# University of Southern Maine Undergraduate Catalog 1985-1986 

University of Southern Maine

Follow this and additional works at: https://digitalcommons.usm.maine.edu/archives_catalogs
Part of the Higher Education Commons

## Recommended Citation

University of Southern Maine, "University of Southern Maine Undergraduate Catalog 1985-1986" (1985). Course Catalogs. 18.
https://digitalcommons.usm.maine.edu/archives_catalogs/18

This Book is brought to you for free and open access by the University Archives at USM Digital Commons. It has been accepted for inclusion in Course Catalogs by an authorized administrator of USM Digital Commons. For more information, please contact jessica.c.hovey@maine.edu.

University of Southern Maine

## Gorham Campus



## Gorham Campus

50. Academy Building
51. Anderson Hall
52. Art Gallery
53. Bailey Hall (Library)
54. Corthell Hall
55. Dickey/Wood Hall
56. Dining Center
57. Industrial Education \& Technology
58. Mechanical Maintenance Shop
59. McLellan House
60. Central Heating \& Sewerage

## Plants

61. President's House
62. Russell Hall
63. Robie/Andrews Hall
64. Upton/Hastings Hall (Bookstore)
65. Warren Hill Gym
66. Woodward Hall
67. 19 College Avenue
68. 24 College Avenue
69. 51 College Avenue

## Parking

P15. Faculty/Staff
P16. Student Commuter
PI7. Faculty/Staff
P18. Visitor
P19. Student Commuter
P20. Faculty/Staff
P21. Faculty/Staff
P22. Student Resident
P23. Student Resident
P24. Student Resident
P26. Student Resident
P27. Faculty/Staff/Student Commuter
P28. Student Resident
P29. Visitor
P30. Student Commuter
P31. Faculty/Staff
P32. Faculty/Staff

# University of Southern Maine 

Undergraduate Catalog<br>1985-1986

## University of Maine Board of Trustees

Mr. Severin M. Beliveau, 1 Memorial Circle, Augusta, Maine 04330, 6235167
Dr. Robert Eugene Boose, Commissioner of Educational and Cultural Services, State House, Augusta, Maine 04330, 289-2321
James Bowers, U.M.A. Student, Box 152, Washington, Maine 04574, 8452597
Mr. Francis A. Brown, P.O. Box 414, Calais, Maine 04619, 454-7543
Mrs. Patricia H. DiMatteo, 403 Blackstrap Road, Falmouth, Maine 04105, 797-2549
Mr. Robert J. Dunfey, 363 Maine Mall Road, South Portland, Maine 04106, 775-6161
Alan M. Elkins, M.D., 22 Bramhall, Portland, Maine 04101, 871-2355
Stanley J. Evans, M.D., 417 State Street, Bangor, Maine 04401, 947-6767
Mr. Joseph G. Hakanson, Chairman, Box 465, Westbrook, Maine 04092, 774-6311
Mr. Peter W. Johnston, P.O. Box 490, Caribou, Maine 04736, 498-8134
Ms. Geneva A. Kirk, 30 Ware Street, Lewiston, Maine 04240, 782-1146
Mr. Richard P. Marshall, Box 34, Old Orchard Beach, Maine 04064, 2821596
Mr. Thomas F. Monaghan, P.O. Box 4863, Portland, Maine 04112, 7743906
Mr. Richard I. Morin, Vice Chairman, P.O. Box 32, Fort Kent, Maine 04743, 834-3116
Mr. Harrison L. Richardson, Jr., 465 Congress Street, Portland, Maine 04101, 774-5821
Barbara H. Sanford, The Jackson Laboratory, Bar Harbor, Maine 04609, 288-3373

Office of the Chancellor, 107 Maine Avenue, Bangor
Patrick E. McCarthy, Chancellor of the University of Maine
Harlan A. Philippi, Interim Vice Chancellor for Academic Affairs, 24 College Avenue, Gorham
William J. Sullivan, Vice Chancellor for Administration
Mary Ann Haas, Assistant Vice Chancellor
Samuel J. D'Amico, Associate Vice Chancellor for Employee Relations
Richard A. Eustis, Assistant Vice Chancellor for Administration and Director of Physical Facilities

The University of Southern Maine is accredited by the New England Association of Schools and Colleges which accredits schools and colleges in six New England states. Membership in the Association indicates that the institution has been carefully evaluated and found to meet standards agreed upon by qualified educators.

The University of Southern Maine does not discriminate on the basis of race, color, religion, sex, national origin, handicap, or age in the recruitment and admission of students, the recruitment and employment of faculty and staff, and the operation of any of its programs and activities; and the University practices affirmative action in hiring and in all other conditions of employment for disabled and Vietnam era veterans, as specified by federal and state laws and regulations. The designated coordinator for University compliance with these laws is Freda D. Bernotavicz, Director of Equal Employment Opportunity/Affirmative Action.

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

The University of Southern Maine supports the efforts of secondary school officials and governing bodies to have their schools achieve regional accredited status to provide reliable assurance of the quality of educational preparation of its applicants for admission.

## Table of Contents

Academic Calendar ..... 4
The University ..... 5
Programs of Study ..... 7
Undergraduate Admissions ..... 9
Tuition and Fees ..... 16
Student Financial Aid ..... 21
Student Life and Services ..... 25
Academic Policies ..... 29
The Core Curriculum ..... 38
Women's Studies Program ..... 46
Convocation ..... 50
College of Arts and Sciences ..... 52
College of Education ..... 165
School of Business, Economics and Management ..... 177
School of Applied Science ..... 194
University of Southern Maine School of Nursing ..... 213
Division of Basic Studies ..... 227
Reserve Officers Training Corps ..... 234
Graduate Programs ..... 236
School of Law ..... 236
Summer Session ..... 237
Center for Research and Advanced Study ..... 237
Division of Public Service ..... 238
University of Southern Maine Alumni Association ..... 244
Administration of the University of Southern Maine ..... 245
Index ..... 262

## Academic Calendar, 1985-1986

Fall 1985 Semester

First Day of Classes
October Break Begins
Classes Resume
Veterans' Day Break Begins
Classes Resume
Thanksgiving Vacation Begins
Classes Resume
Last Day of Classes
Final Exams

Spring 1986 Semester

First Day of Classes
Winter Vacation Begins
Classes Resume
Spring Vacation Begins
Classes Resume
Last Day of Classes
Final Exams
Commencement

8:00 a.m., Tuesday, September 3 After classes on Thursday, October 17
8:00 a.m., Monday, October 21
After classes on Saturday, November 9
8:00 a.m., Tuesday, November 12 4:00 p.m., Tuesday, November 26
8:00 a.m., Monday, December 2
Saturday, December 14
Monday, December 16 through
Friday, December 20

8:00 a.m., Monday, January 13
After classes on Saturday, February 15
8:00 a.m., Monday, February 24
After classes on Saturday, March
29
8:00 a.m., Monday, April 7
Saturday, May 3
Monday, May 5 through Friday, May 9
Saturday, May 10

## The University

One aspect of the Maine spirit, as naturalist Henry Beston has described it, " . . . is a positive enjoyment of adventure, character, and circumstance." This same spirit has also helped guide the development of higher education in the state of Maine. For over 100 years, the predecessors of what today is known as the University of Southern Maine have shared a continuing concern to provide an education appropriate to changing circumstances and responsive to the character and sense of adventure of their students.

In 1878, the Western Maine Normal School was founded at Gorham. Its mission broadened and its student body grew, and in 1945 it became Gorham State Teachers College. Similarly, Portland Junior College, developed in 1933 to bring higher education within commuting distance of a growing population, became the University of Maine at Portland in 1957. The two institutions were joined in 1970 as the University of Maine at Portland-Gorham, and in 1978 became known as the University of Southern Maine. Looking back over the history of those schools and colleges, one can appreciate that the University today is stronger because each of its predecessors grew with the times and the students they served.

Not surprisingly, each college and university in the country likes to think of itself as unique, as offering experiences unavailable at other institutions of higher learning. To be sure, the University of Southern Maine has many characteristics typical of medium-sized, public universities elsewhere in the United States. It comprises seven academic units (Arts and Sciences, Law, Education, Applied Science, Nursing, Business, and Basic Studies); it enrolls over 8,000 students, and is the second largest of the seven campuses making up the University of Maine system; it offers five associate and thirty-eight baccalaureate degree programs, as well as graduate and professional degrees in law, nursing, business, computer science, education, engineering, and public policy and management.

But the University has many unique features, too.
It is both large and small. With 1,100 students resident on the Gorham campus, the University has the characteristics of a rural, New England college; faculty close to hand and facilities set in attractive pastoral surroundings. At the same time, located in Portland, the state's largest city and the center of financial, business, and cultural activities, the University makes available resources, opportunities, and experiences usually found only in much larger institutions. In addition to its two campuses, four off-campus learning centers serve students throughout southern Maine. All of these sites have been linked via computer and an interactive, color, instructional television system.

The student body of the University is the most diverse in the state of Maine. Over one-half are full-time students; more than 57 percent are women, and the average age of an undergraduate is 26 . This diversity of age provides a lively and challenging environment for learning: a context in which scholarship and the experience gained from living complement one another.

The University is also the most cosmopolitan of Maine institutions of higher education. There is easy access to the cultural and social resources of Boston and New York, as well as those of Portland. The City of Portland and the University cooperate to provide internships for students in political science, law, sociology, nursing, and related areas. There is heavy use by the University of community resources including arts institutions, museums, television, and skilled professionals who serve on part-time faculty. The University's Center for Research and Advanced Study engages in a broad range of ventures with municipal, county, state, and federal agencies, as well as with private foundations and industry. These all serve to provide the student with formal and informal learning opportunities in the areas of the arts, humanities, politics, business, mass communication, and high technology. The University maintains a strong faculty and
student exchange program with colleges and universities in Britain, Sweden, Ireland, and Brazil and is developing a new program with the People's Republic of China.

Most important, however, the University is growing and developing. At a time when many colleges and universities in the country are struggling with declining enrollments, drastically curtailed resources, and a need to redefine their mission, this University, by virtue of its location, range of student body, quality of faculty, and level of support, is responding creatively to its particular circumstances and the challenges of its students. Within the past three years, a new Core curriculum has been established: a curriculum which attempts to define the types of skills and the kinds of learning experiences our graduates should have in today's world. University Convocation, first begun in 1981 and repeated yearly, seeks to address an issue of interest to the times-"The City," "The Changing Roles of Women and Men," "Peace and War in the Nuclear Age," and in 1985-86, "The Aging of America"-and to engage students, faculty, and citizens in a common discussion across academic disciplines and between the University and the community. New graduate programs in computer science, nursing, and public policy and management reflect a concern with preparing individuals for contemporary careers. As an urban comprehensive institution, the University is attempting to strengthen its commitment to serve the needs of off-campus students, inservice teachers, and professionals on-site in business and industry. The University is thus a major educational force in the overall growth and improvement of southern Maine: an area often described as the northern part of that business, industrial, and cultural corridor stretching from Washington, D.C., through New York and Boston.

But ultimately, however, a university must be judged on the basis of its impact upon its students and in terms of the value it imparts to those who join its community. Students at the University of Southern Maine find themselves challenged by a talented and dedicated faculty, stimulated by a diverse and involved student body, and enriched by the type of environment that Portland, one of the country's "most livable cities," affords.

The University of Southern Maine is accredited by the New England Association of Schools and Colleges and has most recently been granted a ten-year accreditation, indicating the University meets or exceeds Association standards; the School of Nursing is accredited by the National League for Nursing; the College of Education by the National Council for Accreditation of Teacher Education; and several departments within the College of Arts and Sciences by specialized accrediting bodies. The University of Maine School of Law is approved by the American Bar Association and the Association of American Law Schools.

In short, the University's challenging-academic program encourages students to seek leadership roles in our always changing society. So it was in 1878; so it remains today.

## Programs of Study

The University of Southern Maine offers five associate and thirty-eight baccalaureate degree programs as well as graduate and professional degrees in law, nursing, business, computer science, education, and public policy and management. For further information regarding graduate programs, please refer to the Graduate Catalog.

## Baccaloureate Degree Programs

College of Arts and Sciences
Applied Chemistry (B.S. degree) History

Art (B.A. degree or B.F.A. degree) Liberal Studies*
Biology (including pre-med, Mathematics pre-dental and pre-vet)
Chemistry
Communication
Criminology
Earth Science
Economics
English
French
Geology
Geography-Anthropology
Theatre
*Liberal Studies: Declaration of the major is normally done at the end of the sophomore year with the approval of the Liberal Studies Major Board.
**Self-Designed Major: Approval of this program must be given by the Council for Interdepartmental Majors after students have enrolled at the University.

## Engineering

This University offers the first year of the four-year program common to all engineering majors (with the exception of electrical engineering), and the first and second years in engineering physics. These offerings meet the general requirements of the corresponding programs at the University of Maine at Orono. UMO extends preferred transfer consideration to Maine residents.

## College of Education

The College of Education offers the following four-year programs leading to the degree of bachelor of science:

Art Education (certification, K-12)
Elementary Education (certification, K-8)
Industrial Arts Education (certification, K-12)
Music Education (certification, K-12)
Vocational/Occupational Education (teaching program)
Secondary Education Mathematics
School of Applied Science
Computer Science (B.S.)
Industrial Technology (B.S.)
Vocational Technology (B.S.)
School of Nursing
Nursing (B.S.)
Therapeutic Recreation (B.S.)
School of Business, Economics and Management
Business Administration (B.S.)
(with majors in business administration, accounting, and economics)

Associate Degree
Programs

College of Arts and Sciences
Liberal Arts (A.A.)
School of Nursing Therapeutic Recreation (A.S.)
School of Business, Economics and Management Business Administration (A.S.)
(with options in accounting; business computer programming; business management; business marketing; hotel, motel, and restaurant management; and real estate)
Division of Basic Studies
Human Services (A.S.)
(with options in gerontology, mental health, and developmental disabilities)
Selected Studies (A.S.)
Liberal Arts (A.A.)
Business Administration (A.S.)
(see above for options)
For further information regarding baccalaureate and associate degree programs, please refer to the appropriate school or college section of this catalog.

## Undergraduate Admissions

The University of Southern Maine is an academic community that welcomes applications for admission from qualified women and men regardless of race, color, creed, national origin, handicap, or age. The Admissions Office invites prospect ive students to visit the campus and to discuss their educational interests. The Office will provide information about academic programs, help students plan a course of study, discuss admission requirements, and arrange a tour of the campus. Prospective students are encouraged to telephone or visit the Admissions Office (207-780-5215) located in Corthell Hall on the Gorham campus.

Although secondary school preparation may vary, the following subjects are required for regular admission to the University. In addition to these, further requirements are imposed by certain schools and colleges. (A unit is equivalent to one year of study).

## General subject requirements <br> English <br> Mathematics

4 units
3 units (Algebra I, II and Geometry)

Applicants to the College of Arts and Sciences must also have:
Science 2 units (with lab)

History/Social Science 2 units
Foreign Language 2 units (one language)
(Biology majors must have three lab units of science. Pre-nursing candidates must have biology and chemistry. Foreign language majors must have three units of a foreign language).

Applicants to the College of Education must also have: Science 2 units (with lab) History/Social Science 2 units
(Majors in Secondary Education Mathematics must have four units of mathematics).

Applicants to the School of Nursing
Admission is first to the University as a pre-nursing candidate. (See General Subject requirements above). Admission to the upper-division nursing major may be made after the completion of a minimum of 30 credits in the prescribed prerequisites. For further details, please refer to the section, University of Southern Maine School of Nursing.

Applicants to the School of Business, Economics and Management Admission is first to the School of Business, Economics and Management. Each student must then satisfy additional minimum standards of academic performancefor admission to a major in the baccalaureate program or to an option in the associate degree program. For further information, please refer to the section, School of Business, Economics and Management.
For specific admissions requirements of art, music, industrial arts, industrial technology, and vocational-occupational education, please refer to the appropriate sections of the catalog.

Admission to degree programs at the University is on a selective basis. The University admits women and men to its baccalaureate and associate degree programs whose academic credentials and life experiences indicate potential for success in higher education.

Admissions<br>Deadline

## Admissions <br> Decisions

Each applicant for admission is required to submit a completed University of Maine Application Form and a nonrefundable $\$ 15$ application fee. The Application Form calls upon the applicant to detail his/her academic, personal, and recreational background. In addition, the candidate is asked to describe in narrative form his/her interest in the University and the specific degree program for which application is being made.

The University will consider applications for the fall semester at any time beginning in the September of the year prior to the fall semester in which the applicant intends to commence academic study. As some degree programs admit only a limited number of students, applicants are urged to submit their credentials at their earliest possible convenience in order to receive consideration. Applications may also be made to enter the University in the spring semester. These, too, should be submitted early so as to receive full consideration.

Offers of admission may be revoked because of unsatisfactory performance in the final semester of high school or college work.

Since there is insufficient time to provide necessary student services, applications which remain incomplete beyond one week prior to the opening of classes cannot be approved. Applicants who are in this situation may register as Special Students and request reactivation of their application for the following semester. Special Students, however, are ineligible for University housing and financial aid.

The University recognizes that its prospective students may come with differing academic backgrounds and some with a significant time having elapsed since completion of secondary school. The following categories of admission exist to accommodate such students.

Regular Admission Applicants whose academic backgrounds demonstrate the ability to pursue regular, entry-level coursework may be granted regular acceptance to the University. This admissions decision is based upon a comprehensive evaluation of the student's educational record, including standardized test scores (if required), as well as individual talents and act ivities.

Admission with Conditions Applicants whose academic backgrounds are deficient in some way (e.g., subjects presented, grades, standardized test scores), but who show significant promise, may be granted acceptance with conditions. Such students are fully admitted to the University, and pursue their first year of study under the direction of the Advising and Information Department. Normally, students who are admitted with conditions take a reduced courseload for the first few semesters. These students should expect to take longer to complete a degree program at the University than students granted Regular Acceptance. Students admitted to associate or baccalaureate degree programs with conditions have up to five and six semesters, respectively, to remove their conditions.

To achieve the transition to regular status, the student must complete the minimum proficiency requirements of the University as well as a minimum of 15 credit hours of graded, non-remedial coursework with a grade point average placing the student in good academic standing. Transition to regular status prior to completion of 15 credit hours may be approved if the student earns an exceptional grade point average. The student's assigned academic counselor will assist in initiating the transition.

Admission to Selected Studies Some persons whose educational career has been interrupted for a considerable period of time or whose academic credentials are insufficient to warrant either regular admission or admission with conditions to baccalaureate or associate degree programs, are invited to apply to the Selected Studies Program. The program is a two-year, associate degree course of study that offers the student several options: (1) to complete a self-designed, two-year program; (2) to transfer
to another associate or baccalaureate degree program offered by the University; or (3) to apply for transfer to another institution of higher education. The Selected Studies Program is administered by the Division of Basic Studies and is available at any of the four off-campus centers of the University. For further information, please refer to the Division of Basic Studies section of this catalog.

Readmission Students enrolled in degree programs who either formally withdraw or who fail to register for a particular semester maintain their matriculated status for one academic year from the fifth class day of the next regular academic term. If the non-registered time period is shorter than one academic year, no readmission application is required and the student may register for courses through the Registrar's Office. Readmission following academic suspension requires the approval of the academic dean of the school or college which initiated the suspension. Readmission following academic suspension generally requires the approval of the academic dean of the school or college which initiated the suspension.

Early Admission Students who have completed their junior year of high school may apply for consideration for admission as a fully matriculated freshman within the College of Arts and Sciences. The Early Admission Program seeks to accommodate those students who display both the intellectual ability and the social maturity to succeed in a university course of study.

Students who wish to receive their secondary school diploma after the completion of one year in the Early Admission Program must obtain the prior approval of their secondary school guidance director or principal. Students expecting to receive their secondary 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 20 percent of his or her secondary school class at the end of the junior year. Coursework normally expected to be completed by the end of the junior year includes: three years of English; three years of mathematics beginning at the introductory algebra level; one year of social science/history; one year of biology, chemistry, or physics; and two years of 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 admissions purposes.

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

The Admissions Office in cooperation with the Dean's Office in the College of Arts and Science will review each Early Admission application. Students thus admitted under this program are accorded all the rights and privileges of entering freshmen. Academic advising can be arranged upon request through the College of Arts and Sciences Dean's Office prior to and during the first year of the program.

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

Admission of International Students Due to limitations on available financial aid, applications are encouraged only from international students who are able to fund fully their educational expenses from their own resources. To certify this, a Declaration and Certification of Fi-
nances Statement must be filed as part of the application process. This form must be fully documented and notarized and should accompany the completed application. Applicants whose native language is not English are required to submit scores of the Test of English as a Foreign Language (TOEFL). In addition international students must submit test results of the Scholastic Aptitude Test (SAT). SAT scores are not required of applicants who have completed at least one year of university or college study at an English-speaking institution of higher education. For September 1986 admission, all international student admission credentials must be filed with the Admissions Office no later than April 15, 1986.

Enrollment as an Undeclared Major Student Applicants who are undecided regarding their major field of study may request admission as an "Undeclared Major." Undeclared students are assigned an academic counselor in the Advising and Information Department to assist with appropriate course selection and academic planning while selecting a major field of study. This admission option provides students with the opportunity to select their major at an appropriate time during the first 60 credit hours of coursework.

Enrollment as a Special Student The University encourages members of the local community to take advantage of its diverse course offerings. Special Students (those not enrolled in a degree program of study) may take regular credit courses for self-interest and enrichment. Special Students are enrolled each semester on a space-available basis and are not eligible for student financial aid awards, guaranteed student loans, veterans' benefits, or participation in athletics. Interested persons are invited to contact the Advising and Information Department (AID), Payson Smith Hall, on the Portland campus or the off-campus center nearest them for further information.

## Admissions <br> Applications

## Admission by <br> Transfer

Admission from Secondary School Applicants applying to the University during their senior year in secondary school, or who have been graduated forless than three years and havehad no collegiate attendance, must arrange for their secondary school transcript to be sent to the Office of Admissions. Scores from the Scholastic Aptitude Test (SAT) of the College Board must also be submitted. Achievement tests of the College Board are not required. The American College Test (ACT) may be substituted for the SAT for admission purposes.

Admission of Adult Candidates Applicants who have been graduated from secondary school for more than three years must arrange for their secondary school transcript to be sent to the Office of Admissions. Although Scholastic Aptitude Test (SAT) scores are not required for admission of adult candidates, they may be submitted for placement purposes as such scores may be used to declare minimum academic proficiencies.

From Outside the University of Maine System Applicants who have attempted 12 semester hours of credit or more beyond the secondary school level are classified as transfer students and must submit their collegiate transcripts together with secondary school and SAT records. Those transfer candidates who have earned 30 or more semester hours of collegiate credit must submit their collegiate transcripts for evaluation, but may forego submitting secondary school transcripts and SAT scores.

Students applying for transfer from regionally accredited institutions of higher education must have a grade point average which places them in good academic standing. Transfer credit may be given for coursework completed at a regionally accredited institution of higher education only if a grade of C - or better has been achieved in courses that are comparable to ones offered in the student's proposed degree program at the University of Southern Maine.

Students applying for transfer from non-regionally accredited institutions of higher education must have a minimum 2.75 grade point average (on a 4.0 scale) to be considered for admission. No transfer credit will be awarded for coursework completed at non-regionally accredited institutions of higher education. Students may, in individual cases, petition the dean of the appropriate school or college, for consideration of such coursework.

From Within the University of Maine System Applicants who have completed coursework at other campuses of the University of Maine System should procure an Application Form from the Admissions Office of any University of Maine campus. Students should request that their transcripts be sent to the USM Admissions Office. This will be done at no cost to the student.

Students must have a minimum grade point average which places them in good academic standing to be eligible for consideration for transfer to the University of Southern Maine. Students from within the University of Maine system are given preference over all other transfer applicants, but are subject to the same requirements and policies described in this catalog. Coursework completed with a passing grade within the University of Maine system will be granted transfer credit in accordance with Board of Trustee policy.

Trustee policy is to provide the maximum opportunity for transfer within the system. When a student is accepted for transfer within the University of Maine, all undergraduate degree credits obtained at any unit of the University will be transferable to any other unit but will not be automatically applied to the specific academic degree program to which the student has transferred. Each student will be expected to meet the established requirements of the academic program into which transfer is effected, and appropriate application of that credit is to be the responsibility of the particular academic unit. To determine which courses are transferable for degree program credit, students who anticipate the need to transfer course credits should consult with their academic advisor prior to enrollment.

## Evaluation and Placement

Evaluation of Transfer Credits Undergraduate coursework completed at other institutions of higher education will be evaluated for transfer credit on the basis of the following: (1) comparability of courses taken with courses at the University; (2) whether or not the previous institution was regionally accredited; (3) grades achieved in previous coursework. Credit is not transferred for courses in which the lowest passing grade was earned (exception: grades of D are transferable if earned at another campus of the University of Maine). Courses for which credit is awarded through another institution's credit by examination policy may be granted transfer credit provided both earned credits and grades appear on the transcript and the course is applicable to the student's work at this University. The applicability of transfer credits to a student's intended major field of study shall be determined by the Office of Transfer Affairs in conjunction with the appropriate academic department, school, or college.

Placement Examination Program All newly admitted students with a SAT Mathematics score below 450 or a Test of Standard Written English (TSWE) score below 43 must take the Placement Examinations. The requirement applies to (1) new baccalaureate and associate degree students; (2) transfer students with less than 30 transfer credits; and (3) readmitted students with less than 30 credits. Special students are encouraged to take the Placement Examinations and should contact their academic counselor for details. Copies of the publication, Placement Examination Program, are available at the Testing and Assessment Center, 209 Deering Avenue, Portland campus, the Advising and Information Department, and all offcampus centers.

