Hour Lab. Spring Semester, Even Years. Four credit hours

GEOL 201 Structural Geology
This course is a study and interpretation of rock structure, intrusions, and deformation. Considerable time is spent in field study, geologic mapping, and bed-rock interpretation. Some time is devoted to mineral and ore formations. Prerequisite: GEOL 111, or 112. Two Hours Lecture, Two Hours Lab. Fall Semester, Odd Years. Three credit hours

GEOL 203 Mineralogy
An introduction to descriptive crystallography, and a study of the physical properties and chemical structures of common rock-forming minerals. Field trips and laboratory analysis are an important part of the course. A basic course in chemistry is desirable. Prerequisite: GEOL 111, or 112. Two Hours Lecture, Two Hours Lab. Fall Semester, Even Years. Three credit hours

GEOL 205 Geological Oceanography (also OCN 205)
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 field examination of salt marshes, estuaries, and beaches. Prerequisite: Physical Geology or Oceanography, or permission of instructor. Three Hours Lecture. Spring Semester, Odd Years. Three credit hours

GEOL 301 Geomorphology (also GEOG 301)
Description and interpretation of landform development in terms of geologic structure, process, and stage. Field trips. Prerequisite: GEOL 201 or permission of the instructor. Two Hours Lecture. Two Hours Lab. Spring Semester, Even Years. Three credit hours

GEOL 302 Sedimentation
Source materials, mechanics of transport and dispersal, depositional environments, lithification and diagenesis of sediments. Analysis of common problems in applied field due to these phenomena. Prerequisite: GEOL 203. GEOL 301 recommended. Field trips. Two Hours Lecture. Two Hours Lab. Spring Semester, Even Years. Three credit hours

GEOL 310 Glacial and Pleistocene Geology
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 or 112. Two Hours Lecture. Two Hours Lab. Spring Semester, Odd Years. Three credit hours
## Physical Science

### COURSES IN PHYSICAL SCIENCE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSCI 103</td>
<td>Science for Technology I</td>
<td>Pendleton</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>A one-semester course which attempts to tie chemical theory to the practical problems relating to Industrial Arts. Two hours of lecture and one two-hour lab per week. Offered Spring semester only.</td>
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<tr>
<td>PSCI 104</td>
<td>Science for Technology II</td>
<td>Grass</td>
<td>3</td>
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<tr>
<td></td>
<td>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.</td>
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<tr>
<td>PSCI 110</td>
<td>Elements of Physical Science</td>
<td>Ayers and Pendleton</td>
<td>3</td>
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<td>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.</td>
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<tr>
<td>PSCI 310</td>
<td>History of Science</td>
<td>Whitten</td>
<td>3</td>
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<tr>
<td></td>
<td>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.</td>
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<tr>
<td>PSCI 400</td>
<td>Science and Society</td>
<td>Sottery</td>
<td>3</td>
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<td></td>
<td>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.</td>
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<tr>
<td>PSCI 498</td>
<td>Independent Study in the Physical Sciences</td>
<td>Staff</td>
<td>1-3</td>
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<tr>
<td></td>
<td>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.</td>
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</tbody>
</table>
Physics

The University of Maine offers undergraduate degrees in two four-year programs in physics: Physics, in the College of Arts & Sciences, and Engineering Physics in the College of Technology. Degrees in both of these programs are given by the University of Maine at Orono and must be completed there. However, the freshman and sophomore years of both programs are in routine operation at the University of Maine at Portland-Gorham and students successfully completing these years may automatically continue into the junior year on the Orono Campus.

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

An appropriate specimen curriculum for the Freshman and Sophomore years is shown under the ENGINEERING heading of this section of the catalog.

Students in either of these programs may complete their sophomore year on the Portland-Gorham campus, but must complete their last two years of work on the Orono campus.

REQUIREMENTS FOR A PHYSICS MINOR
FOR SECONDARY EDUCATION

Group A — 8 credit hours required

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PHYS 111</td>
<td>Elements of Physics</td>
<td>4</td>
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<tr>
<td>PHYS 112</td>
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Group B — 8 credit hours required

<table>
<thead>
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<th>Course</th>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>PHYS 210</td>
<td>Introductory Modern Physics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 221</td>
<td>Intermediate Physics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 390</td>
<td>Independent Physics Laboratory</td>
<td>3</td>
</tr>
</tbody>
</table>

Group C — Elect sufficient courses so total credit hours of Groups A, B, and C is at least 18 hours.

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>ASTR 100</td>
<td>Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>MET 100</td>
<td>Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>OCN 100</td>
<td>Oceanography</td>
<td>3</td>
</tr>
</tbody>
</table>

In Group C, substitutions can be made which are acceptable to the departmental advisor.

COURSES IN PHYSICS

PHYS 100  Descriptive Physics  
Armentrout

For the non-science student. A treatment in non-mathematical language of the more important topics in physics. Designed to develop an appreciation for the concepts, vocabulary, and methods of the science rather than a false sense of mastery. Lecture 3 hours.  
Three credit hours

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. Three credit hours

**PHYS 111 Elements of Physics I**
Gross

An introduction to the fundamental concepts of mechanics, sound and head. Lectures, problem solving, demonstrations, laboratory exercises and visual aids will be used to develop an understanding of physical phenomena. Prerequisites: high school algebra. Lecture 3 hours, lab. 3 hours.

**PHYS 112 Elements of Physics II**
Gross

A continuation of Physics 111 considering the topics: optics, electricity and modern physics. Lecture 3 hours, Lab. 2 hours.

**PHYS 121 General Physics I**
Walkling

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 3 hours, Rec. 2 hours, Lab. 2 hours.

**PHYS 122 General Physics II**
Walkling

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 3 hours, Rec. 2 hours, Lab. 2 hours.

**PHYS 210 Introductory Modern Physics**
Gross

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 3 hours, Lab. 2 hours.

**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 114 or equivalent and one year of calculus. Lecture 2 hours, Rec. 2 hours, Lab. 2 hours.

**PHYS 222 Intermediate Physics II**
Armentrout

A continuation of PHYS 221. Topics include electricity, magnetism and optics. Lecture 2 hours, Rec. 2 hours, Lab. 2 hours.

**PHYS 390 Independent Physics Laboratory**
Stoff

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. Three credit hours
Political Science

Professor Peirce (Chairman); Associate Professors Roberts (on sabbatical leave, 1975-76), Woshinsky; Assistant Professors Coogan, Fisher, Maiman, Temple.

REQUIREMENTS FOR THE MAJOR IN POLITICAL SCIENCE

a. Each major must complete a minimum of 36 hours in the Department.
b. Each major must complete POL 101 and 102.
c. Each major must take at least one course in four of following five offerings of the Department:

- **Judicial Process**
  - POL 283
  - POL 284
  - POL 305

- **International Politics**
  - POL 239
  - POL 273
  - POL 274
  - POL 275
  - POL 387
  - POL 388

- **Political Theory**
  - POL 289
  - POL 290
  - POL 292

- **Comparative Political Systems**
  - POL 235
  - POL 236
  - POL 237
  - POL 238
  - POL 240
  - POL 332

- **American Political System**
  - POL 210
  - POL 213
  - POL 233
  - POL 234
  - POL 251
  - POL 257
  - POL 258
  - POL 357
  - POL 358

d. Each major is required to participate in at least one Seminar (POL 400, 401, 402, 403). In unusual cases students may, with prior departmental permission, substitute independent study for a Seminar.

Upper-level Political Science courses all require either POL 101 or 102 or the permission of the instructor.

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. Internships may be taken for three credits on a pass-fail basis or for six credits on a letter-grade basis.

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.

COURSE DESCRIPTIONS

**POL 101 Introduction to American Government**  
Staff  
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. Three credit hours
POL 102  Man and Politics  Staff

This course introduces the student to modern political analysis. It centers on 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. Three credit hours

POL 103  Government and Politics of Maine  Staff

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 of special interest to the student who has an interest in the programs and politics of the State of Maine. Three credit hours

POL 104  Introduction to International Relations  Peirce

Examination of the relationships of nations in their efforts to deal with each other from differing political, economic and cultural bases.

POL 210  Power and Change in American Society  Fisher

This is an interdisciplinary course which examines groups in the United States who hold and wield power and groups who are powerless. Functional and dysfunctional aspects of the political, economic, and social systems are considered. Attempts at intervention to change the systems are examined through selected case studies. Three credit hours

POL 213  Comparative State Political Systems  Coogan

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. Prerequisite: POL 101, 102, or 103 Three credit hours

POL 233  The American City  Fisher

The city in 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. Three credit hours

POL 234  Municipal Administration  Fisher

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. Prerequisite: POL 233 and consent of the instructor. Three credit hours

POL 235  Democratic Governments of Europe  Roberts, Woshinsky

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. Three credit hours

POL 236  Communist Governments  Roberts

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. (Not offered in 1975-76) Three credit hours
POL 237 The Politics of the Soviet Union Roberts
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. (Not offered in 1975-76) Three credit hours

POL 238 Canadian Government and Politics Woshinsky
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. Three credit hours

POL 239 Soviet Foreign Policy Roberts
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. (Not offered in 1975-76) Three credit hours

POL 240 The Politics of Developing Nations Temple
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 or 102 are recommended. Three credit hours

POL 251 Public Administration Coogan
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. Three credit hours

POL 257 Political Parties Coogan
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. Prerequisites: POL 101 and 102. Three credit hours

POL 258 Public Opinion Coogan
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. Prerequisite: POL 102. Three credit hours

POL 274 Current International Problems Peirce
An analysis of contemporary world problems with emphasis on the interdependence of nations versus their viability as individual nation states. Three credit hours

POL 275 United States Foreign Policy Peirce
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. Three credit hours

POL 283 The American Judicial System Maiman
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. Three credit hours
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. Three credit hours

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. Three credit hours

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. Three credit hours

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. Three credit hours

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.

POL 305 Comparative Judicial Behavior

A cross-national study of the social and psychological determinants of judicial decision-making. The course will also focus on the social effects of judicial decisions. Prerequisite: Consent of the instructor. (Not offered in 1975-76) Three credit hours

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. Three credit hours

POL 353 Municipal 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. Three to six credit hours

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. Three to six credit hours

POL 355 Congressional Internship

A first-hand study of the national legislative process and the function of the legislator. The student will be assigned to the staff of a Congressman or Senator in Washington, D.C., from about February 1 until the end of June. Readings and reports are required in addition to the staff work. Open to juniors on a competitive basis. Rules announced publicly each fall semester. Six credit hours
POL 357 The American Presidency
Maiman, Peirce
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.
Three credit hours

POL 358 The American Congress
Woshinsky
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 policymaking in selected areas. Prerequisite: POL 101 or 102.
Three credit hours

POL 387 International Law
Peirce
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 beginning in Fall 1974).
Three credit hours

POL 388 International Organization
Peirce
An analysis of the approaches to the problems of peace, economic and social justice at the international level. Emphasis on the United Nations system and its specialized agencies. (Offered in alternate Spring semesters beginning in Spring 1975.)
Three credit hours

POL 395 Independent Study I
Staff
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.
Three to six credit hours

POL 396 Independent Study II
Staff
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.
Three to six credit hours

POL 397 Independent Study III
Staff
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.
Three to six credit hours

POL 400 Seminar in American Politics
Coogan
A seminar focusing on some aspect of politics in small town and rural environments. Prerequisite: Consent of the Instructor. (Not offered in 1975-76)
Three credit hours

POL 401 Seminar in International Affairs
Peirce
A seminar which focuses on some aspect of international politics. Prerequisite: Consent of the instructor.
Three credit hours

POL 402 Seminar in Comparative Politics
Roberts
A study of some aspects of comparative political institutions and behavior. Prerequisite: Consent of the instructor.
Three credit hours

POL 403 Seminar in Judicial Process
Maiman
A seminar focusing on some aspect of judicial processes and behavior. Prerequisite: Consent of the instructor. (Not offered in 1975-76)
Three credit hours
POL 404 Seminar in American Politics
A study of some aspect of American political institutions and behavior. Prerequisite: Consent of the instructor.

POL 501 Seminar in the Politics of Education
This seminar will explore the neglected literature on what has been thought of as the "non-political" branch of government. The organization and cultural environment of education will be examined critically. An attempt will be made to apply the analytical tools of political science to the study of educational decisions made by the community, its school board and administrators. The course will attempt to bring empirical knowledge to bear on the issues of community control of the schools, innovation, teacher militancy, racial and cultural problems, accountability, academic freedom and inequality in the distribution of educational rewards and resources. A basic objective of the course will be to familiarize students with the tools of educational and political research. (Open to graduate students only.) (Not offered in 1975-76)
Psychology

Professors Bishop, Paradise, Saldanha (Chairman); Associate Professors Hearns, Sanborn; Assistant Professors 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.

The minimum requirement for a major in psychology is 40 hours which must include the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSY 101 and 102</td>
<td>General Psychology</td>
<td>6</td>
</tr>
<tr>
<td>PSY 201</td>
<td>Statistics in Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 205</td>
<td>Experimental Methodology</td>
<td>3</td>
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<tr>
<td>PSY 233</td>
<td>Child Development</td>
<td>3</td>
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<tr>
<td>PSY 330</td>
<td>Social Psychology</td>
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<tr>
<td>PSY 333</td>
<td>Psychopathology</td>
<td>3</td>
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<tr>
<td>PSY 350</td>
<td>Psychology of Learning</td>
<td>4</td>
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<tr>
<td>PSY 361</td>
<td>Sensation and Perception</td>
<td>4</td>
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<tr>
<td>PSY 365</td>
<td>Physiological Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 371</td>
<td>History and Systems</td>
<td>3</td>
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</tbody>
</table>

PSY 101 and 102 are prerequisites for all additional psychology courses.

Other courses offered by the department can be taken as electives to complete the major.

NOTE: These requirements are for students who are beginning their junior year in psychology in 1975-76. The requirements for students who are in their senior year should be discussed with their advisor.
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 will count toward fulfillment of the major.

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
Paradise, Saldanha
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. Three credit hours

PSY 102 General Psychology II
Paradise, Saldanha
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. Three credit hours

PSY 201 Statistics in Psychology
Hearns
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. Three credit hours

PSY 205 Experimental Methodology
Hearns
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. Classroom exercises provide experience in experimental design. Prerequisite: PSY 201. Three credit hours

PSY 223 Child Development
Gayton
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. Three credit hours

PSY 224 Adolescent Development
Sanborn
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. Three credit hours

PSY 232 Psychology of Adjustment
Sanborn
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. Three credit hours

PSY 235 Psychology of Women
Sanborn
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. Three credit hours

PSY 311 Industrial Psychology
Hearns
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. Three credit hours
PSY 320 Psychology of Personality  Gayton
Consideration of current issues and findings in personality. Personality development. Current research in such areas as socialization, aggression, identification, values, morality, anxiety. Relates basic principles of perception, motivation, and learning to personality theory. Prerequisites: PSY 101-102.

Three credit hours

PSY 330 Social Psychology  Bishop
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.

Three credit hours

PSY 333 Psychopathology  Bishop
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 with a grade of C or better. Three credit hours

PSY 335 Deviations of Childhood  Bishop, Gayton
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.

Three credit hours

PSY 338 Theories of Personality  Bishop
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 and 102 with a grade of C or better.

Three credit hours

PSY 340 Behavior Modification  Sytsma
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.

Three credit hours

PSY 343 Psychological Test Theory  Bishop
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.

Three credit hours

PSY 350 Psychology of Learning  Sytsma
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.

Four credit hours

PSY 351 Psychology of Motivation  Sytsma
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.

Three credit hours

PSY 355 Research in Personality  Gayton
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.

Four credit hours

PSY 360 Cognitive Processes  Paradise
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.

Three credit hours
PSY 361 Sensation and Perception

An examination of perceptual processes in selected sensory systems. Emphasis on experimental methodology, research findings, and theoretical interpretations. Prerequisites: PSY 201 and 205.

Four credit hours

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 BIO 111, PSY 101, 102.

Three credit hours

PSY 366 Comparative Psychology

A survey of the principles and concepts of biological psychology. Understanding the physiological basis and species-typical behaviors, learning, and motivation, from a comparative approach. Prerequisites: PSY 101 and 102 or BIO 111.

Three credit hours

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.

Three credit hours

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. Prerequisites: PSY 101 and 102.

Three credit hours

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.

Three credit hours

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.

Three credit hours

PSY 401 Research in Psychology II

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. (Fall and Spring)

Three credit hours

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.

Three credit hours

PSY 521 Individual Psychological Testing

Intensive training in the administrations, 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.

Four credit hours

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. Rec 2, Lab 4.

Four credit hours
Social Welfare

Professor Romanyshyn (Chairman); Associate Professor Steinman; Assistant Professors Finkelhor, Ladley (on leave, 1975-76), Kreisler; Visiting Lecturers B. Rich, J. Benoit.

The major in Social Welfare consists of an inter-disciplinary course of study which includes at least 15 hours of social sciences and humanities to be individually elected by the student and planned with the adviser. The program leads to a B.A. degree in Social Welfare.

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.

REQUIRED COURSES

SWE 101 Introduction to the Human Services I
SWE 252 and 253 Methods of Social Work Practice I & II
SWE 254 and 255 Community Laboratory in Social Welfare I & II
SWE 350 Social Problems and Social Welfare Policy
SWE 351 Human Services and the Consumer
SWE 370 Human Development and Social Welfare
SWE 455 Social Welfare Research
SWE 456 Issues in Social Welfare and Social Work

NOTE: Students must have a minimum of 10 hours of credit in SWE 254 and 255, combined. The requirements for students who began their major prior to 1974-75 should be discussed with their advisors.

COURSE DESCRIPTIONS

SWE 101 Introduction to the Human Services I
An orientation to careers in the human services and an introduction to the organization and functions of community agencies and programs, through lecture, discussion, and volunteer experiences.
Three credit hours

SWE 102 Introduction to the Human Services II
A continuation of SWE 101. (Not offered in 1975-76)
Three credit hours

SWE 252 Methods of Social Work Practice I
An introduction to concepts and beginning skills for intervening with individuals, families, groups, neighborhoods, organizations, or communities with the goal of producing some level of social change consistent with the aspirations of both the system to be changed and the intervenor. Emphasizes theories of human and community development. Must be taken concurrently with SWE 254.
Three credit hours

SWE 253 Methods of Social Work Practice II
A continuation of SWE 252. Must be taken concurrently with SWE 255.

SWE 254 Community Laboratory I
For Social Welfare majors: a required internship in a neighborhood or rural setting, or in an agency placement, designed to provide an opportunity to relate social work theory to practice. Variable credits ranging from 2 through 8 per semester. Prerequisites: SWE 101 and 102; 252 and 253 (concurrent).
SWE 255  Community Laboratory II  
A continuation of SWE 254.  
Finkelhor, Kreisler, Rich  
Variable credits

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, with specific emphasis on contemporary human services and how women are perceived. Prerequisite: SWE 101.  
Ladley  
Three credit hours

SWE 299  Handicapped and Self-Concept  
The purpose of this course is to sensitize students to the meaning of being handicapped. Primary learning experiences are experiential, as, for example, confinement to a wheelchair for one day on campus, being mute for a day, being blind for a class session, etc.  
Kreisler, Davis  
Three credit hours

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.  
Romanyshyn  
Three credit hours

SWE 351  Human Services and the Consumer  
Study and critical evaluation of the bureaucracies, professions, and consumers of social work and other services. Prerequisite: SWE 350.  
Steinman  
Three credit hours

SWE 352  Methods of Social Work Practice III  
An advanced course in social work theory and practice. Prerequisites: SWE 252 and 253.  
Staff TBA  
Three credit hours

SWE 353  Methods of Social Work Practice IV  
A continuation of SWE 352.  
Staff TBA  
Three credit hours

SWE 354  Community Laboratory III  
An advanced field experience in human services. Prerequisites: SWE 254 and 255.  
Kreisler, Rich  
Credits: variable

SWE 355  Community Laboratory IV  
A continuation of SWE 354.  
Kreisler  
Credits: variable

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. Prerequisite: SWE 350 or permission of instructor.  
Romanyshyn  
Three credit hours

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. (Not offered in 1975-76)  
Staff  
Three credit hours

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: FSY 220 and at least six hours of social welfare courses.  
Romanyshyn  
Three credit hours

SWE 374  Aging and Social Policy: A Cross-Cultural View  
This course will examine the similarities and the differences in how both simple and complex societies treat the process of aging. With this perspective, the course will then look at the position of older Americans in relation to various social institutions and at the origin and implementation of social policies affecting them. Prerequisite: SWE 101 or permission of instructor.  
Steinman  
Three credit hours

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SWE 375 Developmental Services to the Aging
Steinman
A study of policy, administration, and implementation of human services to older people with a focus on a developmental view of aging. Prerequisite: SWE 101 or permission of instructor. SWE 374 recommended but not required. Three credit hours

SWE 380 Child Welfare
Staff
A study of the process of growing up under handicapping social conditions and the implications for social services and institutional change. Prerequisite: six hours of social welfare courses. Three credit hours

SWE 385 Self-Assessment
Finkelhor
This course will help students to understand how family and background have influenced their development and the formation of their own lifestyles, values, and career goals. Prerequisite: Permission of the instructor. Three credit hours

SWE 397 Department Projects
Romanyshyn, Staff
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. Three credit hours

SWE 455 Social Welfare Research
Staff
A study of the implications of social welfare research for social policy and social work practice. Prerequisite: at least six hours of social welfare courses. Three credit hours

SWE 456 Issues in Social Welfare and Social Work
Romanyshyn
Senior seminar for social welfare majors that seeks to integrate class and field experience. Open to others with permission only. Should be taken in students' final semester, if possible. Three credit hours

SPECIAL SOCIAL WELFARE DEPARTMENT PROGRAMS

1. Student Organization
A social welfare student organization is a major vehicle for student participation in departmental affairs.

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. Over 150 students are involved in a variety of community projects. Among these are 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 the faculty and students is the High Street Resource Center. The purpose of the Center is to assist persons of the greater Portland community in obtaining suitable assistance concerning their problems, or in finding the correct agency within the area which can assist them.

In addition all students in the Department perform community services in a wide variety of community and social agencies. The Department relies on such agencies to provide appropriate learning experiences and service opportunities. These include 41 agencies, an updated list of which may be obtained from the Social Welfare Department.
Sociology

Professors Giguere, Lacognata, Monsen; Associate Professor Anspach (Chairman); Assistant Professors Fullam, Grzelkowski, Lehman.

The Department of Sociology offers a major in Arts and Sciences.

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 nine hours of sociology credits and with a 3.0 cumulative GPA 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 36 hours of sociology, which must include the following:

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>SOC 100</td>
<td>Introduction to Sociology</td>
<td>3</td>
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<tr>
<td>SOC 300</td>
<td>Sociological Theory</td>
<td>3</td>
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<tr>
<td>SOC 306</td>
<td>Methods of Social Research</td>
<td>4</td>
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<tr>
<td>SOC 307</td>
<td>Statistical Methods for Social Research</td>
<td>4</td>
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<tr>
<td>SOC 400</td>
<td>Theory Construction</td>
<td>3</td>
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<tr>
<td>SOC 401</td>
<td>Senior Seminar</td>
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In addition, each major is required to take at least one course from each of the following areas, plus two elective courses from within the Discipline:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>SOC 310</td>
<td>Social Processes</td>
<td>3</td>
</tr>
<tr>
<td>SOC 330</td>
<td>Social Institutions</td>
<td>3</td>
</tr>
<tr>
<td>SOC 350</td>
<td>Units of Social Life</td>
<td>3</td>
</tr>
<tr>
<td>SOC 370</td>
<td>Social Problems</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition to the 36 required hours of sociology, the sociology major must also take six hours above the introductory level in one of the following:

- Anthropology
- Biology
- Criminal Justice
- Economics
- Geography
- History
- Mathematics
- Philosophy
- Political Science
- Psychology
- SCOGIS (Interdisciplinary Studies)
- Social Welfare

COURSE DESCRIPTIONS

**SOC 100 Introduction to Sociology**

Staff

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.

Three credit hours

**SOC 200 Introduction to Social Problems**

Staff

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. Prerequisite: SOC 100. Three credit hours

**SOC 215 Criminology**

Lehman

An analytical survey of the structure and operation of the American criminal justice system as an institution embedded in a social, political, economic, and cultural context, with emphasis upon the use of historical and comparative materials. (This course is also listed as CJ 215.) Prerequisite: SOC 100. Three credit hours
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. Three credit hours

SOC 305 Methods of Evaluation Research
Giguere
An introduction to the field of methods of evaluation research: evaluation models, targets of evaluation, program objectives, social context of evaluation, research design, data collection, data analysis, and reporting results. Prerequisite: SOC 100. Three credit hours

SOC 306 Methods of Social Research
Monsen
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. Four credit hours

SOC 307 Statistical Methods for Social Research
Monsen
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 306. Four credit hours

SOC 310 Social Change
Giguere
Analysis of sociocultural factors related to social change and the dynamics of the change process. Prerequisite: SOC 100. Three credit hours

SOC 311 Sociology of Adolescence
Anspach
The social behavior of adolescents, the development of adolescent culture, and the involvement of adolescents in the various social systems and the class structure of society. Prerequisite: SOC 100. Three credit hours

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. Three credit hours

SOC 313 Human Ecology
Staff
Spatial distribution of human beings and related activities and social processes; contemporary ecological problems. Prerequisite: SOC 100. Three credit hours

SOC 314 Social Control
Staff
Examination and comparison of major societal control mechanisms. Emphasis on institutions of social control and their role in establishing and maintaining social order. Prerequisite: SOC 100. Three credit hours

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. Three credit hours

SOC 316 Sociology of Sex Roles
Staff
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. Three credit hours

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 101. Three credit hours

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SOC 331 Sociology of Education
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. Three credit hours

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. Three credit hours

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. Three credit hours

SOC 334 Sociology of Religion
Religion as a social institution. Attention is given to the social correlates of religion and the functions of religion in society. Prerequisite: SOC 100. Three credit hours

SOC 335 The Sociology of Prisons
An examination of American prisons focusing on techniques of social control in relation to social structure, mediation of social conflict, and problems of crime. Prerequisite: SOC 100. Three credit hours

SOC 336 Sociology of Law
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. Three credit hours

SOC 337 Sociology of Urban Life
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. Three credit hours

SOC 339 Population Dynamics
The dynamics of population change in size, composition and distribution by means of fertility, mortality, and migration within the context of the physical, social and cultural environments. Prerequisite: SOC 100. Three credit hours

SOC 353 Collective Behavior and Social Movements
Unstructured social behavior, e.g. crowds, mobs, riots. The rise and development of social movements emphasizing structuring and institutionalization. Prerequisite: SOC 100. Three credit hours

SOC 354 Small Group Analysis
Communication and interaction patterns within small groups are identified and analyzed. Course involves observation of and participation in such interaction. Prerequisite: SOC 100. Three credit hours

SOC 355 Social Structure and Politics
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. Three credit hours

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. Three credit hours

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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. The course normally involves a student research project.
Prerequisite: SOC 100.  Three credit hours

SOC 358  Sociology of Rural Life         Stoff
Significance of rural society in American culture. The impact of forces of
change, including population movement. The significance of changes in the
institutions of family, religion, education, and stratification. Prerequisite: SOC
100.  Three credit hours

SOC 361  Sociology of Franco-Americans   Giguerre
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.  Three credit hours

SOC 371  Race and Culture Conflict     Fullam
Analysis of factors involved in group conflict, with emphasis on minority
groups in culture-conflict situations. Prerequisite: SOC 100.  Three credit hours

SOC 372  Juvenile Delinquency          Lehman
The problem of adolescents in modern society. Discontinuities of teenage roles;
influence of various subcultures on patterns of behavior. Prerequisite: SOC 100.
Three credit hours

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. Prereq­
uisite: SOC 100.  Three credit hours

SOC 375  Social Disorganization        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 disor­
ganization; specific social problems are considered, such as suicide, crime, drug
addiction, alcoholism, prostitution, mental illness, divorce, group conflict. Pre­
requisite: SOC 100.  Three credit hours

SOC 380  Seminar in Social Thought     Lacognato
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.  Three credit hours

SOC 397  Department Projects I        Staff
Independent reading and/or research for juniors and seniors. Apply to depart­
ment chairman. Prerequisite: 15 hours in sociology. Two or three credit hours

SOC 398  Department Projects II       Staff
Continuation of independent reading and/or research for juniors and seniors.
Apply to department chairman. Prerequisite: SOC 397 Two or three credit hours

SOC 400  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 re­
search. Prerequisite: Senior standing in sociology.  Three credit hours

SOC 401  Senior Seminar            Staff
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 oppor­
tunity to consider current issues and the future of sociology. Prerequisite:
Senior standing in sociology.  Three credit hours
Theatre

Associate Professors Duclos, Power, Rootes, Steele (Chairman), Stump

Undergraduates desiring to major in Theatre/Communication may do so in either the Bachelor of Arts program of the College of Arts and Sciences, or under programs leading to the degree of Bachelor of Science in the School of Education. All students are reminded that, in addition to meeting departmental requirements for a major, they must also meet the University's General Education Requirements.

Students desiring a concentration in Communication are referred to the catalog entry under the Communication Department for a description of Communication courses and Allied Areas for majors emphasizing Communication.

**REQUIREMENTS FOR THEATRE/COMMUNICATION MAJORS IN THE COLLEGE OF ARTS AND SCIENCES**

Theatre/Communication majors desiring a Bachelor of Arts degree are required to complete 36 hours of Theatre and/or Communication courses, which are to include THE 101 (Introduction to Theatre) or COM 102 (Introduction to Communication). At least 18 additional hours must be selected from courses designated THE and/or COM. To complete this major the remaining 15 hours or less may be selected from Allied Areas or from courses at the 200 level or above in any department, school or college, with the faculty adviser's permission. Students are reminded that prerequisites to courses in Allied Areas must be satisfied as prescribed by the appropriate Department, College or School.
REQUIREMENTS FOR THEATRE/COMMUNICATION MAJORS IN SECONDARY EDUCATION

Theatre/Communication majors desiring a secondary education credential are required to follow the above program in Theatre and Communication courses and specialized requirements in the School of Education where applicable.

REQUIREMENTS FOR MINORS

Theatre/Communication minors are required to complete 18 hours of courses designated THE and/or COM, to include THE 101 or COM 102.