## Prior Learning Evaluation

The University recognizes several procedures for the assessment of learning acquired outside a sponsored collegiate setting. This may include, standardized examinations (e.g., CLEP), or credit for learning gained through paid or unpaid employment, self-directed study, or through avocational talents and skills. For further details regarding the following options, students should contact the Office for Prior Learning Assessment, 110 Payson Smith Hall, Portland campus (780-4067).

Advanced Placement The University participates in the Advanced Placement Program of the College Entrance Examination Board. Applicants interested in advanced placement with credit should make arrangements to take the Advanced Placement Tests given by the C.E.E.B. in May of each year. The tests may be taken in the junior and senior years of secondary school. Students who score a 3 or better on this test may in certain circumstances be granted credit for an introductory course in an appropriate subject area.

College Level Examination Program In certain cases, credit may be given a student who receives a satisfactory score on a CLEP examination, either the General Examinations or the Subject Examinations. These are as follows:

General Examination The University will grant credit in the following areas for a score of 500 or higher on these CLEP general examinations: English (3 credits, will Satisfy ENG 100); Humanities (6 credits); Social Science/History ( 6 credits); Mathematics ( 6 credits); and Natural Science ( 6 credits).

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

Subject Examinations Any subject area CLEP examination which is equivalent to a USM course approved to satisfy a requirement of the Core curriculum may be applied to satisfy the Core requirement in that subject area.
The following departments, schools, and colleges have established policies relative to the acceptance of CLEP subject credit: College of Arts and Sciences (Biological Sciences, Chemistry, History, Mathematics/Computer Science, Political Science, Psychology, and Sociology); School of Business, Economics and Management; School of Nursing; and the College of Education (Industrial Education and Technology, Educational Psychology, and Human Growth and Development). Interested candidates should contact the Office for Prior Learning Assessment (780-4067) or the appropriate school, college, or department for further information.

Challenge Examinations Students in the School of Nursing who successfully challenge selected upper-division courses may receive credit for prior learning.

Portfolio Assessment The University has recently established a program for assessing learning based on an individual student's portfolio. Currently available on a limited basis only, this program involves a detailed and comprehensive documentation of prior learning, an interview with a faculty assessor, and specific performance or demonstration as appropriate. Details may be obtained from the Office for Prior Learning Assessment, 780-4067.

Armed Services Experience The University recognizes credit based on the American Council on Education's Guide to the Evaluation of Educational Experiences in the Armed Services. Interested students should provide a DD 214 form, a DD 295, and other appropriate credentials for evaluation. Details may be obtained from the Office of Prior Learning Assessment.

New England Regional Program In cooperation with the New England Board of Higher Education the University offers undergraduate programs of study to qualified candidates from the New England states. Tuition rates for regional candidates approved by the Board of Trustees will be that of in-state tuition plus a surcharge of 25 percent. Because the listing of programs varies from year to year, candidates should check the most up-to-date listings. The following schedule represents the fields of study available at the University in the New England Regional Student Program for 1985-86. The 1986-87 listing will be available from the New England Board of Higher Education during the fall of 1985. Check with your guidance counselor or the Board at 45 Temple Place, Boston, Massachusetts 02111.
Associate Degree Programs CT MA NH RI VT
Therapeutic Recreation

| O | O | O | O | O |
| :--- | :--- | :--- | :--- | :--- |

Bachelor Degree Programs

| Art Education | O | X | C | O | C |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Criminal Justice/Criminology | X | X | O | O | C |
| Industrial Technology | X | X | X | X | O |
| Therapeutic Recreation | C | O | O | O | X |

$\mathrm{X}=$ state offers program under the RSP
$\mathrm{C}=$ state offers a comparable program, but not under the RSP
$\mathrm{O}=$ state does not offer a comparable program; open to its residents

## Tuition and Fees 1985-86

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 of $\$ 15.00$ must accompany each application at each campus unless the student has previously matriculated at this campus.

Matriculation Fee A one-time fee of $\$ 15.00$ for each student who elects to pursue a degree program within the University of Maine.

New Student Advising and Orientation Fee A one-time fee of $\$ 25.00$ is required of all new degree candidates.

Student Activity Fee (Compulsory) Undergraduate students taking 6 to 12 credit hours are required to pay a $\$ 14.00$ Student Activity Fee. Students taking 12 or more credit hours are required to pay $\$ 23.00$. This fee is charged each semester.

## Tuition Charges

Room and Board
Charges

Other Charges

| Undergraduate Tuition <br> Maine Resident- $\$ 50.30$ per credit <br> hour; 15 credit hours | Semester | Year |
| :--- | ---: | ---: |
| Non-Resident-\$152.00 per credit <br> hour; 5 credit hours | $\$ 754.50$ | $\$ 1,509.00$ |
| New England Program-\$62.88 per <br> credit hour; 15 credit hours | $\$ 2,280.00$ | $\$ 4,560.00$ |

## Graduate Tuition

Maine Resident- $\$ 57.90$ per credit hour; 15 credit hours
\$ 868.50 \$1,737.00
Non-Resident-\$174.80 per credit hour; 15 credit hours
\$2,622.00 \$5,244.00

| Room Charges <br> Double Rooms <br> Single Rooms | $\$$ | 675.00 |
| :---: | :---: | :---: |
| Board Meal Charges | $\$ 61,350.00$ |  |
| 10 Meal Plan | $\$ 775.00$ | $\$ 1,450.00$ |
| 14 Meal Plan | $\$ 565.00$ | $\$ 1,130.00$ |
| 19 Meal Plan | $\$ 617.50$ | $\$ 1,235.00$ |
| 5 Lunch Plan | $\$$ | 215.00 |
| $\$ 1,290.00$ | $\$ 420.00$ |  |

Students residing on campus must choose one of the 10,14 , or 19 meal plans. Students residing off campus may choose from any of the meal plans, or none if they so desire.

## USM Health Services Fee and InsurancePackage (Optional)

This optional fee is available to all students who are carrying at least three credit hours. Students may elect this fee of $\$ 107.00$ per year (includes $\$ 42.00$ USM Health Services Fee and $\$ 65.00$ Insurance Fee) with their fall semester bill.

Tuition for Other<br>Classifications<br>of Students

Student Health Services Fee (Optional)
Students may elect this fee of $\$ 42.00$ per year with their fall semester bill. This service may be purchased independently of the insurance package.

## Late Fee

A late fee of $\$ 25.00$ is charged to all students who fail to satisfy their financial obligations with the Business Office when due and payable. This fee will also be assessed to students whose registration checks are returned and not cleared by the specific deadline. Students will also be liable to a $\$ 25.00$ reinstatement fee if their registration is revoked for any reason.

## Books and Supplies

The cost of books and supplies varies according to the course for which a student is registered. Books and supplies are not billed on the semester invoice. Payment for them must be made directly to the Bookstore at the time of purchase.
Applied Music Fees
The fees are outlined in the music section of the catalog. Commencement Fee

A one-time fee (\$15.00) for each degree candidate, to be paid six weeks prior to Commencement.

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

Adding Courses All adds must be paid for at the time of the add, if it results in an additional charge. The $\$ 25.00$ late fee will apply if not done so.

Tuition and Fee Grants Tuition and fee grants will be restricted to those specifically authorized by the Board of Trustees and include tuition grants for Maine residents over 65 years of age who wish to register for undergraduate courses at any campus of the University of Maine.

## Deposits

Payment of Bills
A deposit of $\$ 25$ is due when the applicant is notified of acceptance by the Director of Admissions. If a residencehall room is requested, an additional $\$ 75$ is due. These deposits will be applied toward the student's account when the student registers, and are subject to the refund policy listed below.

The deposits are forfeited if an applicant withdraws after May 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 May 1 for September enrollment or January 1 for spring semester, the deposits will be refunded. Notification must be in writing.

Students desiring to live in a residence hall must pay a room deposit of $\$ 75.00$ during the spring in order to ensure 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 May l. After May 1 , the $\$ 75.00$ is nonrefundable.

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

All University bills, including those for room and board in University buildings, are due and payable on or before August 30 for the fall semester and on or before January 10 for the spring semester. Bills may be paid at the business office at either campus by mail or in person. Checks should be made payable to University of Maine.

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

Scholarships and grants, other than University awards, which are to be used for tuition payments, should be confirmed with the Business Office on or before the first day of classes in order to receive proper credit against outstanding bills and to avoid a $\$ 25$ late fee.

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

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

## Installment Program

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

The program requires that one-half of the semester bill, plus any previous balance and a nonrefundable $\$ 10.00$ finance charge be paid at the time prescribed above. The balance is to be paid in three consecutive monthly installments commencing 30 days after the first day of semester classes.

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

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

## Tuition Refunds

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

## Schedules

| Academic Year (Fall and Spring Term) | Refund Percentage |
| :--- | ---: |
|  | $100 \%$ |
| Cancellation prior to first day of class | $100 \%$ |
| Withdrawal prior to end of first week | $75 \%$ |
| Withdrawal prior to end of second week | $50 \%$ |
| Withdrawal prior to end of third week | $25 \%$ |
| Withdrawal prior to end of fourth week | $0 \%$ |
| Withdrawal after four th week |  |
|  |  |
| Sessions which are more than three weeks | $100 \%$ |
| Cancellation prior to first day of class | $75 \%$ |
| Withdrawal prior to end of first week | $50 \%$ |
| Withdrawal prior to end of second week | $25 \%$ |
| Withdrawal prior to end of third week | $0 \%$ |
| Withdrawal after third week |  |


| Sessions which are three weeks or less |  |
| :--- | ---: |
| Cancellation prior to first day of class | $100 \%$ |
| Withdrawal prior to end of week | $50 \%$ |
| Withdrawal after first week | $0 \%$ |

## Provisions

Nopart of an advance deposit is refundable after May l. Although such deposits are applicable to tuition charges for students who remain enrolled, they are forfeited by students who withdraw.

In no case will tuition be reduced or refunded because of voluntary absence from classes.

Refunds for involuntary withdrawals, e.g., extended illness or military service, will be considered by the campus on a case-by-case basis.

University fees are not refunded, including the Student Activity Fee.

## Room Refunds

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

## Schedules

Academic Year (Fall and Spring Term)
Refund Percentage
Cancellation prior to first day of class 100\%
Withdrawal prior to end of first week 100\%
Withdrawal prior to end of second week 75\%
Withdrawal prior to end of third week $50 \%$
Withdrawal prior to end of fourth week $25 \%$
Withdrawal after fourth week $0 \%$
Sessions which are more than three weeks
Cancellation prior to first day of class
Withdrawal prior to end of first week $75 \%$
Withdrawal prior to end of second week $50 \%$
Withdrawal prior to end of third week $25 \%$
Withdrawal after third week $0 \%$
Sessions which are three weeks or less
Cancellation prior to first day of class $100 \%$
Withdrawal prior to end of first week $50 \%$ Withdrawal after first week $0 \%$

## Provisions

No part of an advance deposit is refundable after May l. Although such deposits are applicable to room charges for students who remain in the dormitory, they are forfeited for students who withdraw.

This room refund policy pertains to students who are withdrawing from the University of Maine. Refunds, if any, for students who remain enrolled but vacate a dormitory room will be governed by the terms and conditions of campus residence hall contracts. Refunds for involuntary withdrawals, e.g., extended illness or military service, will be considered by the campus on a case-by-case basis.

## Board Refunds

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

Add/Drop
Students may drop courses during the first two weeks of classes* without incurring any financial obligation for tuition charges. After this time, no adjustment to tuition charges for courses dropped will be made. For

Rules Governing<br>In-State and<br>Out-of-State<br>Tuition

students who withdraw from the University, the Refund Policy is applicable.

All courses added must be paid for at the time of the add unless the maximum charge is applicable or the tuition charge is offset by a drop during the first two weeks of classes in order to avoid a $\$ 25$ late fee.
*For purposes of calculation of tuition refunds, the attendance period begins on the opening day of scheduled campus classes, includes weekends and holidays, and ends on the date the student notifies the Registrar in writing.

A student is classified as eligible, or not eligible, for in-state tuition at the time of acceptance to the University. The decision, made by the campus Business Manager, or other official designated by the campus, shall be made in accordance with these rules upon information furnished by the student's application and any other relevant information. No student, having once been registered as an out-of-state student, is eligible for instate tuition classification unless he or she has been a resident of the State of Maine for at least one year immediately prior to registration for the term for which in-state tuition eligibility is claimed, and also has become legally domiciled in Maine before such registration. If the student is enrolled for a full academic program, as defined by the University, it will be presumed that the student is in Maine for educational purposes and that the student is not in Maine to establish a domicile and the burden will be on the student to prove that he or she has established a Maine domicile by the time of such registration.

In general, members of the Armed Forces and their dependents will be granted in-state tuition rates during such periods of time as they are on active duty within the State of Maine.

The domicile of a student who is an unmarried minor follows that of the parents or legally appointed guardian of the student. In such cases, the domicile of the parent with whom the student lives or to whom custody has been granted by court order, or of the student's legally appointed guardian, shall be the domicile of the student.

If a student classified as an out-of-state marries a person who is domiciled in the State of Maine and asserts the establishment of a domicile in Maine, that student shall be presumed to be eligible for in-state tuition status at such student's next registration.

To change tuition status, the following procedures are to be followed:
A. Submit "Request for Change of Tuition Status" form to the Business Manager, or other designated official. If the Business Manager's (or such other official's) decision is considered incorrect by the student:
B. The student may appeal that decision in the following order:

1. To the Executive Director for Budget and Institutional Research or equivalent official as designated by the campus.
2. To the President of the campus.
3. To the Treasurer of the University, whosedecision shall be final.

In the event that the campus Business Manager, or other designated official, possesses facts or information indicating a change of status from in-state to out-of-state, the student shall be informed in writing of the change in status and will be given an opportunity to present facts in opposition to the change. The student may appeal the decision of the Business Manager or other designated official as set forth in the preceding paragraph.

No request for change in tuition status will be considered unless filed on or before September 1 for the fall semester, or on or before January 1 for the spring semester. All applications shall be prospective.

## Student Financial Aid

To acquire a higher education a student must invest a significant amount of money, as well as time and talent. For many, college costs represent the single largest and most important expenditure they will ever make. For some, these costs are a serious obstacle. The University assists students by offering various forms of financial aid. During the 1984-85 academic year, almost $\$ 7,150,000$ was available from aid programs. The average student aid award was $\$ 2,550$. In addition, the University helped 2,500 students borrow more than $\$ 4,700,000$ in low interest loans from commercial lenders. Over 150 students found jobs with the assistance of the Job Locator Program and earned more than $\$ 230,000$. Students may also choose to participate in the Reserve Officer Training (ROTC) program and receive $\$ 100$ per month during their junior and senior year.

Eligibility for Aid

## Application <br> Procedures

Financial need exists when the student and his/her family do not have enough money to pay college costs. Since the federal government provides most of the funds the University allocates to students, need is determined in accordance with a formula approved by the U.S. Department of Education.

Aid can be granted only to U.S. citizens and certain non-citizens. Noncitizens are encouraged to contact the Student Financial Aid Office for more information.

Before receiving funds, a student must be admitted to the University and register for at least six credit hours. Student aid recipients must demonstrate satisfactory academic progress to maintain eligibility. A completestatement of this policy will be found at the end of this section.

Allstudents receiving assistance must also submit a Statement of Registration Compliance. This form certifies that the student has either registered with the Selective Service Administration (all males born after 1959 are required to register) or is exempt from registration.

It is important to remember that financial aid is intended to supplement a student's resources. A basic principle of financial aid programs is that the student and his/her family are expected to contribute, when able, from income and assets to meet college costs.

No student should fail to apply for admission because she or he cannot afford a college education. The Office of Student Financial Aid administers a strong and versatile program. When a student's financial resources are insufficient to meet educational expenses, grants, loans, or employment can usually be made available. If funds are not available from the University, the Office of Student Financial Aid helps students explore other potential sources of aid.

Students are encouraged to apply as early as possible after January 1. Many find it convenient to apply at the same time a federal income tax return is completed. While no deadline exists for entering students, early application is encouraged. Continuing students should apply before April 1st.

All students must complete a College Scholarship Service Financial Aid Form (FAF). The FAF is available from most high school guidance offices or the Student Financial Aid Office. The FAF includes detailed instructions for completion. If these instructions are insufficient, please contact the Student Financial Aid Office for help.

Students under age 24 must have a parent sign the FAF. If the student is dependent, this attests to the accuracy of the parent's financial information. If the student is independent, the signature certifies this. Students and the parents of dependent students are required to submit copies of tax returns and other financial records to verify information reported on the FAF.

How Financial Aid is Allocated

## Types of Aid Available

When completing the FAF all undergraduate students, who do not have a bachelor's degree, must apply for a Pell Grant. Students may also use the FAF to apply for state scholarships.

Any student who attended any vocational school or college, other than the University of Southern Maine, must also submit a Financial Aid History (FAH) form. This form, available from the Office of Student Financial Aid, is completed by the student and sent to the school(s) previously attended. The FAH must be completed even if the student did not receive aid from other school(s) attended.

The University begins reviewing student aid applications in early spring. Once a student is accepted by the Admissions Office, a completed FAF is received, and the University is told how much federal aid it will have for students, a notice of eligibility is sent. If a student receives outside scholarship funds, the amount of aid from the University may have to be reduced.

The amount a student receives is determined by subtracting the student's resources from a budget computed by the Office of Student Financial Aid. This budget is based on typical living and educational costs for a student in a given situation. It may be adjusted if unusual non-discretionary expenses exist.

Even after a student is allocated aid, the amount may be adjusted if the student's financial situation changes. Students and parents must promptly report any of the following to the Student Financial Aid Office: a change in income; a change in marital status; a change in the number of dependents; a change in residence; a change in the number of credit hours attempted; and the receipt of financial aid from sources other than the University.

Students are offered aid in a package which may consist of grant and/or loan and/or work-study. Students who have a bachelor's degree usually receive only loan and work-study funds.

Pell Grants This is a federally funded program to help needy students. Grants vary between $\$ 200$ and $\$ 1,900$ per academic year.

Supplemental Educational Opportunity Grants This is a federally funded program to help needy students. Grants range from $\$ 200$ to $\$ 2,000$ per academic year.

University and Miscellaneous Scholarships These are funded by the University and private donors. Awards range from $\$ 100$ to $\$ 2,000$ and are given on the basis of financial need.

Work-Study Employment This is a program funded by the University and the federal government. Eligible students may earn between $\$ 400$ and $\$ 3,000$ per year. A student's financial need governs the amount that can be earned.

National Direct Student Loans Funded by the federal government, the University, and former bor rowers repaying loans, this program lends money to needy students. No repayment is required until after the student ceases his/her education. Once repayment begins, the student is charged $5 \%$ simple interest on the amount borrowed. While the monthly repayment amount varies with the amount borrowed, a minimum of $\$ 30$ must be repaid each month. Loans vary between $\$ 200$ and $\$ 1,500$ annually.

Nursing Student Loans Funded by the federal government, the University, and loans repaid by former borrowers, money is lent to needy nursing students. Repayment terms are similar to those of the National Direct Student Loan.

Guaranteed Student Loans This program, sponsored by the federal and state governments, allows students to secure low-cost loans. Contact your local bank, credit union, or savings and loan institution for more information.

Guaranteed Parent Loans This program, sponsored by the federal and state governments, allows parents and some students to secure relatively low-cost loans. Contact your local bank, credit union, or savings and loan institution for more information.

Indian Scholarships/Tuition Waivers This is a program funded by the University that pays tuition, mandatory fees, and on-campus room and/ or board. All one-quarter blood North American Indians who have lived in Maine for at least one year are eligible. The residency requirement may be waived for members of the Passamaquoddy, Penobscot, Malacite, or Micmac Tribes. Certification of tribal status is required.

For more information, contact the Office of Financial Aid, University of Southern Maine, Corthell Hall, College Avenue, Gorham, Maine 04038 or telephone 207-780-5250.

Offers of financial aid are conditional upon receipt of funds from all funding sources. The Office of Student Financial Aid reserves the right to revise offers of financial aid at any time during the year based on availability of funds and/or changes in regulation and/or procedures mandated by University, state, or federal authorities.

Standards of<br>Satisfactory<br>Academic Progress

Federal regulations require the University to define standards of academic progress for students receiving financial aid. These standards are used when determining a student's eligibility for aid and are in addition to the requirements established by the Dean or Director of an academic program.

Students are eligible to receive aid while accumulating the number of credit hours normally required for graduation from the school or college in which they are matriculated. If, when the student acquires the number of credit hours usually needed for graduation, all degree requirements have not been met, the student may submit a written request for one additional year of funding. Students are encouraged to consult the University catalog for information about specific degree requirements.

Aid recipients must complete associate degree requirements within eleven semesters. A bachelor's degree must be completed in not more than twenty-one semesters. Further, students receiving financial aid must successfully complete at least six credithours each semester. Grades of A, $\mathrm{B}, \mathrm{C}, \mathrm{D}, \mathrm{P}$ or Y indicate a successfully completed course. A course is not successfully completed if a grade of I, F, INC, AU, L, W or MG is assigned. Plus or minus designations do not affect this requirement.

If an aid recipient does not complete six credithoursduring a semester, the student is contacted and encouraged to seek academic counseling to improve academic performance. The student is also placed in a probationary status by the Student Financial Aid Office. If a student on probationary status does not complete six credit hours during a semester, she or he looses eligibility for financial aid.

To reestablish eligibility, the student must successfully complete six credit hours. While earning the credits needed to regain eligibility, the student cannot receive financial aid. A student may either repeat courses presently attempted or register for new courses when reestablishing eligibility. When eligibility is reestablished, the student is again placed in a probationary status.

Aid recipients are expected to complete degree requirements in the shortest possible period of time. Students are expected to register for fifteen credit hours per semester whenever possible. A student is usually allowed no more than two semesters of regular funding while registered for less than twelve credit hours. Once this allowance is used, the amount of money provided for living expenses will be reduced. A student registering for between six and eight credit hours receives $50 \%$ of the usual amount; a student registering for between nine and eleven credit hours receives $75 \%$ of the usual amount. If a student does not successfully complete the courses for which she or he registers, aid may be reduced, in accordance with the previously described formula, during subsequent semesters.

Students whose personal circumstances prevent full-time attendance or inhibit academic performance may request an exception to the policy. A
written request must be submitted to the Director of Student Financial Aid. The student should explain any mitigating circumstances. Students are encouraged to provide independent verification of the situation. A student citing medical problems, for instance, should provide a letter from a medical authority explaining the condition and how it affects academic performance.

Requests for policy exceptions are reviewed by a committee consist ing of the Director of Student Financial Aid and three members of the Student Financial Aid Policy Advisory Committee (two faculty and one student member). The committee will review the request in view of the student's overall academic performance, the documentation provided and the availability of funds. The committee may establish specific criteria for measuring the academic progress of students in exceptional circumstances. When such standards are developed, the student will receive written notification of the exact criteria that will be in effect.

## Student Life and Services

The University offers a wide range of academic and extracurricular services to supplement, enhance, and support students as they progress toward their educational goals. The breadth of these services is designed to accommodate the needs of a diverse student population.

The University provides academic advising throughout a student's educational career. With the assistance of faculty from the schools and colleges of the University, the Advising and Information Department (AID) conducts a New Student Advising Program for all newly admitted degree students. Upon declaring a major and being accepted by the appropriate department, students are assigned a faculty advisor in that academic department. Students are strongly encouraged to maintain regular contact with their academic advisors throughout their career at the University.

All newly admitted students are invited to participate in the New Student Advising Program conducted during the summer prior to the student's first fall semester. This program is repeated in December for those students entering the University for the first time in January. The program allows the new student to register for his/her first semester of coursework with the benefit of an interview with an academic advisor. During that interview, such issues as the Core curriculum requirements and the requirements of the major may be fully discussed.

Following initial advising and registration, students, during their first semester at the University, are assigned for permanent advising to the department of their declared academic major. Students are encouraged to maintain close contact with their department advisor once this assignment has been made.
For certain students, however, the assignment of a permanent department advisor may be delayed. For such students the following arrangements are made.

Students who have not declared a major are provided academic advising by the Advising and Information Department (AID). The AID academic counselor assists the student in the development of educational goals and the selection of an appropriate major. Students should be ready to declare a major before completing 60 credits of coursework at the University.

Students "admitted with conditions" are assigned to the AID staff for academic advising during the period they complete required coursework. Upon completion of these requirements, the student is assigned an advisor in his/her major department.

Pre-nursing students receive academic advising during their freshmen and sophomore years from the AID staff. Upon acceptance by the School of Nursing Undergraduate Admissions Committee, the student is assigned an advisor in the School of Nursing.

Special (non-degree) students (those who are enrolled in courses at the University on a space-available basis and who have not applied for admission) are advised by the AID staff.

Students having questions regarding general academic policies and procedures, as well as about other aspects of University programs, are encouraged to contact the AID office in Payson Smith Hall on the Portland campus ( $780-4040$ ) and in Corthell Hall on the Gorham campus (780-5340).

The Office of Student Testing and Assessment is responsible for evaluating entry-level skills of students and the development of measures to assess student needs and interests. The Office administers national examina-

University Library

Off-Campus Site Libraries

Educational Media Services

Personal and<br>Psychological<br>Counseling<br>Services<br>Career Counseling, Placement, and Internship Services

## Handicapped Student Services

tions, and coordinates the Prior Learning Assessment Programs through the Office of Prior Learning Assessment.

Students are encouraged to contact the Office of Student Testing and Assessment (780-4383) for general information regarding the various assessment programs available, and the Office of Prior Learning Assessment (780-4067/5376) for specific information about prior learning assessment programs.

The University Library maintains collections representing more than 500,000 items. The Portland campus library is located in Luther Bonney Hall. The Gorham campus library is located in Bailey Hall. These facilities provide staff, collections, equipment, services, and programs to the academic community of the University, and to the citizens of the state of Maine. The broad effort thus supports the educational, public service, and scholarly activities of the University community.