ALLIED AREAS FOR MAJORS EMPHASIZING THEATRE

<table>
<thead>
<tr>
<th>Course</th>
<th>Cr.</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td><strong>ART</strong></td>
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<tr>
<td>ARTH 102 Film as Image and Idea</td>
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<td>ARTS 141 Design I</td>
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<td>ARTS 142 Design II</td>
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<td>ARTS 141</td>
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<tr>
<td>ARTS 151 Drawing I</td>
<td>3</td>
<td>ARTS 151</td>
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<tr>
<td>ARTS 152 Drawing II</td>
<td>3</td>
<td>ARTS 151</td>
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<tr>
<td>ARTS 363 Watercolor</td>
<td>3</td>
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<tr>
<td><strong>DANCE</strong></td>
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<td>DNCE 300 Contemporary Dance I</td>
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<td>DNCE 303 Contemporary Dance IV</td>
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<td>ENG 242 Shakespeare I</td>
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<td>ENG 243 Shakespeare II</td>
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<td>ENG 242</td>
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<tr>
<td>ENG 246 British Drama to 1642</td>
<td>3</td>
<td>Permission</td>
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<tr>
<td>ENG 266 Restoration Drama</td>
<td>3</td>
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<tr>
<td>CPEN 372 Greek Epic, Tragedy, and Comedy</td>
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<tr>
<td><strong>FOREIGN LANGUAGES AND CLASSICS</strong></td>
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<tr>
<td>CLS 252 The Tragic Hero in Ancient Literature</td>
<td>3</td>
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<td>FRE 264 Avant-Garde Theatre in France</td>
<td>3</td>
<td>FRE 231</td>
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<tr>
<td>FRE 303 French Theatre in the 20th Century</td>
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<td><strong>HISTORY</strong></td>
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<tr>
<td>HIST 101 Western Civilization I</td>
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<td>HIST 102 Western Civilization II</td>
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<td><strong>MUSIC</strong></td>
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<tr>
<td>MUS 100 Music Appreciation and History</td>
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<td>MUS 202 Music in America</td>
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<td>MUS 401 Gorham Chorale</td>
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<td>MUS 403 A Cappella Choir</td>
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<tr>
<td>MUS 405 The Chamber Singers</td>
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<tr>
<td>MUS 142 Recital Class for Freshmen I</td>
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<td>MUS 142</td>
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<tr>
<td>MUS 143 Recital Class for Freshmen II</td>
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<tr>
<td>MUS 242 Recital Class for Sophomores I</td>
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<td>MUS 243 Recital Class for Sophomores II</td>
<td>1 2</td>
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<td>MUS 342 Recital Class for Juniors I</td>
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<tr>
<td>MUS 443 Recital Class for Seniors II</td>
<td>1 2</td>
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<tr>
<td><strong>PHILOSOPHY</strong></td>
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<tr>
<td>PLY 220 Aesthetics</td>
<td>3</td>
<td>PLY 100 level</td>
</tr>
</tbody>
</table>

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Course Descriptions

EDUCATION

EDU 310  Prep. of Classroom Instructional Materials  3  Lab fee $7.50
EDU 311  Advanced Production of A-V Material  3  Lab fee $7.50
EDU 449  Photography for Classroom Use  3

INDUSTRIAL ARTS

IA 210  Electronics Technology
IA 313  Electrical Construction
IA 130  Graphic Communication
IA 241  Graphic Arts Technology
IA 444  Photographic Reproduction
IA 363  Wood Science

THEATRE

THE 100  Research  Staff
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. Three credit hours

THE 101  Introduction to Drama  Staff
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. Three credit hours

THE 120  Acting I: Fundamentals of Acting  Staff
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. Three credit hours

THE 130  Theatre Workshop I  Staff
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. One credit hour

THE 131  Theatre Workshop II  Staff
A continuation of THE 130. Prerequisite: THE 130. One credit hour

THE 132  Theatre Workshop III  Staff
A continuation of THE 131. Prerequisite: THE 131. One credit hour

THE 133  Theatre Workshop IV  Staff
A continuation of THE 132. Prerequisite: THE 132. One credit hour

THE 134  Introduction to Theatre Production  Staff
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. Practicum required. Three credit hours

THE 135  Stage Craft  Staff
A lecture-discussion-performance course in technical theatre encompassing scene design, stage craft, properties, and similar topics relevant to technical direction. Three credit hours
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.

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.

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.

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.

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 Stanislovsky, Strasberg and Ball. Prerequisites: THE 120, THE 220.

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 134 and THE 135.

THE 331 Scene Design
Lecture and practicum in stage scenic design. Emphasis on the visual art and drafting of designs. Prerequisites: THE 134 and THE 135.

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.

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.

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.
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. Three credit hours

THE 361 Late 19th Century Drama of the Western World Staff
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. Prerequisites: THE 101 or 340 or 341. Three credit hours

THE 362 20th Century Drama of the Western World Staff
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, Sarte, Wilder, Miller, Beckett, Osborne, Chayefsky, and others will be studied which exemplify the literary, social, political, and philosophical aspects of the age. Prerequisites: THE 101, 340, and 341. Three credit hours

THE 363 Contemporary Avant-Garde Drama Staff
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-Off Broadway" Theatre. Prerequisites: THE 101, 340 and 341. Three credit hours

THE 390 Advanced Oral Interpretation Staff
A continuation of THE 290. Three credit hours

THE 433 Project I Staff
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. Three credit hours

THE 434 Project II Staff
A continuation of THE 433. Three credit hours

THE 450 Dramatic Theory Staff
A study of the development of comedy and tragedy through readings in classic and modern criticism. Includes melodrama and farce, and the merging of all modes in the modern theatre. Consideration of leading philosophical theories and their bearings on the theatre. Prerequisites: THE 101, 340 and 341. Three credit hours

THE 460 American Drama Stump
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. Three credit hours
College of Education

HARLAN A. PHILIPPI, Dean

Director, Pre-Professional Development Programs: Assistant Professor Bruce Allen
Director, Advanced Study Programs: Associate Professor George Hackett
Director, In-Service Programs: Assistant Professor Nye Bemis
Associate Director, Clinical Experiences: to be announced
Associate Director, Placement: Assistant Professor Nye Bemis
Associate Director, Research and Development: to be announced

Faculty, Pre-Professional Development Programs: Professors Berry, Neuberger, Rhodes, Soule; Associate Professors Carter, M. Costello, Faulkner, Fickett, Morrill, Slocum; Assistant Professors Allen, Colucci, Cuprak, Davis, Hudson, Lapointe, Lyons, D. Moore, W. Moore, Nannay, Pine, Whiteside, Zaner; Instructors Edwards, O. Rogers.

Faculty, Advanced Study Programs: Professors Cobb, Downey, Mitchell, Philippi, Southworth, Stearns; Associate Professors Chronister, Hackett, Malik, Milbury, O'Donnell, C. Smith, Walker, J. Whitten; Assistant Professors Bemis, Crosby, Hayes, Kaple, Littlefield, Massey, Morris.

BACCALAUREATE PROGRAMS IN TEACHER EDUCATION

The College of Education concerns itself with direct preparation of school teachers and with providing professional courses for students in any college of the University who wish to meet teacher certification requirements.
All curricula and programs require four years for completion. Upon graduation, the student receives the Bachelor of Science degree and the proper teaching certificate. The University prepares teachers in the following course programs:

**Kindergarten-Primary, Elementary**

The Kindergarten-Primary curriculum qualifies students to teach in kindergarten through grade eight, with emphasis on kindergarten through grade three. A detailed description of this program is provided on the following pages of this section of the catalog.

The Elementary curriculum qualifies graduates to teach grades kindergarten through eight with emphasis on grades four through six. A detailed description of this program is provided on the following pages of this section of the catalog.

Both Elementary Majors and Kindergarten-Primary Majors are required to complete a basic core of courses which meet the General Education Requirements and which are especially adapted to meet the general educational needs of teachers of children at the elementary or kindergarten-primary levels.

**Secondary (7-12)**

The Secondary curriculum qualifies graduates to teach grades seven through twelve in the fields of biology, economics, English, French, general science, history, mathematics, theatre/communication, and social studies. Specific preprofessional courses which students in the Secondary Curriculum must include in their 30-hour General Education core, together with a listing of required and limited-elective courses in the Professional Education Curriculum for Secondary Majors, are provided on the following pages of this section of the catalog. The academic major, minor, and area-concentration programs are provided by the appropriate departments of the College of Arts and Sciences, and descriptions of those programs will be found under the relevant departmental headings of that portion of the catalog devoted to the College of Arts and Sciences.

Secondary Education students with majors or minors in English, History, or the Social Sciences area must achieve at least six credits with grades of B or better in such majors or minors. No grades of D will count toward fulfillment of the major or minor requirements. No required course may be repeated more than once.

**Art**

Graduates of the program are qualified to teach or supervise art in all grades of the public schools. All information about the Art Education curriculum is provided under the Art Department heading in the section of the catalog dealing with the College of Arts and Sciences.

**Music**

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 field 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 Maine Education curriculum is provided under the Music Department heading in this section of the catalog dealing with the College of Arts and Sciences.

**Industrial Arts**

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 of the catalog.
Vocational-Technical Education

This is a part-time evening and summer program leading to a B.S. degree with a major in Vocational-Technical Education or in Technology. A detailed description of this program is provided on the following pages of this section of the catalog.

PHYSICAL EDUCATION REQUIREMENTS
FOR ALL EDUCATION MAJORS

Students in the College of Education are required to complete one year 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. A student enrolled in CED and not matriculated in the day program. However, if a student changes from CED status to day-college status, the Physical Education requirements must be completed unless other exemptions are applicable.
5. The Dean of the College may waive the Physical Education requirements for other reasons reflecting unusual circumstances.
6. Successful completion of a Physical Education proficiency examination.

A carbon copy of the letter exempting the student will be sent to the student, faculty adviser, and registrar.

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; and only one course in the 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 director and the dean is required.

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

PROGRAMS FOR ELEMENTARY MAJORS
AND KINDERGARTEN-PRIMARY MAJORS

Both Elementary Majors and Kindergarten-Primary Majors are required to complete the following basic core of courses which meet the General Education Requirements and which are especially adapted to meet the general educational needs of teachers of children at the elementary or kindergarten-primary levels.
Core Requirements for Elementary and Kindergarten-Primary Majors

<table>
<thead>
<tr>
<th>Basic Core:</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td></td>
</tr>
<tr>
<td>ENG 120—Introduction to Literature, or ENG 200—Topics in Literature, plus one course in a foreign language, Philosophy, English, Comparative Literature, or Classics.</td>
<td>6</td>
</tr>
<tr>
<td>Fine and Applied Arts</td>
<td></td>
</tr>
<tr>
<td>Any electives from Art (ARTH or ARTS prefixes), Music, Dance, Communication, or Theatre.</td>
<td>6</td>
</tr>
<tr>
<td>Science</td>
<td></td>
</tr>
<tr>
<td>Electives.</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>MS 151, MS 231, and MS 232. A Mathematics elective will be substituted if MS 131 is passed through a proficiency test.</td>
<td>9</td>
</tr>
<tr>
<td>Social Sciences</td>
<td></td>
</tr>
<tr>
<td>Electives from Anthropology, Political Science, Psychology, Sociology, History, Geography, Economics.</td>
<td>6</td>
</tr>
<tr>
<td>Interdisciplinary Courses</td>
<td></td>
</tr>
<tr>
<td>(Or any academic courses in addition to the major or minors)</td>
<td>6</td>
</tr>
<tr>
<td>Physical Education</td>
<td></td>
</tr>
<tr>
<td>The equivalent of one complete year (two semesters)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>41</td>
</tr>
</tbody>
</table>

Professional Education for Kindergarten-Primary and Elementary Education Majors

Each student in the Kindergarten-Primary or Elementary Education Program is required to complete a minimum of 37 credit hours in professional education, as follows:

- EDU 150 and 151 Pre-Professional Experiences
- EDU 200 Studies in Foundations of Education
- *EDU 300 or 301 Curriculum
- *EDU 302 or 303 Reading
- *EDU 304 or 305 Teaching Mathematics
- *EDU 306 Teaching Elementary Science
- *EDPY 333 Children's Literature
- EDU 336 Human Growth and Development
- EDU 324 Student Teaching

* These education courses must be completed prior to student teaching.

Additional Requirements for Kindergarten-Primary and Elementary Education Majors

In addition to the general and professional requirements, each Kindergarten-Primary and Elementary Education Major is required to complete at least one approved major of 30 credits OR two approved minors of 18 credits each. At least one minor must be in an academic area, and the other minor may be either in an academic, education, or a physical education area.

Courses taken to meet the General Education requirements may also be included to meet the requirements for majors and minors.

Descriptions of the courses in the approved programs for 30-credit majors and 18 credit minors are located under the appropriate department headings of the College of Arts and Sciences, College of Education, or Division of Physical Education.
Approved programs:

### College of Arts and Sciences

**Majors:**
- English
- History
- Mathematics
- Science
- Social Science
- Economics

**Minors:**
- English
- Geography
- History
- Mathematics
- Music
- Science
- Social Science

### College of Education

**Major:**
- Language-Communications

**Minors:**
- Language-Communications
- Learning Disabilities

### Division of Physical Education

**Major:**
- None

**Minor:**
- Physical Education
- Leadership

Students should consult with an adviser when selecting courses to complete a major or minor.

### 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 201 Current Economic Problems
- ECON 350 Comparative Economic Systems
- ECED 300 Economic Concepts and Resource Materials

**Elective Courses:**
- 6 hours of electives from any of the remaining Economics courses.

*(NOTE: This is a 21-hour minor.)*

### English Major and Minor

An English major 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** World 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.

History Major and Minor

A History major of 30 credits or a minor of 18 credits consists of courses elected from the History course offerings.

Mathematics Major and Minor

A Mathematics major 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 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.

The minor in Music Education is comprised of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 100</td>
<td>3</td>
</tr>
<tr>
<td>MUS 130-131</td>
<td>6</td>
</tr>
<tr>
<td>MUS 132-133</td>
<td>2</td>
</tr>
<tr>
<td>MUED 200</td>
<td>3</td>
</tr>
<tr>
<td>MUED 322</td>
<td>3</td>
</tr>
<tr>
<td>MUS 150-151</td>
<td>2</td>
</tr>
</tbody>
</table>

The minor in Music Education Program requires a total of 24 hours.

Science Area Major and Minor

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 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

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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

Social Science Major and Minor

A Social Science major 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.

Language Communications Major and Minor

Options

A. 30-hour concentration (major)
   (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 concentration (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 Speech Correction Methods

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
EDFY 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 of 18 credit hours consists of the following sequence of courses:

**Required:**

- EDU 316 Introduction to Learning Disabilities 3

**Electives:**

- EDPE 308 Physical Education for the Atypical Child 3
- EDU 321 Atypical Reading 3
- EDU 363 Emotional Problems of the Exceptional Child 3
- EDU 366 Practicum in Learning Disability Problems 3-6
- EDU 367 Psycholinguistics 3
- EDU 368 Introduction to Speech Correction 3

Physical Education Leadership Minor

A Physical Education minor of 18 credits may be completed by successfully completing the following required courses:

**Required:**

- EDPE 298 First Aid and Safety 2
- EDPE 310 Human Growth and Development Lab 1
- EDPE 304 Methods and Materials for Teaching Physical Education 3
- EDPE 401 Practicum in Physical Education Leadership 3

A minimum of 9 credits are to be successfully completed from the following courses:

**Elective Courses:**

- EDPE 216 Analysis of Human Movement 3
- EDPE 306 Movement Education in the Elementary School 3
- EDPE 309 Rhythms and Motor Activities 3
- EDPE 300 Camp Leadership 3
- EDPE 308 Physical Education for the Atypical Child 3
- EDPE 398 Independent Study in Physical Education 1-3

**ALTERNATIVE INTERN PROGRAMS**

A full year teaching internship is a cooperative teacher education program for Kindergarten-Primary and Elementary Education Majors that the College of Education shares with participating school districts. Interns earn up to 36 academic credits while teaching in local schools for a full school year. 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.

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.

**Other General Requirements:**

Students majoring in the Kindergarten-Primary 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.

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.
PROGRAMS IN SECONDARY EDUCATION

The secondary curriculum qualifies graduates to teach grades seven through twelve in the fields of biology, economics, English, French, general science, history mathematics, theatre/communication, and social studies. The academic major, minor, and area-concentration programs are provided by the appropriate departments of the College of Arts and Sciences, and descriptions of those programs will be found under the relevant departmental headings of that portion of the catalog devoted to the College of Arts and Sciences. The Social Science Area program is described in the subsection dealing with the Geography-Anthropology Department, and the Science Area program (including both physical and biological sciences) is described in the section dealing with Physical Sciences and Engineering.

Students in the College of Education may also obtain an academic major or minor in Economics, as described in this catalog in the section dealing with the School of Business and Economics.

General Education Requirements for Secondary Majors

As part of the 30-hour general education core required of all students, Secondary Majors must meet the following specific pre-professional requirements:

A. A three-credit course in either ENG 120 Introduction to Literature or ENG 200 Topics in Literature.

B. Three credit-hours in psychology.

Departmental courses in the student’s major area may not be applied towards fulfillment of the general education core requirements.

Professional Education Curriculum for Secondary Majors

Students may elect one of two patterns to complete this part of their program.

PATTERN A

Professional Studies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 150-151</td>
<td>Pre-Professional Experiences</td>
<td>4</td>
</tr>
<tr>
<td>EDU 200</td>
<td>Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>EDU 333</td>
<td>Human Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>EDU 315</td>
<td>Methods of Teaching in the Secondary School or a</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Methods course in a specific discipline</td>
<td></td>
</tr>
<tr>
<td>EDU 324</td>
<td>Student Teaching</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>

PATTERN B

Professional Studies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 150-151</td>
<td>Pre-Professional Experiences</td>
<td>4</td>
</tr>
<tr>
<td>EDU 200</td>
<td>Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>EDU 333</td>
<td>Human Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>EDU 315</td>
<td>Methods of Teaching in the Secondary School or a</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Methods course in a specific discipline</td>
<td></td>
</tr>
<tr>
<td>EDU 324</td>
<td>Student Teaching</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

Plus three semester-hours of electives from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 150</td>
<td>Pre-Professional Field Experiences</td>
</tr>
<tr>
<td>EDU 314</td>
<td>Introduction to Secondary Education</td>
</tr>
<tr>
<td>EDU 306</td>
<td>Secondary Reading</td>
</tr>
<tr>
<td>EDU 310</td>
<td>Preparation of Classroom Materials</td>
</tr>
<tr>
<td>EDU 313</td>
<td>Maine School Law</td>
</tr>
<tr>
<td>EDU 319</td>
<td>Measurement and Evaluation</td>
</tr>
<tr>
<td>EDU 323</td>
<td>Independent Study in Education</td>
</tr>
<tr>
<td>EDU 327</td>
<td>Seminar in Secondary Education</td>
</tr>
</tbody>
</table>

**Total** 22
COURSES IN EDUCATION

EDU 150-151 Pre-Professional Experiences  
Required for all freshmen education majors, this two-semester course will be an exploratory opportunity designed to assist students in maximizing their educational experience and to look at their future options. Each student will be assigned to a committee for advising, resources and evaluation (C.A.R.E.). Such questions as “Do I really want to teach?” “Are there other options for education majors?” “How can I test out my potential—whether it is right for me—early enough to change direction?” will be explored. (Pass-Fail only.)  
Two credit hours

EDU 152 Pre-Professional Field Experiences  
An exploratory introduction to education through direct involvement with youth in public schools or educative agencies. At least two hours per week of field work, including seminars as necessary, in the school setting. An elective primarily for sophomores with enrollment limited according to transportation and available opportunities. Transportation not provided. (Pass-Fail only.)  
Two credit hours

NOTE: A student, with permission, may continue this course for subsequent semesters under course code numbers EDU 153, and 154.

EDU 200 Studies in Educational Foundations  
This course offers a multi-disciplinary and open-ended approach to the study of education. Topics and resource units (social, historical, and philosophical in perspective) have been selected and prepared to allow students the freedom to explore, both independently and in group settings, educational issues, questions, and concerns. Students enrolled in this course will be placed in a learning environment designed (1) to elicit critical thinking, (2) to examine assumptions and beliefs regarding education, and (3) to test personal commitment to education. Open to sophomores and others who have not met requirements of an introductory course in Foundations, such as the previously offered course in American School. No prerequisites.  
Three credit hours

EDU 300 Primary Curriculum: Methods and Materials  
A core course which analyzes curriculum, methods, and materials from kindergarten through third, with special attention to language arts and social studies. Topics include programming, types of curricula, evaluation, development of units, lesson planning, grouping, sociometric procedures, reporting to parents, analysis of textbooks, and audio-visual techniques. Observation, participation, and supplementary guest speakers. Includes preprofessional experiences.  
Three credit hours

EDU 301 Elementary Curriculum: Methods and Materials  
A basic course which emphasizes language arts and social studies in the intermediate grades. Includes programming, types of curricula, evaluation, development of units, lesson planning, grouping, sociometric procedures, reporting to parents, analysis of textbooks, and audio-visual techniques. Observations and resource speakers are included. Includes pre-professional experiences.  
Three credit hours

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.  
Three credit hours
EDU 303 Elementary Reading
Fickett
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 a reading lesson.
Three credit hours

EDU 304 Teaching Primary School Mathematics
Staff
Techniques for teaching mathematics in primary grades. Includes preparation and laboratory use of materials, analysis of current textbooks, and exposure to experimental programs. Includes pre-professional experiences. Prerequisite: MS 232
Three credit hours

EDU 305 Teaching Elementary School Mathematics
Allen
Developing techniques for teaching mathematics to intermediate grade pupils. Major consideration will be given to the philosophy of teaching mathematics, comparing various curricula of the subject, developing organized lessons, using techniques for evaluating the aims of the lessons, and exploring ways to enrich the mathematics curriculum. Field experiences in the public schools will be an integral part of the course. Prerequisite: MS 131.
Three credit hours

EDU 306 Secondary Reading
Walker
This course places emphasis upon developmental, corrective, adaptive, and remedial readings. Methods of teaching reading in the secondary school and reading instruction as it applies to the content areas.
Three credit hours

EDU 308 Teaching Elementary Science
Neuberger
Problems and methods of teaching science and health. Current practices and teaching materials are emphasized and evaluated. Includes pre-professional experiences.
Three credit hours

EDU 309 Selection and Utilization of Education Media
Milbury, Ordway
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. Class limited to 30.
Three credit hours

EDU 310 Preparation of Classroom Instructional Materials
Davis, Milbury
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. Classes limited to 18. No prerequisite: Lab fee $7.50.
Three credit hours

EDU 312 Teaching Language Arts in Elementary School
Costello
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.
Three credit hours

EDU 313 Maine School Law
Cobb
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.
Three credit hours

EDU 314 Introduction to Secondary Education
Staff
Secondary Curriculum will be an effort to model a teaching-learning process that emphasizes that each person learns only what that individual needs and wants to know. Thus the student will be presented with a number of behaviors...
that might be perceived as appropriate for a teacher and permitted to select those objectives and methods of achieving these objectives that most closely meet individualized needs. The student will consider philosophy, objectives, motivation, learning theory, evaluation, methods, school administration and organization, school law, et al.

EDU 315 Teaching English in the Secondary School
A methods course for English majors preparing to enter secondary teaching, Grades 7-12. Students are familiarized with current developments in the “new English” as evidenced by recent theory and practice. Practical applications include special projects in the teaching of language, literature, composition, and reading. Students are given opportunities for firsthand observation of secondary English classrooms in the greater Portland area; workshops and conferences with visiting junior and senior high school teachers; tutorial assignments as University “Writing Laboratory” aides; and mastery of basic skills in the use of audio-visual equipment before actual classes.

EDU 316 Introduction to Learning Disabilities
This course is designed to expose the prospective teacher to typical learning problems that manifest themselves in typical, as well as atypical, classrooms.

EDU 317 Teaching Social Studies in the Secondary School
The course deals with the role of the social studies teacher as an agent of change, prompting sensitivity, procedure, method, and concern. It presents new concepts, methods, and materials in the professional dimensions of social studies instruction.

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.

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.

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.

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, dyslexia, Frostig materials, and Vallett materials. Includes pre-professional experiences.

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.
EDU 323 Independent Study in Education  Rhoades, Staff

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.

Credit hours to be arranged

EDU 324 Student Teaching  Staff

Full-time student teaching during the senior year is provided under supervision in off-campus situations for all who meet prerequisites. Students are assigned to Elementary or Secondary schools or other educative agencies for one half semester. It is recommended that all Elementary students pursue two quarters consecutively. During the second quarter, students usually enroll in a full-time program of courses. This provides opportunity to teach according to choice in a different situation each quarter. Opportunities include Kindergarten-Primary, Elementary, Secondary, Art, Music, Industrial Arts, Theatre/Communication, and Trade and Industry. Prerequisites vary according to major field of study. See curriculum listings in the catalog. Six or twelve credit hours

EDU 325 Seminar in Primary Education  Pine, Staff

Consideration of such critical problems in primary education as school law in relation to the primary teacher; grouping and individual differences; basic organization of student teaching; the primary teacher in relation to community, school, and state. Faculty members from special areas as well as visiting lecturers participate.

Two or three credit hours

EDU 326 Seminar in Elementary Education  M. Costello, Staff

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. Prerequisite: enrollment in EDU 324 Student Teaching.

Two or three credit hours

EDU 327 Seminar in Secondary Education  Littlefield, Staff

A group discussion concerned with student teachers' questions and answers.

Two credit hours

EDU 328 Teaching Family Life and Sex Education  Bemis

A philosophical, physiological, and methodological approach to family life and sex education in the schools. Major topics dealing with human sexuality will be discussed. Perspectives, methods and materials, program planning, and curriculum development will be included.

Three credit hours

EDU 330 Teaching Biology in the Secondary School  Dorsey

A course designed primarily for students preparing to teach biology in the secondary school. Emphasis is placed on advances in the secondary biology curricula, notably the Biological Sciences Curriculum Study approaches. A major portion of the course work is devoted to the laboratory exercises and techniques which typify the investigative approach of these curricula. Simulated situations in the teaching of biology will be employed.

Three credit hours

EDU 336 Children's Literature  Morris

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, a presentation of methods of individualizing reading. The student will be expected to read children's books widely and in depth.

Three credit hours

EDU 350 Modern Philosophies of Education  Chronister, Whitten

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. Prerequisites: Open to Juniors and Seniors who have completed EDU 200 or equivalent, or a course in general Philosophy.

Three credit hours
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: Open to Juniors and Seniors who have completed EDU 200 or equivalent. Three credit hours

EDU 352 The Role of Education in Social Change  
A critical examination of four basic types of social change procedures, with emphasis on the theories that support each, the possible effects of each on persons and the general social order, and the socio-psychological conditions that give rise to social change. The case-study method is used in examining the basic types; theoretical literature is used to provide a working fund of knowledge on the nature of social systems. Three credit hours

EDU 360 Teaching the Child Under Six  
Philosophy, curricula, methods, and materials of the pre-school child and his teachers. Extensive observation and field experience are integral parts of the program. Three credit hours

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. Three credit hours

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. Three credit hours

EDU 368 Introduction to Speech Correction  
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. Three credit hours

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.) Three credit hours

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. Three credit hours

EDU 499 Introductory Photograpy  
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. No prerequisite. Class limited to 15. Lab fee: $12.50 per person. Three credit hours
ECED 300 Economic Concepts and Resource Materials
Witherill
A study of the simplification of economic 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. Prerequisites: ECON 101, 102, and 350, plus junior standing in the School of Education. Three credit hours

EDPY 331 Group Dynamics
Staff
A study of the nature of group process and one's own functioning in a group. Problems of leadership, roles filled, and techniques will be integral parts of the course. The developing awareness of one's self in relation to others in a group will be of importance. Specific techniques will include reading, leadership of other groups, and participation in a seminar planned to aid in the exploration of leadership styles of self and others. Open to upper class undergraduates and graduate students. Three credit hours

EDPY 332 Psychology of the Self
Staff
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 extensive reading, common class experiences, and intensive small-group interaction. Three credit hours

EDPY 333 Human Growth and Development
D. Moore, M. Whiteside
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. Three credit hours

EDPY 335 Educational Psychology
M. Whiteside
Basic principles, techniques, and research in Educational Psychology. Special consideration given to the learning process, perception, motivation, individual differences, and measurement, with reference to the facilitation of effective teaching and learning. A one-semester course open to upperclass students. Three credit hours
Industrial Arts

Purposes

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 program is to provide non-teaching majors an opportunity to develop general technical proficiencies along with a basic knowledge of business administration, leading to middle management positions in industry.

A B.S. degree with a major in Industrial Arts or in Technology will be granted upon successful completion of the following requirements:

REQUIRED OF BOTH
TEACHER EDUCATION MAJORS AND 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: 27 credit hours total
(Each course listed carries 3 credits.)
- IA 100 Manufacturing and Construction
- IA 101 Energy and Transportation
- IA 130 Graphic Communication
- 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 OF TEACHER EDUCATION MAJORS

Professional Education Courses: 25 credit hours total
- EDU 150-4 Pre-Professional Field Experiences 4 credits
- EDU 335 Educational Psychology 3 credits
- IAED 380-381 Curriculum Methods and Materials 6 credits
- EDU 324 Student Teaching and Seminar 12 credits

(Minimum 2.5 cumulative index required in order to register for EDU 324)

Teaching Area Options

Teacher Education majors have four teaching area options, one of which must be selected prior to entrance to the junior year. Each student should plan the program with the adviser. The teaching areas are I—Laboratory of Industries, II—Energy and Transportation, III—Graphic Communication, IV—Manufacturing and Construction. The following tabulation indicates the number of credit hours a student should take in each of the teaching areas, as selected from the list of technical electives below.

<table>
<thead>
<tr>
<th>I. Laboratory of Industries</th>
<th>II</th>
<th>III</th>
<th>IV</th>
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<tbody>
<tr>
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<td>6</td>
<td>6</td>
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<tr>
<td>II. Energy and Transportation</td>
<td>12</td>
<td>3</td>
<td>6</td>
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<tr>
<td>III. Graphic Communication</td>
<td>3</td>
<td>12</td>
<td>6</td>
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<tr>
<td>IV. Manufacturing and Construction</td>
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<td>6</td>
<td>12</td>
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TECHNICAL ELECTIVES
FOR BOTH TEACHER EDUCATION MAJORS
AND TECHNOLOGY MAJORS

<table>
<thead>
<tr>
<th>II—Energy and Transportation</th>
<th>III—Graphic Communication</th>
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<tbody>
<tr>
<td>IA 311 Communications Electronics</td>
<td>IA 332 Architectural Drawing and Design</td>
</tr>
<tr>
<td>IA 312 Computer Technology</td>
<td>IA 333 Descriptive Geometry</td>
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<tr>
<td>IA 313 Electrical Construction</td>
<td>IA 342 Photo-Offset Lithography</td>
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<tr>
<td>IA 321 Automotive Systems</td>
<td>IA 343 Communications Design</td>
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<tr>
<td>IA 322 Automotive Diagnosis and Tuneup</td>
<td>IA 434 Industrial Production Illustration</td>
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<tr>
<td>IA 413 Instrumentation</td>
<td>IA 435 Systems Analysis and Design</td>
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<tr>
<td>IA 414 Digital Electronics</td>
<td>IA 444 Photographic Reproduction</td>
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<tr>
<td>IA 423 Fluid Power</td>
<td>IA 445 Color Reproduction Theory</td>
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<td>IA 424 Fluid Power Systems</td>
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<tr>
<th>IV—Manufacturing and Construction</th>
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<tbody>
<tr>
<td>IA 351 Machining and Fabrication</td>
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<tr>
<td>IA 352 Fabrication and Forming</td>
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<tr>
<td>IA 361 Production Manufacturing in Wood</td>
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<tr>
<td>IA 362 Residential Construction</td>
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<tr>
<td>IA 363 Wood Science</td>
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<tr>
<td>IA 370 Crafts Technology</td>
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<tr>
<td>IA 371 Plastics Technology</td>
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<tr>
<td>IA 452 Metallurgy and Metrology</td>
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<tr>
<td>IA 472 Materials Testings (Metals/Wood)</td>
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</table>
REQUIRED OF TECHNOLOGY MAJORS

Additional Course in General Education: 3 credit hours
EDU 200 Studies in Foundations of Education

Business Administration and Economics: Elect 18 credit hours
(Electives from the following 3 credit courses)

<table>
<thead>
<tr>
<th>Economics</th>
<th>Cost Accounting</th>
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<tbody>
<tr>
<td>Accounting</td>
<td>Finance</td>
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<tr>
<td>Industrial Management</td>
<td>Industrial Relations</td>
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<tr>
<td>Marketing</td>
<td>Human Relations</td>
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</tbody>
</table>

Technical Electives: 24 credits from the groups above.
Minimum of two courses in each group

Special Problems: 2 credit hours

INDUSTRIAL ARTS CURRICULUM

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>English (Elective)</td>
<td>6</td>
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<tr>
<td>Mathematics (Elective)</td>
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<tr>
<td>Science (Elective)</td>
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<tr>
<td>Physical Education</td>
<td>1</td>
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<tr>
<td>EDU 150-4</td>
<td>Pre-Professional Field Experiences</td>
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<tr>
<td>IA 130</td>
<td>Graphic Communication</td>
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<tr>
<td>IA 100</td>
<td>Manufacturing and Construction</td>
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<tr>
<td>IA 101</td>
<td>Energy and Transportation</td>
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<tr>
<td>IA 231</td>
<td>Technical Graphics</td>
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<tr>
<td>Sophomore Year</td>
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<tr>
<td>Fine and Applied Arts (Elective)</td>
<td>6</td>
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<tr>
<td>Humanities (Elective)</td>
<td>3</td>
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<tr>
<td>IA 210</td>
<td>Electronics Technology</td>
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<tr>
<td>IA 220</td>
<td>Power Technology</td>
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<tr>
<td>IA 241</td>
<td>Graphic Arts Technology</td>
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<tr>
<td>IA 250</td>
<td>Metal Technology</td>
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<td>IA 260</td>
<td>Wood Technology</td>
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<tr>
<td>IA 270</td>
<td>Modern Industry</td>
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<tr>
<td>Social Science (Elective)</td>
<td>3</td>
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<tr>
<td>Junior Year (Teacher Education Majors)</td>
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<tr>
<td>Social Science (Electives)</td>
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<tr>
<td>Area 5: General (Electives)</td>
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</tr>
<tr>
<td>EDU 335</td>
<td>Educational Psychology</td>
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<tr>
<td>IAED 360-381</td>
<td>Curriculum Methods and Materials</td>
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<tr>
<td>Junior Year (Technology Majors)</td>
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<td>Social Science (Elective)</td>
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<tr>
<td>Industrial Arts Technical (Electives)</td>
<td>12</td>
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<tr>
<td>Senior Year (Teacher Education Majors)</td>
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<tr>
<td>EDU 324</td>
<td>Student Teaching and Seminar</td>
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<tr>
<td>General Education (Electives)</td>
<td>6</td>
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<tr>
<td>Industrial Arts Technical (Electives)</td>
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<tr>
<td>Special Problems (Elective)</td>
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<tr>
<td>Senior Year (Technology Majors)</td>
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<tr>
<td>Industrial Management (Elective)</td>
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<tr>
<td>Marketing (Elective)</td>
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<tr>
<td>Industrial Relations (Elective)</td>
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</tbody>
</table>
An opportunity is provided junior and senior Industrial Arts majors to participate in a clinical training program provided by Veterans Administration 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
Nanney
Concepts of Energy and Power related to the areas of muscle, water, wind, solar, nuclear, chemical, combustion, electricity; and with the World of Transportation, the areas of land, water, and space. Students will be involved with group and individual constructional activities to facilitate the study of such energy sources and transportation vehicles, facilities, and networks. Required for all first year students. Prerequisite: Permission of instructor.
Three credit hours

IA 210 Electronics Technology
Slocum
Review of basic network theory; AC networks; theory and use of electrical measuring instruments; semiconductors, diodes, and transistors; basic communication circuits. Prerequisite: Permission of instructor.
Three credit hours

IA 220 Power Technology
Carter
A study of those industries concerned with power; its sources, generation, transmission, and control. Applications of power in the fields of manufacturing construction and transportation are considered and developed. Emphasis is placed on thermal engines — theory, construction, operation, maintenance, and service. Prerequisite: Permission of instructor.
Three credit hours

IA 311 Communication Electronics
Slocum
Detailed study of common communication circuits, including audio equipment, AM-FM radio, television, and radar; integrated circuit technology and application. Prerequisite: IA 210.
Three credit hours

IA 312 Computer Technology
Slocum
Introduction to programming and use of University computing facilities; principles of logic design of digital equipment; social, industrial, and psychological consequences of the computer revolution. Open to all upper-level students.
Three credit hours

IA 313 Electrical Construction
Slocum
Modern electrical construction and wiring practices utilizing the National Electrical Code. Motors, controllers, and residential wiring will be stressed. Field study of industrial electrical construction and maintenance procedures, as well as commercial and new residential buildings. Prerequisite: IA 210.
Three credit hours

IA 321 Automotive Systems
Carter
The study of the automobile and its systems. Theory, design and construction, operation, maintenance, testing, and service included. Utilization of prime movers and devices common to all fields of transportation explored and considered. Prerequisite: IA 220 or permission of instructor.
Three credit hours

IA 322 Automotive Diagnosis and Tune-up
Carter
The study of automotive systems. Analysis and diagnosis. Tune-up and servicing included. Opportunities for independent research and problem solving provided. Prerequisite: IA 321 or permission of instructor.
Three credit hours
IA 413 Instrumentation
Introduction to the study of sensing devices and instruments necessary to observe and control both manufacturing processes and the performance of mechanical and electrical machinery. Emphasis on pressure in liquids, atmospheric pressure, temperature, indicating instruments, mechanical and electrical transducers, potentiometric devices, and other monitoring instruments. Prerequisite: IA 210.

Three credit hours

IA 414 Digital Electronics
Semiconductor junction theory; special devices such as SCR's, FET's; digital electronics, including switching theory and applications. Prerequisite: IA 210.

Three credit hours

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.

Three credit hours

IA 424 Fluid Power Systems
Application of fluid power and fluidic systems to manufacturing and construction industries. Prerequisite: IA 423 or permission of instructor.

Three credit hours

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.

Three credit hours

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. Multi-view projections, pictorial techniques, primary and secondary auxiliaries, detail and assembly working drawings, and reproduction techniques. Contemporary industrial practices and processes. Prerequisite: Permission of instructor.

Three credit hours

IA 241 Graphic Arts Technology
A study of the common reproduction systems utilized 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: Permission of instructor.

Three credit hours

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 231 or equivalent and permission of instructor.

Three credit hours

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 231 or permission of instructor.

Three credit hours
IA 342 Photo Offset Lithography  
Morrill  
A study of those industries utilizing photo-offset lithography with emphasis upon camera work, stripping, platemaking, and presswork. Photographic conversion of line and halftone copy, photo-screen stencils, and finishing procedures are also included. Prerequisite: IA 241 or permission of instructor.  
Three credit hours

IA 343 Communications Design  
Morrill  
An introduction to the principles of layout and design in preparing camera copy for lithographic reproduction. Emphasis on design elements and fundamentals, manuscript and illustration preparation, graphic and photographic techniques, and production specifications. Prerequisite: Permission of instructor.  
Three credit hours

IA 434 Industrial Production Illustration  
Faulkner  
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 reproduction. Engineering and architectural problems. Prerequisite: IA 231 or permission of instructor.  
Three credit hours

IA 435 Systems Analysis and Design  
Faulkner  
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 333 and permission of instructor.  
Three credit hours

IA 444 Photographic Reproduction  
Morrill  
Photographic concepts, processes, and techniques utilized in graphic arts reproduction. Experience in contact printing, continuous tone enlarging, use of filters and color separations. Prerequisite: IA 342 and permission of instructor.  
Three credit hours

IA 445 Color Reproduction Theory  
Morrill  
Advanced study in the additive and subtractive theories of color reproduction. Experiences in photographic separation and offset press printing of color originals. Emphasis on understanding physiological and psychological responses to color. Prerequisite: IA 342 and permission of instructor.  
Three credit hours

MANUFACTURING AND CONSTRUCTION

IA 100 Manufacturing and Construction  
Nannay  
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. Required of all first-year students. Prerequisite: Permission of instructor.  
Three credit hours

IA 250 Metal Technology  
Moore  
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: Permission of instructor.  
Three credit hours

IA 260 Wood Technology  
Zaner  
Structure of wood and its relation to moisture, strength properties, and working qualities. Wood-based materials: veneer, plywood, particleboard, hardboard will be considered. Basic skills in hand and machine processes will be developed. Emphasis on research and experimentation and basic processes in the wood manufacturing industry. Safety practices. Prerequisite: Permission of instructor.  
Three credit hours
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 and permission of instructor. Three credit hours

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. Consideration is also given to plumbing. Group and individual problems and activities. Prerequisite: IA 250 or permission of instructor. Three credit hours

IA 361 Production Manufacturing in Wood

Production and wood manufacturing problems including 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. Three credit hours

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. Three credit hours

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. Three credit hours

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: Permission of instructor. Three credit hours

IA 371 Plastics Technology

Pattern and mold design and construction; thermo-forming, injection-molding, reinforced plastics, blow molding, foam and plastisol forming. Theory and application of thermoplastic and thermo-set principles. Prerequisite: IA 250 or IA 260 and permission of instructor. Three credit hours

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: IA 250 and permission of instructor. Three credit hours

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 250 or 260 and permission of instructor. Three credit hours

INDUSTRIAL ARTS EDUCATION

IA 270 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. Prerequisite: Permission of instructor. Three credit hours

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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.

Two credit hours

IAED 380 Curriculum Methods and Materials

Evaluation of contemporary curriculums in industrial arts. Development of long and short range plans, with emphasis on unit preparation and performance-based objectives. Task analyses for teaching skills and concept development.

Organization for individualized sequence prior to student teaching. Prerequisite: Basic technical core: EDU 335 and IA 270.

Three credit hours

IAED 381 Curriculum Methods and Materials


Three credit hours

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.)

Three credit hours

Vocational Technical Education

A part-time Evening and Summer program designed to:

a) prepare instructors for the teaching of vocational-industrial 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. (TECHNOLOGY)

A B.S. degree with a major in Vocational-Technical Education or in 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.

A. General Education .................................................. 45 credit hours
   Humanities ............................................... 6
   Fine and Applied Arts .............................................. 6
   Science and Mathematics .......................................... 15
   Social Sciences .................................................. 6
   IVE 360 Modern Industry ......................................... 3
   Area 5: General .................................................. 9

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 ............... 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
   IVE 400 Occupational Experience, verified maximum
   (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

Technology Major
   (To be taken in place of professional education) .............. 27 credit hours
   IVE 300 Occupational and Trade Analysis ....................... 3
   IVE 325 Conference Leading ...................................... 3
   Business Administration ..................................... 18 credit hours
   (Electives from following areas)
   Economics .......................................................... Cost Accounting
   Accounting .......................................................... Finance
   Industrial Management .......................................... Industrial Relations
   Marketing .......................................................... Human Relations

   IVE 460 Independent Study in Vocational Education .......... 3
   IVE 350 Philosophy of Vocational Education ................... 3

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IVE 300  Occupational and Trade Analysis  Staff
Identification of occupational or trade fields, units, operations, and items of related information.  Three credit hours

IVE 305  Curriculum Development in Vocational Education  Staff
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.  Three credit hours

IVE 310  Methods and Materials of Instruction in Vocational Education  Staff
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.  Three credit hours

IVE 315  Learning and Programmed Instruction  Staff
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.  Three credit hours

IVE 320  Coordination of Cooperative Education  Staff
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.  Three credit hours

IVE 325  Conference Leading  Staff
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.  Three credit hours

IVE 330  Principles and Practices of Vocational Guidance  Staff
Discussion and study with the intent to develop a better understanding of principles and objectives of Vocational Guidance.  Three credit hours

IVE 331  Practicum—Vocational Guidance  Staff
Field experiences in identification of content and relevant information for vocational counseling. Individual and group activity, visitations, tours, and career counseling techniques.  Three credit hours

IVE 340  Shop Organization and Management  Staff
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.  Three credit hours

IVE 350  Philosophy of Vocational Education  Staff
A survey of the history and philosophy of vocational education in the United States with emphasis upon recent developments.  Three credit hours

IVE 360  Modern Industry  Staff
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.  Three credit hours
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.  Three credit hours

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.  Three credit hours

IVE 420 Trends in Vocational Education  
Identification, analysis, and discussion of major problems and trends in vocational education.  Three credit hours

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, and controlling vocational programs on the local level.  Three credit hours

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.  Three credit hours

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.  Three credit hours

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 advisor.  Three credit hours
School of Business and Economics

JOHN W. BAY, Dean

Department of Associate Business Administration: Associate Professors S. Andrews, Annett, McKell (Chairman), Instructor Gold.

Department of Business Administration: Professors Findlay (Chairman), Fitzpatrick, Waters; Associate Professors Hall, Jagolinzer; Assistant Professors B. Andrews, Chandler, Hodson, Manck; Lecturer Plowman.

Department of Economics: Professor Durgin; Associate Professors Bay, McMahon, Witherill; Assistant Professor Bien (Chairman).

The School of Business and Economics 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. 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

This program 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, communications, public speaking, human relations, and mathematics. Options within the associate program include
Management-Accounting; Hotel, Motel, and Restaurant Management; and Real Estate (offered only in CED).

The Hotel, Motel, and Restaurant Management option is a cooperative and coordinated two-year Associate Degree program developed jointly by Southern Maine Vocational-Technical Institute and the Department of Associate Business Administration at the University. The program draws upon the core business curriculum of this University, the culinary arts curriculum of SMVTI, and industry advisors for the program. The program is flexible and will respond to the developing needs of the hospitality and tourist industry in Maine. The program is designed to allow Maine people to assume positions of responsibility in the industry. Graduates would be prepared for such diverse jobs as motel managers, food and beverage managers, stewards, reservations managers, restaurant managers, convention and special events coordinators, hotel innkeepers, general managers, and other supervisory or mid-management positions.

Students may enter the Hotel, Motel, and Restaurant Management program at either SMVTI or UMPG. If admitted to the UMPG program, the student, upon successful completion of sixty (60) credit hours, will receive an Associate of Science degree in Business Administration with a major in Hotel, Motel, and Restaurant Management. UMPG students take approximately three semesters at UMPG and one semester at SMVTI.

THE THREE 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.

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.

Students admitted to the Associate Degree Program pursue one of the following options during their two years:

Management-Accounting Option

First Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 011 and BUS 012</td>
<td>Principles of Accounting</td>
<td>6</td>
</tr>
<tr>
<td>ECON 011 and ECON 012</td>
<td>Principles of Economics</td>
<td>6</td>
</tr>
<tr>
<td>ENG 011</td>
<td>Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENG 120</td>
<td>Introduction to Literature</td>
<td>3</td>
</tr>
<tr>
<td>BUS 095</td>
<td>Business and Society</td>
<td>3</td>
</tr>
<tr>
<td>COM 150 or THE 170</td>
<td>Business Communication</td>
<td>3</td>
</tr>
<tr>
<td>MS 010 and MS 011 or MS 109 and MS 110</td>
<td>Public Speaking</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Elementary and Intermediate Algebra or Linear Systems</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Elementary Math Analysis</td>
<td></td>
</tr>
</tbody>
</table>

Second Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 040</td>
<td>Industrial Management</td>
<td>3</td>
</tr>
<tr>
<td>BUS 060</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BUS 043</td>
<td>Problems of Small Business</td>
<td>3</td>
</tr>
<tr>
<td>BUS 080</td>
<td>Business Law</td>
<td>3</td>
</tr>
</tbody>
</table>
Students wishing to take MS 100/110 or MS 211/212 in the second year may use these as substitutes for BUS 043 and ENG 019. Students who desire to take one or two Real Estate courses may substitute these for BUS 064 or 067; or BUS 016 or 021 or 030.

Real Estate Option—Offered Only in CED

<table>
<thead>
<tr>
<th>First Year</th>
<th>Second Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 011 and BUS 012</td>
<td>Industrial Management</td>
</tr>
<tr>
<td>ECON 011 and ECON 012</td>
<td>Marketing</td>
</tr>
<tr>
<td>ENG 011</td>
<td>Real Estate Law</td>
</tr>
<tr>
<td>ENG 120</td>
<td>Real Estate Practice</td>
</tr>
<tr>
<td>BUS 090</td>
<td>An Introduction to Appraising Real Property</td>
</tr>
<tr>
<td>COM 150 or THE 170</td>
<td>Expository Writing</td>
</tr>
<tr>
<td>MS 010 and MS 011 or MS 109 and MS 110</td>
<td>Problems of Small Business</td>
</tr>
</tbody>
</table>

One of the following courses:

- BUS 095: Business and Society
- BUS 015 or 016: Intermediate Accounting
- BUS 020: Business Finance I
- BUS 064: Retailing
- BUS 067: Sales Management

Hotel, Motel, and Restaurant Management—Option

<table>
<thead>
<tr>
<th>First Year</th>
<th>Second Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 011 and BUS 012</td>
<td>Principles of Accounting</td>
</tr>
<tr>
<td>ECON 011 and ECON 012</td>
<td>Principles of Economics</td>
</tr>
<tr>
<td>ENG 011</td>
<td>Composition</td>
</tr>
<tr>
<td>THE 170</td>
<td>Public Speaking</td>
</tr>
<tr>
<td>ENG 019</td>
<td>Expository Writing</td>
</tr>
<tr>
<td>BUS 095</td>
<td>Business and Society</td>
</tr>
<tr>
<td>MS 010 and MS 011 or MS 109 and MS 110</td>
<td>Elementary and Intermediate Algebra or Linear Systems</td>
</tr>
</tbody>
</table>

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SECOND YEAR

Taken at SMVTI—Fall Semester

Front Office ........................................... 3
Hotel Orientation ...................................... 3
Food Fundamentals ..................................... 3
Food and Beverage Control ........................... 3
Seminar in Management ................................. 3

Spring Semester at Portland Campus

BUS 040  Industrial Management ..................... 3
BUS 060  Marketing ..................................... 3
BUS 043  Problems of Small Business ............... 3
BUS 020  Business Finance I .......................... 3
BUS 093  Human Relations in Business ............... 3

Upon completion of the 60-hour program with a grade-point average of 2.0, a student will be awarded the degree of Associate of Science in Business Administration.

FOUR-YEAR UNDERGRADUATE PROGRAMS
IN BUSINESS AND ECONOMICS

The primary objective of the undergraduate program in Business Administration is to develop the student's abilities to assume the responsibilities of business management. The program is aimed at providing the broad training necessary for successful business management in a rapidly changing economy. No attempt is made to provide detailed specialized training in particular business tasks. The program aims, rather, at developing skills and attitudes of mind that will enable the student to cope successfully with the changing problems of business 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 business management. This is referred to as the "core" program and includes basic courses in accounting, introduction to computers, economics, finance, business law, marketing, and management. Third, the student undertakes to acquire a deeper knowledge of the selected major field. This is accomplished by taking 18 credit hours beyond the core program.

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.

In addition to the traditional four-year programs in accounting, business administration, and economics, the following options are available to the student:

COORDERATIVE EDUCATION PROGRAM

The School of Business and Economics offers a Cooperative Education Program in which students, while working in business or industry, may earn a maximum of 15 academic credits. The program consists of seven academic periods and three alternating related work experiences. This program combines the efforts of employers and educators in forming a meaningful educational experience in a wide range of areas which include management, accounting, production 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 and Economics.

SMALL BUSINESS INSTITUTE

The School of Business and Economics, and The Small Business Administration, a government agency, jointly sponsor a program, The Small Business Institute, whereby Juniors and Seniors provide management counseling to small area businesses. Under the program the students, working as a team, counsel and advise, in cooperation with a faculty adviser and representatives of the SBA, various actual 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 is offered as “Applied Study” and carries three hours of academic credit. Preference is given to Seniors, but Juniors are considered. Interested students should contact Mr. Donald Annett, Project Director.

JOINT PROGRAMS WITH THE SCHOOL OF EDUCATION AND DEPARTMENT OF MATHEMATICS

In cooperation with the School of Education, the School of Business and Economics offers (1) an Economics Major and Economics Minor leading to the degree of Bachelor of Science in Education for students in the School of Education who wish to prepare themselves to teach economics in public and private schools, and (2) a Social Science Area Major with Concentration in Economics leading to the degree of Bachelor of Science in Education for students in Secondary Education wishing to prepare themselves to teach economics in secondary school in addition to other social sciences including history, geography, and political science. This latter program is described in the section of the catalog dealing with the department of Geography-Anthropology, where other Social Science Area majors are listed.

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 AND ECONOMICS FOR ALL CANDIDATES FOR A 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 and Economics, the student must have attained a cumulative grade point average of 2.0 or better:

a. For all courses taken in 4-year programs at the University, and
b. For all 4-year courses in business and economics.

ADDED REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN BUSINESS ADMINISTRATION

A. General Foundation Courses
200 credit hours

Twelve hours of Humanities (Area 1)
Six hours of Fine and Applied Arts (Area 2)
 Twelve 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

B. Core Requirements in Business and Economics
ECON 101 Principles of Economics I
ECON 102 Principles of Economics II
One 300 level ECON course
BUS 101 Introductory Accounting
BUS 320 Business Finance
BUS 340 Elements of Industrial Management
BUS 360 Marketing
BUS 380 Business Law
BUS 385 Business Economics
BUS 390 Introduction to Computers in Business

C. Major Field Requirements
Accounting Major
BUS 301 Intermediate Accounting I
BUS 302 Intermediate Accounting II
BUS 305 Cost Accounting
BUS 310 Advanced Accounting
BUS 410 Auditing
Elect one:
BUS 311 Advanced Accounting
BUS 313 Federal Tax Reporting

Business Administration Major
BUS 102 Financial and Management Accounting
BUS 330 Investment Management
BUS 370 Managerial Marketing
BUS 450 Business Management and Policy
Six hours of Business or Economics Electives

D. Electives

ADDED REQUIREMENTS
FOR A BACHELOR OF SCIENCE DEGREE
IN ECONOMICS

A. General Foundation Courses
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 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 001, Writing Laboratory, or ENG 100, College Writing. Students having difficulty in or 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 Introductory Accounting

Completion of at least 21 additional hours in economics courses, which may include BUS 385, or HIST 338. ECON 150 and ECON 201 are not applicable for major credit in business and economics.

REQUIREMENTS FOR AN ECONOMICS MAJOR OR AN ECONOMICS MINOR FOR STUDENTS IN THE SCHOOL OF EDUCATION

Criteria For Admission And Retention Of Students

Admission to the Education program by the School of Education plus a minimum of “C” grades in Economics courses.

Secondary Education — Economics Major

<table>
<thead>
<tr>
<th>Requirements and Content</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 101 and 102 Principles of Economics</td>
<td>6</td>
</tr>
<tr>
<td>MS 120 Statistical Inference</td>
<td>3</td>
</tr>
<tr>
<td>ECON 301 and 302 Intermediate Micro and Macro Theory</td>
<td>6</td>
</tr>
<tr>
<td>ECON 350 Comparative Economic Systems</td>
<td>3</td>
</tr>
<tr>
<td>EC ED 300 Economic Concepts and Resource Materials for Educators</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional Economic Electives

15

Total 36

Secondary Education — Economics Majors will do practice teaching in the field of economics, if possible, and will meet all other requirements of the University and the School of Education.

Elementary and Secondary Education — Economics Minor

<table>
<thead>
<tr>
<th>Requirements and Content</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 101 and 102 Principles of Economics</td>
<td>6</td>
</tr>
<tr>
<td>ECON 201 Current Economic Problems</td>
<td>3</td>
</tr>
<tr>
<td>ECON 350 Comparative Economic Systems</td>
<td>3</td>
</tr>
<tr>
<td>EC ED 300 Economic Concepts and Resource Materials for Educators</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional Economic Electives

6

Total Credits 21

Economics Minors will also meet all other requirements of the University and the School of Education.

MASTER OF BUSINESS ADMINISTRATION

Since the fall of 1964 the School of Business and Economics has offered a master's degree in Business Administration. The M.B.A. program is designed to give students a broad preparation in business administration upon which men and women may build executive careers. To this end, the curriculum is designed to give each student a proper orientation toward business, to develop skills in using tools of analysis, to provide an understanding of the functional areas of business, and to develop a capacity for understanding and adapting to technological and social change. Candidates who enter with no previous college work in business will typically need from one to one and one-half years to complete
undergraduate prerequisites in business administration. The graduate work may be completed in one calendar year.

Requirements for the M.B.A. degree consist of undergraduate foundation courses of thirty-three semester hours, which are apportioned in the areas of business administration, economics, and mathematics as listed below. These courses must be completed prior to the completion of the first twelve hours of graduate courses. This stipulation means that a student may take some graduate courses prior to completing the undergraduate work in cases where the prerequisites for specific graduate courses are satisfied. The graduate program comprises thirty hours of graduate courses, including twenty-one hours of required core courses and nine hours of electives, selected from the many offerings of the M.B.A. program.

Most of the courses are offered in the evening to facilitate students whose career or family responsibilities prevent their attending a day program. The course offerings and scheduling are directed to these students. Entry in the M.B.A. program is possible at the beginning of either semester or the summer session. There is no thesis requirement, but research and writing are required throughout the graduate program. These writings often develop from solutions to case problems which are used in many of the courses.

ADMISSION

Application for admission to the M.B.A. program should be made to the Dean of the Graduate School. Admission to this program requires the recommendation of the M.B.A. Graduate Admissions Committee at the University, and the approval of the Dean of the Graduate School.

To be admitted, an applicant must have received a baccalaureate degree or its equivalent and must show promise of ability to pursue advanced study and research. This requirement is determined by the M.B.A. Graduate Admissions Committee using the test score (ATGSB), previous college or university work, and the letters of recommendation. All applicants for the M.B.A. program must submit scores obtained on the Admission Test for Graduate Study in Business (ATGSB) which is administered by the Educational Testing Service, Princeton, New Jersey.

For regular admission, the minimum ATGSB test score and undergraduate grade point average (GPA) from an accredited school are 450 and 2.5 (4.0 system) or 450 and 2.75 for the junior, senior years. A weighted average of the ATGSB score and the GPA may be used with a minimum total of 950 points based on the following formula: 200 times the undergraduate GPA (4.0 system) plus the ATGSB score; or at least 1000 points based on the formula: 200 times upper-division GPA (4.0 system) plus the ATGSB score. Conditional admission (described below) may be possible for applicants whose scores are below those prescribed for regular admission.

An application is not complete until all the required transcripts, ATGSB scores, and letter of recommendation are on file in the Office of the Graduate School. Applications should be received by the Graduate School at least six weeks before the date of registration for the semester or summer session in which the applicant wishes to begin his study. All application material becomes the property of the University.

Status

An applicant's admission status will be one of the following:

Regular. Granted to students who have a record of high scholarship in their academic field and about whom there is no question of ability to carry on graduate study. If the applicant has not completed all of the required undergraduate courses, the applicant will be advised in the letter of acceptance that these courses must be completed prior to completing twelve hours of graduate credit.

Conditional. Students whose academic record does not show high scholarship, but are deemed by the Graduate Admissions Committee to show promise of success in the M.B.A. program, may be admitted on a conditional basis. Conditional
basis admission may also be used under other circumstances. The letter of acceptance will contain the conditions which must be met before the student can be reclassified as Regular. If the applicant has not completed all of the required undergraduate courses, the applicant will be advised in the letter of acceptance that these courses must be completed prior to completing twelve hours of graduate credit.

**Special.** This status is assigned to those in the general category of Non-degree Students. Special status is obtained by submitting a request to the Graduate Admissions Committee with supporting evidence of ability to perform graduate level work. Students granted this status will receive a grade but credit will not normally be granted towards the M.B.A. degree at the University.

**Transient.** A person enrolled in any other graduate program at the University or another school may enroll in graduate business administration courses if the required prerequisite courses have been taken. A request for transient status shall be made to the chairman of the M.B.A. program.

**MASTER OF BUSINESS ADMINISTRATION**

**Undergraduate Courses Required**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>6</td>
</tr>
<tr>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>Calculus</td>
<td>3</td>
</tr>
<tr>
<td>Economics</td>
<td>9</td>
</tr>
<tr>
<td>Finance</td>
<td>3</td>
</tr>
<tr>
<td>Management</td>
<td>3</td>
</tr>
<tr>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Candidates for the M.B.A. degree must complete twenty-one hours of required graduate courses and nine hours of graduate elective courses prior to the completion of their formal graduate degree program.

**Required Graduate Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations Research</td>
<td>BUS 510</td>
</tr>
<tr>
<td>Industrial Relations</td>
<td>BUS 520</td>
</tr>
<tr>
<td>Senior Executive Decision Making</td>
<td>BUS 530</td>
</tr>
<tr>
<td>Managerial Accounting</td>
<td>BUS 540</td>
</tr>
<tr>
<td>Managerial Economics</td>
<td>BUS 550</td>
</tr>
<tr>
<td>Financial Management</td>
<td>BUS 560</td>
</tr>
<tr>
<td>Marketing Management</td>
<td>BUS 570</td>
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**Elective Graduate Courses**

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<tr>
<th>Course</th>
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<td>BUS 523</td>
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<td>Human Relations in Industry</td>
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<td>Production Management</td>
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<td>Business Cycles and Forecasting</td>
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<td>Investment Management</td>
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<td>Business Logistics</td>
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<tr>
<td>Independent Readings and Research in Business and/or Administration</td>
<td>BUS 593</td>
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</tbody>
</table>

For further information and applications, telephone 773-2981, Extension 206, or write:

Chairman, M.B.A. Program
School of Business and Economics
University of Maine at Portland-Gorham
96 Falmouth Street, Portland, Maine 04103

**MBA GRADE POLICY**

In order to receive graduate degree credit for a course, a student must be registered in the graduate program as a graduate student. Generally, graduate credit will not be granted retroactively for graduate work which was taken as a special student.

A grade of "I" (deficient), a temporary grade given when the student, be-
cause of extraordinary circumstances, has failed to complete required work, must be completed and a grade submitted in the semester following the semester in which the "I" grade was received. An "I" which is not removed during this period becomes an "F".

Withdrawal from a course may be made during the first five weeks of a semester without the course appearing on the transcript. During the second five week period a "W" (withdrawn) grade is given. After the end of the first ten weeks, a student may obtain an approved withdrawal but the grade of "WF" (withdraw falling) or "WP" (withdraw passing) is given. The "WF" grade is treated as an "F" in grade point average computation. The last day to withdraw from a course is the last day of classes.

All courses completed for the MBA must be passed with a minimum grade of "C". A grade of "C" will carry graduate degree credit. However, no student will be allowed to apply more than six hours of "C" grades towards any requirements of the MBA taken after being admitted to the program.

No graduate student may repeat the same course after receiving a grade of "C" or "B" in a course to improve his grade point average.