The University Library acquires, catalogs, and circulates a variety of print and non-print material, provides interpretive and instructional reference services, offers computerized searching of more than 200 data bases, offers a computerized, international interlibrary loan network currently locating over 11 million titles, includes the University Archives, and provides patrons with microfilm and microfiche reading machines.

ULMS contracts with public libraries in Bath and Saco, to provide books, journals, reference assistance, and interlibrary loan services to offcampus students and faculty. Dyer-York Library in Saco, and Patten Free Library in Bath, serve the USM Saco and Bath Centers. Negotiations are underway to provide similar academic support services in Sanford. Offcampus students and faculty are also encouraged to use the ULMS facilities in Portland and Gorham.

Educational Media Services maintains offices on both the Gorham and Portland campuses which provide services to support the academic mission of the University.

Each Media Center maintains a collection of film and videotape catalogs and reference materials. The Media Center maintains a collection of instructional materials in addition to obtaining rental materials for USM classroom use.

Assistance is available in the design, production, implementation, and evaluation of instructional materials such as computer graphics, slides, overhead transparencies, video recordings, and audio materials.

Each Media Center provides, maintains, and delivers audiovisual equipment for classroom use.

The Counseling and Career Development Department, through a staff of professional psychologists and counselors, assists students with personal counseling services on both a walk-in, as well as an appointment basis. As a part of this service, the office provides appropriate psychological testing, referral services, and maintains an effective liaison with community medical and mental health agencies. (780-4050)

The Counseling and Career Development Department offers career counseling, vocational testing, and part-time and full-time job placement services for University students. The staff provide a complete information service, guidance information, computerized terminal services, appropriate career inventory and testing, in addition to referrals. The department also offers internship opportunities related to academic majors. (780-4050)

Services for students with a handicapping condition are provided through the Office of Counseling and Career Development. In addition to counseling and placement services, direct academic support (including, where necessary, readers and interpreters) is provided. A specially equipped bus provides round-trip transportation daily between the campuses for wheelchair-bound individuals. (780-4050)

Health Services<br>Student Services at Off-Campus Centers

## International Students

Exchange Study<br>Opportunities

## Veterans

Student Activities, Facilities, and Student Government

The University offers two health care facilities for students, one in Portland and one in Gorham. In Portland, a clinic located off the main lobby of the Gymnasium operates from 8:00 a.m. to 4:00 p.m., Monday through Friday. On the Gorham campus an out-patient clinic and full inpatient services are available twenty-four hours a day, seven days a week, during the academic year when classes are in session. Physician services are available at both locations only during the academic year. Services and staff are reduced during vacation periods. It is recommended that students call either of the Health Centers to find out what services are available, and when.

It is recommended that students avail themselves of the many services offered by paying the voluntary health fee. An enrollment period extends into the first month of each semester. Students choosing not to pay the health fee are charged a fee for services rendered. A schedule of fees is posted in each Health Center. Health insurance is available. For a brochure and further information call 780-5411 (Gorham) or 780-4211 (Portland).

Students attending one of the University of Southern Maine off-campus centers (Bath, Intown, Saco, Sanford) may take advantage of the range of support services available at these locations. Services include academic advising, financial aid assistance, veterans' counseling, registration assistance, admissions information. Also offered are a variety of social, general interest, and student government-related activities. All off-campus services are offered in cooperation with the appropriate on-campus department to ensure consistency and smooth transition.

International students are served for immigration documentation as well as academic and personal counseling by the Office of the Dean for Educational Services. (780-4035)

The University offers a variety of national and international exchange opportunities for its students. Students are able to spend a semester or a year at any one of over 40 universities in the United States. International opportunities exist in England, Ireland, Holland, and Sweden. For further information regarding the National Student Exchange Programs, contact the Registrar's Office, 780-5236. For information regarding international programs, contact the International Studies Office at 780-5313.

Services to veterans are provided through the Department of Advising and Information and include, in addition to certification and liaison with the Veterans' Administration, counseling and academic advising. (780-4040)

Many organizations and clubs exist within the University to serve a variety of student interests and needs. These organizations range from political, social, and educational to special purpose groups.

The Student Senate administers student programs and supervises organizations including the student newspaper, Free Press; the student radio station, WMPG; and the literary journal, Portland Review of the Arts. Through its Student Events Board the Student Senate sponsors concerts, lectures, films, and other activities throughout the academic year.

The Student Center in Gorham and the Campus Center in Portland provide quiet areas for study and conversation, in addition to offices for student government and Student Activities organizations. For further information on Student Activities contact the Coordinator. (780-4090 or 780-5470)

Eight social fraternities and sororities are active on the Gorham campus of the University. Four of the fraternities maintain off-campus houses and all organizations are involved in philanthropic and social activities. (780-5242)

Phi Kappa Phi

Residence Halls

## Food Services

Intramural and<br>Recreation<br>Programs

## Off-Campus Housing

Child Care Services

## Intercollegiate <br> Athletics

Phi Kappa Phi (local chapter est. 1976) is a national honor society which is open to students enrolled in degree programs in all colleges and schools of the University. Election is based on outstanding academic achievement, with nominations for membership made on the basis of grade point average, from the top $5 \%$ of the senior class and the top $2.5 \%$ of the junior class.

The University provides on-campus housing in Gorham for approximately 1,100 students in nine residential units, ranging in size from 15 to 180 students. Accommodations are either in single sex or coeducational dormitories, with a variety of visitation and quiet hour options as selected by residents themselves. The residential units have their own organizations and numerous programs are offered within the dormitory units throughout the year. The residence life staff includes four resident director/counselors, and twenty-six resident advisors and programming assistants. (780-5240)

Dining facilities may be found at three separate locations on the two campuses. In Gorham, the main University dining facility is glass enclosed, providing vistas toward the Sebago Lake region, and accommodates approximately 650 diners. Also on the Gorham campus, the University pub offers short-order fare through late evening.

In Portland, the Campus Center offers a variety of dining facilities for large or small groups, and operates from breakfast until the evening hours. Special meals and events are held once per week in both locations, and students may use their meal program cards on either campus. For more information contact the Office of Residence Life. (780-5240).

Both group and individual sports competition and recreational activities are available. The Gorham and the Portland gymnasia are the main facilities for free play, as well as basketball, flag football, badminton, racquetball, and other league competition sports. Programs in such areas as aerobic dance, Lifeline, and bodyshop and weightlifting are also available. For further information contact the Coordinator of Intramural and Recreation Programs, Gorham (780-5433).

The University maintains lists of available rooms and apartments offcampus for the benefit of students. The lists are available in the Department of Residence Life on the Gorham campus or the Office of Advising and Information on the Portland campus. (780-5240 and 780-4040)

The University Child Care Services serves over 100 children, from infancy to teens, in its three facilities, Portland, Intown, and Gorham through a variety of programs: full day child care (7:30 a.m.-5:30 p.m.); evenings and weekends prearranged; after and before school; flex-care, (child care services on an hourly basis); infant and toddler care; summer camps. All programs are "child-centered," stressing learning and self-discovery, conducted by professional staff with early childhood education experience. Reservations are encouraged. For further information please contact USM Child Care, 96 Falmouth Street, Portland, (780-4125).

The University offers the following sports for men: cross country, soccer, basketball, ice hockey and baseball. Sports offered for women include: field hockey, soccer, volleyball, basketball and softball. Tennis and golf are open to both men and women. The University is a member of the National Collegiate Athletic Association, Eastern College Athletic Conference, and the Maine Association of Intercollegiate Athletics for women. As members of these organizations, student athletes have an opportunity to qualify for and participate in state, regional and national tournaments. Contact 780-5430.

## Academic Policies

## University Degree Requirements

To be eligible for a baccalaureate degree from the University, a student must meet the following:
I. minimum proficiency requirements
II. Core curriculum requirements
III. school or college major requirements

The Core curriculum requirements apply to all students who entered the University in September 1982 and thereafter. (Transfer students should refer to the section, "Transfer Students and the Core Curriculum," p. 39).

## Minimum Proficiency Requirements

Every baccalaureate degree student who is admitted to the University must produce evidence (no credit granted) of both a minimum writing proficiency and a minimum mathematics proficiency. All freshmen students, readmitted students, and transfer students with less than 30 credits, admitted for the 1983-84 academic year and thereafter, must complete both the Mathematics Placement Examination and the Writing Placement Examination before registering in a mathematics or English course. (Details of these examinations may be obtained from the Office of Student Testing and Assessment). Ways of satisfying the Minimum Proficiency Requirements are summarized as follows:
A. Evidence of Minimum Writing Proficiency Do One

1. Score 43 or above on the Test of Standard Written English (TSWE)
2. Pass the Writing Placement Examination
3. Successfully complete ENG 009 (Developmental English)(no degree credit)
B. Evidence of Minimum Mathematics Proficiency Do One
l. Score 450 or above on the quantitative subtest of the Scholastic Aptitude Test (SAT)
4. Score 500 or above on the General Mathematics Test of the College Level Examination Program (CLEP). (This will also satisfy the Core Quantitative Decision Making requirement.)
5. Pass the Mathematics Placement Examination
6. Successfully complete MAT 011 (Intermediate Algebra). (Credit for this course may apply only toward associate degrees.)
7. Successfully complete a 100 level mathematics course (MAT 100-MAT 131 inclusive). Enrollment must be approved by an AID counselor or thechair of the Department of Mathematics and Computer Science. (A passing grade in the course will satisfy both the Mathematics Proficiency requirement and the Core Quantitative Decision Making Requirement.)

For information regarding the Core curriculum, including a list of courses approved to satisfy the Core, please refer to the following chapter.

Course Numbering
001-009
010-099 Associate Degree Program
100-199 Introductory Level
200-399 Intermediate Level
400-499 Senior Level, others by permission
500-599 Undergraduate and Graduate Students
600-699 Graduate and Professional Students Only
Note:

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

## Registration

The registration process is conducted by the Registrar, Advising and Information Department (AID), and Business Office. It includes selection of courses, completion of proper forms, and payment of University charges. Newly admitted students are notified by the Admissions Office of their orientation, advising, and registration schedule. The Advising and Information Department coordinates the new student academic advising and initiates the registration procedure by approving course schedules prior to processing by the Registrar and Business Office.

Continuing degree students may preregister in priority order, based on the number of credits earned through the previous semester. Pre-registration is conducted near the end of each semester for the following semester. Eligible students who fail to preregister must then wait until the open registration period which immediately precedes each semester. Non-degree students may register only during the open registration period. Degree students must obtain advisor approval prior to registration. Non-degree students must have approval from the Advising and Information Department prior to registration. No student may register for more than 18 credits in one semester without the permission of the advisor and dean. No registration is complete unless all related financial obligations to the University are satisfied. No registration will be accepted after the second week of classes.

## Grading System

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

| A | High honors |
| :--- | :--- |
| B | Honors |
| C | Satisfactory, successful, and respectable meeting of the |
|  | course objectives |
| D | Low- |

D Low-level work, below the average required for graduation for an undergraduate, and a failinggrade 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 paragraphs on Minimum Grade and Academic Suspension and Repeated 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 gradegiven when the student, because of extraordinary circumstances, has failed to complete the course requirements. Incomplete grades must be resolved by the end of each subsequent semester; the Registrar shall notify faculty members involved, and their department chair, of students who have carried unresolved incompletes on their transcript for one semester. If the incomplete is not resolved by the instructor, an I grade will be automatically counted as an F in the grade point average and so indicated on the student's permanent record. Under special circum-
stances, the instructor may request that the dean extend the time limit for a specific period.
INC Permanent Incomplete. When a temporary incomplete (I) grade is not resolved to a normal letter grade, a permanent incomplete may be assigned in extraordinary circumstances as determined by the instructor and the dean. In unusual circumstances wherein the faculty member is no longer available, the dean may exercise this function.
L Stopped attending. The grade of L may be assigned to students who stopped attending a course without officially dropping the course. The grade of L will be computed as an F for purposes of the student's grade point average.
MG Missing Grade. Occasionally, faculty assign students invalid grades for a course, or fail to submit a grade for a particular student in a course. In these cases, the Registrar's Office will note this act by designating a missing grade, or MG instead of a grade for the course. Missing Grades must be resolved by the end of each subsequent semester. The Registrar shall notify faculty members involved, and their department chair of students who have carried unresolved MGs on their transcript for one semester. If the missing grade is not resolved by the instructor, an MG grade will be automatically counted as an F in the grade point average and so indicated on the student's permanent record. Under special circumstances, the instructor may request that the dean extend the time limit for a specific period.
W Withdrawal after the second week through the sixth week of a semester. If a student has not officially withdrawn by the end of the sixth week of the course, one of the above regular grades, normally F , will be assigned. The W notation may be obtained after thesixth week under unusual circumstances if so determined by the instructor and the dean. A threat of failure is not considered to be an unusual circumstance.
Y Satisfactory progress after one semester of a two-semester course; grade and credits to be given upon completion of second semester.
AU Student attended courses on a noncredit basis.

## Grade Point Averages

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

A $\quad 4.00$ grade points per credit hour
A- $\quad 3.67$ grade points per credit hour
B+ 3.33 grade points per credit hour
B $\quad 3.00$ grade points per credit hour
B- $\quad 2.67$ grade points per credit hour
C $+\quad 2.33$ grade points per credit hour
C $\quad 2.00$ grade points per credit hour
C - $\quad 1.67$ grade points per credit hour
D+ 1.33 grade points per credit hour
D $\quad 1.00$ grade points per credit hour
F $\quad 0.00$ grade points per credit hour
To compute the grade point average for a semester, first multiply the grade points earned in each course by the number of credit hours assigned to that course. The resulting product is the number of quality points for that course. Then divide the total number of quality points earned during the semester by the total number of credits carried in that semester. The result is carried out to four decimal places to produce the grade point average for that semester.

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

Dean's List

Minimum Grade and Academic<br>Suspension

Unsatisfactory Progress

Academic Dismissal

## Class Membership

At the end of each semester, full-time, undergraduate degree students ( 12 semester hours or more) with grade point averages of 3.2 or above will be placed on the Dean's List. Those students on the list, whose names appear in the Public Directory of the University, will have their names released to the news media.

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

| For Good | For Probationary |  |
| :---: | :---: | :---: |
| Associate Degree Programs | Standing | Standing |
| $0-15$ credit hours | 1.60 | 1.35 |
| $16-30$ credit hours | 1.80 | 1.60 |
| $31-45$ credit hours | 2.00 | 1.80 |
| Baccalaureate Degree Programs |  |  |
| $0-30$ credit hours | 1.70 | 1.50 |
| $31-60$ credit hours | 1.80 | 1.60 |
| 61-90 credit hours | 1.90 | 1.70 |
| 91 or more credit hours | 2.00 | 1.80 |

Students may be suspended from the University by the dean of the appropriate academic unit. Students who have two consecutive semesters of probationary standing may be suspended at the discretion of the dean. Ordinarily, a student may be suspended by the dean in consultation with the department chair or the student's advisor if the student's semester average falls below 1.0 . While under suspension, students may not take coursework to be applied for credit at the University either at the University of Southern Maine or at other institutions without permission of the dean of the suspending academic unit. Suspensions are imposed for a minimum of one academic semester. Other standards vary from college to college and are outlined in the letter of suspension directed to the student from the appropriate dean. For details concerning disciplinary suspension and dismissal, consult the Disciplinary Code, published in the Student Handbook.
Students with majors or minors in English, history, political science, or psychology in the baccalaureate program of the College of Arts and Sciences, or the secondary education mathematics program of the College of Education must achieve at least six credits with grades of B or better in their major or minor requirements. No grades of D will count toward fulfillment of the major or minor requirements in these programs.

Students in the School of Nursing, please refer to the sections entitled Prerequisites to the Nursing Major and Academic Policies-Upper Division Nursing Major in the School of Nursing portion of this catalog.

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

A student who is a degree candidate is expected to complete and pass the courses for which he or she is registered during a given semester. A student who fails or withdraws from more than two courses during a semester may be placed on academic probation or suspended by the dean of the college, school, or division.

Students placed on academic suspension for a second time are dismissed from the University. In rare cases, students may be readmitted if they can provide evidence of significant academic improvement to the dean of their school or college. Such evidence would normally include high quality academic coursework at another institution. For details of disciplinary dismissal, consult the Disciplinary Code, published in the Student Handbook.

As a minimum of 120 credit hours for graduation is required in most four-year programs, at least 30 credits should be earned each year. To
progress satisfactorily through the University, a full-time student is expected to carry at least 15 credit hours each semester. Permission must be obtained from the advisor and the appropriate dean to carry more than 18 credit hours.
For standing as a sophomore, a student shall have completed at least 19 percent of the hours required for graduation, for junior standing 44 percent, and for senior standing 69 percent.
The required number of credit hours by classes, schools, and colleges are:

|  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Sopho- <br> more | Total <br> to |  |  |
| School or College | Senior | Graduate |  |  |
| Arts and Sciences | 23 | 53 | 83 | 120 |
| Business, Economics and Management |  |  |  |  |
| $\quad$ Baccalaureate Programs | 23 | 53 | 83 | 120 |
| Two-Year Business | 23 | - | - | 62 |
| Education |  |  |  |  |
| $\quad$ Music Education | 26 | 60 | 94 | 137 |
| Elementary Education | 23 | 53 | 83 | 128 |
| All Other Programs | 23 | 53 | 83 | 120 |

Schedule Changes

## Pass-Fail Option

## Repeated Courses

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

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

The purpose of the pass-fail grade option is to encourage a student to broaden his or her educational experience with a reduced risk of lowering the overall grade point average. The student's choice is kept confidential and the instructor grades the student in the same manner as the rest of the class. The Registrar will retain the instructor's submitted grade on file. If the grade is A, B, C, or D it will be converted to a P. Grades of F or I will be handled in the normal way.

Courses taken to satisfy Core curriculum, major, or minor requirements may not be taken pass-fail. Undergraduate degree candidates may register for a maximum of six hours of pass-fail credits in any one semester, up to a maximum of 18 hours of the total credit hours required for graduation.

Students may exercise the pass-fail option only during the registration period or during the add period each semester. The pass-fail option, once contracted, may be reversed only during the add period.

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

## Auditing Courses

Independent Study

Variable Credit Courses

Grade Report

Permanent Academic Record

Academic Record Changes

## Coursework at Other Institutions

## Graduation <br> Requirement

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

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 chair are required. The approved independent study form is filed with the Registrar during the registration period.

A student should complete the necessary form during registration at the Registrar's Office. Variable credits may be obtained only for those courses so designated.

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

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

Considerable care is taken to ensure that course registration and grades entered on a student's permanent record are accurate. Any student who suspects an error has been made should take the matter up immediately with the Registrar's Office. Records are assumed to be correct if a student does not report to the Registrar's Office within one year of the completion of the course. At that time, the record becomes permanent and cannot be changed.

Matriculated students at the University are expected to secure written approval from the appropriate dean prior to taking coursework 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.

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

# Residence Requirement 

Graduation with<br>Distinction

Post-Baccalaureate Study for Second Degree

Withdrawal from the University

Matriculation Status<br>(Leave of Absence)

In all undergraduate divisions of 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.

Graduating seniors are cited for graduation honors on the diploma and on the transcript. Students who have achieved a cumulative index of 3.50 or higher graduate summa cum laude; those with a cumulative index of 3.25 to 3.49 inclusive graduate magna cum laude; and those with a cumulative index of 3.00 to 3.24 inclusive graduate cum laude. The curnulative 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 a cumulative average of 3.0 or above for coursework in the baccalaureate program, and must earn at least 30 credits, normally the final 30 credits, at the University.

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

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

Students who have already earned one baccalaureate degree and are undertaking work for a second baccalaureate degree are not required to satisfy any of the Core curriculum requirements.

To withdraw from the University, a student must secure an official withdrawal slip from the Registrar's Office and complete an exit interview with a member of the Educational Services staff.

If a student withdraws from the University during the first two weeks of the semester, there will be no courses or grades recorded. Students withdrawing after the second week through the sixth week will receive a W grade for each course in which the student was enrolled. Students withdrawing after the sixth week will receive regular grade designations as determined by the instructors. Under unusual circumstances, grades of W can be assigned after the sixth week if approved by both the instructor and the dean.
Students in good standing who have withdrawn from the University and who wish to return at a later date should follow the instructions given under Matriculation Status (Leave of Absence).
Information concerning financial obligations to the University relative to the withdrawal policy will be found on page 18 .

Matriculated degree candidates who withdraw from all coursework in a given semester maintain their matriculated status for one year from the fifth school day of the next regular academic term. Matriculated degree candidates who do not register for a given semester maintain their matriculated status for one year from the fifth school day of the semester for which they did not register. If a student resumes attendance during the time period specified above, no readmission process is required. The student should contact the Registrar's Office for registration instructions.
If a student wishes to resume studies as a degree candidate after the time period specified above, an application for readmission must be filed with the Admissions Office.

Re-enrollment after<br>Academic<br>Suspension

Change of Major<br>within a School or College

Change of College<br>or School

Double Majors

## Attendance Policy

## Examination Policy

## Absence from a Final Examination

## Independent Study Term

Confidentiality Policy

Catalog Effective<br>for Graduate Requirements

Suspended students must follow the instructions provided in the section below.

Matriculated degree candidates may apply for re-enrollment at the University in accordance with the stipulations outlined in their letter of suspension. If re-enrollment is requested within one year from the fifth school day of the next regular academic term following the suspension, the student need only receive the approval of the dean. Students wishing to re-enroll should contact the dean's office from which the suspension was issued.

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

Permission to change from one major to another is granted by the dean and head of the department in which the student expects to major. A form for the change may be obtained from the Registrar's Office. A change-of-major form must be filed with the Registrar's Office. Requests from undeclared students, pre-nursing, and admitted with conditions students must be processed by the Advising and Information Department.

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

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

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

The examination policy states that it is the responsibility of the faculty member to inform the students in each class of the examination requirements for that class. Usually, two to four preliminary examinations are administered in each course and count heavily toward the final grade. Giving a final exam is not mandatory; however, in classes where they are given, the examinations must be scheduled within the specific final exam period. A time for make-up exams is also scheduled. Take-home exams are also due within the final exam period. By action of the Faculty Senate, no test or exam may be scheduled during the last week of classes.

Students who miss a final examination and are failing the course at the time will usually 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.

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

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

Freshmen and new transfer students (including transfers from other campuses of the University of Maine system) must satisfy the graduation requirements set out in the catalog in effect for the first semester of their attendance as a matriculated student. Students who terminate their ma-
triculation at the University forfeit the right to pursue a degree according to the provisions of the original catalog and are bound instead by the cata$\log$ in effect for the first semester of attendance as a readmitted student.

At the student's choice, a later catalog may be selected for graduation requirements; but a student may not select an earlier catalog.

Students must complete all degree requirements within a ten-year period unless approval is given otherwise by the dean of the school/college/ division. In some cases, academic units have time limits that are shorter than ten years. If so, that time limit will be noted in the appropriate school/college/division section of this catalog.

# The Core Curriculum 

Chair, Core Council: Craig Dietrich<br>Core Council: Amoroso, Boyle, Conway, Czupryna, Fithian, Hodges, Stebbins

Philosophy of the<br>Core Curriculum

The term "core" refers to the innermost part or heart of a thing. The core of a fruit, for example, is the vegetative center which contains and protects the seeds of future growth. Applied to the process of education, a core curriculum refers to that nucleus of educational experiences which makes possible and sustains broad intellectual growth. The University believes that a mastery of certain broad competencies, an experience of different academic disciplines, and an appreciation of the interconnectedness of knowledge are the core or heart of future intellectual development.

The Core curriculum comprises three parts:
A. The basic competence component stresses the development of skills of communication, quantitative decision making, and analysis/philosophy.
B. The methods of inquiry/ways of knowing component adds breadth and content to the Core curriculum. Courses in this area help the student understand the methods of different academic disciplines, the ways those disciplines understand human experience, and the relationships among them. The student will also develop his or her ability to think and analyze independently, to identify the major sources of an academic discipline, and to recognize the ethical and philosophical issues inherent in the discipline.

In particular, this part of the Core curriculum includes courses in fine arts, humanities, social sciences, and natural sciences. Courses in the fine arts seek to vitalize the human spirit and to prepare an individual to participate intelligently in an aesthetic experience through performance-centered and history-centered classes. The humanities seek to understand, interpret, and criticize the acts and creative works of civilization. This is accomplished through a study of literature which reflects the richness of the written word as an expression of human ideals, aspirations, and reflections, and through a study of other times/other cultures which provides a link with the past and a perspective on our own culture by a comparison with other cultures. Courses in the social sciences attempt to describe, analyze, and evaluate fundamental social institutions, behavior patterns, and issues of societies and their individual members. Through lecture and laboratory, courses in the natural sciences promote an understanding of the natural sciences, their methods and accomplishments, and their role in a technological society.
C. The interdisciplinary component seeks to overcome a fragmented view of experience which may result from a division of knowledge into acadernic disciplines and departments. The interdisciplinary course helps the student integrate knowledge and skills across these traditional lines by focusing on an important issue, major event, or specific region and demonstrating how new knowledge and insight can be gained thereby.