If a student receives a grade of "D" in a required course, the student must take the course over again. If a "D" grade is received in an elective course, the student may or may not elect to retake the elective course. Whether the course is required or an elective, the "D" grade will be included in the student's grade point average. If the course is repeated, the student must pass the course with a minimum grade of "C". When a course with a "D" grade is repeated the new grade as well as the original "D" grade is figured in the grade point average.

The basis for automatic dismissal is:

The equivalent of three "Cs" or below.
The equivalent of two "Ds" or one "F".

A student enrolled on a conditional basis must obtain a grade point average of 3.0 or better by the time of completion of fifteen hours of graduate courses. At this point, the student must also have satisfied the condition under which the student was admitted to the program. If one or the other of these requirements is not met, the student will be dismissed from the program. If at any time during the first fifteen hours the conditional student's grade point average falls below 3.0, the student will be placed on probation. The probational status must be removed within one academic year or by the completion of fifteen hours of graduate courses, whichever comes first, or the student will be dismissed from the program.

A regular student whose grade point average falls below 3.0 will be automatically placed on a probational status. The student will have nine semester hours in which to bring the grade point average back to the required 3.0. Students who fail to do this, will be dismissed from the program.

A student who has completed the program of study must have a grade point average of 3.0 to receive the M.B.A. degree. Any student whose grade point average falls below 2.0 at any time will automatically be dismissed from the program. Since the grade for a single course cannot be considered an average, this rule will be applied when the student's grades for not less than two courses have become available.

**Transfer of Credit**

A student enrolled in the graduate business administration program may, after completing nine hours of graduate credit, apply to have graduate course credit transferred from other institutions. Generally courses taken while enrolled as a graduate student at other institutions will be accepted when work is "B" grade or better in courses corresponding to those offered by the University and if applicable to the student's program of study.

If students relocate from the Portland area, they may apply to continue their
program at another graduate school of business and have the degree granted by the University. In any case involving transfer credit, a minimum of eighteen (18) hours must be taken at the University in order to obtain the M.B.A. degree from the University. All requests for transfer credit must be approved by the graduate admissions committee. When credit transfer is requested to complete any part of the M.B.A. program at the University it must be requested and approved prior to the enrolling in another graduate school of business and not after the course has been completed.

**DESCRIPTIONS OF COURSES IN THE ASSOCIATE DEGREE PROGRAM**

**BUS 011 Principles of Accounting I**

An introduction to accounting concepts, principles, and practices. Emphasis on the preparation and interpretation of statements for financial and management uses as well as the measurement of assets, liabilities, equity, revenues, and expenses.

McKeil

Three credit hours

**BUS 012 Principles of Accounting II**


McKeil

Three credit hours

**BUS 015 Intermediate Accounting I**

An intensive study of accounting theory including financial statements, the accounting for corporate capital, cash receivables, and current liabilities. Prerequisite: BUS 011 and BUS 012.

Findlay

Three credit hours

**BUS 016 Intermediate Accounting II**

The study of accounting theory including investments, inventories, property, plant and equipment, long-term debt, intangible assets. Prerequisites: BUS 011 and BUS 012.

Findlay

Three credit hours

**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, cash budgeting, and capital budgeting are examined. Prerequisites: ECON 011, ECON 012, and BUS 011.

Gold

Three credit hours

**BUS 021 Business Finance II**

An in-depth examination of selected topics in finance with advanced cases and problems used to relate these topics to the theories and principles developed. Cost of capital and other tools are developed for use in the decision-making process. Prerequisite: BUS 020.

Gold

Three credit hours

**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, easements, fixtures, land descriptions, mortgages, deeds, taxes, contracts, legal elements of brokerage relationship, and other legal applications are covered. This subject provides the first half of an approved course of study for those who wish to prepare for the State of Maine Real Estate Broker’s License Examination. (Offered through C.E.D. only).

Staff

Three credit hours

**BUS 023 Real Estate Practice**

This course reviews the basic functions of the practicing real estate broker. Discussed are such topics as listing and sales procedures, financing, introduction to appraising, construction, taxation, advertising, state regulations on office operation, and real estate mathematics. This course is approved as the second part of an approved course of study for those who wish to be eligible to take the State of Maine Real Estate Broker’s License Examination. (Offered through C.E.D. only).

Staff

Three credit hours
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 through C.E.D. only).  
Three credit hours

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, BUS 011, and BUS 012. Three credit hours

BUS 040 Elements of Industrial 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. Three credit hours

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 businessmen face. Problems relevant to small business operations in Maine will be stressed. Prerequisite: BUS 011. Three credit hours

BUS 060 Marketing  
Problems of distribution for representative industrial and consumer goods, including merchandising policies, selection of distribution channels, price policies, and advertising and sales promotion methods. Prerequisites: ECON 011, ECON 012, and BUS 011. Three credit hours

BUS 064 Retailing  
Study of the retail distribution structure and of the problems involved in successful store operation under current conditions. Prerequisite: BUS 060. Three credit hours

BUS 067 Sales Management  
Analysis of the problems facing marketing management in formulating sales policy and in managing the sales organization. Prerequisite: BUS 060. Three credit hours

BUS 080 Business Law  
This course, an introduction to the study of business law, includes origins of the law, its nature and classification; contract law and the laws of agency and personal property are comprehensively dealt with. Three credit hours

BUS 090 Introduction to Computer 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. Three credit hours

BUS 093 Human Relations in Business  
Introduction to the behavioral sciences, emphasizing typical behavioral problems faced in business by employees and management. The laboratory method of teaching, involving the student in role playing and analyzing collected data, is supplemented with lectures, case analysis, and outside reading. Three credit hours
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.  
Three credit hours

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.  
Three credit hours

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.  
Three credit hours

ENG 011 Composition  
Intensive practice in expository writing, with reading of illustrative material. Students in the ABA program will complete ENG 011 on a pass-fail basis or receive credit by examination.  
Three credit hours

ENG 019 Expository Writing  
Training in clear expository writing of formal reports, business communications, and related material.  
Three credit hours

ENG 120 Introduction to Literature  
(See English Department course offerings)

MS 010 Elementary Algebra  
(See Mathematics Department course offerings)  
Three credit hours

MS 011 Intermediate Algebra  
(See Mathematics Department course offerings)  
Three credit hours

MS 109 Linear Systems  
(See Mathematics Department course offerings)

MS 110 Elementary Mathematical Analysis  
(See Mathematics Department course offerings)

MS 211 Probability  
(See Mathematics Department course offerings)

MS 212 Statistics  
(See Mathematics Department course offerings)

COM 150 Business Communication  
(See Communication Department course offerings)

THE 170 Public Speaking  
(See Theatre Department course offerings)
UNDERGRADUATE COURSES IN THE FOUR-YEAR PROGRAM
IN BUSINESS ADMINISTRATION

BUS 101 Introductory Accounting  
Jagolinzer, Hodson  
An introduction to accounting principles and concepts. Emphasis is placed on the preparation of financial statements and the accounting for assets, liabilities, equities, revenue, and expenses.  
Three credit hours

BUS 102 Financial and Management Accounting  
Jagolinzer, Hodson  
(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 the corporate form of organization, manufacturing operations, cost determinations and controls, analysis of financial statements, changes in financial position, consolidated financial statements, and income tax considerations. Prerequisite: BUS 101.  
Three credit hours

BUS 150 A Survey Of Basic Accounting  
Staff  
This course is designed for use primarily by those who wish to obtain a basic understanding of the accountant's approach to measuring and reporting upon the economic activity, resources, and obligations of a business. The use of this information in decision making is also discussed. Accounting topics are introduced and discussed under the assumption that the student has no prior knowledge of accounting.  
Three credit hours

BUS 190 Personal Finance  
Fitzpatrick  
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 planning. 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 elective credit).  
Three credit hours

BUS 301 Intermediate Accounting I  
Hodson  
An intensive study of accounting theory including financial statements, the accounting for corporate capital, cash, receivables, and current liabilities. Prerequisite: BUS 101.  
Three credit hours

BUS 302 Intermediate Accounting II  
Hodson  
The study of accounting theory including investments, inventories, property, plant and equipment, long-term debt, intangible assets. Prerequisite: BUS 101.  
Three credit hours

BUS 305 Cost Accounting  
Jagolinzer  
The principles and methods of job order costing and process costing, including analysis and allocation of factory overhead. A study of joint and by-product costs. Methods and management use of standard costs. Management decision-making through the use of direct costing and cost volume-profit analysis. Prerequisite: BUS 101.  
Three credit hours

BUS 306 Advanced Cost Accounting  
Staff  
Devoted primarily to a detailed study of management uses of cost data. In addition, budgets, forecasting, and capital budgeting are discussed. Prerequisites: BUS 101 and BUS 102.  
Three credit hours

BUS 310 Advanced Accounting I  
Findlay  
A study of accounting principles and theory related to changes in financial position; partnerships; consignment and installment sales; and receiverships. Prerequisites: BUS 301 and BUS 302.  
Three credit hours

BUS 311 Advanced Accounting II  
Findlay  
A study of accounting principles and theory related to home office and branch accounting; consolidations, mergers, parent and subsidiary accounting; governmental and institutional accounting; estates and trusts. Prerequisites: BUS 301 and BUS 302.  
Three credit hours
BUS 313 Federal Tax Reporting

Federal tax laws as they affect individuals, partnerships, corporations, and related topics. Prerequisite: BUS 101. (Offered only by the Continuing Education Division)

Three credit hours

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.

Three credit hours

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.

Three credit hours

BUS 340 Elements of Industrial 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 101 and ECON 102.

Three credit hours

BUS 346 Personnel Management

The selection, training, and management of personnel in private and public business. 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. (Not offered in 1975-76)

Three credit hours

BUS 348 Industrial Relations

A study of industrial relations patterns in the U.S. Major focus is on the relationship between management and organized labor, and the bargaining, administration, and interpretation of contracts. The problem of dispute settlement and a comparison 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. (Not offered in 1975-76)

Three credit hours

BUS 352 Dynamics of Organization and Behavior

An analysis of business organization and the problems of administrators in an interpersonal setting. Primary emphasis is on the findings of behavioral sciences which are particularly relevant to human relations and adjustment problems in modern organizations. Motivation, leadership, and organization theory as related to work and productivity, and associate topics are also covered. Prerequisite: BUS 340 or BUS 348 or permission of instructor.

Three credit hours

BUS 360 Marketing

Problems of distribution for representative industrial and consumer goods, including merchandising policies, selection of distribution channels, price policies, and advertising and sales promotion methods. Prerequisites: ECON 101 and ECON 102.

Three credit hours

BUS 363 Advertising

The place of advertising in the marketing program. Business cases are analyzed to determine those situations in which advertising may be profitably employed to stimulate primary and selective demand for industrial and consumer goods and services. Prerequisite: BUS 360.

Three credit hours

BUS 368 Sales Management

An analysis of the problems facing marketing management in formulating sales policy and in managing the sales organization. Prerequisite: BUS 360. (Not offered in 1975-76)

Three credit hours
BUS 370 Managerial Marketing

A managerial approach emphasizing the integration of marketing, as an organic activity, with other activities of the business firm. Study is directed toward recognition and appreciation of the problems encountered by top marketing executives in modern business, with a consideration of the policies and procedures that may be followed in their solution. By case analysis and consideration of current marketing literature, students are provided opportunities for development of abilities in solving marketing management problems. Prerequisites: BUS 360 and MS 212.

Three credit hours

BUS 373 Marketing Research

A consideration of marketing research as a tool in the solution of problems in production and distribution. Emphasis on problem formulation, exploratory research, research design, basic observational and sampling requirements, data analysis, interpretation, and sampling. Prerequisites: BUS 360 and MS 212.

Three credit hours

BUS 380 Business Law

This course, an introduction to the study of business law, includes origins of the law, its nature and classification; contract law and the laws of agency and personal property are comprehensively dealt with. Prerequisite: (Junior-Senior status)

Three credit hours

BUS 381 Business Law II

An opportunity to continue the study of Business Law and to complete the study of the Uniform Commercial Code. The course will be largely devoted to the law of negotiable instruments such as checks, notes, drafts, bill of lading and negotiable warehouse receipts. Prerequisite: BUS 380 or BUS 80 with permission of instructor.

Three credit hours

BUS 385 Business Economics

Application of economic analysis to concrete business situations. Emphasis on developing the student's ability to apply economic analysis to the solution of problems faced by business management. Prerequisites: ECON 101 and 102, BUS 101, and MS 110.

Three credit hours

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.

Three credit hours

BUS 391 Electronic Data Processing Systems for Business and Industry

A more in-depth examination of the role of the computer as an aid in managerial decision making. Programming the computer, determination of the user's systems requirements, and applications to typical but varied business operations. Prerequisite: BUS 390.

Three credit hours

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 and Economics with permission.

Five credit hours

BUS 396 Cooperative Education—Business Administration II

Open to Sophomores, Juniors, and Seniors in the School of Business and Economics with permission.

Five credit hours

BUS 397 Cooperative Education—Business Administration III

Open to Juniors and Seniors in the School of Business and Economics with permission. Prerequisites: BUS 395 and 396.

Five credit hours
BUS 410 Auditing
Findlay
A study of auditing philosophy and theory relative to the examination of financial statements and other data. Internal control; auditing standards and procedures; and the legal and ethical responsibilities of the independent auditor. Prerequisite: BUS 301.

Three credit hours

BUS 420 Seminar on Current Developments and Practices in Accounting
Staff
A review of APB opinions, FASB opinion, role of SEC in accounting. Current developments and problems - e.g. legal, social relevancy, etc., and information systems. Prerequisite: BUS 310, senior standing or permission of instructor.

Three credit hours

BUS 421 Investment Analysis
Fitzpatrick
A study of the various methods of predicting the price action of stocks and the stock market. It is based upon technical and theoretical methods of forecasting. It is primarily concerned with the Point and Figure technique. Prerequisite: BUS 320.

Three credit hours

BUS 422 Topics in Investment
Fitzpatrick
An in-depth study of each of the major topics investments. The course is based upon assigned readings, research, and discussion. Prerequisite: BUS 320.

Three credit hours

BUS 450 Business Management and Policy
Waters
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 101 and BUS 102; or BUS 301, BUS 340, and BUS 360.

Three credit hours

BUS 490 Independent Readings and Research in Business
Staff
Selected topics in the various areas of accounting, finance, management, and marketing may be studied and researched on an independent basis. (Not for graduate credit.) Prerequisites: Senior standing and permission of the instructor.

One to six credit hours

BUS 491 Applied Study
Staff
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 and Economics in conjunction with agencies such as the Small Business Administration for an off-campus consultative experience in a business firm or other appropriate institutional setting. Prerequisites: Open to qualified juniors and seniors with approval.

Three credit hours

UNDERGRADUATE COURSES IN THE FOUR-YEAR PROGRAM IN ECONOMICS

ECON 101 Principles of Economics I
Staff
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.

Three credit hours

ECON 102 Principles of Economics II
Staff
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.

Three credit hours
ECON 150 Elementary Economics
McMahon, Witherill
An introduction to economic theory and practice as it applies to the U.S. economy, surveying both macroeconomic (national) and microeconomic (industrial) concepts. Topics discussed include the characteristics of the free enterprise system, income and employment determination, government involvement in economic activity, money and banking, the market mechanism, competition and monopoly, and antitrust policy. For non-majors. Three credit hours

ECON 201 Current Economic Problems
Witherill
An in-depth study and application of economic principles to some of the outstanding economic issues of society. These include: the economics of pollution control; problems of the city— including transportation, metropolitan organization, and finance; and problems of labor — such as automation and unemployment. (Not for major credit in either Economics or Business Administration.) Prerequisite: ECON 101. (Not offered in 1975-76) Three credit hours

ECON 301 Macroeconomic Analysis
Boy
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. Three credit hours

ECON 302 Microeconomic Analysis
Bien
Price, income, and employment theory as tools in the study of economics. Prerequisites: ECON 101 and ECON 102. Three credit hours

ECON 310 Money and Banking
Boy
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. Three credit hours

ECON 320 Labor Economics
Chandler
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. Three credit hours

ECON 330 Government and Business
McMahon
Public policy toward business; government powers and private rights; government aids; regulation of competition and monopoly; public enterprise. Prerequisites: ECON 101 and ECON 102. Three credit hours

ECON 350 Comparative Economic Systems
Durgin
The structures and operating principles of the major contemporary economic systems are examined and compared. Prerequisite: ECON 101. Three credit hours

ECON 351 Economic Systems of the Soviet Union
Durgin
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. Three credit hours

ECON 360 Economic Development
Witherill
The theories and practices of interregional and international economic development. Special attention is given to development problems of emerging nations. Prerequisite: ECON 101. Three credit hours

ECON 370—International Trade
Bien
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. Three credit hours
ECON 380  Public Finance and Fiscal Policy
  McMahon
  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. Three credit hours

ECON 381  State and Local Government Finance
  McMahon
  Development of the federal system; fiscal performance; intergovernmental
  fiscal relations; state and local revenue systems; budgetary practices; state and
  local debt. Prerequisites: ECON 101 and ECON 102. (Not offered in 1975-76).
  Three credit hours

ECON 390  Environmental Economics
  Staff
  A study of the economic principles that underlie the role of the environment
  in the private and public sectors of the economy, with particular emphasis on
  environmental issues in the Maine economy. (Offered only in Lewiston-Auburn
  in 1975-76) Three credit hours

ECON 490  Independent Readings and Research in Economics
  Staff
  Selected topics in the various areas of economics may be studied and researched
  on an independent basis. (Not for graduate credit.) Prerequisites: Senior
  standing and permission of the instructor. One to three credit hours

ECED 300  Economic Concepts and Research Materials for Educators
  Witherill
  A study of the simplification of economics concepts for presentation at ele­
  mentary and secondary grade levels; also the study and preparation of various
  resource materials used in presenting economic concepts at these levels. Prereq-
  uisite: Permission of the instructor. Three credit hours

ECON 399  Regional Economics
  Staff
  A study of the application of theoretical economic analysis to the problems of
  regional and economic planning and development, with special emphasis on the
  Three credit hours

MASTER OF BUSINESS ADMINISTRATION

GRADUATE COURSES

(Offered only by the Continuing Education Division)

BUS 510  Operations Research
  B. Andrews
  A survey of commonly used models and analytical techniques in sophisti­
  cated quantitative-management-decision-making. Mathematical models are developed
  and applied in a wide range of business resource-allocation situations. Topics
  include: queuing theory, decision analysis, inventory theory, simulation, game
  theory, Markov analysis, classical optimization, mathematical programming
  (linear, integer and dynamic), and network analysis. Prerequisite: One course
  in statistics and one course in treating integral and differential calculus.
  Three credit hours

BUS 520  Industrial Relations and Personnel Management
  Chandler
  A comprehensive investigation of the changing pattern of industrial relations
  in the United States. Major emphasis is on the human, social, and economic
  aspects of employer-employee relationships in both union and non-union settings.
  Provides an understanding of and appreciation for the crucial importance of the
  development of sound and flexible personnel policies by top management.
  Among the areas considered are: the changing nature of the labor force; wages,
  salaries, and fringe benefits; hours of work; and the impact of technological
  change on the work force. Prerequisite: one course in management or indus­
  trial relations. Three credit hours

BUS 523  Collective Bargaining
  Chandler
  Discusses the major issues and problems in the collective-bargaining process.
  Provides the business manager with the knowledge of sound collective bargaining
  attitudes and techniques necessary to achieve a responsible and mature attitude
in his relationship with employee representatives. To this end, major focus is on
the development of the union movement in this country, the changing nature
of public policy toward collective bargaining, and the public responsibility of
both unions and management. In addition, attention is given to the specific tools
of collective bargaining, including strikes, lockouts, grievance procedures, arbi-
tration, mediation, and bargaining strategies and techniques. Prerequisite: BUS
620.

BUS 527 Human Relations in Industry
Waters

This course is designed to acquaint the student with the complex system of
interdependent human, social, technical, and organizational forces which underlie
the feelings, action, and relationships of people in organizations. Such subjects
as leadership theory, organizational theory, individual and group behavior, and
communication theory are presented. Prerequisite: Six hours in business sub-
jects.

Three credit hours

BUS 530 Senior Executive Decision Making
Plowman

Administrative practice at the higher levels of business management, with
major emphasis on long-range executive planning of profit, sales, production,
social goals and objectives, and of strategies and policies to achieve these objec-
tives. Coordinates all executive activities, viewed as tools for use in developing
administrative competence, in the formulation of business policies at the decision-
making level. Prerequisite: BUS 510 or equivalent.

Three credit hours

BUS 533 Production Management
Staff

Development of models and analytical techniques for designing, operating and
maintaining production systems. The quantitative aspects of production analysis
are emphasized. Topics include: forecasting, experimental design, scheduling,
reliability, sampling, statistical quality control, inventory control, assembly line
balancing, machine assignment and job sequencing. Prerequisite: BUS 510.
(Not offered in 1975-76)

Three credit hours

BUS 537 Organizational Behavior in Business
Staff

Emphasis on the importance of the influence process, motivational settings, and
the structural backgrounds of organizational status and social relations. Analysis
through case discussion and readings will develop a conceptual framework for
improving individual decision-making ability with respect to individual, group,
and intergroup problems. Prerequisite: One course in management.

Three credit hours

BUS 540 Managerial Accounting
Findley

Development, analysis, and interpretation of accounting data and financial
statements for managerial control, coordination, and decision-making; emphasis
upon accounting as a tool of management. Topics are developed by utilization of
case studies, problems, and reference material. Prerequisite: Six semester hours
in accounting.

BUS 550 Managerial Economics
Durgin

Application of economic analysis to the management of business enterprises.
Designed to develop the student’s ability to understand and use some of the
important economic concepts, tools, and methods, relevant to operations and
decisions within a business firm. Particular attention is given to the analysis of
market demands, price policy, cost structures and production functions, capital
budgeting, planning, and financing. Prerequisite: Nine semester hours in
economics and a course in introductory calculus.

Three credit hours

BUS 553 Business Cycles and Forecasting
Boy

A theoretical analysis of the basic forces that determine fluctuations in the
level of income. Stabilization policies are examined and evaluated. Basic fore-
casting techniques for the over-all economy and for certain major sectors are
also explored. Prerequisites: six hours in economics and a course in intro-
ductive calculus.

Three credit hours

215
BUS 560 Financial Management
Fitzpatrick
A consideration of management decisions in the administration of corporate funds. Specific areas covered include capital budgeting, inventory control, working capital management, and the cost of capital. The side effects of taxation, depreciation methods, and earnings retention policies are noted. Current capital structure patterns are analyzed and evaluated. Prerequisite: One course in finance.
Three credit hours

BUS 563 Investment Management
Fitzpatrick
Emphasizes analysis and valuation procedures required to determine the investment quality of specific securities. Sets forth criteria for the formulation of a sound investment policy and the selection of investment media to implement it. Develops the techniques of continuing portfolio management and the task of periodic reappraisal. Prerequisite: One course in finance.
Three credit hours

BUS 570 Marketing Management
Waters
This course is organized to give the graduate student an opportunity to develop and test, through the case method, a number of marketing policies and strategies. Furthermore, the student will read and discuss the current literature in the field of marketing, reviewing current marketing practices and predictions for the balance of the century. Prerequisite: One course in marketing.
Three credit hours

BUS 573 Market Research and Analysis
Monck
A study of the procedure and applications of market research. Such areas as the organization and operation of a research department, survey methods, experimentation, measurement of potential demand, and the analysis of distribution costs are considered. Emphasis on developing the student's ability to apply these and other techniques toward the solution of marketing problems. Prerequisites: BUS 570 and one course in statistics.
Three credit hours

BUS 583 Business Logistics
Plowman
Explores in-depth the need for and means of centralization of decision-making to accomplish effective senior executive control of the chain of logistic activities from point of completion of manufacturing or other form of utility-creating process to delivery at the point of use or consumption. Interdisciplinary relationships with cybernetics, econometrics, operations research, computer-facilitated information analysis, purchasing (materials management) and the customer relations aspect of marketing (physical distribution) reviewed in their role as logistics sub-systems or building blocks. Prerequisite: BUS 510.
Three credit hours

593 Independent Readings and Research in Business and/or Administration
Staff
Selected topics in the area of Business and/or Administration may be studied and researched on an independent basis. Prerequisites: Permission of the instructor and the chairman of Graduate studies in Business is required.
One to three credit hours
Scogis

The School of General and Interdisciplinary Studies

JAMES O'NEIL, Director

SCOGIS is an experiment in undergraduate education which offers unique opportunities for an interdisciplinary approach to learning.

The program has a central thematic which gives focus to the program. An interdisciplinary approach is used to explore the theme, with the expectation that a creative tension among the specialities will enlarge human understanding. This joining of perspectives seeks to bridge the isolation of disciplines.

The program seeks a balance between experimental learning with its emphasis on doing and intellectual learning with its emphasis on conceptual and cognitive states.

For the 1975-1976 school year the theme of Human Ecology will provide the focus for the program's activities. Both the concerns of the broadest nature and regional problems will be addressed with an emphasis on the participants' making reflective value choices.

Interested students are invited to visit SCOGIS, 11 Granite Street (see Portland campus map for the location) or telephone Portland campus extension 478.

SCOGIS COURSES — FALL 1975

SCO 100 Human Ecology: An Interdisciplinary Approach

Ecology, at its heart, is a way of seeing the world: a Mode of Consciousness. This perspective seeks to balance two basic approaches to the world—the world as composed of distinct and isolated things, and the world as contiguous with ourselves. The course will examine these ways of seeing from many approaches: biology, philosophy, sociology, technology, economics, etc. Guest lecturers from these disciplines will lend their resources to the theme. The ecological concerns of the Southern Maine region will be critically examined from this developed perspective, as in the consideration of post-industrial Maine, alternative energy, growth vs. no-growth economy.

SCO 110 Foundations of an Ecological Vision: Human Wholeness and the Environment

The sources which feed an ecological vision are many. Science, art, myths, and philosophy all contribute toward that vision of wholeness. This seminar will critically examine the cultural and historical barriers to a healthy vision of ourselves as embodied beings and to a way of living in the world which transcends alienation. Readings in ecology, phenomenology, literature, and mythology will provide background for intensive individual work in this seminar. Prerequisite: Permission of the Director.

SCO 200 Value Choices in the Southern Maine Region: An Ecological Inquiry

This seminar will explore the ecology of Southern Maine with the specific intent of developing critical value-choices as to the participant's future way of living in Maine. Ecologically sound ways of living require proper choices concerning housing, food production, recycling of waste, job opportunities, etc. The options developed will be applied to individual and community situations. Concrete application of theoretical assumptions will be required of all seminar participants. Prerequisite: Permission of the Director.
University of Maine
School of Nursing

MARY ANN EELLS, Dean

Department of Advanced Medical-Surgical Nursing: Associate Professors Dorbacker, Dubowick, Stone (Chairman); Instructors A. Ellis, Rost; Lecturers Edwards, Haas.

Department of Community Health Nursing: Associate Professors Eells, Jensen, Roscoe; Instructors Grady, Karabin (Chairman), Luther, Perry; Lecturer Hall.

Department of Maternal and Child Nursing: Associate Professor Tryson; Assistant Professor Whitney; Instructors Bellone (Chairman), Mendleson, Fitkin, Tiedemann.

Department of Medical-Surgical Nursing: Associate Professors Malmude, Talbot (Chairman); Assistant Professor Marshall; Instructors Dudac, Tatro, Richards.

Department of Psychiatric Nursing: Associate Professors Cotton (Chairman), Shoobs; Assistant Professors Balber, Tukey; Instructors E. Ellis, MacPherson. Clinical Associate: Flaherty.

Bureau of Continuing Education for Nursing: Mary Ann Rost, Director.

Family Nurse Associates Program: Doris Pennoyer, Director; Mildred Roche, Nurse Director.

The School of Nursing offers a variety of programs to meet student needs. The four-year undergraduate program leads to the Bachelor of Science degree, with the major in nursing. The School's Bureau of Continuing Education for Nursing offers short-term educational programs for practicing nurses throughout the State of Maine. The School also conducts two certificate, post-professional programs, one for Family Nurse Associates, and one for Pediatric Nurse Associates. The School is part of a consortium with Boston University whereby its graduate courses in nursing are offered on the Portland-Gorham campus.

THE BACCALAUREATE PROGRAM IN NURSING

Upon successful completion of the four-year undergraduate program, the degree of Bachelor of Science, with a major in nursing, is awarded. One hundred and twenty credit hours, with a cumulative point average of 2.0, are required for graduation.

The program is designed to prepare a nurse who can (1) make effective responses to the needs of people in providing direct care to people; (2) demonstrate an ability to coordinate care effectively in various settings; (3) identify a personal role as a professional nurse in the community. Nursing is conceived as an art and a developing science concerned with caring and curing. Preparation for professional nursing takes place within the climate of higher education, and builds upon an understanding of man in a bio-social-cultural environment. Excellence in nursing is achieved through the recognition of man's biological, social, and psychological needs, a priority assessment of these needs and effective modes of nursing intervention, and the evaluation of this process.
The first two years of the program consist of courses prerequisite to the clinical courses in nursing, and general education courses required by the University. These two years are offered on three campuses of the University of Maine system: Portland-Gorham, Orono, and Presque Isle. These two years must be completed in full before degree candidates in nursing matriculate for clinical courses in nursing during the junior and senior years on the Portland-Gorham home campus of the School.

Admissions to the undergraduate program are 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. In addition, the Admissions Office implements the policy of the faculty of the School in that policies shall not eliminate an entire category of people, such as high school students, transfers, registered nurses, adult learners, ethnic or religious groups, veterans, and men. Early application is advised because of limited space.

Advanced placement in the undergraduate program is available in several ways. By taking examinations in the College Level Proficiency, one can secure acceptable credit in some of the general and subject examinations. For details, interested persons should contact the Director of Admissions. Credit by examination can be granted in certain courses at the junior level in nursing after admission to the program, provided prerequisite course requirements are met and permission is granted by the chairman of the department offering the course.

In addition to the required University fees and expenses, students of nursing must purchase uniforms (approximately $100) during the sophomore year. They must also have the use of a car during the junior and senior years.

**REQUIREMENTS FOR THE NURSING MAJOR**

The student who matriculates at this campus must attain a cumulative average of 2.0 and a minimum of 60 credits to enter the courses at the junior level of the nursing major. D grades will not count towards fulfillment of the requirements of the clinical courses in the nursing major.