## Core Curriculum Requirements

A. Basic Competence

1. English Composition Do one
a. Successfully complete ENG 100 or ENG 101
b. Score 59 or above on the TSWE
c. Score 500 or above on the CLEP General or English Composition Test

## Core Curriculum <br> Regulations

d. Satisfy composition standards in ENG 100 or ENG 101 by the second week (no credit)
2. Quantitative Decision Making Do one
a. Successfully complete MAT 100 or above (3 credits)
b. Successfully complete computer skills course BUS 290 or COS 100 or above (3 credits)
c. Successfully complete statistics courses MAT 120, PSY 201, or SOC 307
(3 credits)
d. Pass a locally administered examination (no credit)
3. Skills of Analysis/Philosophy Do one
a. Successfully complete a PHI 100 level course (3 credits)
b. Successfully complete a skills of analysis course (a list of courses satisfying this requirement will be published prior to registration.)
(3 credits)
B. Methods of Inquiry/Ways of Knowing
l. Fine Arts Do one each
a. Performance-centered arts (3 credits)
b. History-centered arts
(3 credits)
(The courses in the fine arts must be selected from different departments.)
2. Humanities Do one each
a. Literature
b. Other Times/Other Cultures
(3 credits)
(The two courses in the humanities must have different course prefixes.)
3. Social Science Dotwo
(The two courses in social science must be selected from different departments.)
(6 credits)
4. Natural Science Do one
(The natural science course must include a laboratory.) (4 credits)
C. Interdisciplinary ( $0-3$ credits)

The interdisciplinary component includes a COR 100 level interdisciplinary course.

This course should be taken as early as possible. Each COR interdisciplinary course carries as prerequisites the successful completion of the Basic Competence English Composition and skills of Analysis/ Philosophyrequirements.

1. The student has primary responsibility for ensuring that she/he completes all the requirements of the minimum proficiency requirements and the Core curriculum requirements.
2. Courses completed in a student's major may not be used to satisfy a Core curriculum requirement in the area of Methods of Inquiry/ Ways of Knowing.
3. The student should satisfy the basic competence requirements before the completion of 60 credits.
4. The student should satisfy the COR 100 level interdisciplinary course before the completion of 90 credits.
5. Courses taken to satisfy the Core curriculum requirements may not be taken on a pass-fail basis.

All transfer students into a baccalaureate degree program are expected to meet the Core curriculum requirements as outlined above. The following guidelines should be noted:
A. Basic Competence

1. The English Composition requirement can normally be satisfied by transfer credit for an equivalent English composition course. If no such course is available for transfer credit, the student should refer to the other options noted under the Core curriculum requirements.
2. The Quantitative Decision Making requirement can normally be satisfied by transfer credit for an equivalent mathematics, com-
puter science, or statistics course. If no such course is available for transfer credit, the students should refer to the other options noted under the Core curriculum requirements.
3. The Skills of Analysis/Philosophy requirement can normally be satisfied by transfer credit for a course which deals with logic, reasoning, or analytical thinking. If no such course is available for transfer credit, the student should refer to the other options noted under the Core curriculum requirements.
B. Methods of Inquiry/Ways of Knowing

These requirements can normally be satisfied by transfer credit for equivalent courses in each of the four areas. Equivalent courses will be determined at the time of admission and transfer evaluation. Any CLEP examination which satisfies a course approved for the Core curriculum will satisfy the Core curriculum requirement in that area. When a specific requirement cannot be satisfied by transfer credit, the student is expected to take the appropriate course(s) from the list below.
C. Interdisciplinary

All transfer students granted less than 60 credits at the time of admission to the University are required to take the COR 100 level interdisciplinary course. Students granted 60 or more credits are exempt from this Core curriculum requirement.

Transfer students should complete the Basic Competence Requirement as early as possible after admission to the University.

Courses approved to satisfy Core Curriculum requirements are indicated by a letter following the course number (e.g., MUS 220G) when listed in course registration schedules and other publications. Courses marked by the following letters fulfill these requirements: $\mathrm{A}=$ writing proficiency; $\mathrm{B}=$ mathematics proficiency; $\mathrm{C}=$ English composition; $\mathrm{D}=$ quantitative decision making; $\mathrm{E}=$ reasoning; $\mathrm{F}=$ performance-centered fine arts; $\mathrm{G}=$ history-centered fine arts; $\mathrm{H}=$ literature; $\mathrm{I}=$ other times/other cultures; $\mathrm{J}=$ social science; $\mathrm{K}=$ natural science.

Courses Approved to Satisfy Core Curriculum Requirements

| A. Basic Competence |  |  |
| :--- | :--- | :--- |
| l. English Composition |  |  |
| ENG | 100 | College Writing |
| ENG | 101 | Independent Writing |
| 2. Quantitative | Decision Making |  |
| MAT | 100 | College Algebra |
| MAT | 101 | Trigonometry |
| MAT | 102 | Basic Technical Mathematics I |
| MAT | 103 | Basic Technical Mathematics II |
| MAT | 104 | Topics in Mathematics |
| MAT | 109 | Linear Systems |
| MAT | 110 | Elementary Mathematical Analysis |
| MAT | 120 | Introduction to Statistics |
| MAT | 131 | Number Systemsfor Elementary Teachers |
| MAT | 140 | Precalculus Mathematics |
| MAT | 152 | Calculus A |
| PSY | 201 | Statistics in Psychology |
| SOC | 307 | Statistical Methods for Social Research |
| 3. Skills of Analysis/Philosophy |  |  |
| PHI | 101 | Introduction to Philosophy: Man \& His Will |
| PHI | 102 | Introduction to Philosophy: Quest for Certainty |
| PHI | 103 | Introduction to Philosophy: Human Alienation |
| PHI | 104 | Introduction to Philosophy: Ways of Knowing |
| PHI | 105 | Introduction to Philosophy: Theories of Human |
|  |  | Nature |
| PHI | 106 | Introduction to Philosophy: Why Philosophize? |
| PHI | 107 | Introduction to Philosophy: Search for Identity |
| PHI | 108 | Introduction to Philosophy: Search for God |


| PHI | 109 | Introduction to Philosophy: Law, Politics, <br> and Society |
| :--- | :--- | :--- |
| PHI | 110 | Introduction to Philosophy: Self and Society |
| HTY | 377 | Chinese Thought |
| ENG | 110 | Straight and Crooked Thinking |

B. Methods of Inquiry/Ways of Knowing

1. Fine Arts
a. Performance-centered arts:

ART $141 \quad$ Fundamental Design I
ART 151 Fundamental Drawing I
ENG 201 Creative Writing
ENG 202 Fiction Writing
ENG 203 Poetry Writing
ENG 302 Fiction Workshop
ENG 303 Poetry Workshop
MUS $\quad 110 \quad$ Fundamentals of Music
MUS 130 Music Theory I
MUS $\quad 150 \quad$ Applied Music for Freshmen I
MUS $\quad 151 \quad$ Applied Music for Freshmen II
MUS 160 Applied Music for Freshmen I
MUS 161 Applied Music for Freshmen II
MUS 170 Applied Music for Freshmen I
MUS $\quad 171 \quad$ Applied Music for Freshmen II
MUS 334 Electronic Music I
MUS 400 Chamber Orchestra
MUS 401 The University Chorale
MUS 402 University Concert Band
MUS 405 The Chamber Singers
MUS 408 Wind Ensemble
THE 120 Acting I Fundamentals of Acting: Movement and Improvisation
THE 121 Acting II Fundamentals of Acting: Scene Work
THE 122 Contemporary Dance I
THE 170 Public Speaking
THE 222 Contemporary Dance II
THE 135/ Stagecraft I \& Lab
137
THE 290 Oral Interpretation
b. History-centered arts

ART 101 Approaches to Art
ARH 111 History of Art I
ARH 112 History of Art II
MUS 100 Music Appreciation and History
MUS 102 Music of the Portland Symphony
MUS 103 Introduction to Jazz
MUS 120 History of Music I
MUS 121 History of Music II
MUS 202 Music in America
MUS 203 Music in the 20th Century
MUS 205 Chamber Music Literature
MUS 220 History of Music III
MUS 221 History of Music IV
THE 101 Introduction to Drama
2. Humanities
a. Literature

CLA 283 The Epic Hero in Ancient Literature
CLA 284 The Tragic Hero in Ancient Literature
ENG 120 Introduction to Literature
ENG 160 Poetry
ENG 161 Fiction
ENG 162 Drama
FRE 251 Introduction to French Literature I

| FRE | 281 | Masterpieces of French Literature (in English translation) |
| :---: | :---: | :---: |
| FRE | 283 | Contemporary French Thinkers (in English translation) |
| FRE | 362 | French Poetry |
| FRE | 363 | The French Theatre |
| GER | 281 | The German Novelle (in English translation) |
| GER | 351 | Introduction to German Literature I |
| GER | 352 | Introduction to German Literature II |
| SPA | 281 | Masterpieces of Spanish Literature (in English translation) |
| SPA | 351 | Introduction to Hispanic Literature I |
| SPA | 352 | Introduction to Hispanic Literature II |
| THE | 210 | Play Analysis |
| b. Other Times/Other Cultures |  |  |
| ANT | 202 | Origins of Civilization |
| ANT | 220 | North American Indians |
| ANT | 221 | South American Indians |
| ANT | 222 | Peoples of the North |
| ANT | 232 | Women in Cross Cultural Perspectives |
| ANT | 301 | Victims of Progress: Primitive Peoples in the Modern World |
| ARS | 124 | Patterns in Comparative Religion |
| CLA | 291 | The Golden Age of Greece |
| CLA | 292 | Rome, from Republic to Empire |
| FRE | 201 | Intermediate French I |
| FRE | 291 | French Civilization-Historical Approach (in English) |
| FRE | 292 | French Civilization-Contemporary France (in English) |
| GEO | 201 | Cultural Geography |
| GER | 201 | Intermediate German I |
| HTY | 101 | Western Civilization I |
| HTY | 102 | Western Civilization II |
| HTY | 131 | U.S. History to 1877 |
| HTY | 132 | U.S. History Since 1877 |
| HTY | 133 | American History I |
| HTY | 134 | American History II |
| HTY | 161 | Introduction African History to Partition |
| HTY | 162 | Introduction African History Since Partition |
| HTY | 171 | Traditional East Asia |
| HTY | 172 | Modern East Asia |
| HTY | 181 | Latin America I |
| HTY | 182 | Latin America II |
| ITA | 201 | Intermediate Italian I |
| PHI | 310 | History of Ancient Philosophy |
| PHI | 320 | History of Medieval Philosophy |
| PHI | 330 | History of Early Modern Philosophy |
| PHI | 340 | History of Late Modern Philosophy |
| PHI | 350 | American Philosophy |
| PHI | 360 | Existentialism |
| SPA | 201 | Intermediate Spanish I |
| 3. Social Sciences |  |  |
| ANT | 101 | Anthropology: The Cultural View |
| COM | 102 | Introduction to Communications |
| ECO | 201 | Principles of Economics I |
| ECO | 202 | Principles of Economics II |
| GEO | 101 | Principles of Geography |
| GEO | 120 | Geography of Maine |
| GEO | 303 | Economic Geography |
| HRD | 333 | Human Growth and Development |
| POS | 101 | Introduction to American Government |
| POS | 102 | People and Politics |


| POS | 104 | Introduction to International Relations |
| :--- | :---: | :--- |
| PSY | 101 | General Psychology I |
| SOC | 100 | Introduction to Sociology |
| SWE | 101 | Introduction to Social Welfare |
| 4. Natural Sciences |  |  |
| ANT | 102 | Biological Anthropology (with ANT 102 Lab) |
| AST | 100 | Astronomy |
| AST | 103 | Astronomy Exercises/Experiences |
| BIO | 101 | Biological Foundations |
| BIO | 102 | Biological Experiences |
| BIO | 105 | Biological Principles |
| BIO | 106 | Laboratory Biology |
| CHY | 101 | Chemistry I |
| CHY | 102 | Introduction to Laboratory Measurement |
| GEO | 102 | Physical Geography |
| GEO | 102 L | Physical Geography Lab |
| GEY | 111 | Physical Geology |
| GEY | 112 | Physical Geology Lab |
| OCE | 100 | Introduction to Oceanography |
| OCE | 101 | Oceanographic Laboratory |
| PHY | 121 | General Physics I |
| PHY | 122 | General Physics II |
| PHY | 121 | General Physics I \& Lab |
| PHY | 122 | General Physics II \& Lab |
| C. Interdisciplinary |  |  |
| COR | 101 | Three Crisesin Western Civilization |
| COR | 102 | Human Ecology |
| COR | 103 | Revolution in the Arts 1850-1918 |
| COR | 104 | Women and Men: Perspectives on Gender |
| COR | 105 | Work in America |
| COR | 106 | War and Peace in the 20th Century |
| COR | 107 | Man, Society, and Technology |
| COR | 108 | Poverty in America |
| COR | 109 | Popular Cultures |
|  |  |  |

COR 101 Three Crises in Western Civilization
An interdisciplinary investigation of three turning points in Western culture: Greece about 400 B.C.; Europe about 1600 A.D.; and Europe about 1900 A.D. The course is team-taught and consists of lectures, panel presentations, discussion sections, and films.

Cr 3 .
COR 102 Human Ecology
An interdisciplinary study of the function and evolution of ecosystems, models for decision making, and human-environmental interactions. The course is team-taught and consists of lectures, discussions, workshops, and films. The course is an examination of the way in which human beings interact with the world around them. Three aspects of ecology are examined in detail: energy, population, and the impact that populations have on the environment. Throughout the course the emphasis is upon people; therefore, the dynamics of human populations, people's use of energy, and the impact that human beings
have on the systems of which they are a part are the dominant themes. The environment is viewed as a system which people act upon and which acts upon people.

Cr 3.
COR 103 Revolution in the Arts (1850-1918)
A study of the changes in art and music from 1850-1918 in light of cultural and historic events. The team-taught course uses lectures, slides, and live and recorded music. No prerequisites.

Cr 3.

## COR 104 Women and Men: Perspectives on Gender

This course is designed as an interdisciplinary investigation of the various perspectives on the complexity of gender issues. Special attention will be focused on theoretical explanations for sex similarities and differences in contemporary and cross cultural society. The course will be team-taught and will consist of lectures, films, small group discussions, and experiential activities. Cr 3.
COR 105 Work in America
An interdisciplinary course designed to pro-
vide students with historical, cultural, social, and individual perspectives on work in America. Each student will also examine their own values, motivations, and goals as they relate to their working careers and to their personal and professional development. The course is team-taught. It will consist of lectures, films, discussion sections, inventories, experiential activities, the writing of journals, and the completion of annotated bibliographies and analytic papers, as appropriate.

Cr 3.
COR 106 War and Peace in the 20th Century This course analyzes basic causes of warpsychological, political, social, economicand problems of maintaining peace in the 20th century. After a look at important theorists of war, it focuses on World War I, World War II, and the Vietnam war as case studies and then examines current nuclear and peace issues within the framework of the Cold War. It aims at helping students living in the nuclear age make informed decisions about the life and death issues confronting them as citizens. Cr 3.
COR 107 Man, Society, and Technology
An interdisciplinary examination of the interaction of man, society, and technology. The relationships of technology to social, phi-
losophical, and physiological issues will be studied from the perspective of single and combined disciplines. Interpretation, analysis, and evaluation of technological alternatives in cultural and environmental contexts will receive particular attention. The course will be team-taught and consist of lectures, readings, small group discussions, films, guest speakers, and research papers. Cr 3.
COR 108 Poverty in America
An interdisciplinary examination of the issues associated with poverty and oppression in America. The course seeks to de-mystify common attitudes about the nature and causes of poverty and to examine the major social policy implications for improving the situation of the poor. As a consequence, students should be able to make informed decisions about poverty-related issues that ultimately influence political action. Cr 3.

## COR 109 Popular Culture

An interdisciplinary examination of various aspects of popular culture, including film, music, television, and literature, this course addresses such questions as whether popular culture is homogenizing our society and to what extent popular culture reflects and reinforces values in American society. Cr 3.


# Women's Studies Program 

Coordinator: Nancy K. Gish, 124 Luther Bonney, Portland
Committee: MacPherson, Tizon, Gish, Lazar, Padula, Ricci, Gutmann, Louden, Bergstrom, Crochet, Davis, Franklin, Heidema, Henderson, Powers, Thiem, Woshinsky, Karpeles, Preston, Thompson, Murphy, Shedletsky, Hanisco

The Women's Studies Program is an interdisciplinary academic program focusing on the study of women, their experiences, and accomplishments. It is dedicated to the investigation of knowledge, theories, and research about women's roles and function in society and the perspectives which can be brought to these by new systems of thought.

Until recently, research, theory, and course content have failed to explore with depth or objectivity the conditions, contributions, and quality of women's lives. New scholarship on and by women documents the need to revise existing theory, examine issues surrounding gender, and study women's experiences and accomplishments.

The Women's Studies Program offers an interdisciplinary major leading to a bachelor of arts degree through the Self-Designed Program in the College of Arts and Sciences. A minor in women's studies is also available.

The curriculum in women's studies offers an exciting, rigorous series of courses that provide students a body of scholarship that focuses on women and the examination of society and culture from women's perspectives, investigates alternative methods of intellectual inquiry, and explores the formulation of future inclusive paradigms for a fuller understanding of humanity. The women's studies curriculum is designed to examine critically the issues surrounding gender, the origins of gender differentiation, the gendering of knowledge, and the attitudes and expectations related to gender in various societies and historical periods.

Since the philosophy and goals of women's studies transcend any one discipline, the core of the curriculum is interdisciplinary. Elective courses in women's studies focusing on women, gender issues, sex roles, or feminist issues are available from various departments and colleges throughout the University. These elective courses enhance the interdisciplinary dimension of the major in women's studies and serve to broaden perspective on and application of women's studies theory and research.

Graduates with a bachelor of arts degree with a self-designed major in women's studies are prepared for graduate studies in a variety of disciplines. They are also prepared for careers in social service, affirmative action and equal employment programs in government, education or industry, personnel or career advising, women's centers, agencies, and programs, human service agencies dealing with families and related issues, public service and communication areas.

## Programs and Requirements

## Self-Designed Major in Women's Studies

The minimum number of credits (exclusive of the University's Core curriculum) required for the self-designed major: 39.

The women's studies self-designed major consists of a minimum of 21 hours of required courses and 18 hours of women's studies elective or related courses.

Required Courses (select at least 21 hours)
WST 130 Introduction to Women's Studies
WST 230 Psycho-Social Development of Women
WST 299 History of Women in Europe and America
WST 330 Feminist Research Seminar
WST 430 Comparative Feminist Theories
WST 440 Field Experience/Internship in Women's Studies and a choice of/or both
WST 350 Feminist Ethics
WST 360 Classics of Feminism

| Women's |  |  |
| :---: | :---: | :--- |
| Wtudies | Elective and Related Courses (select at least 15 hours) |  |
| WST | 320 | Topics in Women's Studies |
| WST | 450 | Women's Studies Independent Study |
| ENG | 285 | Earlier Women Writers |
| ENG | 295 | Contemporary Women Writers |
| NUR | 308 | Women and Health |
| BUS | 349 | Women and Management |
| ANT | 232 | Women in Cross-cultural Perspective |
| COM | 495 | Sex-related Differences in Communication |
| ARH | 218 | Women in Art |
| POL | 201 | Women and Politics |
| SOC | 316 | Sex Roles |
| COR | 104 | Women and Men: Perspectives on Gender |
| HST | 499 | History of Women in Europe: 18th and 19th |
|  |  | Centuries |

Minor in Women's Studies
The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 18 hours of women's studies courses and 6 hours of related courses.

For students interested in the minor in women's studies, the program offers the following concentration:

Required (15 hours)
WST 130 Introduction to Women's Studies
WST 230 Psycho-social Development of Women
WST 330 Feminist Research Seminar
WST 430 Comparative Feminist Theories
WST 299 History of Women in Europe and America
and the choice of/or both (at least 3 hours)
WST 350 Feminist Ethics
WST 360 Classics in Feminism
and women's studies elective courses or related courses
(at least 6 hours)

| WST | 320 | Topics in Women's Studies |
| :--- | :--- | :--- |
| WST | 450 | Women's Studies Independent Study |
| ENG | 295 | Contemporary Women Writers |
| ENG | 285 | Earlier Women Writers |
| NUR | 308 | Women and Health |
| BUS | 349 | Women and Management |
| ANT | 232 | Women in Cross-cultural Perspective |
| COM | 495 | Sex-related Differences in Communication |
| ARH | 218 | Women in Art |
| POL | 201 | Women and Politics |
| SOC | 316 | Sex Roles |
| COR | 104 | Women and Men: Perspectives on Gender |
| HST | 499 | History of Women in Europe: 18th and 19th |
|  |  | Centuries |

Major Credit and Grade Policy
There are prerequisites for many of the women's studies courses. See departmental course listings for specific information. Certain courses may require the instructor's or coordinator's permission. Others will accept permission of the instructor in lieu of the prerequisite. In some cases, waivers or equivalents for required courses will be accepted. No grade of D will count toward fulfillment of the women's studies self-designed major. Courses taken pass/fail are not acceptable.

## Curriculum Summary and Guide

The curriculum core in women's studies is structured to offer introductory, intermediate, and advanced level courses that provide comprehensive knowledge of the history, theories, research, methodology, and applications of women's studies. The first-year student is encouraged to complete Core curriculum requirements, including the COR/interdisciplinary course, Women and Men: Perspectives on Gender. In the second
year, Introduction to Wornen's Studies, providing a substantial overview of research and theories relevant to the field of women's studies from a variety of disciplines, should be taken along with Psycho-Social Development of Women, which provides a comprehensive and comparative examination of traditional and feminist theories of women's psychological and social development and behavior through the life span. It is suggested that desired electives in women's studies or related courses be taken as well. Those who desire to minor in another discipline should begin the suggested sequence for that minor during the second year. The third year, History of Wormen, Classics of Feminism, Feminist Ethics, and electives in women's studies are suggested. These courses offer students an interdisciplinary knowledge of women which adds to the foundation already established and provides additional experience with and application of basic theoretical and critical analytical concepts. Comparative Feminist Theories, Feminist Research Seminar, and Field Experience/Internship in Women's Studies are recommended for the fourth year, providing an advanced experience in theory, research, and practical application. During this year, students will complete elective requirements and any minor requirements.

Summary<br>Year I<br>Core curriculum requirements COR 104 Women and Men: Perspectives on Gender (if available)<br>Year II<br>Complete Core curriculum requirements<br>Introduction to Women's Studies (fall)<br>Psycho-Social Development of Women (spring) Women's studies electives (fall and spring) Begin any minor requirements<br>Year III<br>History of Women (fall) Ferninist Ethics (spring) Classics of Feminism (fall) Women's studies electives (fall and spring) Continue minor requirements<br>Year IV<br>Feminist Research Seminar (fall) Comparative Feminist Theories (spring) Field Experience/Internship (fall and/or spring) Women's studies electives (fall and spring) Complete minor and elective requirements

## Declaration of Major

Students are encouraged to explorc a variety of disciplines and courses before declaring a self-designed major in women's studies. It is recommended that a minimum of 30 hours of arts and sciences courses, including at least one women's studies course, be completed before application is made. Consistent with Indepartment Major Board policy, it is recommended that students declare a major prior to completion of 53 credits and prior to completion of 30 percent of the proposed major.

WST 130 Introduction to Women's Studies
This course examines wormen in society from an historical and cross-cultural , perspective. Biological, sociological, psychological, economic, political, cultural and feminist theoretical influences on women's socialization and roles will be studied as well as women's contributions to society in the past and present. The goal of the course is to provide a
scholarly and substantial overview of the new research and theories relevant to women's studies and a comprehensive investigation of the forces that interact to produce the varied parameter of women's past, the rapidly changing roles of women and men in today's world, as well as the possibilities for the future.

Cr 3.

WST 230 Psycho-social Development of Women
This course is designed to introduce, investigate, and critique traditional developmental theory as well as the current research which seeks to expand the basic knowledge of women's development and the ways in which women learn. Emphasis will be placed on the study of psychological, cognitive, moral, and sociological development of women from conception through the life span. The interaction of biological and environmental factors will be considered as new theories and research related to women's development over the life span are explored. Prerequisite: WST 130 or permission of the instructor. Cr 3.

## WST 320 Topics in Women's Studies

Each semester topic areas not already covered by regular course offerings in women's studies will be offered. The course may be repeated for credit when different topics are considered.

Cr 3.

## WST 330 Feminist Research Seminar

This seminar will explore feminist research and methodology from an interdisciplinary perspective. Similarities and differences between feminist and traditional research, sex biases and the role of values in research, and new research paradigms will be examined. Emphasis will be on applying critical and scholarly feminist approaches to selected issues and topics related to women through involvement in a major research project. Prerequisites: ARS 130, ARS 230 or permission of instructor.

Cr 3-6.
HST 299 History of Women in Europe and America
A survey of women's roles during critical historical periods and in specific cultures will be examined with emphasis placed on a sociocultural investigation of the feminist movement. Students will be introduced to the methods and materials of oral history and the relevance of folk sources to the study of women's history and culture.

Сг 3.

## WST 350 Feminist Ethics

This course is an introduction to feminist ethics. The first part of the course explores some of the diverse approaches to feminist ethics, examines both the distinctiveness of each approach and similarities among them, and investigates why such diversity exists and to what extent it is necessary. The second part of the course explores specific issues and areas of ethical reflection, such as power, sexuality, dualism, nonviolence, and means of social change. Prerequisite: ARS 130 or permission of the instructor. Cr 3.
understanding of women. Individual works will form the basis for an extensive examination of the social, political, philosophical, psychological, and personal issues interacting with and influencing women's experiences. Readings by de Beauvoir, Wollstonecraft, Freidan, Millett, Morgan, Rich, Daly, Chodorow, Dinnerstein, and others will be included.

Cr 3.
WST 430 Comparative Feminist Theories
This comparative course focuses on five selected theories, only four of which would ordinarily be described as feminist. The first theory, conservatism, is based upon the concept of a female biological imperative as natural and inevitable. The other four theoriesliberal feminism, traditional marxism, radical feminism-build their argument both against this background of conservatism and through their on-going dialogue with each other. The practical implications of these theories for women and men will be examined within the three dimensions of work, family, and sexuality. Prerequisite: ARS 130, 230,340 or permission of instructor. Cr 3.
WST 440 Field Experience/Internship in Women's Studies
This course is designed to provide an opportunity for students to relate feminist theory and philosophy to practice. The links between community and and campus, social action and research will be emphasized through experiential learning. Requirements include 120-240 hours of work in a community or government agency or private organization, in addition to meeting with other interns in seminars and scheduled meetings with a supervisor. Prerequisite: self-designed major in Women's Studies, senior standing, and permission of the instructor. Cr 3-6.

## WST 450 Independent Study in Women's Studies

This course provides junior and senior students with the opportunity to pursue a project independently, concentrate on a particular subject of concern, or conduct individually arranged reading or research studies under the advice and direction of a faculty member. Prerequisite: advanced standing and permission of the coordinator.

Cr 3.

## WST 360 Classics of Feminism

This course focuses on writings, considered essential to the feminist movement and to the

## Convocation

Each year the University of Southern Maine sponsors a year-long series of lectures, debates, workshops, programs, and cultural events focused on an important contemporary theme. Previous themes have been "The City," the "Changing Role of Women and Men," "The Age of the Computer," and "Peace and War in the Nuclear Age." For its fifth convocation, the University community has chosen "The Aging of America" as the theme for the 1985-1986 academic year.

At the beginning of this century, a female newborn could expect to live to the age of 49 and a male newborn to the age of around 47. In 1990, the comparable life expectancies are predicted to be 80 and 72 . In 1900, approximately three million Americans were 65 years of age or older, a comparable figure to the number over the age of 85 now. Thirty five million are projected to be age 65 or over in the year 2000 and $5 l$ million by 2020. In the year 2000 , it is expected that there will be 21 people over the age of 65 and 19 people under the age of 18 for every 100 people between the ages of 18 and 64. A large majority of people over the age of 85 are and will continue to be women.

Chronological time, physiological time, personal time and socialhistorical time are not identical. To age is to give meaning to life, for ourselves, each other, and our posterity. What do age groups owe each other? What do age groups have to teach each other? Can we be young without negating our old age? Can we retain our vision to see things anew as we accept the limitations of our aging bodies? What are the limits of our human development? Can an older people remain a vibrant nation? Can a young nation achieve wisdom? These are some of the questions that the University community will convene around this year. The University provides, as no other setting does, the appropriate resources and environment of open inquiry requisite for thoughtful and comprehensive consideration of such questions.

All students, faculty, and staff are encouraged to participate in Convocation by offering ideas, by supporting and sponsoring events in collaboration with the Convocation Committee, by sharing in the organizing and planning tasks, and by teaching or enrolling in courses related to the theme. It is hoped that every member of the University community and many members of the Greater Portland community will find this shared enterprise intellectually rewarding. Students are encouraged to engage in independent study and research within the framework of the Convocation theme.

For further information contact Alyce O'Brien, Executive Director for University Relations and Administrative Chair of Convocation.


## College of Arts and Sciences

Dean: Robert J. Hatala<br>Associate Dean for Student Academic Services: Kathie L. Benton; Coordinator of Scheduling: Maurice J. Chabot; Associate Dean for Information and Development: Peter Lehman

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

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

| Art | Mathematics |
| :--- | :--- |
| Biological Sciences | Music |
| Chemistry | Philosophy |
| Communication | Physics |
| English | Political Science |
| Foreign Languages and Classics | Psychology |
| Geography-Anthropology | Social Work |
| Geosciences | Sociology |
| History | Theatre |

Programs of study leading to a bachelor of arts (B.A.) degree are available in the areas listed below. In addition, bachelor of fine arts (B.F.A.) is offered by the Art Department; bachelor of science (B.S.) is offered by the Departments of Chemistry, Art, Mathematics, and Music; and bachelor of music in performance (B.M.) is offered by the Music Department.

| Art | Liberal Studies |
| :--- | :--- |
| Biology | Mathematics |
| Chemistry | Music |
| Communication | Philosophy |
| Criminology | Political Science |
| Earth Science | Psychology |
| Economics | Self-Designed |
| English | Social Science |
| French | Sociology |
| Geography-Anthropology | Social Work |
| Geology | Theatre |
| History |  |

Requirements for all
Baccaloureate
Degree Candidates

To be eligible for a baccalaureate degree from the University, a student must meet the following:
I. minimum proficiency requirements
II. Core curriculum requirements
III. departmental or program requirements
IV. minimum of 120 credits of accepted courses
V. minimum of 2.0 cumulative grade point average

## Minimum Proficiency Requirements

Every baccalaureate degree student who is admitted to the University must produce evidence (no credit granted) of both a minimum writing proficiency and a minimum mathematics proficiency. These requirements are described in the Academic Policies section of this catalog.

Associate of Arts<br>Degree Program in<br>Liberal Arts (60 credits)

Academic Majors for the College of Education

## Other Educational Opportunities

## Core Curriculum Requirements

Every baccalaureate degree student who is admitted to the University is required to meet the Core curriculum requirements. These are set out on page 38 .

## Departmental or Program Requirements

The College requires that every baccalaureate degree student fulfill the requirements of a major program. Students normally declare a major program prior to completing 53 credits.

Fine arts students, especially in the Departments of Art and Music, usually must begin their program earlier owing to portfolio and audition requirements. Students planning to major in a science are urged to obtain an advisor in the appropriate department and begin the required course sequence as early as possible.

Selecting a major is an important and often difficult decision. Students who are undecided about a major should take courses in programs that interest them before making a final decision. Undecided students are encouraged to consult the Advising and Information Department as well as those departments which interest them prior to declaring a major.

Individual departmental or program requirements are described in the sections that follow.

A two-year program leading to the associate of arts degree (A.A.) in liberal arts is available in conjunction with the Division of Basic Studies. Graduates of this program may transfer into a baccalaureate degree program.

To be eligible for the associate of arts degree in liberal arts from the University, a student must meet the following:
I. minimum proficiency requirements
II. Core curriculum requirements
III. electives from the College of Arts and Sciences

A list of courses approved for satisfying the requirements of the Core curriculum may be found on page 40 .

Students who wish to transfer into a baccalaureate degree program should ensure that their electives are from courses carrying a number of 100 or higher. They may also wish to consult the major requirements of baccalaureate programs in which they are interested.

The College of Arts and Sciences offers certain liberal arts majors for students in the College of Education. These are: art education (K-12); mathematics (secondary education); and music education (K-12).

In addition, liberal arts concentrations ( 36 credits) for students in elementary education are being developed by certain departments of the College of Arts and Sciences. These will be available as interdisciplinary sequences in the liberal studies major. Students should contact the Office of the Dean of the College of Education for further information.

## Independent Study Term

Students who have an academic project which they feel would contribute significantly to their program may, with the approval of a faculty sponsor, the appropriate department, and the dean, apply for a semester of independent study. General guidelines for the independent study term may be obtained from departments or the Office of the Dean of the College of Arts and Sciences.

## Double Majors

Students interested in a double major should consult the appropriate departments and obtain a declaration of major form from the Registrar's Office.

## Interdepartmental <br> Major Programs

## College of Arts and Sciences Minors

Minors are available in the following departments: art history, biology, chemistry, communication, English, foreign language, geography/anthropology, geology, history, mathematics, music, political science, and sociology.

Chair: Remo H. Riciputi, 150 Science Building, Portland
Faculty Council: Albee, Bearce, Crochet, deBenedetto, Freeman, Louden, Pendleton, Steinman

All interdepartmental major programs are approved and administered by the Faculty Council for Interdepartmental Majors. Within these programs it is possible for a student (or a group of students), in consultation with appropriate faculty advisors, to develop and propose interdepartmental major programs to the Faculty Council. Faculty members inay also propose interdepartmental majors to the Faculty Council.

## Individualized Programs

Two programs are available for individual students whose academic needs cannot be met through other academic department majors. 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. Students interested in such an option may apply to the Faculty Council for Interdepartmental Majors at the normal time for declaring a major. Guidelines for this program may be obtained from the Office of the Dean of the College of Arts and Sciences or from the chair of the Council.

The self-designed major allows a student to design a multi-disciplinary program not currently available through a department major. Persons wishing to pursue such an option should apply to the Faculty Council for Interdepartmental Majors for approval, normally during the student's sophomore year.

A self-designed major program must be as comprehensive as departmental majors in the College of Arts and Sciences. Coursework outside the College may be included, but the major must consist mainly of courses within the arts and sciences.

Deadlines for submission of completed proposals are September 15, February 15, and April 15. Students may obtain applications, program descriptions, and guidelines from the Office of the Dean of the College of Arts and Sciences or from the chair of the Council.

## Group Contract Programs

Group contract majors offered through the self-designed major program require appropriate courses offered by program-related departments. These majors allow a number of students to be enrolled in the same program.Students interested in majoring in any of the following programs may obtain additional information and guidelines in the Office of the Dean of the College of Arts and Sciences or from the appropriate office indicated.

Students and faculty interested in designing and proposing group contract majors are encouraged to do so and should obtain additional information from the Office of the Dean of the College of Arts and Sciences or from the chair of the Faculty Council for Interdepartmental Majors.

## Biotechnology Program

Coordinator: Louis F. Gainey, Jr., 306 Science Building, Portland. Steering Committee: Gainey, Holmes, Otter, Ricci, Smith, Stebbins

The Biotechnology Program is an interdisciplinary degree program designed to provide students with a liberal arts education emphasizing cellular and molecular biology. An integral part of this program is a semes-ter-long, full-time internship at one of several local biotechnology firms
which will provide students with practical experience in biotechnology.
Students may apply for admission to the program at the end of their freshman year (after completion of one year of chemistry and one year of biology coursework). The committee will recommend the most qualified students for admission to the program. Minimum requirements are a "B" average in all coursework required for the program. The number of students admitted to the program will be determined by the committee; however, students will not be admitted unless there is a reasonable expectation of their being placed in an internship.

Students will be required to maintain a 2.5 GPA in required coursework to remain in the program. Students who do not maintain this average will be placed on probation for one semester; if no improvement is noted, they will be dismissed from the program. Required coursework with a grade of "D" will not be counted toward fulfilling the program requirement.

Complete details and guidelines may be obtained from the program coordinator.

## Self Designed Major in Biotechnology

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 76.5 or 77.5
Biology (2l.5 credit hours)

1. 2 semesters freshman biology (BIO 105, 106, 107)
2. Genetics (BIO 201)
3. Microbiology (BIO 311, 312)
4. Cell and Molecular Biology (BIO 409, 410)

Chemistry ( 27 credit hours)

1. 2 semesters freshman chemistry (CHY 113, 114, 115, 116)
2. 2 semesters Organic Chemistry (CHY 251, 252, 253, 254)
3. Biochemistry (CHY 361 or BIO 491, CHY 362)
4. Analytical Chemistry (CHY 231, 232)

Internship ( 12 credit hours)
Physics (9 or 10 credit hours)
l. 2 semesters introductory physics (PHY 121, 122, 123, 124 or PHY 111, 112)

Mathematics (7 credit hours)

1. I semester Calculus (MAT 152)
2. 1 semester Statistics (MAT 120)

## Foreign Languages Study Programs

The self-designed major of the College of Arts and Sciences provides students with a flexible opportunity to tailor their major to their interests and needs in foreign language study. In order to help students prepare their application for approval by the Faculty Committee for Interdepartmental Majors, five possible models are presented. Additional information may be obtained from the chair of the Department of Foreign Languages and Classics.

## Self-Designed Major in Foreign Languages

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 36 .

For a major in foreign languages, students may choose any two of the following languages and take these courses in the language of their choice: Spanish: SPA 321, 322, 351, 281
German: GER 321, 322, 351, 352, 281
French: FRE 321, 323, 291, or 292; anytwo of 361,362 , or 363.
Classical Languages: GRE 251, 252, LAT 251, 252, and either GRE 470 or LAT 470

In addition, the student is required to take two foreign language Core courses bringing the total of credits required to 36 .

```
Self-Designed Major in Classical Studies (Concentration in either Greek
or Latin)
```

The minimum number of credits (exclusive of the University's Core curriculum) for the major: 36 .
Core Course
Language and Literature
Concentration in Greek
GRE 251 Introduction to Literature
GRE 252 Introduction to Literature
GRE 470 Independent Study
LAT 251 Introduction to Literature
LAT 252 Introduction to Literature
Civilization and Literature in Translation
CLA 283 Epic
CLA 284 Tragedy
CLA 291 5th Century Athens
Related Courses (electives)
ARH 111 History of Art I
ARH 212 Classical Art
HTY 231 Ancient History I
HTY 232 Ancient History II
PHI 310 Ancient Philosophy
POS 289 Political \& Social Thought I
Concentration in Latin
LAT 251 Introduction to Literature
LAT 252 Introduction to Literature
LAT 470 Independent Study
GRE 251 Introduction to Literature
GRE 252 Introduction to Literature
Civilization and Literature in Translation
CLA 283 Epic
CLA 284 Tragedy
CLA 292 Rome
Self-Designed Major in French Studies
The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 36 .

Core Course
French Language and Literature
Any two
FRE 321 Workshop in Writing French
FRE 323 Workshop in Speaking French
FRE 305 French Phonetics
Any two
FRE 361 The French Novel
FRE 362 French Poetry
FRE 363 The French Theatre
One French literature course from the 400 level.
French Civilization and Literature in Translation
FRE 291 and $292 \quad$ French Civilization
Select one
FRE 283 Contemporary French Thinkers
FRE 284 Avant-Garde Theatre in France
FRE 285 18th Century Literature in France and England
Electives (any three)
LAT 101- Beginning Latin
102
HTY 242 French Revolution and Napoleon

| HTY | 244 | 20th Century Europe |
| :--- | :--- | :--- |
| POS | 235 | Democratic Governments of Europe |
| ARH | 316 | Modern Art |
| MUS | 203 | Music in the 20th Century |
| SOC | 361 | Sociology of Franco-Americans |
| Self-Designed Major in German Studies |  |  |
| The minimum number of credits (exclusive of the University's Core |  |  |
| curriculum) required for the major: 36. |  |  |
| Core Course |  |  |
| German Language and Literature |  |  |
| GER | $321-$ | Composition/Conversation |
| 322 |  |  |

Students must meet the following requirements within the discipline selected for concentration:
I. a. Geography-Anthropology-to include GEO 101, GEO 102 or GEO 201, ANT 101 or ANT 103, and at least 3 courses in geography or anthropology at the 300 level or above. ( 21 credits)
b. History-to include at least 21 credit hours at the 200 level or above. (2l credits)
c. Political Science- 21 credit hours as arranged with advisor
d. Sociology—to include SOC 100, SOC 300, SOC 305; or SOC 307, SOC 312, or SOC 356. (21 credits)
e. Economics-to include ECO 201, ECO 202, ECO 301, and ECO 302 , and three advanced economics courses. ( 21 credits)
II. Remaining courses must include three each, in each of three of the remaining four disciplines. Nine of these credits must be upper division level ( 20 or above).
III. One course ( 3 credits) must be Independent Study to be supervised by two faculty, one of whom is in the discipline of concentration. This requirement may only be met during the senior year or during the second semester of the junior year.
Program descriptions and guidelines are available in the Office of the Dean of the College of Arts and Sciences or from the chair of the Council.

For information regarding the women's studies self-designed major, please see p. 46.

## Graduate Programs

The College of Arts and Sciences offers a master of science degree in computer science. For details, refer to the Graduate Catalog.

## College of Arts and Sciences Courses

The College also offers courses on a variety of topics and themes which are not sponsored by individual departments. The courses currently offered are:

## ARS 121 The Religious Dimension

This course will explore the religious dimensions of our lives in a number of different ways. We will develop a personal and satisfying definition of religion, investigate the expressions of religion in the whole life, gain understanding of the experience of various religious communities, and explore our own personal identities. The focus will be through Western religious thought, a study of myths, and exploration of the perceptions on religion by Carl G. Jung.

Cr 3.

## ARS 122 Career Development

This course is designed for upper-level students to investigate the world of work in terms of their own personal-professional goals. Emphasis is placed upon the careerplanning process in relation to current opportunities. Activities will assist students to formulate and clarify realistic job objectives as well as plan appropriate strategies to achieve employment. Experiences will include inven-tory-awareness exercises, career exploration with field visitations, and preparation with resume construction and interviewing procedures.

Cr 1.

ARS 123 Topics of Human Sexuality
The purpose of this course is to provide individuals with a thorough understanding and accurate information concerning their sexuality. The course will show the subtle complex interrelationship among sociology, biology, philosophy, psychology, theology, behavior, and interpersonal relationships as they pertain to sexuality. Topics to be discussed include sexual growth and development. sexual attitudes, sexual anatomy and physiology of males and females, human sexual response cycle, sexual attraction, love and relationships, contraception, homosexuality and bisexuality, alternative forms of sexual behavior, sexual fantasies, sexual dysfunctions and problems, sexual history and research. Cr 3.

## ARS 124 Patterns in Comparative Religion

This course seeks to stimulate a broadened understanding of religion through an examination of such typical religious phenomena as rites associated with birth, life-stages, death, sacred times, sacred places, myths, and religious symbolism. Course materials, including lectures, readings, and other sources, will be drawn from the major religions of the
world as well as from ancient and regional traditions. Throughout the course, particular emphasis will be given to a sympathetic, rather than judgmental, examination of religious traditions. No prerequisites. $\quad \mathrm{Cr} 3$.
ARS 223 Attitudes of Human Sexuality
The purpose of this course is to allow individuals to understand better their sexual feelings, attitudes, and relationships. Emphasis will be placed on developing skills necessary
in dealing with one's own sexuality, as well as the sexuality of others. Topic areas will include sexual communication skills, body images and sensory awareness, values clarification, male and female sexual identity, sexual assertiveness, overcoming sexual dysfunctions, sexual lifestyles, understanding sexual deviancy, sexual scripting. The course will rely heavily on lecture, group process and role playing. Prerequisite: ARS $123 . \quad \mathrm{Cr} 3$.

## Art

Chair of the Department: Michael G. Moore, 201 Academy Building, Gorham
Professors: Bearce, Ubans; Associate Professors: Franklin, Hewitt, M. Moore, Rakovan, Schiferl; Assistant Professor: J. Moore

The department offers three bachelor's degrees: the bachelor of arts (B.A.), the bachelor of fine arts (B.F.A.), and the bachelor of science (B.S.). The requirements for the B.F.A. heavily involve the student in studio art courses and prepare him/her for graduate school or suitable professions. The B.S. gives the student preparation in several studio areas and professional education, and leads to teacher certification, grades K-12, in the state of Maine. The B.A. is designed to provide a broad liberal arts education and to prepare students for graduate study in allied fields. In all of the programs, the faculty strive to promote the student's creative abilities.

Specifically, the department goals are a.) to provide a broad and challenging foundations program, which will enable students to develop a self-awareness, an historical perspective, and insight into the meaning and application of creative media in the visual arts; b.) to develop the capacity for critical analysis, the ability to investigate and experiment, and to make judgments within a framework of reason; c.) to develop an art vocabulary appropriate to the visual arts; d.) to develop an overview and understanding of literature on art; e.) to develop an open attitude for viewing and creating art; f.) to develop basic proficiencies in a variety of art media, as well as an in-depth competency in selected art areas; g.) to develop understanding of nonverbal communicationskills; and h.) to provide an enriching gallery program for students, faculty and staff, and the greater Portland community.

Above all, the faculty helps students develop an intelligent and cosmopolitan attitude about art, and encourages self-reliance in developing their own artwork and other creative endeavors.

## Admission <br> Requirements

Students wishing to apply for admission to the Department of Art should observe the following procedure: Formal application should be made to the Director of Admissions, Admissions Office. Current degree candidates enrolled at the University, wishing to transfer into the Department of Art from another discipline, must obtain a change of major form and submit this form with an up-to-date transcript to the chair of the Department of Art.

B y following these procedures a student is identified as a candidate for matriculation in the Department of Art. All candidates must complete the art core (consisting of Fundamental Design I \& II, Fundamental Drawing I \& II, and History of Art I \& II) before matriculating as an art major in the Department of Art.

In order to become a full-time matriculated art major in one of the three degree programs, a portfolio of original works must be submitted to the Department for evaluation. This must be done subsequent to or during the semester in which art core requirements are being completed. The portfolio should consist of 12 works in varying media, including one selfportrait drawn from life. The entire portfolio may indicate the applicant's current interest and should include examples of designs and drawings typical of those completed at the art core level. The portfolio may also include prints, paintings, posters, and photographs, but 35 mm slides or photographs of three-dimensional work should be submitted rather than the work itself. The Department cannot accept responsibility for damage or loss, and asks that no glass, three-dimensional work, or work larger than $24^{\prime \prime} \times 36^{\prime \prime}$ be submitted.

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

## Programs and Requirements

Final notification of a decision will come from the Department of Art approximately two weeks after the portfolios have been evaluated.
Students already enrolled in the University who wish to change their major to art also must follow the departmental admission procedures concerning submission of portfolio, as described above.

## Bachelor of Arts (B.A.)

The minimum number of credits (exclusive of the Univerity's Core curriculum and electives) required for the major: 45.
Art Core (18 credits)
ART 141 Design I
ART 142 Design II
ART 151 Drawing I
ART $\quad 152$ Drawing II
ARH 111 History of Art I
ARH 112 History of Art II
Art History Requirements (9 credits)
ARH $\quad 411$ Philosophy of Art (may substitute PHI 220)
ARH Elective
ARH Elective
Studio Art Requirement (18 credits)
Electives ( 45 credits)
No more than 60 credit hours with ART designation may be used to fulfill 90 credit-hours degree requirement.

## Bachelorof Fine Arts (B.F.A.)

The minimum number of credits (exclusive of the University's Core curriculum and electives) required for the major: 72 .

Art Core (18 credits)

| ART | 141 | Design I |
| :--- | :--- | :--- |
| ART | 142 | Design II |
| ART | 151 | Drawing I |
| ART | 152 | Drawing II |
| ARH | 111 | History of Art I |
| ARH | 112 | History of Art II |

Art History Requirements (9 credits)
ARH 411 Philosophy of Art (may substitute PHI 220)
ARH Elective
ARH Elective
Studio Art Requirement ( 45 credits)
9 credits in Drawing above the 152 level
6 credits from each of the following two categories: two-dimen-
sional: painting, printmaking, photography; three-dimensional: ce-
ramics, sculpture
24 credits ART electives
A concentration of 12 credits in painting, printmaking, ceramics, drawing, or other (specified by the Department) area is required. In addition, B.F.A. candidates are required to have an exhibit of their work during their senior year.
Electives ( 18 credits)
Bachelor of Science in Art Education
The minimum number of credits (exclusive of the University's Core curriculum and electives) required for the major: 80 .

Art Core (18 credits)

| ART | 141 | Design I |
| :--- | :--- | :--- |
| ART | 142 | Design II |
| ART | 151 | Drawing I |
| ART | 152 | Drawing II |
| ARH | 111 | History of Art I |
| ARH | 112 | History of Art II |

Art History Requirement (9 credits)

| ARH | 4ll | Philosophy of Art (may substitute PHI 220) |
| :---: | :--- | :--- |
| ARH | Elective |  |
| ARH | Elective |  |
| Studio Art Requirement (27 credits) |  |  |
| ART | 232 | Ceramics I |
| ART | 261 | Painting I |
| ART | 271 | Photography I |
| ART | 281 | Printmaking |
| ART | 291 | Sculpture I |
| ART | Elective |  |
| ART | Elective |  |
| ART | Elective |  |
| ART | Elective |  |
| Professional Education Requirement (26 credits) |  |  |
| AED | 221 | Practicum in Art Education |
| AED | 321 | Principles and Procedures in Art Education |
| EDU | 200 | Studies in Educational Foundations |
| HRD | 333 | Human Growth and Development |
| EDU | 324 | Student Teaching (6 Cr course) |
| EDU | 324 | Student Teaching (6 Cr course) |
| AED | 421 | Seminar in arteducation |
| Electives (12 credits) |  |  |

## Minor in Art History

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 21.
The minor consists of ARH 111; ARH 112; and ARH 411, and 12 credits of art history courses (noted by ARH prefix) above the 200 level including: a.) at least one of the following areas: Classical, Medieval, Renaissance; and b.) at least one in either of the following areas: 19th-Century Western Art, 20th-Century Western Art

## Art History

## ART 101 Approaches to Art

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

ART 416 Exhibitions \& Gallery Management Problems in the operation of an art gallery. Various exhibition, installation and handling techniques; design and distribution of promotional material. Practical experience in connection with the operation of the USM Art Gallery. Prerequisite: art core courses.

Сг 3.

## ARH 111 History of Art I

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

Cr 3.

## ARH 112 History of Art II

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

Cr 3.
ARH 212 Classical Art
A survey of ancient art and architecture with special emphasis on discussing the key monuments of Greek and Roman art and their influence on later artistic periods. Prerequisite: ARH 111

Cr 3 .
ARH 213 Medieval Art
A survey of the various medieval styles from the Early Christian through the Gothic pe-
riod with a special section on Islamic art. The relationship of culture to art will be examined for architecture, painting and sculpture. Prerequisite: ARH $111 . \quad$ Cr 3.

## ARH 214 Renaissance Art

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

Cr 3.
ARH 215 Seventeenth and Eighteenth Century Art
The course will survey the Baroque and Rococo movements in painting, sculpture, and architecture. The impact of the Academies and academic art and the Enlightenment will be given special attention. Prerequisite: ARH 112

Cr 3.

## ARH 217 Oriental and Non-Western Art

A survey of some of the major styles in Asian art (India, China, Japan) followed by an overview of the art of tribal Africa and Indian art of the Americas. The emphasis will be on an understanding of the art through the cultural factors which influenced its development. Prerequisite: none.

Cr 3.
ARH 218 Women in Art
A focus on women in the arts; their images, ideals, dialogues, politics, and history through contemporary trends. The course will be enhanced with slides, films, video, tapes, papers, panels and discussions. Prerequisite: permission of instructor.