**FRESHMAN YEAR**

<table>
<thead>
<tr>
<th>Required</th>
<th>Required</th>
<th>SOPHOMORE YEAR</th>
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<tbody>
<tr>
<td>BIO 101 Biological Principles</td>
<td>BIO 311 Microbiology</td>
<td>3</td>
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<tr>
<td>BIO 102 Biological Experiences</td>
<td>BIO 312 Microbiology Lab</td>
<td>2</td>
</tr>
<tr>
<td>BIO 111 Human Anatomy and Physiology</td>
<td>FN 352 Human Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>BIO 112 Practical Human Anatomy and Physiology</td>
<td>SOC 101 Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>NSG 100 The Role of the Nurse</td>
<td>ANY 101 or POL 101</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 101 Chemistry for Health Sciences I</td>
<td>SOC Elective</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 102 Chemistry for Health Sciences II</td>
<td>FINE ARTS</td>
<td>or</td>
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<tr>
<td>PSY 101 General Psychology</td>
<td>HUMANITIES</td>
<td>6</td>
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<tr>
<td>and</td>
<td>3 ELECTIVES</td>
<td>9</td>
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<tr>
<td>PSY Elective</td>
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<tr>
<td>FINE ARTS</td>
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<td>29</td>
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<tr>
<td>or HUMANITIES</td>
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<tr>
<td>ELECTIVE</td>
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219
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<tr>
<th>JUNIOR YEAR</th>
<th>SENIOR YEAR</th>
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<tr>
<td>Nursing</td>
<td>Nursing</td>
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<tr>
<td><strong>NSG 301 Medical-Surgical Nursing I</strong></td>
<td>7</td>
</tr>
<tr>
<td><strong>NSG 302 Medical-Surgical Nursing II</strong></td>
<td>7</td>
</tr>
<tr>
<td><strong>NSG 303 Nursing of Mothers &amp; Children I</strong></td>
<td>7</td>
</tr>
<tr>
<td><strong>NSG 304 Nursing of Mothers &amp; Children II</strong></td>
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<td><strong>28</strong></td>
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</table>

In addition to the above, there is a Physical Education requirement of two credits which must be met unless excused in writing by the Dean of the School of Nursing.

**COURSE DESCRIPTIONS**

**NSG 100 The Role of the Nurse**  
A survey of the current and expanding roles of the nurse.  
Three credit hours

**NSG 301 Medical-Surgical Nursing I**  
The nursing care of adults with health problems, present or potential, arising from aging or a pathophysiological condition. The nursing process of assessment, planning, intervention and evaluation is utilized. Learning experiences in the classroom and clinical laboratory are closely correlated with NSG 303/304 for integration of nursing concepts basic to both areas of clinical practice.  
Seven credit hours

**NSG 302 Medical-Surgical Nursing II**  
A continuation of NSG 301.  
Seven credit hours

**NSG 303 Nursing of Mothers and Children I**  
A family-centered approach to the nursing needs of parents and children in community care agencies. Learning experiences in the classroom and clinical laboratory will be closely correlated with NSG 301/302 for integration of nursing concepts basic to both areas of clinical practice.  
Seven credit hours

**NSG 304 Nursing of Mothers and Children II**  
A continuation of NSG 303.  
Seven credit hours

**NSG 400 Advanced Medical-Surgical Nursing**  
Concepts of nursing intervention based on scientific principles. Emphasis is on current trends in clinical nursing and the organizational principles relevant to the leadership role in coordinating the work of others. Prerequisites: NSG 301, NSG 302, NCG 303, and NSG 304.  
Twelve credit hours

**NSG 401 Community Health**  
Concepts and principles basic to the development and maintenance of community health, including theories of ecology, biostatistics, epidemiology, and the organization and delivery of health care.  
Three credit hours

**NSG 402 Community Health Nursing**  
Concepts of community health and the nursing process essential to the practice of nursing in the community.  
Six credit hours

**NSG 403 Psychiatric Nursing**  
The study of psychodynamic concepts and their application to nursing care.  
Six credit hours

**NSG 404 Seminar in Nursing**  
Current problems and issues of the profession.  
Two credit hours
NSG 295 Independent Study in Nursing I
Staff
Individualized study in an area of nursing with the permission of the instructor.
Two to three credit hours

NSG 395 Independent Study in Nursing II
Staff
Individualized study in an area of nursing with the permission of the instructor.
Two to three credit hours

NSG 495 Independent Study in Nursing III
Staff
Individualized study in an area of nursing with the permission of the instructor.
Two to three credit hours

FN 352 Human Nutrition
Jensen
Body metabolism and requirements for nutrients by normal individuals. Pre-requisites: CHEM 101, CHEM 102 or equivalent, and BIO 111.
Three credit hours

THE BUREAU OF CONTINUING EDUCATION FOR NURSING

The overall objective of the Bureau is to provide educational programs for nurse practitioners 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 the nurse practitioner, 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.

As part of the School of Nursing, the Bureau of Continuing Education for Nursing offers counseling and program guidance to registered nurses interested in pursuing part-time study prior to matriculation into the School of Nursing. Program information may be obtained by contacting Mary Ann Rost, Director, B.C.E.N., University of Maine at Portland-Gorham, Portland campus, 773-2981, Extension 478.

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-supervised clinical practice in community health facilities.

Program information may be obtained by contacting Dr. Doris Pennoyer, University of Maine at Portland-Gorham, Portland campus, 773-2981, Extension 416.

GRADUATE EDUCATION IN NURSING

The University of Maine School of Nursing and Boston University School of Nursing have established a consortium whereby Boston University's graduate programs are made available on the Portland-Gorham campus. Interested persons holding the prerequisite baccalaureate degree in nursing should contact directly: Dean Evelyn Elwood, Graduate Studies, Boston University School of Nursing, 635 Commonwealth Avenue, Boston, Massachusetts 02215 (tel. 617-353-3445).
The Division of Physical Education and Intercollegiate Athletics comprises two departments: the Department of Physical Education, and the Department of Recreation. Certain faculty members from the Division are also assigned the responsibility of organizing and coaching the various Intercollegiate and Intramural Athletic activities for men and women.

The Intercollegiate Athletic programs, as well as the many Recreation/Leisure Activities available to all students, are described under “Student Life and Activities,” one of the major introductory sections of this catalog.

The faculty and academic programs of the Department of Physical Education are described on the lower part of this page and on the immediately following pages, before the descriptive information concerning the Department of Recreation.
DEPARTMENT OF PHYSICAL EDUCATION

Professor Richard A. Costello; Associate Professors Paula D. Hodgdon (Coordinator of Women's Athletics), Jeanette L. Goodwin (Coordinator of Women's Dance), Joey Bouchard; Instructors Pat Raybould, David Drew.

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 are numbered PE 100 to PE 197 and may be used to satisfy the Physical Education requirements of the School of Education or the School of Nursing. 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, or for four-year Business Administration majors in the School of Business and Economics.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>PE 103</td>
<td>Physical Fitness</td>
</tr>
<tr>
<td>PE 105</td>
<td>Weight Training</td>
</tr>
<tr>
<td>PE 107</td>
<td>Trampoline</td>
</tr>
<tr>
<td>PE 108</td>
<td>Camping</td>
</tr>
<tr>
<td>PE 110</td>
<td>Canoeing</td>
</tr>
<tr>
<td>PE 112</td>
<td>Cycling</td>
</tr>
<tr>
<td>PE 113</td>
<td>Cross-Country</td>
</tr>
<tr>
<td>PE 114</td>
<td>Snow-Shoeing</td>
</tr>
<tr>
<td>PE 116</td>
<td>Hiking</td>
</tr>
<tr>
<td>PE 121</td>
<td>Mountaineering I</td>
</tr>
<tr>
<td>PE 122</td>
<td>Mountaineering II</td>
</tr>
<tr>
<td>PE 134</td>
<td>Basketball for Women</td>
</tr>
<tr>
<td>PE 135</td>
<td>Field Hockey for Women</td>
</tr>
<tr>
<td>PE 137</td>
<td>Tumbling</td>
</tr>
<tr>
<td>PE 179</td>
<td>Folk Dance</td>
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<tr>
<td>PE 180</td>
<td>Dance</td>
</tr>
<tr>
<td>PE 181</td>
<td>Modern Dance</td>
</tr>
<tr>
<td>PE 182</td>
<td>Fencing</td>
</tr>
<tr>
<td>PE 184</td>
<td>Golf</td>
</tr>
<tr>
<td>PE 186</td>
<td>Jogging</td>
</tr>
<tr>
<td>PE 188</td>
<td>Lacross for Women</td>
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</tbody>
</table>

CERTIFICATE PROGRAM IN ATHLETIC COACHING FOR MEN AND WOMEN

This program is designed to prepare interested students in handling certain coaching responsibilities in the public schools of Maine. 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 care and prevention 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)

<table>
<thead>
<tr>
<th>Required Courses:</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 203 Athletic Training (Care and Prevention of Injuries)</td>
<td>3</td>
</tr>
<tr>
<td>PE 314 Organization and Administration of Athletics</td>
<td>3</td>
</tr>
<tr>
<td>PE 391 Field Experience in Coaching</td>
<td>1-3</td>
</tr>
</tbody>
</table>

223
### Elective Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FE 302</td>
<td>Coaching Philosophy and Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>FE 303</td>
<td>Coaching Basketball</td>
<td>3</td>
</tr>
<tr>
<td>FE 305</td>
<td>Coaching Track and Field</td>
<td>3</td>
</tr>
<tr>
<td>FE 311</td>
<td>Coaching Soccer</td>
<td>3</td>
</tr>
<tr>
<td>FE 312</td>
<td>Coaching Football</td>
<td>3</td>
</tr>
<tr>
<td>FE 315</td>
<td>Coaching Field Hockey</td>
<td>3</td>
</tr>
<tr>
<td>FE 316</td>
<td>Coaching Volleyball</td>
<td>3</td>
</tr>
<tr>
<td>FE 318</td>
<td>Coaching Gymnastics</td>
<td>3</td>
</tr>
<tr>
<td>FE 331</td>
<td>Coaching Golf</td>
<td>1</td>
</tr>
<tr>
<td>FE 332</td>
<td>Coaching Tennis</td>
<td>1</td>
</tr>
<tr>
<td>FE 333</td>
<td>Coaching Skiing</td>
<td>1</td>
</tr>
<tr>
<td>FE 334</td>
<td>Coaching Cross Country</td>
<td>1</td>
</tr>
<tr>
<td>FE 335</td>
<td>Coaching Softball and Baseball</td>
<td>3</td>
</tr>
</tbody>
</table>

### PROFESSIONAL COURSES IN PHYSICAL EDUCATION

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor(s)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 202</td>
<td>Current Health Issues</td>
<td>Costello</td>
<td>Three</td>
</tr>
<tr>
<td></td>
<td>The aim of this course is to help students</td>
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<tr>
<td></td>
<td>grow in scientific health knowledge,</td>
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<td></td>
<td>develop desirable health attitudes,</td>
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<td></td>
<td>improve health practices, and solve</td>
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<tr>
<td></td>
<td>individual and group health problems.</td>
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<tr>
<td>PE 203</td>
<td>Athletic Training</td>
<td>Drew, Sullivan</td>
<td>Three</td>
</tr>
<tr>
<td></td>
<td>Care and prevention of athletic injuries;</td>
<td></td>
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<td></td>
<td>the use of proper field equipment,</td>
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<td></td>
<td>support methods, therapeutic modalities,</td>
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<td></td>
<td>pharmacology in athletics, and training</td>
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<tr>
<td></td>
<td>techniques.</td>
<td></td>
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<tr>
<td>PE 207</td>
<td>Gymnastics</td>
<td>Staff</td>
<td>One</td>
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<tr>
<td></td>
<td>To develop skills, techniques, and</td>
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<tr>
<td></td>
<td>understandings for competency in</td>
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<tr>
<td></td>
<td>conditioning exercises, tumbling apparatus,</td>
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<td></td>
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<tr>
<td></td>
<td>and free exercise.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE 208</td>
<td>Folk and Square Dance Workshops</td>
<td>Staff</td>
<td>One</td>
</tr>
<tr>
<td></td>
<td>A beginning, intermediate, and advanced</td>
<td></td>
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<tr>
<td></td>
<td>affiliation program with the Maine Folk</td>
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<tr>
<td></td>
<td>Dance Camp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE 209</td>
<td>Officiating Basketball</td>
<td>Staff</td>
<td>Two</td>
</tr>
<tr>
<td></td>
<td>Study and discussion of the rules as well</td>
<td></td>
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<tr>
<td></td>
<td>as practical experience in the techniques</td>
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<td></td>
<td>of officiating basketball. Practical and</td>
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<td></td>
<td>written tests will be given. Students</td>
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<td></td>
<td>completing this course will have the</td>
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<tr>
<td></td>
<td>opportunity to take officials' examinations.</td>
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<tr>
<td>PE 210</td>
<td>Officiating Field Hockey</td>
<td>Hodgdon</td>
<td>Two</td>
</tr>
<tr>
<td></td>
<td>Study and discussion of the rules of field</td>
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<td>hockey as well as practical experience in</td>
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<td></td>
<td>the techniques of officiating. Practical</td>
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<td>and written tests will be given. Opportunity</td>
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<td>to become a rated official.</td>
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<tr>
<td>PE 215</td>
<td>Posture and Figure Control</td>
<td>Raybould, Willard</td>
<td>One</td>
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<tr>
<td></td>
<td>Posture appraisal and programs developed</td>
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<td>to assist individuals attain better</td>
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<tr>
<td></td>
<td>posture and figure control.</td>
<td></td>
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<tr>
<td>PE 302</td>
<td>Coaching Philosophy and Fundamentals</td>
<td>Costello</td>
<td>Three</td>
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<td>This course will cover various approaches</td>
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<td>to planning, organizing, and implementing</td>
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<td>practice sessions in preparation for</td>
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<td></td>
<td>athletic competition. The psychological</td>
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<td>and emotional aspects of coaching will also</td>
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<td></td>
<td>be covered. One segment of the course will</td>
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<td>be concerned with society's view of</td>
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<td>coaching as illustrated by today's literature.</td>
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<tr>
<td>PE 303</td>
<td>Coaching Basketball, Philosophy and Methods</td>
<td>Raybould, Bouchard</td>
<td>Three</td>
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<tr>
<td></td>
<td>Emphasis on the methods of teaching and</td>
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<tr>
<td></td>
<td>coaching basketball. Offense and defense,</td>
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<td>coach-player relationship, team selection,</td>
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<td>planning of practice sessions, and game</td>
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<td>situations will be areas of concentration.</td>
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</table>
PE 305 Coaching Track and Field, Philosophy and Methods
Martin
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. (Offered in alternate years)
Three credit hours

PE 311 Coaching Soccer, Philosophy and Methods
Bouchard
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. Two hours lecture, two hours lab per week.
Three credit hours

PE 312 Coaching Football, Philosophy and Methods
Sullivan
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.
Three credit hours

PE 314 Organization and Administration of Athletics
Costello, Hodgdon
This course covers the principles and practices of athletic administration as related to elementary, junior and senior high schools. Areas of concentration will be travel, scheduling, supplies, equipment, facilities, budget, and personnel.
Three hours lecture per week.
Three credit hours

PE 315 Coaching Field Hockey, Philosophy and Methods
Hodgdon
Analysis of the techniques and methods of coaching field hockey with emphasis on stick work, team strategy, and practice organization.
Three credit hours

PE 316 Coaching Volleyball, Philosophy and Methods
Willard
Fundamentals of individual skills, team strategy, practice organization, and team play are emphasized.
Three credit hours

PE 318 Coaching Gymnastics, Philosophy and Methods
Breton
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.
Three credit hours

PE 324 Dance Methods and Materials for Teaching
Goodwin
Theory and practice of methods of teaching dance on elementary, secondary, college, and professional levels; concentrated technique in the individual's movement vocabulary; exploration of movement sequences; elements of movement qualities.
Three credit hours

PE 331 Coaching Golf, Philosophy and Methods
Costello
A concentrated course dealing primarily with team selection, match strategy, scheduling, equipment, and basic fundamentals of golf instructional techniques.
One credit hour

PE 332 Coaching Tennis, Philosophy and Methods
Martin
A concentrated course with emphasis on match strategy, player selection, and instructional techniques for individual and team play.
One credit hour

PE 333 Coaching Skiing, Philosophy and Methods
Staff
A concentrated course emphasizing the methods of team selection, race strategy, and instructional techniques. (Offered in alternate years)
One credit hour

PE 334 Coaching Cross Country, Philosophy and Methods
Martin
An eight-week course of study with emphasis on training techniques, race strategy, and practice organization.
One credit hour

PE 335 Coaching Baseball and Softball, Philosophy and Methods
Bouchard
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.
Three credit hours
**PE 391 Field Experience in Coaching**  
Staff  
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: Permission of instructor. One to three credit hours

**PE 397 Adapted Physical Education for the Physically Handicapped**  
Sullivan  
Designed to bring both handicapped and unhandicapped students together to participate in such sports as table tennis, badminton, shuffleboard, basketball, bowling, and physical fitness activities. First of its kind offered at this University.  
Three credit hours

**PE 399 Man and Movement**  
Folsom  
Stresses the acquisition of knowledge and understanding about participation in physical activity. Primary emphasis on the student's physical and organic development understandings. Lab experiments. Provides a background of the scientific principles underlying physical activity.  
Two credit hours

**PE 406 Survey of Movement and Dance in Education**  
Goodwin  
A background of the history and development of modern dance heritage. Folk, square, modern dance forms, including techniques and teaching composition of each form. Course is also designed to include the place of dance in education.  
Three credit hours

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**PHYSICAL EDUCATION LEADERSHIP COURSES**

**EDPE 298 First Aid and Safety**  
Breton, Drew  
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.  
One credit hour

**EDPE 216 Analysis of Human Movement**  
Raybould  
A study of major skeletal bones and muscle groups; posture appraisal, development, and correction; and application of the principles of mechanics to body movement. Opportunity for posture appraisal of elementary children provided.  
Three credit hours

**EDPE 300 Camp Leadership**  
Drew  
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.  
Three credit hours

**EDPE 304 Methods and Materials for Teaching Physical Education**  
Staff  
A basic course for prospective teachers to acquaint them with the various areas of Physical Education. Topics include: philosophy and objectives of PE, rhythms, dance, and movement exploration; basic motor skills and activities; first aid and safety; outdoor education; posture; program planning; and PE for atypical children. Practical experience with children will be included. Three credit hours

**EDPE 306 Movement Education in the Elementary School**  
Goodwin  
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.  
Three credit hours
EDPE 308 Physical Education for the Atypical Child
Costello, Sullivan
This course is planned to help the student understand adaptive physical education for the physically and mentally handicapped child. The emphasis will be on the educable mentally retarded child in the special education class. Activities covered include games, relays, tumbling, apparatus, swimming, bowling, and activities geared to assist learning in the cognitive areas. The investigation of the causes and incident of mental retardation is also included. Three credit hours

EDPE 309 Rhythms and Motor Activities
Bouchard, Goodwin
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.
Three credit hours

EDPE 401 Practicum in Physical Education Leadership
Staff
Provides opportunity for group thinking and discussion on problems of organization, administration, and conduct of programs of physical education and intramural activity in the elementary school. Provision for the students to work individually or in small groups toward the solution of problems of their own choosing. Special attention will be given to the problems of student teachers and to the leadership role in organization an elementary school program.
Three credit hours

EDPE 398 Independent Study in Physical Education
Staff
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. Prerequisite: Permission of the instructor. One to three credit hours

DANCE
Dance instruction is offered through “The Modern 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

DNCE 300 Contemporary Dance I
Goodwin
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. Permission of instructor required.
One credit hour

DNCE 301 Contemporary Dance II
A continuation of DNCE 300.
Goodwin
One credit hour

DNCE 302 Contemporary Dance III
A continuation of DNCE 301.
Goodwin
One credit hour

DNCE 303 Contemporary Dance IV
A continuation of DNCE 302.
Goodwin
One credit hour

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Department of Recreation

Professor James V. Sullivan; Associate Professor Robert Folsom (Chairman); Assistant Professors Liliette Breton, Thomas Martin, Nancy Willard.

The Portland gymnasium is home base for the varied activities of the Recreation Department. Three large, separate gymnasiums are available, plus a multi-purpose room, an exercise room, a dance room, two racquetball or handball courts, and two squash courts. Each of the locker rooms offers ample shower facilities and a sauna.

COMMUNIVERSITY LEISURE-LEARN PROGRAM

The Recreation Department sponsors the U.M.P.G. Communiversity Leisure-Learn adult recreation program. This program is designed to make the Portland gymnasium facilities available to the general public, alumni, staff, faculty, and students during many hours of off-peak student demand. Programs of adult fitness, skills instruction, clinics, and tournaments are all a part of Leisure-Learn.

For information regarding fees and time schedules, contact the Recreation Office at the Portland gymnasium.

LEISURE TIME CENTER FOR THE HANDICAPPED

The Recreation Department also sponsors the Leisure-Time Center for the Handicapped. This center is located in the Portland gymnasium and is in cooperation with the City of Portland Parks and Recreation Department. It provides opportunities for creative use of leisure for the handicapped who are physically unable to participate with the non-handicapped. Both students and the general public may participate.

COURSES IN RECREATION

Courses in Recreation may be used to meet the University's general education requirements (under area V).

REC 100 Posture and Efficiency of Movement

An introduction to exercises that help maintain good posture and correct faulty habits. Efficiency in the use of the body for lifting, carrying, and performing various recreational sports movements are emphasized. Requirement for nursing students. Lecture, 1 hour; laboratory, 1 hour. Eight weeks One-half credit hour

REC 101 Recreational Activities

This course includes instruction in several sports activities. Students may choose the activity that best fits their time schedules. Each activity class is designed to accommodate the student, including open enrollment (the student may enter the class at any time during the semester with the instructor's permission), and variable credits (one-half to one credit hour depending on time spent in class).

Each activity is taught to meet the needs of the student. Beginners receive instruction in fundamentals while advanced students have more opportunity to participate in game situations. Pass-Fail only.
Credits in this course may be used to satisfy the Physical Education requirement in the College of Education and in the School of Nursing.

Activities available:
- Advanced Lifesaving
- Archery
- Badminton
- Bowling
- Chinese Goju-Do
- Figure Skating
- Fly Fishing
- Gymnastics
- Handball
- Horsemanship
- Karate
- Racquetball
- Road Running
- Sailing
- Scuba Diving
- Self Defense
- Ski Touring
- Slimnastics
- Swimming
- Squash
- Tennis
- Yoga

Laboratory, 2 hours

One-half to one credit hour, each activity

REC 204 Problems in Recreation and Sports Clubs
This course will discuss all the relevant problems associated with the organization and administration of programs in leisure activities for individuals in educational institutions, community programs, large office complexes, etc. These problems include the organization of activities, financial responsibilities, publicity and public relation efforts. Three Hours Lecture. Three credit hours

REC 205 Rhythmic Activities
An introduction to basic dance tempos including folk, social, and square dances. Co-ed. Two Hours Lab. One credit hour

REC 209 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. Two credit hours

REC 300 Introduction to Recreation/Leisure Trends
Goals for American Recreation studied in modern context; implications for the profession; historical background, concepts of work, leisure, recreation; trends, issues, and future directions. Three credit hours

REC 310 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 (cardio-vascular 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 Lecture. Three Hours Lab. Two credit hours

REC 311 Recreation Activities for Atypical Individuals and Groups
Adaptation of recreational activities to meet the needs of handicapped individuals in hospitals and other organizations offering recreational programs for handicapped. Emphasis on the basic principles of recreation. Three credit hours

REC 410 Independent Study
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 previous course experiences. By permission. Credit hours to be arranged
THE ALUMNI ASSOCIATION OF THE UNIVERSITY OF MAINE AT PORTLAND–GORHAM

ANNE M. THERIAULT, Executive Director
BERTHA F. HIGGINS, Associate Executive Director

The Alumni of UMPG are now banded into a single, unified alumni organization serving not only the graduates of today's dual-campus university, but also the graduates of the various institutions which became renamed and then merged, as the years went by, into what is now known as UMPG.

The Alumni Association of the University of Maine at Portland-Gorham now enrols more than 13,000 members, representing alumni of Gorham Normal School, Gorham State Teachers College, Portland Junior College, Portland University, the University of Maine in Portland, Gorham State College, Gorham State College of the University of Maine, and the University of Maine at Portland-Gorham.

For several years after the academic merger of the University of Maine programs at Portland and at Gorham, the alumni organizations at the two locations maintained separate identities, although they cooperated in more and more joint activities of benefit to the alumni during this transitional period. By May, 1975, the need for separate alumni organizations no longer seemed apparent, and the two existing alumni associations merged into a single, unified organization.

Although there is only one alumni organization, an alumni office is maintained on each campus. The Gorham Campus Alumni Office is located in Robie Hall, a building in which a large proportion of campus residents lived throughout their college years. Robie Hall was constructed in 1897 and still preserves the home-like qualities that have endeared it to generations of former students. Accordingly, it provides an almost ideal setting as a center for alumni hospitality.
The Portland Campus Alumni Office is located in the UMPG Alumni Center, built in 1803 as the farmhouse for the Deering Estate, and now being gradually restored by alumni efforts as an alumni center whose furnishings and general interior appearance will reflect the cozy feeling of a farm dwelling of the early post-Revolutionary period.

The Alumni Association of UMPG works from these two centers to expand the tradition of service both to alumni and to the current UMPG community, carrying on a tradition established some 80 years ago at the Gorham campus, and more recently at the Portland campus. On one hand, it keeps alumni in touch with both their former classmates and contemporary developments at UMPG. On the other, it stimulates alumni interest in the intellectual and cultural programs available to them at both Gorham and Portland, and it also helps them to band together in support of worthwhile projects of benefit to UMPG.

Students are urged to visit both Alumni Offices and to get acquainted with the personnel and the programs of The Alumni Association of the University of Maine at Portland-Gorham before graduation. All students, as well as former students, are cordially welcomed at both locations.

Since the University of Maine School of Law is a graduate professional school of a distinctive type, it enjoys its own alumni association, the University of Maine Law Alumni Association, and encourages membership of former students of the original University of Maine School of Law (which was located in Bangor from 1898 to 1920), the Portland University School of Law, or the current University of Maine School of Law, established in 1961.
Currently, this University offers programs leading to the following graduate degrees: Master of Business Administration, Master of Science in Adult Education, and Master of Science in Education. Information concerning each of these programs may be obtained from the Office of Graduate Studies, 103 Corthell Hall, Gorham, Maine 04038.

With the exception of Summer Session graduate courses, all graduate courses are offered through the Continuing Education Division during late afternoon or evening hours, most classes meeting once a week, either from 4:00-6:30 p.m. or from 7:00-9:30 p.m.

Application for admission to a program of graduate study should be made to Dr. Robert M. York, Dean of Graduate Studies, 103 Corthell Hall, UMPG Gorham, Maine 04038, on the forms provided for this purpose. In order to be admitted to a program of graduate study, an applicant must have received a baccalaureate degree from an accredited college or university and, as judged by the previous scholastic record or otherwise, must show promise of ability to pursue advanced study and research.

All applicants, except those for the M.B.A. program, are required to provide the results of their performance on either the Graduate Record Examination or Miller Analogies Test. In the case of the GRE the results should include the scores obtained on the general aptitude portion of the examination and on the appropriate advanced test. Applicants for the Master of Business Administration program should present scores from the Admission Test for Graduate Study in Business in lieu of GRE scores or MAT scores.

An application is not considered complete until all the required transcripts, the appropriate test scores, and letters of recommendation are on file. A $10, non-returnable fee is required at the time of application. All material sent in support of an application for admission becomes the property of the University and will not be returned to the student.

An applicant’s admission status will be one of the following: Regular, Conditional, Non-Degree, or Transient.

Listings of Graduate Programs

MASTERS OF BUSINESS ADMINISTRATION

Material describing the program leading to the degree of Master of Business Administration is provided in the section of this catalog dealing with the School of Business and Economics.

MASTER OF SCIENCE IN EDUCATION

THE CLASSROOM TEACHER (K-12) — 33 CREDITS

*12-24 credit hours in Arts and Sciences
6-18 credit hours in Professional Education
3 credit hours in EDU 550 Research Seminar
Comprehensive Examinations

*A minimum of 9 hours must be completed in one of the following disciplines: English, Geography, History, Mathematics, Psychology, Science, or Sociology.
COGNATE AREA IN MATHEMATICS (K-8)* — 33 CREDITS

18-24 credit hours in Mathematics** from:
MS 502 Number Systems
MS 503 Informal Algebra
MS 504 Informal Geometry
MS 505 Logic and the Nature of Proof
MS 506 Foundations of Mathematics
MS 507 The Real Numbers
MS 508 The Theory of Numbers
MS 509 Topics in the History of Mathematics
MS 514 Analysis I
MS 515 Analysis II
MS 524 Probability and Statistics
MS 528 Computer Programming I
MS 532 Geometry
MS 545 Abstract Algebra

6-12 credit hours in Professional Education from:
EDU 555 Current Research in Mathematics Education
EDPY 560 Psychology of Learning
MS 512 Newer Practices in Elementary Mathematics
MSED 513 Laboratory and Field Experiences in Mathematics Education
MSED 514 Selected Topics in Mathematics Education

3 credit hours from:
EDU 550 Research Seminar in Professional Education

*Graduate students matriculated in the Master of Science in Education Classroom Teacher program who wish to work toward the Cognate Area in Mathematics Certificate must notify the Dean of Graduate Studies of their intentions. The Dean will assign an adviser who will assist the student in selecting an appropriate sequence of Mathematics courses totaling 18 hours.

**Five-hundred level courses in Mathematics are reserved for in-service elementary teachers and may not be taken for credit by other students except with the permission of the Dean of Graduate Studies. In addition to their degree, teachers who satisfactorily complete the Cognate Area in Mathematics will receive a certificate from the Mathematics Department countersigned by the Dean of Graduate Studies.