Cr 3.
ARH 273 Film as Image and Idea
An approach to the appreciation of motion pictures and allied arts through the understanding and analysis of the context, range, and resources of this, the only major form of
creative expression conceived and developed entirely within the Industrial Age. Principles of evaluation, illustrated through the development of motion pictures to their present state. Prerequisite: permission of the instructor.

Cr 3.
ARH 315 Western Art (1790-1880)
A study of the major movements of the first half of the modern era covering the period between 1790-1880. Prerequisite: ARH 112.

Cr 3.
ARH 316 Modern Art
A continuation of ARH 315 covering the period from 1880-1950 and including the growth and development of the modern "isms." Prerequisite: ARH 112.

Cr 3.
ARH 317 Contemporary Art (1950-Present)
An examination and discussion of development in the visual arts since 1950. Prerequisite: ARH 112.

Cr 3.
ARH 411 Philosophy of Art
An investigation into the theories of art and beauty found in the writings of philosophers, painters, writers, and critics which form the basis of understanding of the fine arts. Readings and discussion of writers from ancient to modern times. Prerequisite: ARH ll2. Cr 3.

## ARH 412 Topics in Art History

A seminar on a selected topic in art history which will be the focus of in-depth research and discussion. Prerequisite: Permission of the instructor.

Cr. 3

## ARH 418 Independent Study in Art History

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

## Studio Art

## ART 141 Fundamental Design I

A studio introduction to the basic elements of two-dimensional and color relationships. Cr 3.

## ART 142 Fundamental Design II

A studio introduction to the basic elements of three-dimensional relationships, and "the aggregate," an extended project interrelating the two and three-dimensional. Prerequisite: ART 141.

Cr 3

## ART 151 Fundamental Drawing I

A studio introduction to drawing, including the basic elements of line, tone, design, and representation.

Cr 3.

## ART 152 Fundamental Drawing II

A continued introduction to drawing, using the basic graphic elements studied in Drawing I.

Cr 3.

## ART 231 Ceramics

An introduction to methods and processes of clay forming, including modeling, pressing, handbuilding, and the potter's wheel. Emphasis on form and texture, with aspects of glaze composition and firing procedures. Prerequisite: art core courses. Cr 3.

## ART 251 Drawing III

Extensive combining of media. Stress on role of images, both object and model. Prerequisite: ART 152.

Cr 3.

## ART 261 Painting

An introduction to basic aspects of the painting process as related to visual perception and technique. Prerequisite: art core courses.

Cr 3.

## ART 271 Photography

Photography as a creative medium. Introduction to basic skills in the use of the camera and darkroom equipment. Investigation and practice in the fundamental techniques and processes of black and white photography as an art form. Prerequisite: art core courses.

Cr 3.

## ART 281 Printmaking

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

## ART 291 Sculpture

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

## ART 331/332 Intermediate Ceramics

Application of design principles in production of ceramicware with a concentration on advanced problems in wheel-thrown forms and hand-building sculptures. Prerequisite: ART 231.

Cr 3/3.

ART 351/352 Intermediate Drawing
Continued drawing with emphasis on independent direction. Prerequisite: ART 251.

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

Cr 3/3.

## ART 363 Painting/Watercolor

Watercolor, wash, dry-brush, ink and wash, gouache, and other techniques in watermedia. Emphasis on individual concepts and personal expression. Prerequisite: ART 261.

Cr 3.
ART 365/366 Intermediate Watercolor
Continuation of Painting/Watercolor with emphasis on personal expression. Prerequisite: ART 363.

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

Cr 3/3.

ART 381/382 Intermediate Printmaking Application of the basic knowledge of printmaking as it concerns image making, with an emphasis on at least two of the media studied in ART 281. Prerequisite: ART 281. Cr 3/3.
ART 391/392 Intermediate Sculpture
The theory and practice of sculptural composition using a variety of techniques with traditional and new materials. Prerequisite: ART 291.

Cr 3/3.
ART 407 Advanced Problems in Art
An opportunity for the student to do advanced work in the discipline of his/her choice, culminating in a related project. Prerequisite: permission of instructor and Art Department chairman.

Cr 1 to 6.
ART 408 Independent Study in Art
An opportunity for the student who has demonstrated competence in a specific area of study to work independently with scheduled tutoring from a faculty member of the student's choice. Prerequisite: permission of instructor and Art Department chairman. Cr 1
to 6 .
ART 412 Topics in Studio Art
A course on a selected topic in the studio arts. To be offered at least once each year. Prerequisite: permission of the instructor. Cr 3.

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

ART 45l/452 Advanced Drawing
Making personal and complete drawings and series of drawings. Emphasis on individual concepts and personal expression. Prerequisite: ART 351 and 352.

Cr 3/3.

## ART 461/462 Advanced Painting

Continuation of Intermediate Painting. Emphasis on individual concepts and personal expression. Prerequisite: ART 361 and 362.

## Art Education

AED 221 Practicum in Art Education
An introduction to art education theories and processes through reading, writing, discussion, observation, and clinical experiences with children. The examination of the relationship between art-making and learning is relevant to prospective art and classroom teachers. Prerequisite: sophomore standing or above.

Cr 3 .
AED 321 Principles and Procedures in Art Education
History and philosophy of art education, theories of child art, relationship of goals to art education strategies, development of a workable set of beliefs about art education through readings, writings, discussion, observation, interview, and field experiences. Intended for the art education major. Prerequisite: AED 221 and art core courses. Cr 3.
AED 407 Advanced Problems in Art Education
An opportunity for the student to do advanced work in art education related problems. A total of 6 credits may be taken. Pre-

ART 471/472 Advanced Photography
Investigation of advanced photography projects with emphasis on personal expression and individual concepts of image-making. Prerequisite: ART 371 and $372 . \quad$ Cr $3 / 3$.
ART 481/482 Advanced Printmaking
Study and realization of personally developed imagery through advanced investigation of preferred print-making media. Prerequisite: ART 381 or ART $382 . \quad$ Cr $3 / 3$.
ART 491/492 Advanced Sculpture
Continuation of Intermediate Sculpture with emphasis on the pursuit of personal imagery. Prerequisite: ART 391 and 392 . Cr $3 / 3$.
requisite: completion of the sequence of courses in the related discipline and permission of the instructor and Art Department chair.

Cr 1 to 6.
AED 412 Topics in Art Education
A course on a selected topic in art education to be offered at least once a year. Prerequisite: permission of the instructor. Cr 3.
AED 421 Seminar in Art Education
This seminar examines art curriculum design and evaluation. Critical issues in art education for the emerging art education professional today are explored through discussion, writing, and readings. This course is to be taken whilestudent teaching. Cr 3.
AED 428 Independent Study in Art Education
An opportunity for the student who has demonstrated competence in a specific area of study to work independently, with scheduled tutoring from a faculty member of the student's choice. Prerequisite: permission of instructor and Art Department chair. Cr 1 to 6.

## Biological Sciences

Chair of the Department: Louis F. Gainey, Jr., 306 Science Building, Portland
Health Education Advisor: Patricia M. O'Mahoney-Damon, 206 Science Building, Portland. Professor: Najarian; Associate Professors: Gainey, Greenwood, Holmes, Mazurkiewicz, O'Mahoney-Damon, Riciputi, Schwinck; Assistant Professors: Dorsey, Hubbard

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

## Pre-medical Students

Almost every American school of medicine, veterinary medicine, and dentistry requires for admission a baccalaureate degree (major optional), two years of biology, two years of chemistry, one year of physics, a course in calculus, satisfactory performance on a national professional aptitude test, and a recommendation from a committee at the baccalaureate institution. At this campus, the Health Professions Pre-professional Evaluation Committee is comprised of faculty from the Departments of Biology, Chemistry, and Physics and is responsible for evaluating, comparing, and recommending students. For further information contact Patricia O'Ma-honey-Damon, 206 Science Building, Portland.

## Programs and Requirements

## Bachelor of Arts

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 64.5. A GPA of 2.0 in required biology courses is necessary for successful completion of the major.

All four of the following are required:

| BIO | 105, 106 | Elements of Biology and Laboratory Biology |
| :--- | :--- | :--- |
| BIO | 107 | Biological Diversity |
| BIO | 201 | Principles of Genetics |

One course (lecture and laboratory combination) from each of the following areas:

AREA 1: Organismal Biology
BIO 203, 204 Comparative Vertebrate Embryology and Laboratory
BIO 205 Comparative Vertebrate Anatomy
BIO 231 Botany
BIO 351, 352 Invertebrate Zoology and Survey of Invertebrates
AREA 2: Community-Ecosystems
BIO 331, 332 Ecological Principles and Laboratory
BIO 341, 342 Limnology and Laboratory
AREA 3: Functional Biology
BIO 401,402 General Physiology and Laboratory
BIO 403, 404 Comparative Physiology and Laboratory
AREA 4: Cellular Biology
BIO 311, $312 \quad$ Microbiology and Laboratory
BIO 409, 410 Cell and Molecular Biology and Laboratory

The biology major must also satisfactorily complete all of the following:

| CHY | 113,$114 ;$ | Principles of Chemistry I and II and Labo- |
| :--- | :--- | :--- |
|  | 115,116 | ratory |
| CHY | 251,$252 ;$ | Organic Chemistry I and II and Laboratory |
| MAT | 253,254 | 152, |
| PHY | 121,$122 ;$ | Calculus A |
|  | 123,124 |  |
| PHY | OR |  |
| PHeral Physics I and II and Laboratory |  |  |
|  | 111,112 | Elements of Physics I and II |

And any of the following:
Foreign language through intermediate level
OR
2 -semester sequence in reading knowledge of a foreign language OR
MAT $120 \quad$ Introduction to Statistics OR
PSY $201 \quad$ Statistics in Psychology
In addition, students must fulfill the University Core curriculum requirements.

## Minor in Biology

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 18.

The minor consists of BIO 105, BIO 106, BIO 107; or BIO 105, BIO 106, BIO 2ll, BIO 212; plus electives numbered 200 or above to equal 18 hours in biology coursework.

BIO 019 Biological Basis of Human Activity
A course designed to elucidate the basic biological constraints of human performance. This course does not serve as a prerequisite for BIO 107 or BIO 211. Associate degree credit only.

Cr 3.

## BIO 101 Biological Foundations

An introduction to the areas of current biological interest: molecular and cellular biology, genetics and development, and evolution and population biology. Intended primarily for students selecting a laboratory science to satisfy the Core Curriculum or for those students not intending to take other courses in the Biological Sciences. This course cannot be used as a prerequisite for other biology courses.

Cr 3.

## BIO 102 Biological Experiences

Laboratory studies to complement and illustrate the concepts presented in BIO 101. Prerequisite: BIO 101 or concurrently. Cr 1 .

## BIO 105 Elements of Biology

An introduction to the structure and function of living systems from the cell to the ecological communities. This course is a prerequisite to all higher numbered courses offered in the Department of Biological Sciences.

Cr 3.

BIO 106 Laboratory Biology
Laboratory experiences illustrating concepts and principles introduced in BIO 105. Prerequisite: BIO 105 or concurrently. Cr 1 .
BIO 107 Biological Diversity
Integrated lecture/laboratory course on the evolution and diversity of life. Three hourly lectures and one three-hour laboratory/week. Prerequisites: grades of C or higher in BIO 105 and BIO 106.

Cr 4.5.

## BIO 201 Principles of Genetics

A study of heredity through a discussion of the mechanism and control of gene action. Current research on the nature of mutations and the role of genes in development, behavior, and populations will be examined. Prerequisite: grade of C or higher in BIO 105.

Cr 3.
BIO 202 Experimental Genetics
Practical laboratory experience in techniques used in genetics. Prerequisite: BIO 201 or concurrently.

Cr 2.
BIO 203 Comparative Vertebrate Embryology
The embryonic origin and evolutionary relationships of vertebrate structure. Prerequisite: grade of C or higher in BIO 105. Cr 2.

BIO 204 Comparative Vertebrate Embryology Laboratory
Laboratory experiments and observations on amphibian, chick, and mammalian embryos. Prerequisite: BIO 203 or concurrently.

Cr 2.
BIO 205 Comparative Vertebrate Anatomy The comparative study of vertebrate organ systems from an adaptational and evolutionary point of view. Lecture three hours/week; one four-hour laboratory/week. Prerequisite: Grade of C or higher in BIO 105 and BIO 106.

Cr 5.
BIO 207 Human Heredity and Embryology
This course presents the fundamental principles of genetics and embryology as they apply to humans. The influence of nutrition, drugs, viruses and physical agents on development will be discussed. Prerequisite: grade of C or higher in BIO 105. NOT open to students who have passed BIO $203 . \quad$ Cr 3.

BIO 211 Human Anatomy and Physiology
The study of functional anatomy and physiology of the human. Prerequisite: grade of C or higher in BIO 105.

Cr 3.
BIO 212 Practical Human Anatomy and Physiology
Laboratory studies of the structure and functions of the human body including histology and physiological experiments. NOT open to those who have completed BIO 205. Prerequisite: grade of C or higher in BIO 106; BIO 211 or concurrently.

Cr 1.5.

## BIO 217 Evolution

A study of the processes of biological evolution. Prerequisite: grade of C or higher in BIO 105.

Cr 3.

## BIO 231 Botany

A study of structure, function, development, reproduction, and environmental adaptations of representative non-vascular and vascular plants. Lecture three hours/week; one three-hour laboratory/week. Prerequisite: grade of C or higher in BIO 105 and BIO 106.

Cr 4.5.

## BIO 241 Plant Physiology

A study of the physiological activities of plants, and their growth and development as influenced by internal and external factors. Prerequisites: BIO 107, or BIO 231, one year of college chemistry or permission of the instructor.

Cr 3.

## BIO 251 History of Biology

A chronological survey of developments in biological investigations from earliest records to the present day. Prerequisite: grade of C or higher in BIO 105.

Cr 3.
BIO 281 Microbiology and Human Disease
Fundamentals of microbiology with empha-
sis on infectious diseases of people, including bacteria, rickettsia, fungi, viruses, protozoa and helminths. Prerequisites: grade of C or higher in BIO 105, and college chemistry.

Cr 3.
BIO 282 Microbiology and Human Disease Laboratory
Laboratory techniques in the cultivation, identification and control of microorganisms. Prerequisites: BIO 281 or concurrently.

Cr 2.
BIO 291 Ornithology
The basic biology of birds: life histories, migration, behavior, and economic importance, with emphasis on species found in Eastern North America. (Students supply their own binoculars or spotting scopes.) Prerequisite: grade of C or higher in BIO 101.

Cr 3.
BIO 311 Microbiology
A consideration of protozoa, fungi, bacteria, and viruses of medical and biological importance. Prerequisites: grade of C or higher in BIO 105, one year of college chemistry. Cr 3.
BIO 312 Microbiological Laboratory
The laboratory isolation and examination of microorganisms by various techniques. Prerequisites: grade of C or higher in BIO 106, BIO 311 or concurrently.

Cr 2.
BIO 331 Ecological Principles
The interrelationships of living organisms and their environments, including man's impact on ecosystems. Prerequisite: grade of C or higher in BIO 107.

Cr 3.

## BIO 332 Field Ecology

Field and laboratory studies demonstrating basic concepts of ecology. Numerous field trips. Prerequisites: BIO 331 or concurrently.

Cr 3.
BIO 335 Entomology
Integrated lecture-laboratory course on the biology of insects and their impact on man. Prerequisite: grade of C or higher in BIO 107.

Сr 3.
BIO 3241 Limnology
The study of inland waters with special concern for the factors that influence the living populations within these waters. Prerequisite: grade of C or higher in BIO 107 . Cr 3.

## BIO 342 Field Limnology

Practical application of the methods and materials used to study inland waters and their associated living populations. Prerequisite: BIO 341 or concurrently.

Cr 2.
BIO 345 Pathophysiology
A study of the physiological, genetic, biochemical and environmental basis of noninfectious diseases. Prerequisite: grade of C or

## BIO 351 Invertebrate Zoology

The morphology, physiology, and phylogenetic relationship of non-backboned animals. Prerequisite: grade of C or higher in BIO 105.

Cr 2.
BIO 352 Survey of Invertebrates
Laboratory experience on the anatomy, physiology, and behavior of invertebrate animals. Prerequisite: BIO 351, or concurrently. Cr 2.

## BIO 361 Parasitology

The life histories and host-parasite relationships of animal parasites, with emphasis on those of humans. Prerequisite: grade of C or higher in BIO 105.

Cr 2.

## BIO 362 Parasitological Laboratory

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

## BIO 401 General Physiology

A study of physiological processes and their regulation in animals. Prerequisites: grade of C or higher in BIO 105; one year of college chemistry; one semester of physics, or permission of instructor.

Cr 3.
BIO 402 General Physiology Laboratory
Laboratory examination of physiological mechanisms in animals. Prerequisites: BIO 401 or concurrently.

Cr 2.
BIO 403 Comparative Physiology
Physiological and biochemical basis of environmental adaptation: Prerequisite: one year college biology with grade of C or higher, one year college chemistry, junior standing. Cr 3.

BIO 404 Comparative Physiology Laboratory Laboratory experiments on the physiological basis of environmental adaptation. Emphasis
is on marine organisms. Prerequisite: BIO 403 or concurrently. Cr 2.
BIO 407 Comparative Animal Behavior
The physiological, genetic, evolutionary and environmental basis of behavior in invertebrates and vertebrates. Emphasis is on the neurophysiological and hormonal controls of behavior. Prerequisites: grade of C or higher in BIO 105; BIO 201 or BIO $211 . \quad \mathrm{Cr} 3$.
BIO 409 Cell and Molecular Biology
A study of the eukaryotic cell at the level of organelles and molecules. The biochemical aspects of cell growth and reproduction are emphasized. Prerequisites: two semesters of college biology with a grade of C or higher, CHY 251. Cr 3.

BIO 410 Cell and Molecular Biology Laboratory
A course in which the techniques of cell fractionation and biochemical analyses are applied to the eukaryotic cell. Prerequisite: BIO 409 or concurrently.

Cr 2.

## BIO 421 Biology Seminar

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

Crlor 2.

## BIO 441 Problems in Biology

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

Credit Arranged.

## BIO 491 Biochemistry

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

## Chemistry

Chair of the Department: John S. Ricci, 370 Science Building, Portland Professors: Hatala, Ricci, Smith, Sottery; Associate Professor: Stebbins; Assistant Professor: Rhodes

The field of chemistry is concerned with the structure of matter, its transformations, and the energy changes related to these transformations. Departmental aims are to contribute to the student's understanding of chemistry's place within the sciences and in today's industrial and business world, and to provide students concentrating in this field with a thorough and practical education which will be useful in teaching or in industrial, technical, or graduate work.

To achieve these aims the Department of Chemistry offers a four-year program with two tracks leading to baccalaureate degrees (B.A. in chemistry or a B.S. in applied chemistry). Since the chemistry courses in each track are the same for the first two years it is possible to switch tracks through the junior year. Students interested in a chemistry major are strongly urged to consult with a member of the chemistry faculty to discuss the total program and should pay particular attention to the pre- and co-requisites necessary for different courses.

## Programs and Requirements

## Bachelor of Arts: Chemistry

The minimum number of credits in chemistry and related areas (exclusive of the University's Core curriculum) required for the major in this track: 60.

The courses include: CHY $113 \& 114 ; 115 \& 116 ; 231 \& 232 ; 251 \& 252 ;$ $253 \& 254 ; 371 \& 372,373 \& 374$; and two of the following four offerings: 321,351 , 361 or $377 \& 378$, and 401 (a minimum of 39 hours within the department). In addition PHY 121, 122; 123, 124; MAT 152, 153; COS 140 (FORTRAN) or a math/computer science course approved by the Chemistry Department are required (a total of 21 more hours).

Additional requirements for graduation include minimum standards of academic excellence and a demonstrated proficiency in technical writing. To graduate as a chemistry major a student must maintain a minimum overall grade point average (GPA) of 2.0 and a GPA of 2.0 in all courses required for the chemistry major.

## Bachelor of Science: Applied Chemistry

The minimum number of credits in chemistry and related areas (exclusive of the University's Core curriculum) required for the major in this track: 63.

The courses include: CHY 113 \& 114; 115 \& 116; $231 \& 232 ; 251 \& 252$; $253 \& 254 ; 371 \& 372$; 321 or 361 ; and 401 (a minimum of 31 hours within the department). In addition PHY $121 \& 122 ; 123 \& 124 ;$ MAT 152; COS 140 (FORTRAN) or a math/computer science course approved by the Chemistry Department are required (a total of 17 hours). In addition, a candidate for the B.S. degree must elect 15 hours of CHY 490, Senior Research.

Additional requirementsfor graduation include minimum standards of academic excellence and a demonstrated proficiency in technical writing. To graduate as a chemistry major a student must maintain a minimum overall grade point average (GPA) of 2.0 , and a GPA of 2.0 in all courses required for the chemistry major.

As a general rule, candidates for the B.S. degree in applied chemistry should complete the majority of their formal coursework at the University by the end of their junior year. The fourth year in the B.S. program consists partly of the intensive independent study and field experience in a specific application of chemistry. After a reasonable orientation period, the student will participate in the day-to-day operations of a laboratory (or alternative facility) as a functioning member of the staff. Supervision
of the applied chemistry major during this period will be provided by a suitable qualified staff member of the host facility and by a member of the chemistry faculty, who will also supervise the independent study.

## Minor in Chemistry

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 17. The minor consists of CHY 113, $114,115,116,231,232,251$ and 252.

## Admission <br> Requirements

Students who apply for admission to the chemistry program should have completed college preparatory courses in chemistry, physics, and mathematics. At least two years of algebra and a semester each of geometry and trigonometry are recommended as part of the student's high school program. (Freshmen in the applied chemistry program who lack this preparation in mathematics are required to take MAT 140, Precalculus Mathematics.)

CHY 100 Foundations for College Chemistry A course designed to help students who are inadequately prepared to complete successfully the CHY 113-116 (Chemical Principles) sequence, either on the basis of their own perceptions or of their scores on two chemistry placement tests. The course will review basic chemical principles commonly presented in high school chemistry and emphasize solving mathematical problems commonly done in freshman college-level chemistry. Two lectures and one recitation session per week. No prerequisite. Offered each semester. Cr 2.

## CHY 101 Introduction to Chemistry

General topics in chemistry including 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. Three hours lecture per week (usually concurrent with CHY 102). Prerequisite: high school algebra and one year of high school chemistry (taken during the past five years) or a satisfactory grade level on the proficiency test administered by the Department. Not appropriate for science majors, pre-med, pre-vet or pre-dentistry. $\quad \mathrm{Cr} 3$.
CHY 102 Introduction to Laboratory Measurement
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. Corequisite: CHY 101. Not appropriate for chemistry or biology majors.

Cr 1.

CHY 103 Introduction to Organic and Biochemistry
Stress will be placed upon topics of special importance for students of the health sciences: 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. Three lecture hours per week (usually concurrent with CHY 104). Prerequisite: grade of C or better in CHY 101. Not appropriate for science majors, pre-med, pre-vet or pre-dentistry. Spring. $\quad \mathrm{Cr} 3$.
CHY 104 Introductory Organic and Biochemistry Laboratory
Students will perform experiments to illustrate aspects of organic chemistry of importance to living systems, as well as elementary principles of biochemistry. Topics include 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 spring semester. Corequisite: CHY 103. Not appropriate for chemistry or biology majors. Cr 1 .

## CHY 109 General Chemistry

A study of selected fundamental concepts and theories of chemistry: atomic structure, periodic classification, electronic structure, chemical bonding, molecular structure, chemical reactions, chemical equations and quantitative relations, gases, kinetic theory, changes of state, solutions, acids and bases are discussed. Three lectures per week. No prerequisites.

Cr 3.

## CHY 110 General Chemistry Laboratory

Laboratory experiments to illustrate material presented in CHY 109 lectures. One hour of recitation and two hours of laboratory per week. Corequisite: CHY $109 . \quad$ Cr 1.

## CHY 113 Principles of Chemistry I

A presentation of fundamental principles of chemical science. These principles will be presented in quantitative terms and illustrated by examples of their applications in laboratories and in ordinary non-laboratory experience. This course and CHY 114 (normally taken concurrently) provide the basis for further study of chemistry. Three lectures per week. Fall.

Cr 3.
CHY 114 Laboratory Techniques I
Laboratory experiments to illustrate the principles which are presented in CHY 113 lectures. One recitation and two laboratory hours per week. Corequisite: CHY 113. Fall.

Crl.
CHY 115 Principles of Chemistry II
A presentation of topics of chemistry additional to those presented in CHY 113. This course is designed to provide a solid foundation for all further studies in chemistry and is a prerequisite for all upper-level chemistry courses. Prerequisite: grade of C or better in CHY 113. Spring.

Сг 3.
CHY 116 Laboratory Techniques II
Laboratory experiments to illustrate the principles presented in CHY 115 lectures. One recitation and two laboratory hours per week. Prerequisite: grade of C or better in CHY 114. Corequisite: CHY 115. Spring.

Cr 1.
CHY 140 Energy, Man, and Environment
This course presents a study of man's energy needs, and the alternative energy sources available. In addition, the impacts on the environment of the utilization of various energy sources will be considered. No prerequisite.

Cr 3.
CHY 141 Environmental Chemistry
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.

Сr 3.
CHY 231 Analytical Chemistry
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 CHY 115. Spring.

Cr 2.

CHY 232 Analytical Chemistry Laboratory Quantitative experimental determination by means of gravimetric, volumetric, and instrumental methods. Classical procedures and modern instrumentation, including spectrophotometry, electroanalysis and chromatography. Six laboratory hours per week. Prerequisite: a grade of C or better in CHY 116. Corequisite: CHY 231. Spring. Cr 2.

CHY 251 Organic Chemistry I
An intensive treatment of organic chemistry. ToPics include: 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). Three lectures per week. Prerequisite: a grade of C or better in CHY 115. Fall.

Cr 3.
CHY 252 Organic Chemistry Laboratory
Experiments will be performed to illustrate the basic laboratory skills of crystallization, extraction, distillation, and melting and boiling point determinations. The preparation and isolation of compounds by the FriedelCrafts and Grignard reactions will be performed. The latter part of the semester will comprise an introduction to organic qualitative analysis. One recitation and three laboratory hours per week. Prerequisite: a grade of C or better in CHY 116. Prerequisite or corequisite: CHY 251. Fall. Cr 2.

## CHY 253 Organic Chemistry II

A continuation of CHY 251, but with a more extensive (and intensive) investigation of the principal categories of organic reactions. Extensive problem-solving in such areas as structure determination, spectroscopy, and stereochemistry. The structures and fundamental chemical reactions of lipids, carbohydrates, proteins and nucleic acids will be presented. Three lectures per week. Prerequisite: a grade of C or better in CHY 251. Spring. Cr 3. CHY 254 Organic Chemistry Laboratory II A continuation of the experiments begun in CHY 252 on organic qualitative analysis, including solubility tests, classification tests, and preparation of derivatives. Interpretation of spectroduced to assist in the process of identification of unknowns. One recitation and three laboratory hours per week. Prerequisite: a grade of C or better in CHY 252. Prerequisite or corequisite: CHY 253. Spring. Cr 2.

## CHY 321 Inorganic Chemistry

Descriptive chemistry of the inorganic compounds, structure, bonding and ligand field
theory. Three lectures per week. Prerequisite or corequisite: CHY 371. Alternate years.

Cr 3.
CHY 322 Inorganic Chemistry Laboratory
Preparation and characterization of inorganic compounds. One recitation and three laboratory hours per week. Prerequisite or corequisite: CHY 321. Not offered every year.

Сг 2.

## CHY 351 Advanced Organic Chemistry

The major areas of discussion include: synthetic organic chemistry; linear free energy relationships; photochemistry; stereochemistry; an introduction to natural products (steroids, alkaloids, and terpenoids); electrocyclic reactions; spectroscopy; and the literature of organic chemistry including the use of online retrieval services. Three lectures per week. Prerequisite: grade of C or better in CHY 253. Alternate years.

Сг 3.
CHY 361 Biochemistry
A consideration of the structure, function, and transformations of the principal cormpounds of biological importance, and of the applications of chemical principles to these studies. Three lectures per week. Prerequisite: grade of C or better in CHY 253. Fall.

Cr 3.
CHY 362 Biochemistry Laboratory
Experiments will be performed to illustrate material presented in CHY 361. One recitation and three laboratory hours per week. Prerequisite or corequisite: CHY 361 or permission of the instructor. Fall.

Cr 2.
CHY 371 Physical Chemistry I
Introduction to the principles of theoretical chemistry: classical and statistical thermodynamics, molecular energetics, quantum phenomena and equilibrium. Candidates for the B.S. degree elect this course in the fall semester of the junior year. Three lectures per week. Prerequisites: grade of C or better in CHY 231, MAT 152, and PHY 123. Fall.Cr 3.

## CHY 372 Physical Chemistry Laboratory I

Experiments illustrative of theoretical principles pertinent to chemical processes, such as thermochemistry, absorption phenomena, and physical properties of gases and liquids. One recitation and three laboratory hours per week. Prerequisite: grade of C or better in CHY 232. Prerequisite or corequisite: CHY 371. Fall.

Cr 2.

CHY 373 Physical Chemistry II
Additional principles of theoretical chemistry: reaction kinetics, surface chemistry electrochemistry, quantum mechanics and spectroscopy. Three lectures per week. Prerequisite: a grade of C or better in CHY 371. Spring.

Сr 3.
CHY 374 Physical Chemistry Laboratory II
Experiments illustrating material presented in CHY 373. One recitation and three laboratory hours per week. Prerequisite or corequisite: CHY 373. Spring.

Cr 2.
CHY 377 Instrumental Analysis
A consideration of the applicability of current laboratory instrumentation both to the elucidation of fundamental chemical phenomena and to the measurement of certain atomic and molecular parameters. Topics include absorption and emission spectroscopy in the ultraviolet, visible and infra-red regions, chromatography, electrochemistry, mass spectrometry, and magnetic resonance. Two lectures per week. Prerequisite or corequisite: CHY 371 or permission. Alternate years. Cr 2.

CHY 378 Instrumental Analysis Laboratory
Experiments will be performed in low resolution ultraviolet and infrared absorption spectroscopy, flame spectroscopy, and atomic absorption. Prerequisite: a grade of C or better in CHY 371. One hour of pre-lab recitation and three laboratory hours per week. Alternate years. Cr 2.
CHY 401-409 Seminar
Oral and written presentation of a current topic in chemistry or of research results. Required of all senior majors. Satisfactory completion of written paper fulfills technical writing requirement.

Cr 1.

## CHY 410-419 Special Topics

Reading and discussion of advanced subjects or instruction in special topics/research. Permission of instructor required. 6 credits maximum. Cr 1-3.

## CHY 490 Senior Research Project

Open to senior majors. Prerequisites include a 3.0 GPA in chemistry, completion of the Analytical and Organic Chemistry series, and permission of the department. 15 credits maximum.

Сг 3-15.

# Communication 

Chair of the Department: Russell J. Kivatisky, 218 Bailey Hall, Gorham Associate Professor: Shedletsky; Assistant Professors: Hanisko, Kivatisky, Sayers, Cojuc, Lockridge

The development of communication understanding and skills, like communication itself, is a continual process. The study of communication involves the examination and exploration of processes by which verbal and/or nonverbal information is transmitted from one information processing system to another, the physical and social-psychological factors which affect the transmission and reception of the messages, and the consequences of feedback on the systems. The systems could be individuals, groups, organizations, societies, cultures, or cybernetic mechanisms. During human transactions, symbolic information such as words and behaviors are transmitted and processed by the participants. Machinebased communication focuses on the transmission and processing of electronic data. The Department of Communication emphasizes the study of human transactions in its coursework. However, students may focus their degree programs on other areas of communication theory by supporting their program with courses from appropriate departments, schools, or colleges within the University.

In order to understand the interdisciplinary nature of communication, majors may take courses in such fields as philosophy, business, sociology, psychology, education, and political science. The Communication Internship Program allows majors to study a particular aspect of communication in the field. This allows for applying knowledge acquired in the classroom to a practical setting. Since communication is essential to most forms of human endeavor, communication majors may prepare for employment or further study in education, government, business, law, health care, and the media.

## Programs and Requirements

## Bachelor of Arts

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 45.

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

| COM | 102 | Introduction to Communication |
| :--- | :--- | :--- |
| COM | 290 | Small Group Communication |
| COM | 330 | Interpersonal Communication Theories |
| COM | 390 | Organizational Communication |
| COM | 495 | Theories of Communication: Seminar |

In addition, 15 credit hours must be selected from other departmental courses offerings. These courses may be chosen from the following.

| COM | 100 | Research |
| :--- | :--- | :--- |
| COM | 150 | Business Communication |
| COM | 171 | Interpersonal Communication |
| COM | 190 | Media and Children |
| COM | 265 | Intrapersonal Communication |
| COM | 272 | Persuasion |
| COM | 275 | Theories of Language |
| COM | 280 | Mass Media and Human Interaction |
| COM | 295 | Communication Development in Children |
| COM | 310 | Nonverbal Communication |
| COM | 320 | Intercultural Communication |
| COM | 420 | Communication and Cognition |
| COM | 485 | Sex-Related Differences in Communication |
| COM | 490 | Theories of Mass Communication |
| COM | 491 | Independent Study |

Fifteen additional credits of coursework should be selected from departments having courses consistent with the student's interests and goals. Such courses must be approved by the student's departmental advisor. Those students who wish to enter graduate study will be advised, in addition to the above requirements, to take a sequence of research courses.

## Minor in Communication Theory

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 18.

For students interested in a minor in communication theory, the Department offers the following concentration: COM 102, COM 290, COM 295, СОМ 330, СОМ 390, СOM 495.

## COM100 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.

Сг 3.

## COM 102 Introduction to Communication

This course is designed to provide students with a conceptual framework of the basic elements of human communication. Students will examine different levels of communication analysis, learn to chart and analyze communication behavior, and discuss the effects of communication on themselves and others. Topics discussed will include communication theory, self-concept, interpersonal communication, nonverbal behavior, small group interaction, and mass communication. Students will be encouraged to adapt communication principles to their various fields of endeavor.

Сг 3.

## COM 150 Business Communication

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

Cr 3.

## COM 171 Interpersonal Communication

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

Cr 3.

## COM 190 Media and Children

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

Cr 3.
COM 265 Intrapersonal Communication
This course examines our ability to use what we know and feel in order to send, receive, and store information. Whether stimuli come from an external source or from within the self, the focus of intrapersonal communication is on the ways in which we process those stimuli, our ability to make sense out of our experiences, to remember, to retrieve information from memory, and to create mes-sages-at whatever level of consciousness, and no matter how many people are involved, in face-to-face or mediated communication. Prerequisite: COM 102 or permission.

Cr 3.

## COM 272 Persuasion

A course designed to help students understand the basic principles of persuasion. The course deals with persuasion as a social phenomenon. The perspective from which the course is offered is the analysis of persuasion as a behavioral process. As such, the course will investigate the social science research which relates to persuasion. Students will examine the attempts made by others to persuade them, as well as the attempts they make to persuade others. Further, the course will deal with the issue of ethics in persuasion. Although this issue will be illusive, it is hoped that each student will give this topic adequate thought.

Сr 3.

## COM 275 Theories of Language

The purpose of this course is to instigate thinking about the nature of language. The course is premised upon the conviction that, because language is such a central concern of so many disciplines and because various disciplines have made important contributions to our understanding of it, language can only be studied adequately via an interdisciplinary
approach. The student will be introduced to some of the foremost efforts to comprehend language in the fields of psycholinguistics, philosophy, and linguistics. Through these disciplines, we intend to raise and pursue questions concerning the nature of language, its structure and function, its relation to man's perception of reality, and its relation to the mind. Prerequisites: COM 102, any PHI 100 level course, or permission of the instructor.

Cr 3.
COM 280 Mass Media and Human Interaction
Mass Media and Human Interaction concentrates on the history and effects of mass communication in our society. Through readings and independent research, the student will explore the content and social consequences of our rapidly changing telecommunication technology. Media to be discussed include print, broadcasting, and cable. Cr 3.

## COM 290 Small Group Communication

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

Cr 3.
COM 295 Communication Development in Children
This course will examine the structural and the functional development of children's communication behavior. Syntactic, semantic, and pragmatic aspects of communication development will be explored from both learning and acquisition theory perspectives. This course includes a final project of the student's creation. Freshmen must have instructor's permission.

Cr 3.

## COM 310 Nonverbal Communication

A study of the effects of nonverbal factors on the process of human communication. Proxemics, body motion, paralanguage, metacommunication, and other specific areas of nonverbal behavior will be explored and examined. Each student will be required to conduct a research project and prepare a scholarly paper related to a particular area of nonverbal communication. Prerequisite: COM 102 or permission of the instructor. Cr 3 .
COM 320 Intercultural Communication
A study of communication as an agent of cooperation/conflict between cultures, such as between nations, races, and societies. Focus is upon institutional agencies, such as the U.N., and upon simulations of intercultural communication, such as R.B. Fuller's World

Game, the Geophysical Year, and others. Appropriate consideration is given to intercultural communication, such as cultural exchanges, diplomacy performing groups, lecturers, consultants and similar cross-cultural relationships. Prerequisite: COM 102 or permission of instructor. Cr 3.
COM 330 Interpersonal Communication Theories
A study of the current thinking in interpersonal communication with emphasis upon specific theories of human interaction. Students will engage in behavioral observations, experiential learning activities, group research projects, individual study, and will complete a final project on a selected topic in interpersonal communication. Prerequisite: COM 102 or COM 290. Offered each spring semester.

Cr 3 .
COM 390 Organizational Communication
A lecture-discussion course with a practical field study required. The class will examine factors relevant to communication within organizations and will discuss such topics as organizational roles, information flow, decisionmaking, leadership, and the nature of organizational change. Prerequisite: COM 290 or permission of the instructor. Cr 3.
COM 420 Communication and Cognition
A seminar designed to explore the relationship between communication and thought processes. The nature of consciousness is explored through a consideration of the acquisition, retention, and retrieval of information. Special attention is given to experimental analysis of thought processes. Prerequisites: junior, senior, or permission of the instructor.

Cr 3.
COM 430 Communication Internship
An in-depth study of experiences in specific areas of communication which is conducted in the field. Students will focus their efforts in an area related to their choice of communication expertise (i.e., organizational communication, mass communication, intercultural communication). Prerequisite: a precise definition of the project, and director's consent. Pass/Fail only.

Cr var.
COM 490 Theories of Mass Communication A discussion of significant factors related to communication theory. Contemporary theories of mass communication, the mass media, audience analysis, and the role of mass communication in society will be among the topics examined in the course. Students elect to examine an aspect of mass communication which is of interest to them, and present their findings in research papers and projects. Prerequisite: COM 280 or permission of the instructor.

Cr 3.

COM 491 Independent Study
A concentrated program of research or study on a particular topic of the student's choice, with approval of a communication faculty advisor. Periodic conferences with the advisor are required. Enrollment by permission of faculty sponsor only.

Cr 3-6.
COM 485 Sex-Related Differences in Communication
This seminar on sex-related differences in communication is designed primarily to evaluate critically the research literature. It is concerned with whether or not males and females differ in their actions of sending, receiving, and interpreting messages. The course examines gender-role stereotyping, empirical findings on sex-related differences in communication behavior (e.g., talking, interpersonal style, touching, eye contact,
etc.), and explanations for sex differences. Critiques of some major theoretical positions are discussed (e.g., sex differences in dominance, aggression, cognition, and brain organization). Prerequisite: junior or senior standing.

Cr 3.

## COM 495 Theories of Communication: Sem-

 inarThis course is designed for upperclass students who are majoring or minoring in communication studies. Based on a seminar format, students in this course will explore in depth several advanced theories of communication, mechanistic through interactive, with examples and application for each. Open to juniors and seniors having at least 12 credithours of communication coursework.

Cr 3.

## Criminology

Coordinator: Piers Beirne, 120 Bedford Street, Portland

The bachelor of arts in criminology is a four-year degree offered by the Department of Sociology. Criminology is the study of the complex relations among crime, law, and society. Traditionally, criminologists have sought to understand why particular individuals or groups engage in criminal activities. Recently, however, the study of crime has been expanded to include the structures and processes whereby certain behavior is defined as criminal. This includes examination of the ideas, ideals, and ideologies embedded in definitions of crime and expressed in our everyday perceptions of crime and criminality.

The curriculum in criminology is a rigorous series of courses that provides students with a comprehensive knowledge of traditional and modern criminological thought. The core of the curriculum is an integrated set of required courses. These courses are designed as a cumulative set of experiences and must therefore be taken in sequence. Elective courses enable students to place their criminological interests in a broader sociological perspective.

Many students in the program are interested in law studies or in social service occupations related to criminal or juvenile justice. The program also prepares students for a wide variety of other career options and provides an excellent basis for graduate study in criminology, other social sciences, and law.

## Programs and <br> Requirements

## Bachelor of Arts

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 40.

The criminology major consists of 28 hours in required courses, 9 hours of sociology electives, and 3 hours of cognate electives.

Students are reminded that they must complete the requirements of the College of Arts and Sciences and the University Core curriculum.

Required Courses
CRM 215 Criminology
SOC 205 Methods of Social Research
SOC 300 Sociological Theory I
CRM 301 Criminological Theory
CRM 302 Punishment and Discipline
SOC $\quad 336$ Law and Society
SOC 375 Deviance
CRM 401 Comparative Criminology
PHI 240 Political Philosophy
OR
PHI 260 Philosophy of Law
Sociology Electives (select 9 hours)
SOC 310 Social Change
SOC 312 Class and Inequality
SOC 315 Self and Society
SOC 350 Urban Sociology
SOC 353 Social Movements
SOC 355 Politics and Society
SOC 356 Order and Control
SOC 357 Bureaucracy in Modern Society

## Cognate Electives

An advanced level course in a related discipline to be selected in consultation with the student's advisor.

## Major Credit and Grade Policy

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

## Curriculum Summary and Guide

The curriculum is a series of structured and integrated core experiences for the student. The Criminology and Law and Society courses introduce students to some of the basic concepts, theories, and perspectives in the field, and convey basic empirical knowledge about the structure and processes of American law and the agencies of control in modern society. The Criminology course primarily focuses on the sources of crime data, the reasons why certain behavior is defined as criminal, and the consequences of criminal labeling.

The Law and Society course focuses on the features that distinguish law from other rules of social behavior, with particular emphasis on the doctrinal and institutional aspects of American criminal law. The Methods and Research course provides students with the elementary investigative tools of social inquiry. These three courses should be taken during the second year of a student's career at the University.

The theory sequence of Sociological Theory and Criminological Theory forms the core of the third year of study. The Deviance course, also taken during the third year, provides an added dimension to the social nature of rule creation, deviation, and enforcement. These core courses are complemented, in the third year, by elective courses.

The fourth year includes a sequence of Punishment and Discipline and Comparative Criminology. Together, these serve as a senior experience for students. During this year students will complete elective requirements.

```
Summary
    Year I:
        SOC 100, Core curriculum requirements
    Year II:
        Complete University Core curriculum requirements
        Criminology (fall or spring)
        Methods of Research (fall or spring)
        Law and Society (spring)
    Year III:
        Sociological Theory (fall)
        Criminological Theory (spring)
        Deviance (spring)
        PHI 240 or 260 and electives
    Year IV:
        Punishment and Discipline (fall)
        Comparative Criminology (spring)
        Complete elective and cognate requirements
```


## Declaration of Major

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

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

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

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

Supplementary information is published each semester by the Criminology Office to assist students in planning their course schedules. The information includes a summary of major courses for freshmen and sophomores, listings and descriptions of special courses, and general information for majors.

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

## Transfer Students

Transfer students and students contemplating transfer into the criminology program are urged to meet with department faculty as early as possible for an evaluation of their progress and their requirements in the major.

## Required Courses

## CRM 215 Criminology

This course focuses on the difficult question, "what is crime?" and on problems concerning the measurement and distribution of crime. The criminology course examines some of the popular misconceptions and myths about crime, the creation and utility of official and unofficial crime statistics, popular presumptions about the causes of crime, and the institutional responses to crime in our society. The course is also listed as SOC 215 . This course is one of the two basic courses in the Criminology program, along with Law and Society (SOC 336). Prerequisite: SOC 100 or permission of instructor.

Cr 3.

## CRM 301 Criminological Theory

This course focuses on the development of criminological theory from 1930 to the present. The course is historical in nature and addresses such fundamental problems as why certain behavior is defined as criminal, the causes of crime, and the consequences for the individual of being labeled as a criminal. Offered spring semesters. Prerequisite: SOC 300 and CRM 215.

Cr 3.

## CRM 302 Punishment and Discipline

This course distinguishes between different forms of discipline, such as punishment, therapy, conciliation, and repression. It traces the development of punishment as the definitive style of discipline in modern societies. Specific historical emphasis is given to the emergence of the doctrine of the rule of law. The development of the modern police and the modern prison are traced as responses both to the necessity of social control and to crises generated by social disorder and political instability. Offered fall semesters. Prerequisite: CRM 301.

Cr 3.

## CRM 401 Comparative Criminology

This course focuses on the application of American criminological theory in cross-cultural contexts. Specific emphasis is given to the problems of cultural relativism and intellectual imperialism while providing an integrative senior experience for majors. Offered spring semesters. Prerequisite: CRM 301 and CRM 302.

Cr 3.
roles in a variety of community agencies and organizations. The primary emphasis of the internship is the application of the social science perspective, substantive knowledge, and methodology to understand and illuminate a particular organizational situation. Thus, the internship can be understood as a participant observation experience within the context of social science research. It is primarily designed as a field experience for up-
per-level social science majors with substantive background or coursework in the area of internship placement. In addition to field placement, students are expected to meet for a series of internship seminars, for which readings and reports will be required. Offered each semester. Contact departmental internship coordinator for details. Cr 3 or 6 .

CRM 412 Research In Criminology
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.

# Economics 

Coordinator: Robert C. McMahon, 227 Luther Bonney, Portland
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 economic development.

## Programs and Requirements

## Bachelor of Arts

The minimum number of credits (including the University's Core curriculum) required for the major: 120 .

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

Students in this program are required to take MAT 110, MAT 120, and POS 101. Successful completion of either of the mathematics courses and of the POS 101 course will satisfy parts of the Core curriculum requirement.

In fulfilling the Core social science requirement, students may not take an ECO course. Students who fulfill the English Composition Competency requirement of the Core curriculum without earning academic credit must complete three credits of ENG or PHI electives.

Requirements in Economics and Business (36 credits)
Business
ACC 201 Principles of Financial Accounting
Economics
ECO $201 \quad$ Principles of Economics I
ECO 202 Principles of Economics II
ECO 301 Macroeconomic Analysis
ECO 302 Microeconomic Analysis
ECO electives which may include GEO 303 and HTY 338
Electives (41 credits)
An economics minor and a more math-oriented economics major are offered by the School of Business, Economics and Management.

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

## English

Chair of the Department: L. Morrill Burke, 321 Luther Bonney, Portland Professors: Gish, Jaques, Rosen, Rutherford, Slavick; Associate Professors: Abrams, Ashley, Baier, Burke, Carner, Carper, Coffin, Reuter, Selkin; Assistant Professor: Benedict

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, and will prepare the student to think and write clearly and creatively, talents vital to success in any field. For information and counsel regarding the major or appropriate courses for non-majors, students should visit English offices in Gorham (200 Bailey Hall) or Portland (4ll Luther Bonney Hall).

Students not majoring in English who want to satisfy the Humanities Core requirement in English should begin with English 120, except when English 120 is waived. Courses numbered below 120 cannot be used to satisfy the Humanities Core requirement.

## Programs and Requirements

## Bachelor of Arts

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 48.

The English major begins with a course in writing ( 100 or 101) and an introduction to the study of literature (120). The student then selects more advanced English courses (and up to 6 credits in approved courses of other departments) to complete the 48 -credit major requirement. The English major curriculum is designed to assure that the student has a familiarity with many of the outstanding literary achievements of Western culture, a knowledge of how the language has developed, and a sensitive appreciation of works by the great representative writers and critics in major periods of English and American literature. Elective and independent study courses will permit the student to go more deeply into subjects of personal interest, including creative expression.

While the Department does not require courses in other disciplines, majors are strongly 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 (HTY 101 and 102), History of England (HTY 261), a course in American history (HTY 131, 132, 133, or 134), a lowerlevel philosophy course (PHI 101, 102, 103, 104, 106, 109), one or more history of philosophy courses (PHI 310, 320, 330, 340, 350, 360), an art course (ARH 101, lll, l12), a music course (MUS 100, 120, or 121), and one or more theatre courses (THE 101, 340, 341, 361, or 362).

English majors must meet the following English Department requirements. All courses must be passed with a grade of $\mathrm{C}-$ or better and six hours with a grade of B or better; at least nine hours must be taken from the 300-400 level offerings.

1. ENG 100 or 101 or waiver; ENG 120 ( 0 credits toward major)

A student may, with an advisor's approval, substitute the third Introduction for Majors course, or a second Classical and Biblical Backgrounds course for ENG 120.
2. Introduction for Majors ( 6 credits required)

ENG $\quad 160 \quad$ Poetry (required of all majors)
ENG 161 Fiction
ENG 162 Drama

Majors who do not take the Fiction course (161) or the Drama course (162) must take an upper-level course in the omitted genre. For Drama, a course other than Shakespeare must be selected.
3. Writing Courses (3 credits required)

ENG 209 Business and Report Writing may not be used to satisfy this requirement.
4. Classical and Biblical Backgrounds ( 3 credits required)
5. Linguistics and Related Courses (3 credits required)
6. Criticism Courses (3 credits required)
7. Major Figures ( 6 credits required)

The two major figures courses should be selected as follows:
3 or 6 credits from Chaucer (ENG 250), Shakespeare (ENG 260 or 261), or Milton (ENG 356); 0 or 3 credits from another major figure or major figures seminar.
8. Periods of LiteratureCourses ( 15 credits required)

At least one course from five of the following six areas is required:
Continental and World Literature; Medieval Period; Renaissance; Neo-classical and Romantic Periods; 19th Century British and American Literature; Modern British and American Literature. Major figure courses other than Shakespeare also fulfill Periods of Literature requirements.
9. Electives (credits in courses numbered above 160 to complete the 48 -credit major required)
Note: The requirements of the English major program may be waived in favor of an interdepartmental major that is approved in advance by the English Department Curriculum Committee.

## Prerequisites and Course Waivers

ENG 100 or 101 , or an equivalent or waiver, is a prerequisite for any English language or literature course, including ENG 120. For Englishmajor and general-interest courses numbered 130 to 199, ENG 100 or 101 (or an equivalent or waiver) and ENG 120 or permission of the instructor are prerequisites. For courses numbered 200 to 499, prerequisites are ENG 100 or 101 (or an equivalent or waiver), and ENG 120 . Certain advanced courses, as indicated in the course listings, and all Independent Study courses require the instructor's permission.
Note: Non-majors and students with special interests are encouraged to seek the instructor's permission to take any course for which they feel qualified. ENG 120 may be waived for a few exceptional students who pass a qualifying examination administered by the English Department, and for transfer students with certain literature course credits. English majors may, with their advisor's approval, substitute a third genre course (ENG 161 or 162) or a second Classical and Biblical Backgrounds course for ENG 120.