ELEMENTARY AND SECONDARY HIGH READING — 33 CREDITS

12-18 credit hours in Professional Education
EDU 511 Reading Synthesis in the Middle Grades
EDPY 512 Sequential Development of the Reading Domain
EDPY 514 Teaching Language Arts in the Elementary School
EDU 515 Children's Literature
EDU 536 Innovations in Reading
EDPY 537 Reading Remediation
EDU 538 Analysis of Reading Difficulties (Grades 7-12)
*EDU 539 Clinical Practices in Reading (Clinic)
EDU 540 Learning Disabilities
EDU 571 Introduction to Counseling

12-18 credit hours in Arts and Sciences
*EDPY 521 Individual Psychological Testing
EDPY 560 Psychology of Learning
EDPY 569 Psychology of Motivation
EDPY 571 Psychopathology for Educators
EDPY 575 Psychology of the Exceptional Child
*EDPY 582 Psychological Measurement and Evaluation
ENG 503 Modern Short Story
ENG 530 History of the English Language
ENG 531 Linguistics

3 credit hours in Research Seminar or Thesis Preparation and Thesis Comprehensive Examination

*Required courses
INDUSTRIAL EDUCATION — 33 CREDITS

6-15 credit hours in Industrial Education
9-18 credit hours in Liberal Arts
6 credit hours in Professional Education
3 credit hours in EDU 550 Research Seminar or Thesis Preparation and Thesis Comprehensive Examination in Industrial Education

ELEMENTARY SCHOOL COUNSELOR EDUCATION — 33 CREDITS

12-21 credits in Core Courses
*EDPY 521 Individual Psychological Testing
*EDPY 562 Group Process and Procedures
*EDPY 570 Problems and Issues in School Guidance
*EDPY 571 Introduction to Counseling
*EDPY 582 Psychological Measurement and Evaluation
*EDPY 590 Practicum in Elementary School Guidance Services, Individual Counseling

3-9 credits in Related Issues
Reading Courses
Learning Disabilities Courses
EDPY 563 Advanced Group Process and Procedures
EDPY 572 Educational and Occupational Theory and Information
EDPY 573 Advanced Counseling
*EDPY 585 Introduction to Field Experience
EDPY 586 Field Experience in Elementary School Guidance
Other

3-12 credits in Psychology and Appropriate Related Courses
EDPY 560 Psychology of Learning for Educators
*EDPY 567 Child Psychology
EDPY 568 Adolescent Psychology
EDPY 575 Psychology of the Exceptional Child
Social Welfare Courses
Other

3-6 credits in Research
EDU 550 Research Seminar
or
TH 598 Thesis Preparation and TH 599 Thesis
*Suggested first courses

SECONDARY SCHOOL COUNSELOR EDUCATION — 33 CREDITS

12-21 credits in Core Courses
*EDPY 521 Individual Psychological Testing
*EDPY 562 Group Process and Procedures
*EDPY 570 Problems and Issues in School Guidance
*EDPY 571 Introduction to Counseling
*EDPY 582 Psychological Measurement and Evaluation
*EDPY 590 Practicum in Secondary School Guidance Services, Individual Counseling

3-9 credits in Related Issues
Reading Courses
Community Relations
Family Dynamics
EDPY 563 Advanced Group Process and Procedures
EDPY 573 Advanced Counseling
*EDPY 585 Introduction to Field Experience
EDPY 586 Field Experience in Secondary School Guidance
Other
Continued on the next page
Secondary School Counselor Education, Continued

3-12 credits in Psychology and Appropriate Related Courses
EDPY 560 Psychology of Learning for Educators
EDPY 567 Child Psychology
*EDPY 568 Adolescent Psychology
EDPY 569 Behavior Problems for Educators
EDPY 575 Psychology of the Exceptional Child

Social Welfare Courses

3-6 credits in Research
EDU 550 Research Seminar
or
TH 598 Thesis Preparation and TH 599 Thesis

*Suggested first courses

REHABILITATION COUNSELING — 33 CREDITS

9-12 credits in Core Courses
EDPY 550 Introduction to Rehabilitation Services
EDPY 551 Medical Aspects of Rehabilitation
EDPY 552 Psychosocial Aspects of Disability
EDPY 553 The Rehabilitation Process

3 credits in Counseling
EDPY 571 Introduction to Counseling

12-18 credits in Related Issues
EDPY 562 Group Process and Procedures
EDPY 568 Adolescent Psychology
EDPY 572 Educational and Occupational Theory and Information
EDPY 582 Psychological Measurement and Evaluation
EDPY 586 Field Experiences
EDPY 590 Practicum in Counseling
Other appropriate courses in Education, Psychology and Social Welfare

3-6 credits in Research
EDU 550 Research Seminar
or
TH 598 Thesis Preparation
and
TH 599 Thesis

ELEMENTARY ADMINISTRATION — 33 CREDITS

12-18 credit hours in Arts and Sciences
EDPY 560 Psychology of Learning for Educators or
EDPY 561 Psychopathology for Educators is required

12-18 credit hours in Professional Education as follows:
EDU 508 Supervision in the Public Schools
EDU 509 Elementary Administration
6-12 credit hours to be elected from the following courses:
EDU 530 Evaluating Pupil Achievement
EDU 533 School Law
EDU 534 School Personnel Administration
EDU 570 Introduction to School Guidance Services
EDU 583 Public Relations
EDU 589 School Finance

3 credit hours in EDU 550 Research Seminar or Thesis Preparation and Thesis
Comprehensive Examination in Administration
SECONDARY ADMINISTRATION — 33 CREDITS

12-18 credit hours in Arts and Sciences
   EDPY 560 Psychology of Learning for Educators or
   EDPY 561 Psychopathology for Educators is required

12-18 credit hours in Professional Education as follows:
   EDU 507 Secondary Administration
   EDU 510 Supervision in the Public Schools
   6-12 credit hours to be elected from the following courses:
   EDU 530 Evaluating Pupil Achievement
   EDU 533 School Law
   EDU 534 School Personnel Administration
   EDU 570 Introduction to School Guidance Services
   EDU 583 Public Relations
   EDU 589 School Finance

3 credit hours in EDU 550 Research Seminar or Thesis Preparation and Thesis Comprehensive Examination in Administration

The programs in Administration and Guidance are designed to satisfy state certification requirements for the elementary principal or counselor (K-8) and the secondary principal or counselor (7-12). It is assumed that candidates in the Guidance programs hold the necessary teaching certificate and will have completed a minimum of two years of successful teaching by the time their graduate program is completed. Candidates in the Administration programs must have completed three years of successful teaching.

Master of Science in Adult Education

This program of 33 graduate credits offers a choice of 18 credit hours of concentration in Administration or Classroom Management as follows:

CONCENTRATION IN ADMINISTRATION
   18 Credit hours
   EDUA 527 Growth and Development of Adult Education
   EDUA 528 Psychology of Adult Learning
   EDUA 529 Curriculum Construction for Adults
   EDUA 530 Administration of Adult Education
   EDUA 531 Leadership for Change
   EDUA 540 Internship, Career Exploration or
   EDUA 541 Internship, the Adult in the Community

CONCENTRATION IN CLASSROOM MANAGEMENT
   18 Credit hours
   EDUA 505 Preparation of Instructional Materials
   EDUA 527 Growth and Development of Adult Education
   EDUA 528 Psychology of Adult Learning
   EDUA 529 Curriculum Construction for Adults
   EDUA 532 Methods and Techniques of Teaching Adults
   EDUA 540 Internship, Career Exploration or
   EDUA 541 Internship, the Adult in the Community

ADDITIONAL REQUIRED CREDITS
   12 credit hours in electives from non-related areas or the following:
   EDUA 533 Paraprofessional in Adult Education
   EDUA 535 Teaching Reading to Adults

3 credit hours in Research Seminar
   Comprehensive Examination

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School of Law
BERT S. PRUNTY, Dean
WILLIAM F. JULAVITS, Assistant Dean


History and General Description
The University of Maine School of Law, established in Portland in 1961, is the successor of the university's college of law which existed in Bangor from 1898 to 1920. The school is located on the undergraduate campus of the University in Portland, in a new building of unique architectural design, where the law school shares facilities with the Center for Research and Advanced Study.

The research activities of the law students and faculty already extend over a wide range of social problems, and the proximity of the law school to the various institutes in the Research Center will foster continuing interdisciplinary study. A distinctive feature of the school is the close working relationship among students and faculty resulting in part from the small size of classes.

The school is a charter member of the Association of American Law Schools, having resumed membership in 1966, and is on the fully approved list of the American Bar Association. As an element of the University of Maine, the school is accredited by the New England Association of Schools and Colleges, Inc.

Library and Physical Facilities
The library, containing nearly 115,000 volumes, provides a sound working collection of legal and collateral materials. The new building has space for expansion to 150,000 volumes. An integral part of the library program is a course of instruction to students in legal research, beginning early in the first year and continuing through the senior year as an adjunct of the senior thesis program.
Basic Program of Study and Degree Requirements

The law school is on the semester basis, with 88 semester credits required for the J.D. degree. The first year curriculum, including work in the basic legal subjects, is required of all students. Through the case-and-problem method of instruction, the student has an opportunity to apply, compare, and test legal concepts in varying situations, using legal precedents and authorities from all jurisdictions, as well as relevant materials drawn from other disciplines. The perspective is national, although statutes and rules peculiar to Maine are noted to some extent. Classroom work is supplemented by programs of legal writing, drafting, advocacy, and clinical practice designed to promote professional skills. Within this framework the successful student comes to understand basic principles of law, their purposes and social origins, and the processes by which legal institutions grow.

The school has a writing program designed to develop the student's skill in research, writing, and advocacy. In the first year the program is devoted to legal analysis and writing, with emphasis on criticism and rewriting. In the second year a student may participate in a moot court program in which the student prepares a formal brief upon an assigned legal issue and argues the position orally before a moot court. In the third year each student is required to prepare and submit a research paper on some topic determined by the student in consultation with a faculty adviser. The student may satisfy this requirement by preparation during the third year of a note or comment in publishable form for the Maine Law Review. The thesis affords the senior law student an opportunity to explore in depth some topic that may not be treated in the regular curriculum in which the student has developed a special interest.

The curriculum is taught by a resident faculty of sixteen members, plus occasional lecturers from bench and bar.

Special Programs

Third-year students in good standing are permitted under special rules to represent indigent clients before any state court in Maine provided they are properly supervised in a public agency or legal assistance office. Some third-year students will be authorized under similar rules to represent the state in prosecutors' offices in counties near Portland. The clinical practice courses are specifically offered to help the student further develop and refine skills in advocacy and negotiation. Junior and senior students who are interested in serving as research assistants to professors are often invited to do so.

Activities

Law students participate on many university committees and councils concerned with governance of the University of Maine at Portland-Gorham. The Maine Law Review, published twice a year by law students, concerns itself with national and state legal problems, with some emphasis on matters of current interest to the public. The Student Bar Association, which performs the usual functions of student government, has a special committee which researches problems referred to it by lawyers and judges. The association is partly financed with the proceeds from such research. The Law Students Civil Rights Research Council gives research assistance in civil rights cases, particularly those arising in Maine.

Students

Most of the law students are from Maine and other New England states. During 1974-75 there were 230 students, of whom 53 were women; the student body included graduates of 70 colleges and universities.

Admission

An applicant must hold a bachelor's degree from an accredited college or university and must take the Law School Admission Test before entering law school. Transcript evaluation by the Law School Data Assembly Service is required except in unusual circumstances. There are no specific prerequisites for an undergraduate curriculum, but the law school offers in its own catalog some suggestions regarding pre-law study.
Beginning students are admitted only in September; transfer students into the upper classes may be admitted at the beginning of the spring semester only in extraordinary circumstances. Written recommendations are required, but personal interviews are not encouraged. The deadline for applications is February 15, and applications must be completed by April 1, 1975; applications received after February 15 will be processed only if the lateness is satisfactorily explained.

Because admission has become extremely competitive, those who show the highest promise of effective performance will be chosen from all the applicants. Although the admissions committee considers many factors in the records of applicants, academic performance in college and Law School Admission Test scores are evidence to which the committee necessarily attaches considerable weight in making its choices. In the class entering in September 1974, the mean LSAT score was 640 and the mean grade-point average was 3.2 on a 4-point scale.

Expenses and Financial Aid

Residents of Maine, New Hampshire, Vermont, Massachusetts, or Rhode Island will be charged $600 for tuition and fees for the year 1975-76; non-residents, $1,750. Expenses for a single student are estimated at $2,500 plus tuition and fees. Scholarships and loans are awarded by the university student aid office on the basis of need to the extent that funds are available.

Housing

Most law students live in apartments in the city of Portland or suburban homes. There may be a few dormitory rooms available for law students in the undergraduate dormitories at the Gorham campus of this University. It is recommended that new students come to Portland a few days before school opens in order to find suitable housing.

Correspondence

Registrar, University of Maine School of Law, 246 Deering Avenue, Portland, Maine 04102.

Center For Research & Advanced Study

The Center for Research and Advanced Study is dedicated to practical and applied research conducted through a multi-disciplinary mode of problems which presently or potentially confront the State of Maine.

The Center, which opened its doors in the fall of 1972, already houses three Institutes dealing with the areas of Human Services, the Environment, and Economics. Three more Institutes, dealing with Education and Manpower Training, Law, and Government, will ultimately be added.

The Center also houses a major Biomedical Research activity, which is concerned with coronary disease research.

Additionally, the Center serves as the clearing house for all research activities carried on within the University and assists in the development of research projects valuable to the University community.
Continuing Education Division

WILLIAM G. MORTENSEN
Director of Continuing Education and Public Service

WILLIAM U. SMALL
Associate Director of Continuing Education and Summer Session

HOLLIE L. INGRAHAM
Assistant Director of Continuing Education and Summer Session

John N. Farrar, Director of Counseling, Continuing Education and Summer Session; Shirley A. Mader, Assistant Counselor; Raymond P. Kane, Coordinator, Special Programs, C.E.D.; Ellen M. Martel, Administrative Assistant.

The Continuing Education Division offers a broad diversity of programs, including those to meet specialized needs and designed to relate the University to the outlying community, and also those to meet the cultural and academic needs of persons who have to work during normal daylight hours but who are able and willing to take university courses offered in the late afternoon, in the evening, on Saturdays, or during day or evening Summer Sessions.

ACADEMIC PROGRAMS OFFERED THROUGH C.E.D.

Deferred Degree Candidates

Persons who have to work during daytime hours may enroll for individual courses for which they are qualified. Adults who have not made formal application for degree status, but are interested in following a C.E.D. program which may lead to admission as a degree candidate, are required to receive counseling from a C.E.D. Counselor in order to be admitted as Deferred Degree Candidates. Persons who register as Deferred Degree Candidates, complete the basic program specified by their C.E.D. Counselor, and earn grades acceptable for transfer, may then apply as regular Degree Candidates; and if accepted, applicable credits may be transferred toward the desired degree.

Degree Candidates

Applicants who satisfy the same admission standards as students enrolled in the day division of the University are classified as Degree Candidates. Undergraduates who wish degree status must apply to the Director of Admissions. Graduate students must apply to the Dean of Graduate Studies. Degree Candidates are those who have been accepted by the Committee on Admissions.
Types of Programs Offered

The Continuing Education Division offers many of the academic programs described on the earlier pages of this catalog. A few programs, such as those of the School of Law or some of the laboratory-centered undergraduate programs in the various sciences, are not offered. Most of the other subjects described in this catalog are available on either an annual or a rotating basis.

The current academic-year enrollment of the Continuing Education Division totals approximately 6,000 part-time students, and an additional 3,000 persons are normally enrolled in the various Summer Session courses.

In addition to the varied C.E.D. programs for undergraduate and graduate students, the Division offers many short courses, specialized seminars, and other programs.

CERTIFICATE COURSE “CEU” AWARD SYSTEM

Students completing individual courses in the following Certificate Programs receive Continuing Education Unit (CEU) awards rather than semester-hour credits on their grade sheets and permanent records. The reason is that Certificate Program courses require fewer class hours than the degree-credit courses which are offered for persons enrolled in the university-degree programs. The “CEU Unit” system for grade sheets and permanent records of students completing courses of the type provided by the UMPG Certificate Programs has been officially adopted by the New England Council of Deans and Directors of Continuing Education.

CERTIFICATE PROGRAM IN QUALITY CONTROL

This series of courses is tailored for those who are interested in quality control as it applies to either small or large business.

The program as a whole 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 Gaging
- CSQ 16-51 (6 wks) Government & ASME Code 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
- CSM 28-51 (10 wks) Human Relations
- CSM 40-51 (10 wks) Production Control

All of the courses are designed to be both flexible and practicable in nature, and are specifically directed to assist the small business community. The subjects are aimed at providing those engaged in either Quality Control, or the production of Quality, with the necessary basic tools and techniques for setting up new Quality Assurance Systems, and for improving effectiveness of programs which already exist. Any person engaged in producing quality in the field of manufacturing or production will find selected courses beneficial.

Selected courses in the Certificate Program in Management (CSM) have been incorporated in this program. The class size in all subjects is limited, depending upon the “type” of course offered.
CERTIFICATE PROGRAM IN MANAGEMENT

For those who are interested in the field of management and desirous of improving skill and effectiveness, the Continuing Education Division offers a program leading to a Certificate in Management.

The program is the result of consultations with business and educational leaders. The subjects are designed to meet the specific needs of the business community. Upon completion, it is expected the participants will be better equipped with basic, usable knowledge of management principles, thus contributing to career, company, and society.

The following courses are offered in the program:

- CSM 10 Business Management I
- CSM 11 Psychology Applied to Business
- CSM 12 Legal Aspects of Business*
- CSM 13 General Economics
- CSM 14 Oral Communication
- CSM 15 Written Communication
- CSM 18 Business Management II
- CSM 28 Human Relations*
- CSM 30 Marketing and Distribution
- CSM 40 Production Control*
- CSM 41 Electronic Data Processing*
- CSM 42 Policy Formulation and Administration
- CSM 50 Managerial Accounting I
- CSM 51 Managerial Accounting II*
- CSM 52 Business Mathematics

*Electives: Two to be chosen to meet Certificate requirements as explained below.

The subjects of the program are designed to be both flexible and practical from the standpoint of the needs of management. Each course will frequently have the traditional college approach as well as practical aspects necessary for current business practice. A "Certificate of Completion" rather than degree credit will be awarded to those who successfully complete the Certificate Program.

Each course is scheduled for ten weeks and, with a few exceptions, classes will be of two and one-half hours duration. Those not interested in completing the entire program may register in individual courses. Upon completion of the ten required courses and two of the five elective courses identified with an asterisk (*), a Certificate of Completion will be awarded by the Continuing Education Division.

Instructors include business specialists and faculty members from the University and other institutions. As of September 1973, the fee for each course was $35, plus a $5 registration fee. Textbooks and study materials are not included in the charge. A brochure is available upon request.

CERTIFICATE PROGRAM FOR PRACTICING SECRETARIES

Persons who are already trained in stenographic skills and who wish to meet the requirements of higher-level secretarial positions including, if desired, preparation for the prestigious Certified Professional Secretary's examination, will find this program designed to meet their needs.

The twelve evening courses in the Certificate Program for Practicing Secretaries include eleven of the most practical courses offered in the Certificate Program in Management, together with a specialized course emphasizing the aspects of office administration which are apt to be the responsibility of a major executive's secretary. The entire group of courses covers all subjects tested in the two-day Certified Professional Secretary's examination, except for the stenographic skills of typing, shorthand, and transcription. Since this certificate program is designed for persons who are already employed as practicing secretaries, it is understood that all persons who register in this program have already received a thorough training in the various stenographic skills.
Each course is scheduled one evening a week for ten weeks, and classes are
normally of two and one-half hours duration. Students may enter classes in
early September, early December, or late February each year. The program
normally requires two years for completion, but those not interested in com­
pleting the entire program may register in individual courses. Upon completion
of the twelve required courses, a Certificate of Completion will be awarded by
the Continuing Education Division.

Instructors include business specialists and faculty members from the Uni­
versity and other institutions. As of September 1973, the fee for each course was
$35, plus a $5 registration fee. Textbooks and study materials are not included
in the charge. A brochure is available upon request.

**CERTIFICATE PROGRAM FOR EXECUTIVE HOUSEKEEPERS**

This certificate program is designed to improve the skills and effectiveness of
executive housekeepers, supervisors, and other personnel dealing with house­
keeping functions. The series of courses will meet the requirements for certi­
fication with the Southern Maine Executive Housekeeper Association.

Several seminars in the area of floor maintenance, fire regulations, and similar
specialized subjects will be offered. These seminars, however, are not required
as part of the certificate program.

This certificate program includes courses in Psychology Applied to Business,
Oral Communication, Written Communication, Financial Planning (including
budget preparation and record keeping), and Sanitation Technology (which
covers the technical details that confront the executive housekeeper on a daily
basis).

**SPECIALIZED SEMINARS AND SHORT COURSES**

Throughout the school year, the Continuing Education Division periodically
offers a variety of seminars, institutes, workshops, conferences, and other short
courses. The specialized programs are frequently developed at the request of the
representative of a group, a member of the university staff, or an interested in­
dividual. Many programs include a group of lectures and seminars scheduled
for a single day; others consist of briefer sessions once a week for several weeks.

Some of the more popular subject matter is in the area of:

- Engineering
- Retailing
- Shakespeare
- Antiques
- Purchasing
- Transportation
- Management
- Veterinarian Medicine

Although local talent is utilized when available, each lecturer or seminar
leader is a professional in the given field, and speakers are often recruited from
distant parts of the United States or 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 Continuing
Education Division Office, 96 Falmouth Street, Portland, Maine 04103 (Telephone
773-2981, extension 272).
PUBLIC SERVICE FACILITIES OF THE UNIVERSITY

This University offers facilities at both campuses for conferences, institutes, seminars, workshops, and training programs. Thousands of persons each year take advantage of the resources and facilities offered by the University to such groups.

Meetings of educational value — whether their primary purpose may be to impart information, solve problems, upgrade professional skills, further some aspect of education, or develop a greater understanding of current problems — are a part of the total educational program of the University.

VOCATIONAL-TECHNICAL EDUCATION PROGRAM

A program recognizing Industrial and Occupational Experience and awarding college credit through part-time evening and summer courses leading to a Bachelor of Science degree in Vocational Education or Technology is designed to:

(a) prepare instructors for the teaching of vocational and/or technical subjects in high schools and post-secondary schools:

or (b) provide non-teaching majors an opportunity to pursue a college program leading to a degree which recognizes trade and technical competencies and provides knowledge in business and industry leading to supervisory, technical, or middle-management positions.

For additional information and a brochure, contact:

Dr. Arthur O. Berry
Director of Vocational-Technical Education, U.M.P.G.
Gorham, Maine 04038

COMMUNITY SERVICES

The Continuing Education Division, through the office of the Director of Continuing Education and Public Service, is able to provide community services on a limited basis. Currently the Urban Adult Learning Center project services undereducated adults in adult basic education and is described more fully below.

THE URBAN ADULT LEARNING CENTER

The Urban Adult Learning Center is a University of Maine off-campus project, located in the heart of intown Portland at 68 High Street.

The Center is currently receiving funds from the State Department of Education, the State Department of Health and Welfare, and the City of Portland.

The Center provides a full-time adult education facility, designed to provide Adult Basic Education for the greater Portland community. The Center's basic objective is to identify ways to broaden and increase educational opportunities for undereducated adults.

The Center offers instruction in basic reading, language, and computational skills, as well as preparation for high school equivalency testing. Adult students work with an instructor/counselor to develop an individualized learning plan. Sessions are scheduled for the adult's available time during the 9:00 a.m. to 9:00 p.m. Center hours. The student's progress is regularly assessed by the instructor/counselor, and the learning plan extended or redirected as needed.

Veterans may qualify for educational benefits during attendance at the Center. All services of the Center are offered free of charge to enrollees. For further information call the Center at 773-2981, ext. 562.
Associate Degree Studies

GEORGE P. CONNICK
Director

SAMUEL G. ANDREWS
Assistant Director

RICHARD H. STURGEON
Assistant Director

YORK COUNTY COMMUNITY COLLEGE SERVICES
Coordinator: ELLEN FORBES
Counseling Director-Sanford: LORRAINE MASURE
Counseling Director-Biddeford: JUDI MELLOR
Counselor-Biddeford: JOHN PENCE
Counselor-Eliot: ROBERT WEIMONT

Associate Degree Studies, a new academic unit of the University established in 1973, has the responsibility for developing and offering new less-than-baccalaureate programs.

In cooperation with Southern Maine Vocational Technical Institute (SMVTI), Associate Degree Studies is offering off-campus degree programs through York County Community College Services. This joint venture provides less-than-baccalaureate degree opportunities and comprehensive counseling services for citizens of York County.

Programs currently available from the University of Maine are Liberal Arts, Selected Studies and Business Administration. Southern Maine Vocational-Technical Institute has available programs in Law Enforcement, Building Construction, Electronics Technology and Secretarial Science. In addition, a joint program in Hotel-Motel Restaurant Management is being offered.

Courses are offered in the early morning, late afternoon, and evening in order to maximize the opportunity for working students to participate. Arrangements made with private colleges, local education agencies, churches and libraries allow the majority of courses to be offered in convenient locations for the student.

Interested persons holding a high school diploma (or its equivalent) or who are 18 years of age may enroll by contacting the local Counseling Offices. Information or literature regarding the available programs may be obtained by contacting:

YCCCS COUNSELING OFFICE
260 Main Street
Biddeford, Maine
282-4111 or 282-4112

YCCCS COUNSELING OFFICE
Marshwood High School
Eliot, Maine
439-1559

ADMISSIONS OFFICE OR
UMPG
Portland, Maine
773-2981

YCCCS COUNSELING OFFICE
195 Main Street
Sanford, Maine
324-6012 or 324-6013

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Local Offices Representing Statewide University Functions

Several offices, located in buildings shown on the campus maps near the back of this catalog, are not under the administration of this University but represent statewide services of the University of Maine. Among these are the Cumberland County office of the Cooperative Extension Service at 15 Chamberlain Avenue, and the Portland MPBN studios at 45 Exeter Street.

COOPERATIVE EXTENSION SERVICE

A broad variety of services to bring the benefits of the University to families and community groups in both the inner city and also suburban and rural areas is provided by the Cooperative Extension Service of the University of Maine. All of Cumberland County is served by the CES office at 15 Chamberlain Avenue on the Portland Campus. Some programs, such as the annual series for persons preparing for retirement or the seminars on various aspects of family money management for married couples, are normally offered in the University classrooms, if space is available. Many of the urban programs are conducted in low-rent housing developments or Model City neighborhood centers, where 4-H clubs adapted to the needs of urban children are developed and training in homemaking and in the planning and cooking of meals utilizing government-surplus foods is provided. CES aides supplement the services of the professional staff in such cases.

In addition to these newer programs for inner city inhabitants, the more traditional programs for residents of suburban and rural areas throughout Cumberland County are continued. The staff of the Portland CES office includes specialists in urban community development, a nutritionist, a district recreation specialist, an agricultural specialist, and other county agents. Visiting specialists from the Orono Campus provide added services from time to time. The work of the local and visiting specialists is multiplied through volunteer leaders in community groups scattered throughout the county.

LOCAL MPBN STUDIOS AND CONTROL FACILITIES

The Maine Public Broadcasting Network maintains studios and control facilities for WMEA-FM and WMEG-TV (Channel 26) in the 45 Exeter Street building shown on the Portland Campus map. Public radio and television programming is produced here as well as at Orono for statewide distribution as a public service of the University of Maine.

INSTRUCTIONAL TELEVISION

Instructional television, which is not broadcast for home reception like general educational television but which is beamed directly for use in specific classrooms or other meeting places, is being developed in the Greater Portland area through the services of the Portland MPBN office at 45 Exeter Street. One of the recent developments has been the installation of in-service instructional television facilities at major hospitals in the area. Demonstration operations or similar procedures conducted at the University of Vermont Medical School or other facilities are transmitted to the receiving antenna on the roof of Luther Bonney Hall, converted electronically for local transmission, and then beamed to dish antennae mounted on the roofs of local hospitals. In this way, hospital staff members may view the latest surgical or therapeutic techniques on television screens in staff lounge rooms. Both live and taped instructional materials are utilized. This type of development is but one example of the sort of project being developed by the local instructional television office.
Landmark Dates in the Development of UMPG

1773—Construction date of the McLellan House, considered to be the oldest brick house in the State of Maine and the oldest building still used by UMPG. It was purchased and renovated by Gorham State College in 1966 and is currently operated as an honor resident dormitory for 16 women students.

1803—The approximate date of the construction of the Alumni Center on the Portland Campus. In 1947 it was acquired by purchase of part of the Deering Estate by the trustees of Portland Junior College and has been used for offices ever since.

1807—Construction date of the Academy Building. Built to house the original Gorham Academy, it was presented to the State of Maine in 1895. In 1966 it was renovated to contain studios, offices, and classrooms for the Art Department.

1821—Construction date of the Art Gallery, originally built as the Gorham Town Hall. Acquired by Gorham State Teachers College in 1961 for use as a student chapel, it now houses the Gorham Campus Art Gallery.

1871—Establishment of Western Maine Normal School on the site of the former Gorham Female Seminary approved by the Maine Legislature. The Normal School opened on January 29, 1879, with six faculty members and 85 students.
- Dr. William Corthell appointed first president of the institution. He served for 27 years, from 1878 to 1905.
- Corthell Hall built to house the original Western Maine Normal School. Afterward named to honor the first president, it now houses administrative offices, information desk, classrooms and offices of the Music Department, and the Museum of Man.

1897—Construction of Robie Hall, the first unit of the Robie-Andrews Halls dormitory complex. Robie Hall is named for Governor Frederick Robie, an early benefactor of Gorham.

1905—inauguration of Dr. Walter F. Russell as the second president of Western Maine Normal School. He served in this office for 35 years, from 1905 to 1940.

1906—The President's Residence constructed on the Gorham Campus.

1911—The Industrial Arts Program established at Gorham.

1916—Andrews Hall constructed. It is named for Professor Emerita of Music, Miriam Andrews. The dormitory complex called Robie-Andrews Halls contains accommodations for 200 resident women students. Andrews Hall also contains classrooms and laboratories of the audio-visual education program.

1927—Graduation date of the first class in the Kindergarten-Primary Program at Gorham.

1931—Construction date of Russell Hall, named for the second president at Gorham. It now contains a 500-seat auditorium with stage, workshop facilities, offices for the Theatre Department, and a small gymnasium for various recreational activities.

1938—Baccalaureate degrees awarded to the first graduates of a full four-year program at Gorham.

1940—Inauguration of Dr. Francis L. Bailey as third president at Gorham. He served for 20 years, from 1940 to 1960.

1945—Gorham State Teachers College adopted as the new name of the Gorham institution.

1947—Part of the former Deering Estate purchased as a campus for Portland Junior College, which had previously utilized rented quarters. The land purchased forms the nucleus of the present Portland Campus of UMPG.
The present *University Bookstore Building*, a military war-surplus building, disassembled at its original location, brought by barge to Portland, and reassembled at its present location on the Portland Campus, together with several other buildings which are no longer standing.

1955—*Woodward Hall* constructed to provide dormitory accommodations for 96 resident men students. It was named for a former Vice-President of Gorham, Louis B. Woodward.

1956—A *Music Education Program*, to prepare supervisors and teachers of music for the public schools, established at Gorham.

1957—The *University of Maine in Portland* established by the Maine Legislature, making the former property of Portland Junior College a part of the University of Maine. Until 1961, only the first two years of the academic programs of the University's College of Liberal Arts and College of Education were available, together with the freshman year of several other University of Maine programs.

1958—Dean Luther I. Bonney, long-time Dean of Portland Junior College, appointed Dean Emeritus by the University of Maine Board of Trustees, retroactive to July 1, 1957.

—Dr. William L. Irvine appointed Dean of the University of Maine in Portland. He served in this position for three years until 1961.

—An *Art Education Program*, to prepare supervisors and teachers of art for the public schools, established at Gorham.

—The *Science Wing of Bailey Hall*, the first unit of the present Bailey Hall complex, constructed at Gorham. It contains classrooms, laboratories, a greenhouse, a science museum, and offices for various physical and biological scientific disciplines.

1960—*Payson Smith Hall* constructed at the Portland Campus and named in honor of a prominent Maine educator who had also served with distinction as Commissioner of Education for the Commonwealth of Massachusetts. The lower level contains a large cafeteria, a formal dining room called the College Room, and a small seminar dining room. The main floor now houses the Portland offices for personnel, the registrar, the campus business personnel, student affairs, student aid, testing and counseling, placement, and other services, as well as the Continuing Education Division. The upper floors contain classrooms, a language laboratory; physics, chemistry, organic chemistry, and geology laboratories; a science lecture hall; and some faculty offices.

—*Upton Hall* constructed at Gorham to provide added dormitory and lounge accommodations for women students. The basement now houses the Gorham Campus Bookstore. The building is named for a long-time faculty member, Miss Ethlyn Upton. A second unit, making up the Upton-Hastings complex, was added in 1968.

—Dr. Kenneth T. H. Brooks inaugurated as President of Gorham State Teachers College. He served for 10 years, from 1960 to 1970.

1961—The *merger of Portland University* and the University of Maine in Portland approved by the Maine Legislature. Portland University had already established a baccalaureate program in Business Administration and a professional School of Law. Following the merger, the latter program was reorganized and developed into the University of Maine School of Law, housed from 1961-72 in the former Portland University building on High Street in downtown Portland. The four-year undergraduate program in Business Administration was moved to the Portland Campus, to become the first four-year program of the University of Maine to be offered in this area. This program has now evolved into the UMPG School of Business and Economics.

—The *Library Wing of Bailey Hall* constructed. The library section provides reading areas, conference rooms, a study-smoker, and a music-listening area. The east side of the building contains classrooms, conference rooms, faculty offices, and facilities for closed-circuit television.

—William L. Whiting appointed Dean of the University of Maine in Portland. He served in this capacity for four years, from 1961 to 1965.

1962—Establishment of the Continuing Education Division at the University of Maine in Portland. Under the direction of John M. Blake, former Dean of Portland University, acting as a special assistant to the President of the University of Maine, the previous evening program of Portland University and the Portland extension courses of the University of Maine were consolidated and expanded into a coordinated program.
1963—Construction of Warren G. Hill Gymnasium at Gorham. Named for a former Maine Commissioner of Education and graduate of Gorham, the 2,500-seat gymnasium provides facilities for men's and women's physical education, locker rooms, classrooms, and offices for Health Services and Gorham members of the Division of Physical Education and Intercollegiate Athletics.

—Anderson Hall constructed at Gorham. Named for Hayden L. V. Anderson, alumnus of Gorham and former Executive Director of Professional Services for the Maine Department of Education, it contains lounges, study areas, and dormitory accommodations for 100 resident men students.

1964—A Graduate School established at Gorham.

1965—Gorham State College adopted as the official name of the institution at Gorham.

—Dr. David R. Fink, Jr., appointed Dean of the University of Maine in Portland. After serving as Dean for three years, he was promoted to Provost by the Board of Trustees in 1968, in which position he served until joining the Chancellor's staff in 1970.

—Construction of the Industrial Education and Technology Center at Gorham. It contains offices, classrooms, and laboratories for conducting programs in industrial arts and vocational-industrial teacher education, providing facilities to teach concepts in the manufacturing, construction, power-transportation, electrical-electronics, graphic communications, and service industries.

—Dedication of Luther I. Bonney Hall at Portland, a five-story building named in honor of the Dean Emeritus of the Portland Campus. The main floor contains academic administrative offices and Luther Bonney Auditorium, a modern, air-conditioned lecture hall seating 250 persons. The upper floors contain classrooms, seminar rooms, faculty offices, and specialized quarters for art studios, choral groups, closed circuit and other instructional television, and other audio-visual aids.

—Opening of the Library Wing of Bonney Hall at Portland. In addition to plentiful study carrels, four rooms called the Quattro Galleries, containing shifting art exhibits and comfortable furniture, provide facilities for smoking, recreational reading, listening to recorded music, and other functions.

1966—A Secondary Education program established at Gorham.

1967—A baccalaureate program in the Liberal Arts established at Gorham.

1968—Establishment of Gorham State College as a unit of the University of Maine with the official title of Gorham State College of the University of Maine.

—Hastings Hall constructed at Gorham and named for a long-time faculty member, Miss Mary Hastings. The complex of Upton-Hastings Halls contains lounges and dormitory accommodations for 300 resident women students.

—Acquisition of scattered houses or house lots in the vicinity of Bedford Street and Chamberlain Avenue in Portland to provide quarters for the Student Union and various administrative or faculty offices and to enlarge student parking facilities.

1969—Opening of the Portland Campus Gymnasium and Physical Education Building. The main gymnasium can seat 2,800 spectators. The building also contains offices, classrooms, Health Center offices, examination rooms, a general purpose corrective and adaptive room, a dance room for women, and a small auxiliary gym for a variety of activities. Two squash courts and two handball courts are located in a wing on the lower level behind the main building.

—Opening of the Science Building at the Portland Campus. The main tower of the Science Building, six stories high, has facilities for students in the engineering programs, as described in this catalog, on the ground floor; laboratories for the various biological sciences, as well as offices, seminar rooms, and classrooms, on the second, third, and fourth floors; laboratories and other facilities for the courses in psychology on the fifth floor; and quarters for experimental animals, as well as a greenhouse for botanical specimens, on the six floor. In the two-story wing, the Southworth Planetarium is located on the lower and ground-floor levels. The Portland Computer Center, ringed about with faculty offices, occupies the second-floor space directly above the Southworth Planetarium.
Rapid increase in the Baccalaureate Degree programs offered at the Portland Campus. The facilities offered by the new buildings, coupled with the marked increase in faculty and student body, enabled the University Board of Trustees to authorize, at successive meetings during this period between 1965 and 1970, a number of added programs leading to a baccalaureate degree, with majors in various arts and sciences.

Opening of the Classroom Wing of Bailey Hall at Gorham. This final unit of Bailey Hall contains a 200-seat multi-purpose lecture hall, a student lounge, classrooms, and academic and faculty offices.

Bachelor of Arts degrees awarded to the first group of candidates completing this new program at Gorham.

1970—Dean Edward S. Godfrey of the School of Law appointed to serve as Acting Provost of the Portland Campus for the final semester before the administrative formation of the University of Maine at Portland-Gorham on July 1, 1970.

Dr. William J. MacLeod, Professor of Philosophy, appointed Acting President of the University of Maine at Portland-Gorham on July 1, 1970. Dr. MacLeod served for one year during the period of administrative merger of the former University of Maine in Portland, the University of Maine School of Law, and Gorham State College of the University of Maine.

Dr. Kenneth T. H. Brooks, former President of Gorham State College of the University of Maine, created University Professor of Education.

Opening of the Dining Center at the Gorham Campus. It contains a 900-seat dining hall, faculty and Presidential dining rooms, a snack bar, and a student lounge, together with offices and conference rooms for student organizations and activities.

Opening of the Tower Residences at the Gorham Campus. These twin high-rise student residences provide accommodations for 380, with lounge and study facilities.

1971—Dr. Louis J. P. Calisti appointed the first President of the University of Maine at Portland-Gorham, effective July 1, 1971. Dr. William J. MacLeod at the same time assumed office as Vice President for Academic Affairs. Dr. Gordon S. Bigelow assumed office as Vice President for Student Affairs.

Academic reorganization of the University of Maine at Portland-Gorham, as a single, integrated University, completed at the opening of the academic year in September 1971. Shuttle-bus transportation permitting students to schedule courses on either campus was established at the same time.

1972—Moving of the University of Maine School of Law to its new home in the lower floors of the seven-story School of Law and Center for Research and Advanced Study at 246 Deering Avenue, opposite the Portland Campus.

The Center for Research and Advanced Study was established at 246 Deering Avenue under the direction of Halsey Smith.


UMPG officially became accredited with full membership in the New England Association of Schools and Colleges for a period of three years. Prior to this time the Gorham campus had been separately accredited and the Portland campus had shared accreditation as part of the Orono campus accreditation.

The Dickey and Wood Tower Dormitories were officially named in honor of Miss Edna F. Dickey, who became Associate Professor Emerita of History, and Miss Esther E. Wood, who became Associate Professor Emerita of Social Sciences, after contributing a total of 69 years of service.

Dr. N. Eda Miller appointed the second President of the University of Maine at Portland-Gorham. His appointment was approved by the Board of Trustees on August 23, 1973, and he assumed his duties on November 1.

1974—The Bachelor of Fine Arts degree program established in the College of Arts and Sciences, which had been previously known as the College of Liberal Arts.

The College of Education formally established as a result of a reorganization of the former School of Education to meet the needs of the coming decade.
UNIVERSITY of MAINE at PORTLAND—GORHAM
PERSONNEL LISTINGS

As Reported to the Office of Publications and Public Information
On or before May 1, 1975

EMERITI

ANDREWS, MIRIAM E. (1922-1960) B.S., M.A., Professor Emerita of Music

BAILEY, FRANCIS L. (1940-1960) B.A., M.A., Ph.D., President Emeritus of Gorham State College of the University of Maine


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., 1935; M.A., 1937; Associate Professor Emeritus of French and Spanish

DICKEY, EDNA F. (1946-1973) University of New Hampshire, B.A., 1933; M.A., 1936; Associate Professor Emerita of History, University of Maine at Portland-Gorham


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, University of Maine at Portland-Gorham

PEABODY, MILDRED (1952-1973) Gorham State College, B.S., 1939; Boston University, Ed.M., 1952; Associate Professor Emerita of Education, University of Maine at Portland-Gorham

WOOD, ESTHER E. (1930-1972) Colby College, A.B., 1926; Radcliffe College, M.A., 1929; Associate Professor Emerita of Social Sciences, University of Maine at Portland-Gorham

PERSONNEL

The following list includes both teaching faculty and administrative personnel. Dates in parentheses indicate initial year of appointment.

ALBEE, PARKER BISHOP, JR. (1966) Associate Professor of History; Dartmouth College, A.B., 1961; Duke University, M.A., 1964; Ph.D., 1968

ALLEN, BRUCE A. (1970) Assistant Professor of Mathematics Education and Director, Pre-Professional Programs; Gorham State College, B.S., 1960; M.S., 1967; Boston University, Ed.D., 1973

ANDREWS, BRUCE H. (1974) Assistant Professor of Business Administration; University of Connecticut, B.A., 1967; Polytechnic Institute of New York, M.S., 1969

ANDREWS, SAMUEL GEORGE (1966) Associate Professor of Associate Business Administration and Assistant Director of Associate Degree Studies; Babson Institute, B.S.A., 1964; University of Maine, M.S., 1966

ANGELAKOS, EVANGELOS T. (1973) Research Associate, Biomedical Research Laboratory; Tripolis College, Greece. Diploma (s.c.l.), 1948; Boston University, M.A., 1953; Ph.D., 1956; Harvard University, M.D. (m.c.l.), 1959

ANNETT, DONALD ARCHIE (1969) Associate Professor of Business Administration; University of New Hampshire, B.S., 1937; New York University, M.B.A., 1963

ANSPACH, DONALD FREDERICK (1970) Associate Professor of Sociology and Chairman, Department of Sociology; Franklin and Marshall College, A.B., 1964; Western Reserve University, M.A., 1966; Case Western Reserve University, Ph.D., 1970

ARMENTROUT, CHARLES EDWIN (1960) Associate Professor of Physics; University of Maine, B.A., 1955; Wesleyan University, M.A., 1958; Columbia University, M.S., 1970

AYERS, GEORGE H. (1959) Associate Professor of Physical Science and Director, Southworth Planetarium; University of Maine, B.A., 1951; Ohio State University, M.A., 1959

BAIER, LEE S. (1966) Associate Professor of English; Reed College, A.B., 1948; Columbia University, M.A., 1952; Ph.D., 1965
Personnel listings as reported to Public Information on or before May 1, 1975

BALBER, PAULA G. (1973) Assistant Professor of Nursing and Chairman, Department of Psychiatric Nursing; Boston University, B.S., 1969; New York University, M.A., 1970


BAY, JOHN WILLIAM (1965) Dean, School of Business and Economics and Associate Professor of Business and Economics; Saint Ambrose College, B.A., 1961; Boston College, M.A., 1964; Ph.D., 1966

BEARCE, JEANA DALE (1965) Associate Professor of Art; Washington University, B.F.A., 1951; New Mexico Highlands University, M.A., 1954

BELLONE, ROSEMARY (1972) Instructor in Nursing and Chairman, Department of Maternal and Child Health; Virginia Commonwealth University, B.S.N., 1970; Catholic University of America, M.S.N., 1971

BEMIS, A. NYE (1970) Instructor in Education and Director, In-Service Programs; Gorham State College, B.S., 1964; M.S., 1969

BERNARD, JULES EUGENE (1963) Professor of English; Yale University, B.A., 1934; M.A., 1936; Ph.D., 1937

BERRY, ARTHUR O. (1955) Director of Vocational Technical Education and Professor of Metals Technology; Gorham State College, B.S., 1950; Pennsylvania State University, Ed.M., 1954; University of Connecticut, Ph.D., 1967


BIEN, LEON J. (1970) Assistant Professor of Economics and Chairman, Department of Economics; Boston College, B.A., 1966; Michigan State University, M.A., 1970

BIGELOW, GORDON S. (1971) Vice President 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 SCOTT (1968) Professor of Psychology; University of New Brunswick, B.A., 1953; Dalhousie University, M.A., 1957; University of London, Ph.D., 1958

BONNER, ROWLAND A. (1973) Research Associate, Biomedical Research Laboratory; Michigan State University, B.S., 1962; D.V.M., 1964; Boston University, Ph.D., 1972

BONNEY, JAMES H. (1970) Lecturer, School of Law; Bowdoin College, A.B., 1948; University of Vermont, M.D., 1953; University of Maine, J.D., 1967

BOUCHARD, JOEY A. (1968) Associate Professor of Physical Education and Coordinator of Men's Athletics; Springfield College, B.S., 1960; M.Ed., 1961; Boston University, C.A.S., 1968

BOUCHARD, KATHLEEN M. (1969) Associate Dean of Student Life; Western Michigan University, B.A., 1966; Indiana University, M.S., 1969


BREEN, RICHARD F. (1974) Associate Professor of Law and Associate Law Librarian, School of Law; Dartmouth, A.B., 1962; University of Maine School of Law, LL.B., 1967; University of Oregon, M.L.S., 1973

BRETON, LILLETTE CAMILLE (1969) Assistant Professor of Physical Education; University of Maine, B.S., 1965; M.S., 1968; University of Maine at Orono, C.A.S., 1972

BRIGGS, WAYNE F. (1965) Chief Accountant and Director of Purchasing; University of Maine at Portland-Gorham, B.S., 1975

Numbers in the left hand margin are coded as follows:
1 on leave, Fall semester, 1974
2 on leave, Spring semester, 1975
3 on leave, Academic year, 1974-1975

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Personnel listings as reported to Public Information on or before May 1, 1975

BROOKS, KENNETH T. H. (1959) University Professor of Education and Director, Cooperative Education Program; University of New Hampshire, A.B., 1947; Boston University Ed.M., 1948; Ed.D., 1955

BROWN, ELECTA M. (1943) Bursar; Shaw's Business College, 1926

BROWN, HAROLD F. (1972) Professor of Music and Chairman, Department of Music; Colby College, A.B., 1935; Westminster Choir College, B.Mus., 1938; Harvard University, A.M., 1942; Michigan State University, Ph.D., 1968

BROWN, WILLIAM ALLEN (1960) Associate Professor of Mathematics and Computer Science; Bowdoin College, B.A., 1954; University of Maine, M.A., 1959

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


CAMPBELL, RICHARD R. (1973) Financial Aid Officer


CARPER, THOMAS R. (1967) Associate Professor of English; Harvard University, A.B., 1958; New York University, M.A., 1967; Boston University, Ph.D., 1973

CARROLL, CONSTANCE M. (1972) Associate Dean, College of Arts and Sciences and Assistant Professor of Classics; Duquesne University, B.A., 1966; Knubly University School of Hellenic Civilization (Athens, Greece), M. Cert., 1967; University of Pittsburgh, M.A., 1969

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

CHABOT, MAURICE JOSEPH (1965) Assistant Professor of Mathematics and Computer Science; University of Maine, B.A., 1961; Bowdoin College, M.A., 1965

CHAMBERLAND, GERARD G. (1957) Professor of Music; Boston University, B.Mus., 1950; M.M. 1956

CHANDLER, JOSEPH (1968) Assistant Professor of Business and Economics; Bowdoin College, A.B., 1942; University of Maine, M.B.A., 1967; University of New Hampshire, M.A., 1971


CLARKE, CAROLYN K. (1968) Periodicals Associate; University of Maine at Orono, B.A., 1968


COFFIN, RICHARD NEAL (1964) Associate Professor of English; Bowdoin College, B.A., 1951; Harvard University, A.M., 1952; Boston University, Ph.D., 1962

COLE, PHILLIP ALBERT (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

COULUCCI, NICHOLAS DOMINIC, JR. (1969) Assistant Professor of Education; Gorham State College, B.S., 1963; University of Connecticut, M.A., 1964; Ph.D., 1969

CONNICK, GEORGE PERCY (1966) Acting Director of Associate Degree Studies; Associate Professor of History; Stanford University, B.A., 1957; San Jose State College, M.A., 1960; University of Colorado, Ph.D., 1969

COOGAN, WILLIAM H., III (1972) Assistant Professor of Political Science; Boston College, B.A., 1963; Rutgers University, M.A., 1964; University of North Carolina, Ph.D., 1971

COOPER, JANET K. (1972) Director of Placement, School of Law; St. Thomas College, M.A.T., 1972
Personnel listings as reported to Public Information on or before May 1, 1975

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Institution(s)</th>
<th>Degrees/Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPE, GERALD S.</td>
<td>Lecturer, School of Law</td>
<td>University of Maine</td>
<td>B.A., 1952; M.A., 1955</td>
</tr>
<tr>
<td>COSTELLO, RICHARD A.</td>
<td>Director, Division of Physical Education</td>
<td>University of Alabama</td>
<td>B.S., 1952; M.S., 1953; Springfield College, D.P.E., 1965</td>
</tr>
<tr>
<td>COTTON, JEAN</td>
<td>Associate Professor of Nursing</td>
<td>Simmons College</td>
<td>B.S., 1960; M.S., 1966</td>
</tr>
<tr>
<td>CROCHET, MONIQUE Y.</td>
<td>Associate Professor of French</td>
<td>University of Paris, Sarbonne</td>
<td>B.A., 1959; M.A., 1960; Ed.D., 1969</td>
</tr>
<tr>
<td>CROSBY, JEANIE W.</td>
<td>Assistant Professor of Education and Program</td>
<td>Maine Teacher Corps</td>
<td>B.A., 1963; M.A., 1964; Ed.D., 1973</td>
</tr>
<tr>
<td>CUPRAK, RUTH M.</td>
<td>Assistant Professor of Elementary Education</td>
<td>Maine Head Start Educational Resource Center</td>
<td>B.S., 1944; M.S., 1966; Tufts University, M.S., 1966</td>
</tr>
<tr>
<td>DALVET, YVES FRANCOIS</td>
<td>Associate Professor of French</td>
<td>Laval College</td>
<td>B.A., 1940; M.A., 1965; Ph.D., 1969</td>
</tr>
<tr>
<td>DAVIS, EVERETT A.</td>
<td>Assistant Professor of Educational Media</td>
<td>Gorham State College</td>
<td>B.S., 1961; Indiana University, M.S.Ed., 1966; Ed.S., 1972</td>
</tr>
<tr>
<td>DEAS, DAVID C.</td>
<td>Assistant Registrar</td>
<td>University of Maine at Portland-Gorham</td>
<td>B.A., 1971</td>
</tr>
<tr>
<td>DELOGU, ORLANDO E.</td>
<td>Professor of Law</td>
<td>University of Utah</td>
<td>B.S., 1960; M.S., 1963; J.D., 1966</td>
</tr>
<tr>
<td>DEPRES, GREGORY A.</td>
<td>Administrative Coordinator</td>
<td>University of Maine at Portland</td>
<td>B.S., 1965; University of Maine at Gorham, M.S., 1970</td>
</tr>
<tr>
<td>DI BENEDETTO, LUCIA A.</td>
<td>Assistant Professor of French</td>
<td>Emmanuel College</td>
<td>B.A., 1963; Middlebury College, M.A., 1965</td>
</tr>
<tr>
<td>DIETRICH, CRAIG</td>
<td>Associate Professor of History</td>
<td>University of Chicago</td>
<td>A.B., 1961; Ph.D., 1970</td>
</tr>
<tr>
<td>DORBACHER, BEATRICE M.</td>
<td>Associate Professor of Nursing</td>
<td>Columbia University</td>
<td>B.S., 1950; M.A., 1957; Boston University, Ed.D., 1972</td>
</tr>
<tr>
<td>DORSEY, F. DONALD, JR.</td>
<td>Assistant Professor of Biology</td>
<td>Bowdoin College</td>
<td>B.A., 1940; Syracuse University, M.S., 1960; Simmons College, M.S., 1964</td>
</tr>
<tr>
<td>DOWNEY, LOREN W.</td>
<td>Professor of Education</td>
<td>Drake University</td>
<td>B.A., 1949; University of Oregon, M.S., 1950; University of Arizona, Ed.D., 1966</td>
</tr>
<tr>
<td>DREW, DAVID</td>
<td>Instructor in Physical Education, Trainer and</td>
<td>Springfield College</td>
<td>B.S., 1967; M.Ed., 1971</td>
</tr>
<tr>
<td>DUBOWICK, DOROTHY BUNKER</td>
<td>Associate Professor of Nursing</td>
<td>Colby College</td>
<td>A.B., 1948; University of Maine at Portland-Gorham, M.S., 1971</td>
</tr>
<tr>
<td>DUCLOS, ALBERT JOSEPH</td>
<td>Associate Professor of Theatre</td>
<td>University of Maine</td>
<td>B.S., 1963; M.A., 1965</td>
</tr>
<tr>
<td>DUCLOS, GLORIA SHAW</td>
<td>Associate Professor of Classics</td>
<td>Radcliffe College</td>
<td>A.B., 1949; M.A., 1953; Oxford University, B.A., 1951; M.A., 1955</td>
</tr>
<tr>
<td>DUDAC, PAMELA J.</td>
<td>Instructor in Nursing</td>
<td>Manhattanville College</td>
<td>B.A., 1964; Fordham University, M.S., 1966; New York Medical College, M.S., 1970</td>
</tr>
<tr>
<td>DURGIN, FRANK ALBERT, JR.</td>
<td>Professor of Business and Economics</td>
<td>Tufts University</td>
<td>B.A., 1949; University of Toulouse, France, License en Droit, 1954; Docteur en Droit, 1956</td>
</tr>
<tr>
<td>DUVAL, MARJORIE ANN</td>
<td>University Archivist and Associate Professor of</td>
<td>Simmons College</td>
<td>B.S., 1945; M.A., 1962</td>
</tr>
</tbody>
</table>

On leave Fall Sem. On leave Spring Sem. On leave for Acad. Year
Personnel listings as reported to Public Information on or before May 1, 1975

EASTMAN, JOEL WEBB (1970) Associate Professor of History; University of Maine at Orono, B.A., 1962; M.A., 1965; University of Florida, Ph.D., 1973

EDWARDS, MARY L. (1966) Instructor in Maine Teacher Corps; Cornell University, B.S., 1952

EELLS, MARY ANN (1969) Dean, School of Nursing and Associate Professor of Nursing; State University of New York, B.S., 1955; University of Rochester, M.S., 1968; Ed.D., 1970

ELDRIDGE, SUSAN D. (1972) Bookstore Manager; University of Maine at Portland-Gorham, B.S., 1971

ELLIS, ANN P. (1973) Instructor in Nursing; University of Maine at Orono, B.S., 1964; Boston University, M.S., 1967

ELLIS, EDNA M. (1973) Instructor in Nursing; University of Maine at Portland-Gorham, B.S., 1972; Boston University, M.S., 1973

EMERSON, HORTON W., JR. (1962) Professor of History; Colby College, A.B., 1949; Yale University, Ph.D., 1957

EMERY, VIRGINIA L. (1966) Administrative Assistant to the President; Shaw’s Business College, 1938

ESTES, ROBERT A. (1966) Professor of Mathematics and Computer Science; Bowdoin College, A.B., 1958; University of Kansas, M.A., 1961; University of Michigan, Ph.D., 1970


FAULKNER, HOWARD M. (1970) Associate Professor of Graphics; Massachusetts State College of Fitchburg, B.S., 1957; Northeastern University, M.Ed., 1960

FEIG, KONNLYN G. (1972) Dean, College of Arts and Sciences and Associate Professor of History; University of Montana, B.S., 1958; B.A., 1959; M.A., 1963; University of Washington, Ph.D., 1969

FELDMAN, STEPHEN R. (1972) Associate Professor of Law, School of Law; Duke University, A.B., 1959; Fordham University, LL.B., 1965; Harvard University, LL.M., 1972


FINDLAY, ROBERT WALKER (1967) Professor of Accounting and Chairman, Baccalaureate Program in Business Administration; Boston University, B.S., 1955; M.B.A., 1964; C.P.A. (Massachusetts and Maine)


FISH, LINCOLN T., JR. (1959) Professor of Mathematics and Computer Science and Chairman, Department of Mathematics and Computer Science; University of Maine, B.S., 1948; M.A., 1949; Boston University, Ed.D., 1951

FISHER, IRVING D. (1967) Assistant Professor of Political Science; University of Connecticut, B.A., 1946; Columbia University, M.A., 1953

FITZPATRICK, ALBERT ARTHUR (1968) Professor of Business and Economics; University of Southern California, B.S., 1949; M.B.A., 1951; Baylor University, M.S., 1955; University of Southern California, Ph.D., 1962

FLAHERTY, AGNES E. (1973) Clinical Associate in Nursing at the Maine Medical Center; Columbia University, B.S., 1950; Catholic University of America, M.S., 1961

FOLSOM, ROBERT EUGENE (1968) Associate Professor of Physical Education and Chairman, Department of Recreation; Springfield College, B.S., 1953; Boston University, Ed.D., 1963


FOSTER, CAROLYN NEIDIG (1966) Assistant Professor of Mathematics and Computer Science; Douglass College (Rutgers), A.B., 1958; Purdue University, M.S., 1961; Bowdoin College, A.M., 1966


Personnel listings as reported to Public Information on or before May 1, 1975

FRENCH, ROBERT K. (1969) Associate Professor of Geography-Anthropology and Director; Museum of Man; Dartmouth College, A.B., 1957; Northeastern University, M.Ed., 1967; Clark University, M.A., 1972

FRIDINGER, WALTER PETER (1958) Vice President for Finance and Administration; Lebanon Valley College, B.S., 1938


GAGNE, DAVID L. (1975) Veterans Affairs Coordinator; Keene State College, B.A., 1973

GANZEOORT, HERMAN (1973) Assistant Professor of History; Calvin College, B.A., 1965; Wayne State University, M.A., 1967

GARRECHT, DONALD L. (1962) Law Librarian and Professor of Law, School of Law; University of Minnesota, A.B., 1958; LL.B., 1961

GAVIN, WILLIAM JOSEPH (1968) Associate Professor of Philosophy and Chairman, Department of Philosophy; Fordham University, B.A., 1965; M.A., 1967; Ph.D., 1970


GIERINGER, ROMONA (1972) Serials Librarian, School of Law

GIGUERE, MADELEINE DINORA (1967) Professor of Sociology; College of New Rochelle, B.A., 1947; Fordham University, M.A., 1950; Columbia University, M.Phil. 1973


GODFREY, EDWARD S. (1962) Professor of Law, School of Law; Harvard University, A.B., 1934; Columbia University, J.D., 1939

GOLD, JOEL I. (1973) Instructor in Associate Business Administration; Pace University, B.B.A., 1968; Bernard Baruch College, M.B.A., 1972

GOODWIN, JEANETTE L. (1955) Associate Professor of Physical Education and Coordinator of Dance; Sargent College, B.S., 1944; Springfield College, Ed.M., 1955

GRADY, MARGARET (1974) Instructor in Nursing; University of Maine at Portland-Garham, B.S.N., 1972

GRAMLING, LAWRENCE (1974) Instructor in Accounting; Northeastern University, M.B.A., 1970

GRANGE, JOSEPH (1970) Associate Professor of Philosophy; St. Joseph’s College, B.A., 1961; Fordham University, M.A., 1965; Ph.D., 1970

GRAY, MARIE L. (1970) Acting Director, Urban Adult Learning Center; Catholic University of America, B.A., 1967; New York University, M.S., 1970

GREENWOOD HELEN L. (1969) Associate Professor of Biology; Northeastern University, B.S., 1958; University of New Hampshire, M.S., 1960; University of Connecticut, Ph.D., 1969

GREGORY, DAVID D. (1972) Associate Professor of Law, School of Law; Duke University, B.A., 1964; University of Maine, LL.B., 1968; Harvard University, L.L.M., 1972

GRZELKOWSKI, SLAWOMIR A. (1973) Assistant Professor of Sociology; University of Warsaw, Poland, M.A., 1962; Indiana University, Ph.D., 1974

GUAY, MERLE DANA (1969) Professor of Mathematics and Computer Science; Tufts University, B.S., 1958; University of Maine, M.A., 1960; Michigan State University, Ph.D., 1967

HAAS, BARBARA A. (1971) Assistant Professor of Nursing; New York University, B.S., 1961; M.A., 1965

HACKETT, GEORGE F. (1968) Associate Professor of Education and Director, Advanced Study Programs; Central Michigan University, B.A., 1952; University of Michigan, M.A., 1957

1on leave Fall Sem. 2on leave Spring Sem. 3on leave for Acad. Year

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Personnel listings as reported to Public Information on or before May 1, 1975


HALL, OWEN C. (1952) Associate Professor of Accounting; Portland University, B.S., 1955; Maine Society of Public Accountants, C.P.A., (Maine)

HANNA, JOHN G. (1963) Professor of English; Trinity College, B.S., 1936; Harvard University, B.A., 1946; Boston University, Ph.D., 1958

HANSEN, EDWIN R. (1964) Professor of Communication; Tufts University, B.S., 1936; University of Denver, M.A., 1947; Cornell University, Ph.D., 1952

HARE, PARNELL S. (1963) Associate Professor of Physical Science and Chairman, Department of Physical Sciences and Engineering; University of Maine, B.S., 1956; University of New Hampshire, M.S., 1960

HARTMAN, H. BERNARD (1973) Assistant Professor of Biology; University of Maryland, B.S., 1960; American University, M.S., 1962; University of Connecticut, Ph.D., 1965

HAWKES, DAVID B. (1971) Lecturer, School of Law; University of Maine, B.S., 1966; J.D., 1969; Boston University, LL.M., 1970; C.P.A., 1971

HAYES, DALE T. (1973) Assistant Professor of Reading and Director, Upward Bound; Bob Jones University, B.A., 1959; Arizona State University, M.A., 1968

HEARNS, JOSEPH F. (1970) Associate Professor of Psychology; Boston College, B.S., 1964; University of Massachusetts, M.S., 1966; Ph.D., 1967

HEEL, HELEN E. (1953) Associate Professor of Music; Gorham State College, B.S., 1942; University of Michigan, M.M., 1948

HEISLER, EDWIN A. (1972) Lecturer, School of Law; Tufts University, B.S., 1957; George Washington University National Low Center, LL.B., 1965

HENDERSON, SUSAN J. (1973) Instructor in Nursing; St. Luke's Hospital, School of Nursing, R.N., 1963; Fairleigh Dickinson University, B.S., 1966; New York University, M.A., 1973

HERNANDEZ, ADELE BETANCOURT (1962) Part-time Instructor in Spanish and Director of Language Laboratory; M.A., Florida State Christian College, 1973

HIGGINS, BERTHA F. (1970) Associate Executive Director, The Alumni Association of the University of Maine at Portland-Gorham; Gorham State Teachers College, B.S., 1939

HIGGINS, GEORGE MICHAEL (1971) Assistant Business Manager; University of Maine in Portland, B.S., 1971

HIGGINS, JUDITH A. (1973) Financial Aid Officer; State University College of Buffalo, N.Y., B.S. in Ed., 1971

HOCH, LINDA S. (1973) Career Development Officer; Oberlin College, B.A., 1972

HODGSON, PULIA D. (1967) Associate Professor of Physical Education and Chairman, Department of Athletics; Lasell Junior College, A.A., 1948; Beaver College, B.A., 1950; Columbia University, M.A., 1952; Springfield College, D.P.E., 1973

HODGES, FRANKLIN D. (1966) Associate Professor of Geography; Farmington State College, B.A., 1961; Clark University, M.A., 1966

HODSON, D. BRADLEE (1973) Assistant Professor of Accounting; University of Maine at Orono, B.S., 1968; University of Pennsylvania, M.S., 1969; C.P.A. (Massachusetts)

HOLMES, PETER KARL (1968) Associate Professor of Biology and Chairman, Department of Biology; Bowdoin College, A.B., 1956; Wesleyan University, M.A., 1958; University of Illinois, Ph.D., 1964

HOLT, STEPHANIE B. (1975) Assistant Bookstore Manager; University of Maine, B.A., 1965

HOPKINSON, DAVID BRADFORD (1959) Associate Professor of General Engineering; University of Maine, B.S., 1942; University of Vermont, M.S., 1949; University of Maine, M.E., 1961; P.E. (Maine)


HORTON, DONALD BION (1969) Lecturer in Biology and Executive Director, The Research Institute of the Gulf of Maine (TRIGOM); Union College (New York), B.S., 1954; University of Rhode Island, M.S., 1958; Ph.D., 1965

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Personnel listings as reported to Public Information on or before May 1, 1975


HUMPHRIES, DREW (1972) Assistant Professor of Sociology; L'Universite de Bordeaux (Bordeaux, France), Certificate des Etudes, 1966; University of California, A.B., 1967; M.S., 1968; Ph.D., 1973

HUNT, HARRY DRAPER, III (1965) Professor of History; Harvard University, B.A., 1957; Columbia University, M.A., 1960; Ph.D., 1968

HYMOFF, IRA H. (1971) Director of Counseling and Career Development; Colby College, B.A., 1965; University of Maine at Orono, Ph.D., 1970

INGRAHAM, HOLLIE L. (1973) Assistant Director of Continuing Education Division and Summer Session; University of Maine, B.A., 1967; University of Maine at Portland-Gorham, M.S., 1972

IRISH, JOEL W. (1971) Assistant Professor of Mathematics and Computer Science; Colby College, A.B., 1967; University of New Hampshire, M.S., 1969; Ph.D., 1975

JAGOLINZER, PHILIP (1966) Associate Professor of Accounting; Clark University, A.B., 1958; University of Rhode Island, Certificate des Etudes, 1966; University of Rhode Island, A.B., 1967; M.S., 1972

JENSEN, HELENA MARIE (1967) Associate Professor of Nutrition; University of Maine, B.S., 1943; Pennsylvania State University, M.Ed., 1951

JOHNSON, BRUCE (1974) Acting Director of Student Financial Aid

JOHNSON, SHEILA A. (1968) Acquisitions Associate; Boston College, B.S., 1967

JULAVITS, WILLIAM F. (1970) Assistant Dean and Lecturer, School of Law; Amherst College, B.A., 1964; University of Maine, LL.B., 1968


KANE, RAYMOND PAUL (1965) Coordinator, Special Programs, Continuing Education Division; University of Maine, B.S., 1964

KAPLE, DONALD J. (1973) Assistant Professor and Director, Adult Education; Athenaeum of Ohio, B.A., 1953; Th.M., 1958

KARABIN, JACQUELINE (1973) Instructor in Nursing and Chairman, Department of Community Health Nursing; University of Michigan, B.S.N., 1967; M.P.H., 1973

KAZENSKI, JOHN T. (1973) Director of Physical Plant; U.S. Naval Academy, B.S., 1960

KEARNEY, JAMES F. (1974) Institutional Research Coordinator; University of Scranton, B.S., 1964; University of Virginia, M.A., 1973

KEARNEY, MAUREEN J. (1973) Career Development Specialist; Norwood College, A.B., 1964; American University, Ph.D., 1972

KERN, ABRAHAM K. (1959) Associate Professor of Botany and Zoology; Bowdoin College, A.B., 1936; University of Maine, M.Ed., 1956


KNOWLTON, SUZANNE L. (1968) Assistant University Librarian; University of Kansas, B.A., 1960; University of Denver, M.A., 1963


KREISLER, JOSEPH D. (1972) Assistant Professor of Social Welfare; Oklahoma University, B.A., 1947; Columbia University, M.A., 1949; M.S.W., 1959

LACognATA, ANGELO A. (1965) Professor of Sociology; University of Buffalo, B.A., 1957; University of Rochester, M.A., 1959; Michigan State University, Ph.D., 1962

LADLEY, ANNE (1973) Assistant Professor of Social Welfare and Acting Director, Office of Equal Employment Opportunity; University of Pittsburgh, B.A., 1953; New York University, M.S.W., 1962

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Personnel listings as reported to Public Information on or before May 1, 1975

LAFFRANCE, ARTHUR B. (1973) Professor of Law, School of Law; Dartmouth College, B.A., 1960; Yole University, LL.B., 1963

LAPointe, NORMAN J. (1967) Project Director, Head Start Supplementary Training Program and Assistant Professor of Education; University of Maine, B.S., 1956; University of Massachusetts, M.A., 1960


LEPELLEY, EDITH (1965) Associate Professor of French; Lycee de Jeunes Filles de Chartres, Baccalauréat, 1950; University of Rennes (France), Licence est Lettres, 1956

LITTLEFIELD, MAURICE E. (1965) Assistant Professor of Education and Development Officer; University of Maine, B.S., 1960; University of Virginia, Ed.M., 1964


LOPER, MERLE W. (1971) Associate Professor of Law, School of Law; Northwestern University, B.A., 1962; University of Chicago, J.D., 1965; Harvard University, L.L.M., 1971

LUTHER, GERTRUDE E. (1974) Instructor in Nursing; Columbia University, B.S., 1959; Marquette University, M.S., 1964

LYONS, CHARLES M. (1973) Instructor in College of Education; St. Francis Xavier University, B.A., 1966; University of Hartford, M.Ed., 1970

MacDONALD, STEPHEN A. (1970) Associate Professor of Mathematics and Computer Science; Gorham State College, B.S., 1963; University of Maine, M.A., 1964; Case Western Reserve University, Ph.D., 1972


MacLEOD, WILLIAM JOHN (1969) Professor of Philosophy; Gordon College, Th.B., 1938; Boston University, A.M., 1940; Ph.D., 1948


McCASLIN, MILLARD P. (1968) Superintendent of Buildings and Grounds, Portland Campus

McGUIRE, RAYMOND G. (1973) Professor of Law, School of Law; Canisius College, B.S., 1960; Harvard University, LL.B., 1964; Columbia University, LL.M., 1968

McKell, RICHARD LLOYD (1966) Associate Professor of Associate Business and Economics and Chairman, Associate Program in Business Administration; University of Maine, B.A., 1959; M.A., 1965

McMAHON, ROBERT CHARLES (1969) Associate Professor of Economics; University of Washington, B.A., 1959; M.A., 1964; Lehigh University, Ph.D., 1970

MADER, SHIRLEY, A. (1973) Counselor, Continuing Education Division; University of Maine, B.S., 1946; Boston University, M.A., 1948

MAIMAN, RICHARD JOHN (1971) Assistant Professor of Political Science; Lake Forest College, B.A., 1967; Brown University, Ph.D., 1972

MAINVILLE, WALDECK ERNEST, JR. (1965) Associate Professor of Mathematics and Computer Science and Assistant Dean, College of Arts and Sciences; University of Maine, B.S., 1960; Bowdoin College, A.M., 1964; Bowling Green State University, Sp.Ed., 1965; Michigan State University, Ph.D., 1972

MALIK, HASAN MUHAMMAD (1974) Associate Professor of Educational Psychology; Michigan State University, B.A., 1957; M.A., 1959; University of Oregon, Ph.D., 1973

MALMUD, ALICE PROBST (1972) Assistant Professor of Nursing; New York University, B.S., 1960; M.S., 1962

MANCK, WILLIAM J. (1970) Assistant Professor of Marketing; University at Maine, B.S., 1957; College of the City of New York, M.B.A., 1966

MANUEL, CHARLOTTE (1971) Instructor, Urban Adult Learning Center; University of Maine at Portland-Gorham, B.A., 1969

*On leave Fall Sem. †On leave Spring Sem. ‡On leave for Acad. Year
Personnel listings as reported to Public Information on or before May 1, 1975

MARSHALL, JAN M. (1970) Assistant Professor of Nursing; Boston University, B.S., 1968; M.S., 1971

MARTIN, THOMAS ANDREW (1965) Assistant Professor of Physical Education; University of Maine, B.S., 1963; M. Ed., 1969

MASSEY, SARA R. (1973) Assistant Professor of Educational Psychology, Maine Teacher Corps; University of Colorado, B.S., 1960; University of Denver, M.A., 1968; University of Northern Colorado, Ed.D., 1973

MASURE, LORRAINE D. (1973) Counseling Director, York County Community College Services; Nasson College, B.A., 1970

MAZURKIEWICZ, MICHAEL, JR. (1969) Associate Professor of Biology; Rutgers University, B.S., 1961; M.S., 1964; University of Connecticut, Ph.D., 1970

MELLOR, JUDITH A. (1973) Instructor in Nursing; Cornell University, B.S., 1968; Columbia University, M.S., 1971

MENNINGER, HAROLD P. (1970) Associate Dean of Student Program Development and Assistant Professor of Education; University of Maryland, B.S., 1963; C.W. Post College (Long Island University), M.S., 1967; University of New Mexico, Ed.D., 1970

MILBURY, ALLEN W. (1963) Associate Professor of Education and Director of Educational Media Center; University of New Hampshire, B.S., 1960; Indiana University, M.S., Ed.D., 1969

MILLARD, RONALD W. (1973) Research Associate, Biochemical Research Laboratory; Tufts University, B.S., 1963; Boston University, Ph.D., 1969

MILLER, N. EDD (1973) President and Professor of Speech; University of Texas, B.S., 1939; M.A., 1940; University of Michigan, Ph.D., 1952

MILLER, ROBERT N. (1946) Professor of Physical Science; Colby College, A.B., 1936

MILLIGAN, PATRICIA (1975) Associate Cataloger, School of Law; Ohio State, B.A., 1971

MILLIKEN, ROBERT ALSTON (1968) Instructor in English; University of Maine, B.A., 1964; M.A., 1965

MIRTO, DOLORES A. (1974) Assistant Professor of English; Barnard College, B.A., 1963; Cornell University, M.A., 1965; Ph.D., 1973

MITCHELL, JOHN (1947) Professor of Industrial Arts and Chairman, Department of Industrial Education and Technology; Fitchburg State College, B.S., 1939; University of Minnesota, M.A., 1947; Pennsylvania State University, Ed.D., 1954

MONSEN, SVERRE HENRY (1969) Professor of Sociology; Florida State University, B.A., 1957; University of California, Los Angeles, M.A., 1959; University of Texas, Ph.D., 1967

MOORE, DOROTHY DEAN (1968) Assistant Professor of Education; University of Maine, B.S., 1966; M.Ed., 1968


MORRILL, DAVID (1970) Associate Professor of Graphic Arts; Moorehead State College, B.S., 1967; Texas A & M University, M.Ed., 1968; Ed.D., 1970

MORRIS, BARBARA W. (1973) Assistant Professor of Elementary Education; Bates College, A.B., 1942; Gorham State College, M.S.Ed., 1966; Boston University, C.A.G.S., 1972

MORTENSEN, WILLIAM G. (1966) Director of Continuing Education and Public Service; University of Maine, B.S., 1961; M.S., 1966

MOTHERWELL, JULIE E. (1973) Coordinator of Student Activities and Student Union; St. Francis College, B.A., 1968; Ball State University, M.A., 1973


MUNSEY, WILLIAM J. (1965) Director of Admissions; University of Maine, B.S., 1960; Boston University, M.Ed., 1964

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Personnel listings as reported to Public Information an or before May 1, 1975


MURPHY, THOMAS J., JR. (1972) Instructor, Urban Adult Learning Center; St. Francis Xavier University, B.A., 1969

NAJARIAN, HAIG HAGOP (1966) Professor of Biology; University of Massachusetts, B.S., 1948; Boston University, M.A., 1949; University of Michigan, Ph.D., 1953

NANNAY, ROBERT WILLIAM (1972) Associate Professor of Industrial Arts; Trenton State College, B.A., 1964; M.A., 1967; University of Maryland, Ed.D., 1970

NELSON, CLIFFORD V. (1973) Research Associate, Biomedical Research Laboratory; Massachusetts Institute of Technology, B.S., 1942; University of London, Ph.D., 1953

NELSON, LEONARD M. (1962) Lecturer, School of Law; Harvard University, A.B., 1957; LL.B., 1960

NEUBERGER, HAROLD T. (1967) Instructor, Urban Adult Learning Center; St. Francis Xavier University, B.A., 1969

NEUBERGER, HAROLD T. (1957) Associate Professor of Geology; Hunter College, A.B., 1966; University of Florida, M.S., 1968; Cornell University, Ph.D., 1971


O'NEILL, JAMES M. (1971) Director, School of General and Interdisciplinary Studies (SCOGIS); St. Louis University, B.A., 1968; Goddard University, M.A., 1974

O'REILLY, CHARLES A. (1966) Assistant Professor of English; Colby College, B.A., 1949; Antioch-Putney Graduate School of Teacher Education, M.A., 1952

OSTRAND, JANICE (1975) Assistant Professor of Art; University of Wisconsin, B.A., 1970; University of Missouri, M.A., 1972; Ph.D., 1975

PADULA, ALFRED L. (1972) Assistant Professor of History; College of the Holy Cross, B.S., 1957; University of the Americas (Mexico City), M.A., 1961; University of New Mexico, Ph.D., 1975

PAIGE, SYLVIA DRAKE (1970) Assistant Professor of Nursing; Marietta College, B.A., 1944; Yale School of Nursing, M.N., 1947

PARADISE, NOEL E. (1967) Professor of Psychology; University of Maryland, A.B., 1948; University of Michigan, Ph.D., 1960

PEIRCE, JOHN ALDEN (1965) Professor of Political Science and Chairman, Department of Political Science; University of Maine, B.S., 1962; University of Virginia, M.A., 1965; Ph.D., 1971

PENCE, JOHN H. (1973) Counselor, York County Community College Services; St. Francis College, B.A., 1969

PENDLETON, JAMES W. (1967) Assistant Professor of Physical Science; Keene State College, B.Ed., 1959; Oregon State University, M.S., 1963

PENNOYER, DORIS (1971) Director, Family Nurse Associate Project; Smith College, B.A., 1950; Columbia University, M.D., 1954

PERLMAN, STEPHEN (1975) Instructor in Anthropology; Boston University, B.A., 1970; University of Massachusetts, M.A., 1973

PERRY, BETSY J. (1973) Instructor in Nursing; University of Michigan, B.S.N., 1969; M.S., 1972

PETERS, DORIS M. (1964) Registrar, School of Law

PETRUCCELLI, GERALD F., JR. (1968) Lecturer, School of Law; Boston College, A.B., 1964; LL.B., 1967

PHILIPPI, HARLAN A. (1972) Dean, School of Education and Professor of Education; University of Wisconsin, B.S., 1949; M.S., 1953; Northwestern University, Ph.D., 1962


PITKIN, RHODA A. (1974) Instructor in Nursing; University of Vermont, B.S., 1956; Boston University, M.S., 1974

POTTER, JUDY R. (1972) Associate Professor of Law, School of Law, and Director, Clinical Practice Program; Cornell University, B.A., 1960; University of Michigan Law School, J.D., 1967

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Personnel listings as reported to Public Information on or before May 1, 1975

POWER, THOMAS AMBER (1966) Associate Professor of Theatre; University of Maine, B.S. in Ed., 1964; M.A., 1968
PRANGER, EUGENE (1973) Assistant to Director of the Center for Research and Advanced Study; Indiana University, B.S., 1971
PROVENCHER, GERALD M., (1975) Assistant Professor of Chemistry; Wayne State University, B.A., 1962; M.S., 1966; University of Windsor, Ph.D., 1972
PRUNTY, BERT S., JR. (1973) Dean, School of Law and Professor, School of Law; Drake University, B.A., 1948; Drake University Law School, J.D., 1950
QUINN, HORATIO (1973) Chief, Department of Police and Security; University of Maine at Augusta, A.S., 1973

RAKOVAN, LAWRENCE FRANCIS (1967) Assistant Professor of Art; Wayne State University, B.S., 1967; Rhode Island School of Design, M.A., 1969
REUTER, JOHN E. (1949) Associate Professor of English; University of New Hampshire, A.B., 1958; University of Rochester, M.A., 1963; Ph.D., 1968
ROADES, ROGER HANSON (1964) Professor of Education; Colby College, B.A., 1935; University of Michigan, M.A., 1938; University of Colorado, Ph.D., 1961
RICH, BARBARA (1974) Visiting Lecturer in Social Welfare; Columbia University, M.S.W., 1970
RICIPUTI, REMO H. (1965) Associate Professor of Biology; University of New Hampshire, B.A., 1954; M.S., 1958
ROBERTS, JAMES WESTON (1967) Associate Professor of Political Science; San Diego State College, B.A., 1954; University of North Carolina, Ph.D., 1973
ROCHE, MILDRED (1971) Nursing Director, Family Nurse Associate Project; University of Vermont, B.S., 1951; Catholic University of America, M.S.N., 1966
RODGERS, MARJORIE J. (1970) Assistant Director of Admissions; University of Massachusetts, B.S., 1966
ROGERS, ALVIN D. (1952) Editor of Publications; Gordon College, Th.B., 1935
ROGERS, OLIVIA (1973) Upward Bound Field Worker; University of Maine at Portland-Gorham, B.S., 1969
ROGERS, PAUL CARNEY (1965) Professor of Mathematics and Computer Science; College of the Holy Cross, B.N.S., 1945; Boston University, M.A., 1948
ROGOFF, MARTIN A. (1972) Professor of Law, School of Law; Cornell University, B.A., 1962; University of California, Berkeley, M.A., 1963; Yale Law, LL.B., 1966
ROLFE, FREDERICK B. (1966) Associate Professor of French and Chairman, Department of Foreign Languages and Classics; Bowdoin College, A.B., 1946; Middlebury College, A.M., 1948
ROMANYSHYN, JOHN MIKE (1946-1950; 1953) Margaret Payson Professor of Social Welfare and Chairman, Department of Social Welfare; University of Oklahoma, B.A., 1942; University of Chicago, M.A., 1952
ROOTES, MINOR R. (1966) Associate Professor of Theatre; University of California, Santa Barbara, A.B., 1954; San Francisco State College, M.A., 1961
ROSHE, MARJORIE MARY (1966) Associate Professor of Nursing; Simmons College, B.S. in P.H.N., 1950, University of Michigan, M.P.H., 1959
ROSEN, KENNETH F. (1945) Associate Professor of English; Pennsylvania State University, B.A., 1962; University of Iowa, M.F.A., 1964
ROST, MARY ANN (1972) Director, Bureau of Continuing Education for Nursing and Instructor in Nursing; Boston College School of Nursing, B.S., 1964; University of Massachusetts, M.S., 1972
ROTHENBERG, CHRISTINE M. (1971) Information Specialist; College of Wooster, B.A., 1966; Columbia University, M.A., 1967

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Personnel listings as reported to Public Information on or before May 1, 1975


SALDANHA, ESTELITA LONGUINHOS (1966) Professor of Psychology and Chairman, Department of Psychology; University of Lisbon, B.A., 1943; University of Nebraska, B.S.; 1946; M.A., 1947; Cornell University, Ph.D., 1950

SALMON, EDWARD I. (1966) Director of Engineering and Planning; University of Maine, B.S., 1956

SANBORN, JANE OBERHOLTZER (1961) Associate Professor of Psychology; Wilson College, A.B., 1942; University of California, Los Angeles, Ed.D., 1961

SAWTELLE, GWENDOLYN (1966) Associate Professor of English; University of Maine, B.S., 1953; George Peabody College for Teachers, M.A., 1939

SCHWANAUER, FRANCIS (1962) Professor of Philosophy; University of Stuttgart and Tubingen, Ph.D., 1959


SCHWINCK, LOTTE (1969) Associate Professor of Biology; University of Tubingen, Dr. rer. nat., 1956

SELKIN, MICHAEL (1970) Assistant Professor of English; Columbia College, A.B., 1961; Cornell University; M.A., 1963; Columbia University, Ph.D., 1975

SHOOPS, DOROTHY S. (1973) Associate Professor of Nursing; New York University, B.S., 1953; M.A., 1960; Ph.D., 1973

SIMMONDS, STEPHEN P. (1971) Director, Human Services Development Institute; University of New Hampshire, A.B., 1948; University of Chicago, M.A., 1953

SLAVICK, WILLIAM H. (1970) Associate Professor of English and Chairman Department of English; University of Notre Dame, B.A., 1949; M.A., 1951; Ph.D., 1971

SLOCUM, LLOYD V. (1966) Associate Professor of Electronics; Pennsylvania State University, B.S., 1955; M.S., 1957

SMALL, WILLIAM ULRICH (1967) Associate Director of Continuing Education and Summer Session; Bowdoin College, B.S., 1949; Columbia University, M.B.A., 1951

SMITH, ALLAN GUY (1967) Professor of Chemistry; Mount Allison University (New Brunswick), B.Sc., 1949; University of New Brunswick, M.S., 1951; University of Maine, Ph.D., 1966

SMITH, CHARLES F. (1969) Associate Professor of Education; Coordinator of Research and Development for the School of Education; Westfield State College, B.S., 1960; University of Massachusetts, M.S., 1963; Ed.D., 1969

SMITH, HALSEY (1972) Director of Research and Advanced Study; Princeton University, A.B., 1943; University of Maine in Portland, LL.D., (Hon.), 1962

SNOW, ROGER V., JR. (1967) Director of Publications and Public Information; Williams College, B.A., 1940

SOTTERY, PATRICIA (1973) Administrative Director, Allagash Environmental Institute; Bard College, B.A., 1953; New York University, M.A., 1965

SOTTERY, THEODORE WALTER (1956) Professor of Chemistry; Dartmouth, B.N.S., 1946; University of Maine, M.S., 1956; Ph.D., 1966

SOULE, WILLIAM HILTON (1965) Professor of Education and Director of Student Teaching, Secondary Education; Bowdoin College, A.B., 1936; Bates College, M.Ed., 1941; Boston University, Ed.D., 1967

SOUTHWORTH, ROBERT S. (1963) Professor of Educational Psychology; Bostan University, B.A., 1951; Ed.M., 1958; Ed.D., 1965

SOYCHAK, ANTHONY G. (1965) Assistant Professor of Mathematics and Computer Science; University of Maine, B.S., 1959; Bowdoin College, M.A., 1963

STEARNS, GENE F. (1972) Professor of Education and Director of Student Teaching, Elementary Education; Plymouth State College, B.Ed., 1962; University of New Hampshire, M.Ed., 1968; Ball State University, Ed.D., 1970

STEELE, WILLIAM PAUL (1967) Associate Professor of Theatre and Chairman, Department of Theatre; University of Maine, B.S., in Ed., 1964; M.A., 1967
Personnel listings as reported to Public Information on or before May 1, 1975

STEINMAN, RICHARD (1966) Associate Professor of Social Welfare; University of Missouri, B.A., 1949; Columbia University, M.S., 1952; Brandeis University, Ph.D., 1968

STONE, JUDITH THELMA (1968) Associate Professor of Nursing and Chairman Department of Advanced Medical-Surgical Nursing; University of Maine, B.S., 1964; University of Pennsylvania, M.S.N., 1966

STUMP, WALTER R. (1968) Associate Professor of Theatre; San Diego State College, B.A., 1959; M.A., 1960; Indiana University, Ph.D., 1974

STURGEON, RICHARD HOWARD (1962) Associate Professor of Education and Assistant Director of Associate Degree Studies; University of Maine, B.S., 1960; M.Ed., 1966

SULLIVAN, DAVID T. (1972) Registrar; Tufts University, B.A., 1966

SULLIVAN, JAMES VINCENT (1959) Professor of Physical Education and Chairman, Department of Physical Education; University of Maine, B.S., in Ed., 1951; University of Delaware, M.Ed., 1954; Boston University, Ed.D., 1971

SYTSSMA, DONALD (1972) Assistant Professor of Psychology; Arizona State University, B.A., 1965; University of Waterloo, Ph.D., 1971

TALBOT, FRANKLIN (1963) Head Cataloger and Associate Professor of Library Service; University of Maine, B.A., 1946; Columbia University, M.S., 1949

TALBOT, JEANNE GEORGIANNA (1968) Associate Professor of Nursing and Chairman, Department of Medical Surgical Nursing; Boston College, B.S., 1964; M.S., 1967

TATRO, SUZANNE E. (1972) Instructor in Nursing; D'Youville College, B.S., 1968; University of Rochester, M.S., 1972

TAYLOR, LAWRENCE A. (1968) Associate Professor of Business Administration; University of Maine, B.S., 1967; M.B.A., 1968

THERIAULT, ANNE M. (1975) Executive Director, The Alumni Association of the University of Maine at Portland-Gorham; University of Maine in Portland, A.B.A., 1967

TIEDEMANN, JANET B. (1974) Instructor in Nursing; Skidmore, B.S., 1956; Boston University, M.S., 1968

TIZON, JUDITH (1972) Assistant Professor of Anthropology and Chairman, Department of Geography-Anthropology; University of Illinois, B.A., 1965; University of California, M.A., 1969

TRYON, PHYLLIS ARLEEN (1965) Associate Professor of Nursing and Chairman, Department of Maternal and Child Health Nursing; Boston University, B.S., 1958; Yale University, M.S.N., and C.N.M., 1962

TUKEY, GERALDINE M. (1970) Assistant Professor of Nursing; Mercy College of Detroit, B.S., 1957; Boston University, M.S., 1964

UBANS, JURIS K. (1968) Associate Professor of Art and Chairman, Department of Art; Director, Art Gallery; Syracuse University, B.F.A., 1966; Pennsylvania State University, M.F.A., 1968

UBANS, MAREA (1970) Assistant Professor of German; Indiana University, A.B., 1960; University of Southern California, M.A., 1962


VAN AMBURG, GEORGE EDWARD (1960) Student Adviser; Portland University, B.S., 1956

VAN HAM, GLORIA (1972) Coordinator of Alumni Activities; Lassell Junior College, A.S., 1944; Boston University, B.S., 1946

VAN HAM, GLORIA (1972) Coordinator of Alumni Activities; Lassell Junior College, A.S., 1944; Boston University, B.S., 1946

VENTRESCO, FIORELLO B. (1966) Associate Professor of History; Boston University, A.B., 1959; University of Michigan, M.A., 1961

VINTCENT, STANLEY J. (1959) Assistant Professor of English; Boston University, B.A., 1949; Columbia University Teachers College, M.A., 1950


WALKLING, ROBERT A. (1969) Associate Professor of Physics; Swarthmore College, B.A., 1953; Harvard University, M.S., 1954; Ph.D., 1962

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Personnel listings as reported to Public Information on or before May 1, 1975


WEEKS, ERNEST E. (1967) Professor of English; Bowdoin College, A.B., 1939; Tufts University, M.A., 1949; Columbia University, Ph.D., 1965

WEIMONT, ROBERT A. (1973) Counselor, York County Community College Services; Colby College, B.A., 1971; University of Maine at Orono, M.Ed., 1973

WHITE, STUART E. (1975) Lecturer, School of Law; U.S. Naval Academy, B.S., 1945; Harvard University, J.D., 1950


WHITTING, WILLIAM LAWRENCE (1947) Associate Professor of Communication and Coordinator of Administrative Affairs; University of Maine, B.A., 1937; Bates College, M.Ed., 1948; Northwestern University, M.A., 1954

WHITMORE, ALLEN RICHARD (1969) Associate Professor of History; University of Maine, B.A., 1962; Northwestern University, M.A., 1964; Ph.D., 1970

WHITNEY, SARAH FLORENCE (1973) Assistant Professor of Nursing; Catherine Spalding College, B.S.N., 1960; Catholic University of America, M.S.N., C.N.M., 1964

WHITTEN, JAMES M. (1951) Associate Professor of Philosophy of Education and Chairman, Department of Foundations; Colby College, A.B., 1944; University of Maine, A.M., 1955

WHITTEN, MAURICE M. (1955) Professor of Physical Science; Colby College, A.B., 1945; Columbia University, M.A., 1949; Ohio State University, Ph.D., 1971

WIGGLESWORTH, EDWARD (1972) Laboratory Demonstrator; Colby College, M.S.T., 1968

WILBUR, CARL A. (1973) Counselor, York County Community College Services; University of Maine at Orono, B.S., 1948; State University of New York at Buffalo, M.A., 1972

WILLARD, NANCY LEE (1969) Assistant Professor of Physical Education; Russell Sage College, B.S., 1958; State University College, Plattsburg, N.Y., M.S., 1967

WILLIAMSON, MARION (1974) Director/Teacher - University Day Care Center; Colorado State University, B.S., 1968

WILSON, NEVILLE (1968) Assistant Professor of English; Tufts University, B.A., 1965

WISE, WILLIAM B. (1966) Assistant to the President for Academic Affairs; University of Maine, B.S., 1961; University of Maine at Orono, M.Ed., 1971

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Numbers in the left hand margin are coded as follows:
1 on leave, Fall semester, 1974
2 on leave, Spring semester, 1975
3 on leave, Academic year, 1974-1975

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STUDENT PARKING LOTS
*indicates student parking lots, which are outlined by heavy borders on this map. From left to right, these are:

IE — Industrial Education Center
BN — Bailey Hall North
HG — Hill Gymnasium (outlined areas only)
AH — Anderson Hall
WH — Woodward Hall
UH — Upton Hall
HH — Hastings Hall
MH — McLellan House
SS — School Street

After 4:00 p.m. students may park in the southern hall of the BS faculty parking lot or the RH faculty-staff parking lot. These lots must be restricted at other hours.

Lightly outlined parking areas coded RH and CH are for faculty and staff only; the BS area is for faculty only. Small areas restricted to faculty-staff parking are also provided close to the gymnasium, the Industrial Education building, and the Art Building.

Ten-minute parking for visitors is provided west of Corthell (WC), west of Hill Gymnasium, near the entrance of the Bailey Library, and by the tennis courts.

Buildings:
1. Bailey Hall — Science Wing
2. Bailey Hall — Library Wing
3. Bailey Hall — Classroom Wing
4. Warren G. Hill Gymnasium
5. Anderson Hall
6. Woodward Hall
7. Russell Hall
8. Corthell Hall
9. President's Residence
10. All Faith Chapel — Art Gallery
11. Upton Hall
12. Hastings Hall
13. Robie Hall
14. Andrews Hall
15. Maintenance Building
16. Art Building (Academy)
17.-18. Tennis Courts
19. Water Tower
20. Athletic Field
21. Industrial Education Center
22. McLellan House
23. New Dining Center
24. Residence Towers
25. Heating and Sewage Plants
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