## The Honors Degree in English

For a B.A. degree in English with honors, a student must achieve a B + or better average, and he or she must successfully complete a seminar where a major paper is required (or a department-approved Independent Study course if a suitable seminar is not being offered).

## Minor in English

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 18.

The Department offers an English minor which requires 18 credits of upper-level ( 160 and above) courses in a program planned with an English faculty advisor and approved by the director of English Minor Programs. The goal of the program is to givestudents not simply a collection of courses, but a coherent experience with English courses chosen to suit their needs and interest, whether in literature generally, creative writing, American literature, language and composition, or another area of study.

Each program must meet these specific requirements beyond ENG 100/101 and ENG 120/122 (or waivers): a 200 -level writing or language/ linguistics course; three 200 -level literature courses (one must be selected from those numbered 220 to 265 , one from 270 to 291 ); one 300 - or $400-$ level course.

Further information about the minor is available in the English Department offices.

## Internships, Job Opportunities, and Exchange Programs

Students of English are encouraged to take advantage of a variety of internship opportunities as part of their program. Internships allow academic credit for work experiences that use and enhance English skills. Also, students are invited to discuss job opportunities for those with training in English, and to examine pamphlets and books on the subject, in the English office at Gorham.

English majors are encouraged to apply for semester or year-long exchanges in English departments at Whitelands College, London, and Nijmegen University, The Netherlands.

## 100-Level Courses

## ENG 100 College Writing

Classes meet regularly to analyze professional and student writing as a way of sharpening awareness of how to use language effectively. The writing assignments encourage students to apply the principles discussed in class to their own work. To complete the course successfully, the student must pass a departmental exit examination. The exit examination is an integral part of the course; it may not be taken as a waiver examination. Passing the departmental examination does not, however, guarantee that the student will pass the course. Each instructor has his or her own standards. Students may not take both ENG 100 and 101 for credit. This course cannot be used to satisfy a humanities requirement. (every semester). Prerequisite: writing proficiency.

Cr 3.

## ENG 101 Independent Writing

A course especially designed for the mature student who has been well prepared in writing by high school or previous experience and who has the discipline to work independently. The course is conducted primarily in individual weekly conferences, though classes meet occasionally. Independent Writing focuses on problems of style, presentation, and minor mechanical difficulties. To complete the course successfully, the student must pass a departmental exit examination as well as satisfy tquirement. (usually fall semester). Prerequisite: writing proficiency. Cr 3.

## ENG 102 Term Paper Writing

This course will teach the student to write a research paper. The choice of subjects will be worked out by instructor and student. The student will learn how to develop a topic, prepare a working bibliography, become fa-
miliar with library resources, take notes in an orderly and meaningful fashion, and then write a final paper aftes.

Cr 1.

## ENG 103 Basic Grammar and Usage

This course is designed to teach the student current practice in grammar and usage as opposed to formal grammar. The student will master the many matters of agreement, punctuation, etc., needed in writing college papers.

Cr 1.
ENG 110 Straight and Crooked Thinking
The analysis, interpretation, and evaluation of various kinds of arguments and ways to reach logical decisions, with a firitical tracts, speeches, literary essays, scientific papers, and magazine articles. This basic course employs a new non-symbolic approach to practical reasoning expressed in natural language; its emphasis is on direct application to realistic cases. Exercises and readings are designed to aid undergraduates in reports, essays, and term papers. The materials for critical analysis have a broad appeal for future lawyers, administrators, executives, business people, and scholars. Regular oral reports; brief written exercises in critical reasoning and analysis; final examination based on actual specimens of contemporary argument. Prerequisite: ENG 100/101 or permission of instructor.

Cr 3.

## ENG 120 Introduction to Literature

A general introduction to the various literary genres - poetry, the short story, drama which will include a study of critical terminology, close textual reading, and practice in writing. (every semester). Prerequisite: ENG 100 or 101 or waiver.

Cr 3.
ENG 130 The Literature of Sport
Contemporary fiction, poetry, and drama on

The Game, its players and watchers, its heroes and losers, its joy and sadness reflected in the works of such writers as Cheever, Updike, Algren, Wain, Roth, Shaw, Schulberg, Wright, Ellison, McCullers, Dickey, Williams, Moore, Ferlinghetti, Sillitoe, and many others. The social and cultural implications of sports, now and in the immediate future, will also be weighed. These include the ritualistic side of competition and spectacle; the blurring of professional and amateur; flaws in America's hero image; kid teams and adult ambitions; college conferences and academic standards; racism and nationalism in the Olympics; thrills, violence and gate receipts; winner-loser psychology; sex stereotypes; mass versus elite leisure; machismo politics and femlib. Readings will include two anthologies, a novel, a play, a collection of recent essays by social anthropologists.

Cr 3.
ENG 131 The Literature of Business
The drama of business as reflected in the fiction of important writers like Twain, Norris, Dreiser, and Warren. The course will focus on significant moments and problems in America's economic history and on the way these have been represented by writers who have concerned themselves with subjects like the exploitation of the West, the Robber Barons, manipulation in the stock market, and cycles of economic euphoria and disillusionment.

Cr 3.
Eng 150 Topics in Literature
A selection of courses varying in content from term to term. Under consideration for coming semesters: Utopian Literature, Radical-

## Writing Courses

## ENG 200 Advanced Essay Writing

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. (every semester). Prerequisite: a grade of B in ENG 100 or 101, or permission of the instructor. Cr 3.

## ENG201 Creative Writing

An introduction to the principles and practice of writing fiction, poetry, and drama: Emphasis is on fresh observation and meaningful selection of concrete details and their uses in the different genres. Recommended for beginners. (every semester). Prerequisites: ENG 100 or 101 and ENG 120 . Cr 3.

## ENG202Fiction Writing

A course for those who have already, in a course such as Creative Writing or on their own, written several pieces of fiction and are
ism and Revolt in Fiction, Feminism in the World Novel, Native American Literature, and Popular Semantics. Descriptions of current offerings are available in the English offices. More than one section may be taken for credit.

Cr 3.
ENG 160 Poetry
An intensive course in the close reading of many of the most significant poems in English. Attention will be given to important elements of poetry, including versification and the use of metaphor; characteristics and conventions of poetry written in different periods, early and contemporary, will also be explored. Required of English majors and recommended for all students seeking to understand a principal area of our cultural heritage. (every semester).

Cr 3.

## ENG 161 Fiction

An intensive course in the close reading of many kinds of fiction, with an emphasis on the tradition of psychological realism. The different styles and approaches to narrative that characterize writing by men and women in different eras, and the qualities that give superior writing its position of esteem in our culture, will be studied. (every fall). Cr 3.

## ENG 162 Drama

Significant representative plays from several periods, including the contemporary, will be studied. Conventions of stagecraft at different points in the drama's history will be explored, and attention will be given to how dramatic and literary techniques, like the use of action, stage effects, and dialogue, contribute to the often profound meanings that plays can convey. (every spring). Cr 3.
ready for more advanced work. Emphasis will be on writing well-developed short stories and on understanding the basic elements of fiction. A better-than-average competence in using English is required. Suggested preparation: ENG 201. (every semester). Cr 3.

## ENG 203 Poetry Writing

A course for those who, in a creative writing course or on their own, have developed basic skills of careful, thoughtful observation and a preference for concrete details to convey emotional meanings, and who are interested in developing a sense of how poetry has been written in the past by major poets and how it is being created in the present. Emphasis will be on imitation of past and present writers and exercises that stress the elements of poetry, as well as on the development of personal approaches. Suggested preparation: ENG 201. (every semester).

Cr 3.

## ENG 204 Playwriting

A lecture-practicum course designed to acquaint the student with playwriting principles. Emphasis is placed on the one-act play form. Students will be required to complete a series of creative exercises culminating with writing a one-act play. Prerequisites: THE 101 and THE 361 or 362 or 363 . This course is alsolisted as THE 335.

Cr 3.
ENG 209 Business and Report Writing
Primarily for juniors and seniors majoring in business administration. Training in clear and effective writing of formal reports, business communications, and related materials. (every semester).

Cr 3.
ENG 302 Fiction Workshop
An advanced course requiring the completion of short stories or a substantial part of a

## Journalism Courses

## ENG 210 Newswriting

This course includes news and feature writing with intensive practice in journalisticwriting techniques, accuracy, judgment, and style. (every fall). Prerequisite: ENG 100/ 101.

Cr 3.
novel. Prerequisites: ENG 202 and instructor's permission. May be repeated for 3 additional credits with instructor's permission.

Cr 3.
ENG 303 Poetry Workshop
A course for advanced students who, after experimenting with different approaches and styles, are developing their own themes and voices as poets. Work toward a completed chapbook-length manuscript of high-quality work will be the basis for the course grade. Prerequisites: ENG 203 and instructor's permission. May be repeated for 3 additional credits with instructor's permission. Cr 3.
ENG 400 Independent Study in Creative or Expository Writing

Cr var.

ENG 310 Advanced Newswriting
A continuation of Newswriting. (every spring).

Cr 3.
ENG 410 Independent Study in Journalism
Cr var.
pides, Seneca; discussion, papers. Cr 3.
The following Foreign Languages and Classics courses carry English major credit as electives. Note that these courses cannot count both toward the English major and toward the Core curriculum requirement.

CLA 291 The Golden Age of Greece
CLA 292 Rome, from Republic to Empire
FRE 281 Masterpieces of French Literature I
FRE 282 Masterpieces of French Literature II
FRE 283 Contemporary French Thinkers
FRE 284 Avant-Garde Theatre in France
FRE 285 18th-Century Literature in France and England
GER 281 The German Novelle
SPA 281 Masterpieces of Spanish Literature

For descriptions, see Foreign Languages and Classics section of this catalog.

Up to six hours of specific courses offered by such other CAS departments as History, Theatre, and Philosophy may be elected for English major credit.

## Linguistics and Related Courses

## ENG 230 History of the English Language

This course includes a survey of the prehistory of the language as well as a detailed study of the Old, Middle, and Modern English and the forces which shaped these stages. Some methods of modern linguistic science are utilized in examining current usage. Change and development of the language are emphasized. (every fall). Cr 3.

## ENG 231 Modern Grammars

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. (alternate springs).

Cr 3.

## ENG 232 Introduction to Linguistics

A general introduction to modern linguistic science, including studies in the development of language, phonology, morphology, the dictionary, and varieties of English usage. Also examined are the various grammatical philosophies and their methods-traditional, structural, and transformational. (alternate springs).

Cr 3.

## Criticism Courses

ENG 240 History of Literary Criticism
A study of the great literary critics, their methods and approaches, from Plato and Aristotle to the present day. Among the many figures included are Sidney, Johnson, Coleridge, Arnold, and T.S. Eliot. (alternate springs).

Cr 3.

## ENG 341 Critical Approaches to Literature

This course will provide a basic introduction to the major critical interpretive perspectives indispensable for the sensitive reader (moralphilosophical, formalistic, psychological, mythological, archetypal, and exponential). It will be structured around a close reading of

ENG 233 Structural Linguistics
The course first analyzes the structure of many languages: i.e., Mexican and Central American Indian languages, including dialects of Chontal, Aztec, Mayan. The course uses the acquired analytical skills to explore the nature of language itself. (alternate falls).

Cr 3.

## ENG 234 Semantics

Interpretation of literature by means of analysis of the language used. Recommended for prospective teachers of literature and English. (alternate falls).

Сг 3.
ENG 333 Structural Linguistics and Culture The course analyzes the languages and culture (art, religion, poetry) of pre-literate societies, particularly the American Indian.

Cr 3.
ENG 430 Independent Study in Linguistics
Cr var.

## ENG 431 Seminar in Linguistics

An advanced course focusing on specialized problems in language study, including Old English. Emphasis is on applying various critical and scholarly approaches to important, limited subjects. Typical subjects: Old English, Beowulf, Modern Linguistic Theorists.

Cr 3.
specific works from several genres. It will also study literary terms, prosody, prose style, and the relation of literature to the other arts. (alternate springs). Cr 3.
ENG 440 Independent Study in Criticism
Cr var.
ENG 441 Seminar in Literary Criticism
An advanced course focusing on specific problems or historical movements in literary criticism. Emphasis is on applying various scholarly approaches to important, limited subjects. Typical subjects: myth and myth criticism, psychoanalytic theory as myth.

Cr 3.

## Continental and World Literature

ENG 225 Continental Masterpieces
A study of some of the masterworks of medieval and renaissance culture, including Dante's Divine Comedy and Cervantes' Don Quixote. (every spring).

Cr 3.
ENG 325 Medieval Epic and Romance
The development of medieval traditions of epic and romance with readings of major works from England, Germany, France, Spain, and Italy (in translation). Focus of the course varies; it may be taught as an Arthurian literature course, for example. (3-year cycle, spring).

Cr 3.

ENG 326 Satire
A thorough exploration of its backgrounds in Classical literature and an attempt to define satire as a mode will be followed by discussion of important satires in English and other languages.

Cr 3.
ENG 327 Modern Short Story: Themes and Methods
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, Virginia Woolf, 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 weekly review of some critical article. Prerequisite: junior class standing or permission of the instructor. (alternate springs).

Cr 3.
ENG 328 Modern Novel: Themes and Methods
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, Herman Hesse, Andre Malraux, D. H. Lawrence, James Joyce, and Christina Stead. 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. (alternate springs). Cr 3.
ENG 420 Independent Study in Comparative Literature

Cr var.
ENG 421 Seminar in Comparative Literature An advanced course focusing on individual writers or particular literary themes or problems. Emphasis is on applying various critical and scholarly approaches to important, limited subjects. Typical subjects: Continental humanism, Dante, Continental influences on English literature. $\operatorname{Cr} 3$.

## Medieval Period

ENG 250 Chaucer and the Medieval World
An exploration of Chaucer's historical, philosophical, and literary world through his major comic narrative, Canterbury Tales. (every fall). Cr 3.
ENG 350 Medieval English Literature
A survey of genres popular from the twelfth to the fifteenth centuries (including debates, lyrics, romances, allegories, drama), with emphasis on the literature of fourteenth-century England. Major readings will include Chaucer's Troilus, the Pearl, and Sir Gawain and the Green Knight. (3-year cycle, spring).

Cr 3.
ENG 352 Medieval Drama
This course will introduce the theatre of the medieval world, which ranges from the liturgical, ritual drama of the church, to the

## Renaissance

ENG 255 The English Renaissance
A study of the principal writers of the English Renaissance exclusive of Shakespeare, with emphasis on major figures like Spenser, Donne, and Milton, but with some attention to other figures. (every fall). Cr 3.

ENG 356 Milton
Study of Milton's major poetry and selected prose with attention to critical and historical background. (every spring). Cr 3.
ENG 357 British Drama to 1642
Shakespeare's predecessors, contemporaries,
morality plays, performed by traveling companies, and the mystery cycles, produced by civic and guild pride in the 15 th century. Attention will be paid to the aesthetic and theological principles underlying this conjunction of farce and high seriousness in the plays as well as to distinctly medieval techniques of staging and production. (3-year cycle, spring).

Cr 3.
ENG 450 Independent Study in Medieval Literature

Cr var.
ENG 451 Seminar in Medieval Studies
An advanced course focusing on individual writers or particular literary themes or problems. Emphasis is on applying various critical and scholarly approaches to important, limited subjects.

Cr 3.
and followers to 1642. (3-year cycle, fall).
Cr 3.
ENG 455 Independent Study in Renaissance Literature

Crvar.

ENG 456 Seminar in Renaissance Studies
An advanced course focusing on individual writers, or particular literary themes or problems. Emphasis is on applying various critical and scholarly approaches to important, limited subjects. Typical subjects: the metaphysical poets, Elizabethan prose fiction.

Cr 3.

## Shakespeare

ENG 260, 261 Shakespeare
ENG 260 and 261 each feature close readings of approximately seven of Shakespeare's plays, and focus attention both on philosophical and theatrical meanings. The division of plays within the two courses is largely arbitrary. Its intent is to permit students to take a second course in Shakespeare without repeating the readings of the first course. Neither course is introductory or prerequisite to the other. The main difference is that ENG 260 will include a section on the major history plays (Richard II; 1, 2 Henry IV); ENG 261 will include a section on the dramatic fairytales or "romances" that Shakespeare wrote at the end of his career (The Winter's Tale; The Tempest). Beyond that the courses will in-
clude the following major plays assigned to each course:
ENG 260: As You Like It, Twelfth Night, Hamlet, Macbeth. (every fall). ENG 261: Romeo and Juliet, Midsummer Night's Dream, Othello, King Lear. (every spring). Each course:

Сг 3.
ENG 460 Independent Study in Shakespeare ENG 461 Seminar in Shakespeare Studies
An advanced course in Shakespeare which emphasizes the application of various critical and scholarly approaches to important aspects of the poet and dramatist's work. Typical subjects: allegorical elements in Shakespeare's plays, Shakespeare and the daemonic.

Cr 3.

## Neoclassical and Romantic Periods

ENG 265 The Neoclassical Age
The principal writers from the Restoration to the Romantic Period are studied. Emphasis is on the achievements of major figures, including Dryden, Pope, Swift, and Johnson. (alternate fall).

Cr 3.
ENG 366 Restoration and 18th-Century 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 hewill include Davenant, Dryden, Otway, Etherege, Shadwell, Cibber, Wycherley, Congreve, Farquhar. (3-year cycle, fall).

## ENG 369 The Earlier English Novel

The principal novelists from Defoe through Smollett.

Cr 3.
ENG 465 Independent Study in the Neoclassical Period Cr var.

ENG 466 Seminar in Neoclassical Studies
An advanced course focusing on individual writers or particular literary themes or problems. Emphasis is on applying various critical and scholarly approaches to important, limited subjects. Typical subjects: Swift, the
poetry of Alexander Pope, Thomas Gray, and the poets of sensibility.

Сг 3.

ENG 270 Major Romantic Writers
A study of the major British poets and essayists of the Romantic period (approximately 1785-1832) and of the nature of the Romantic movement. Readings selected from among Blake, Burns, Wordsworth, Coleridge, Keats, Byron, Shelley, Lamb, DeQuincey, Beddoes, Hunt, Peacock, etc.; also Mary Shelley's Frankenstein. (alternate fall).

Cr 3.
ENG 370 Fiction of the Romantic Period The novels of Jane Austen; readings in Maturin, Peacock, Edgeworth, Lewis, Godwin, Mary Shelley, Scott. (alternate spring). Cr 3.

ENG 470 Independent Study in the Romantic Period

Cr var.

## ENG 471 Seminar in Romantic Studies

An advanced course focusing on individual writers or particular literary themes or problems. Emphasis is on applying various critical and scholarly approaches to important, limited subjects. Typical subjects: William Blake, the gothic novel, Wordsworth and Coleridge.

Cr var.

## ENG 275 Eminent Victorian Writers

Major writers of the Victorian era, including Tennyson, Browning, Arnold, George Eliot, Harriet Martineau, Thackeray, and Dickens are studied; attention is given to Victorian controversies; emphasis is on the novel as the greatest achievement of the period. (every fall).

Cr 3.

## ENG 285 Earlier Women Writers

The aim of this course is twofold, to introduce students to the wealth of major works by women writers and to consider in detail the voices of women on women and society. Women novelists and poets have explored the entire range of human experience, of social, political, and philosophical issues as well as personal experience. This course will discuss the ways in which they have treated such issues as they relate to women's own lives. Although specific content may vary from semester to semester, the course will introduce students to the wealth of major works by women writers and consider the voices of women on women and society. Readings are likely to emphasize nineteenth-century writers like Jane Austen, George Eliot, Charlotte Bronte, and Elizabeth Gaskell. (alternate spring).

Cr 3.
ENG375 The Victorian Novel
The principal novelists from Austen to Hardy. (alternate spring).

Cr 3.
ENG 377 Victorian Poetry
Extensive reading in the poetry of Tennyson, Browning, Arnold, Swinburne, Clough, the Rossettis, Meredith, Morris, Hardy, Hopkins, and Housman. Lectures and class discussions will involve several critical approaches-biographical, sociological, psychological, archetypal, symbolical, formalistic and exponential. Collateral readings in 19th-century intellectual history-the Romantic revolt, the Industrial Revolution, the science-religion debate, aestheticism, artistic alienation, Utilitarianism, and Darwinism. Brief oral reports and two short papers. (alternate spring).

Cr 3.
ENG 475 Independent Study in the Victorian Period

Cr var.

ENG 476 Seminar in Victorian Studies
An advanced course focusing on individual writers or particular literary themes or problems. Emphasis is on applying various critical and scholarly approaches to important, limited subjects.

Cr 3.
ENG 280 The American Renaissance
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. (alternate fall).

Cr 3.
ENG 381 Colonial American Literature
A study of early American writers of religious prose, fiction, and poetry. A course in early American history is recommended background.

Cr 3.
ENG 382 The Earlier American Novel
An historical survey of the American novel from Charles Brockton Brown to Henry James. (alternate fall).

Cr 3.

## ENG 389 Writers of Maine

Historical and literary analysis of writers in and about Maine. The emphasis will be on the literary quality o for a report about any off-campus project related to 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. (every year).

Cr 3.
ENG 480 Independent Study in American Literature

Cr var.

## ENG 481 Seminar in Earlier American Liter-

 atureAn advanced course focusing on individual writers or particular literary themes or problems. Emphasis is on applying various critical and scholarly approaches to important, limited subjects. Typical subjects: backgrounds of American thought, Hawthorne and Melville, Twain and James, Thoreau.

Cr 3.
kind of world, for example, does a poem like The Waste Land or a novella like Heart of Darkness portray? What assumptions underlie them? What changes in poetic narrative form do they demand? The class will emphasize early Modern (pre-World War II) but
will attempt to discover, as well, how contemporary British literature has developed since then. The course will include such writers as Joyce, Conrad, Yeats, MacDiarmid, Woolf, Les and Beckett. (alternate fall).

Cr 3.

## ENG 291 The Modern Age: American

The purpose of this course is to examine the nature of Modernism as it developed in 20thcentury America. Early precursors such as Whitman and Twain will be considered with a view to determining what special issues and techniques developed to express an American Experience. Emphasis, however, will be on major recent writers such as Faulkner, Hemingway, Fitzgerald, Pound, Williams, Katherine Anne Porter, Flannery O'Connor, and selected contemporary poets. (alternate fall).

Cr 3.

## ENG 295 Contemporary Women Writers

The focus of the course is on 20th-century novelists and/or poets. Specific readings and thematic approaches will vary depending on instructor. The course has been taught, for example, with an emphasis on the regional and ethnic cultures from which American women writers come, reading works by Kate Chopin, Willa Cather, Eudora Welty, Alice Walker, Toni Morrison, Maya Angelou, Leslie Silko, Maxine Kingston, Grace Paley, and Anne Sexton. (alternate spring). Cr 3.

## ENG 390 Modern British Poetry

Modern British poetry has taken diverse forms and concerned itself with a wide range of themes. This course, however, will focus on two or three selected major figures such as Hardy, Yeats, Eliot, MacDiarmid, Auden, and Thomas with the aim of placing them in the larger context. The class will examine and discuss early changes in poetic forms, the impact of World War I poets and the Georgians, the developments in contemporary Britain. The primary focus will then be to consider in depth the two or three major figures, defining what determines their particular voice and vision of reality. The selected poets will vary with the semester. (alternate spring).

Cr 3.

## ENG 391 Modern American Poetry

This course will focus on two or three major poets such as Stevens, Frost, Marianne Moore, Pound, and Williams. The course will also, however, seek to place them in a historical perspective, both in technical development and specifically American themes and conceptions of reality. There will be some examination of poets like Whitman and Dickinson, who stand at the beginning of modern American poetry, as well as contemporary poets like Strand, Snyder, Kinnell, and Bly. The primary focus will then be to
examine the selected figures against the broader context, with the purpose of defining their unique voices and forms. The selected poets will vary with the semester. (alternate spring).

Cr 3
ENG 392 Twentieth-Century British Novels Selected novels from the late 19th century to the present. (alternate fall). Cr 3.

ENG 393 Twentieth-Century American Novels
An historical survey of American novels beginning around 1900 . (alternate fall). Cr 3.

ENG 394 Experimentation in Modern Poetry This course explores the tradition of experimentation in modern poetry from Rimbaud to the present day. It draws from a range of figuressuch as Cavafy, Ponge, and Calvino in an effort to bring into focus the achievement of such English and American figures as Eliot, Williams, Auden, Moore, and contemporaries like Dorn and Berryman. Cr 3.

## ENG 397 American Drama

A study of the drama in the United States. A brief history of early American playwrights followed by a close study of major figures, with O'Neill as the center. Others: Maxwell Anderson, Robert Sherwood, Tennessee Williams, Arthur Miller, and Edward Albee. (This course is also listed as THE 460). Cr 3.

## ENG 398 The Southern Renascence

The post-World War I flowering in Southern letters, with emphasis on the fiction of Wolfe, Faulkner, Elizabeth Madox Roberts, Tate, Gordon, Porter, Warren, Welty, Peter Taylor, Flannery O'Connor, and Walker Percy. (alternate fall).

Cr 3.
ENG 490 Independent Study in Modern Literature

Crvar.

ENG 491 Seminar in Modern British Literature
An advanced course focusing on individual writers or particular literary themes or problems. Emphasis is on applying various critical and scholarly approaches to important, limited subjects. Typical subjects: Joyce's $U l$ ysses, modern Scottish literature. Cr 3.

ENG 492 Seminar in Modern American Literature
An advanced course focusing on individual writers or particular literarasis is on applying various critical and scholarly approaches to important, limited subjects. Typical subjects: the image of Blacks in American literature, the fugitive poets, Fitzgerald, Hemingway, and Faulkner.

Cr 3.

## Experimental Courses

Occasionally the English Department offers special courses not listed individually in the catalog. They appear in the current Schedule of Courses under the designation $199,299,399$, or 499 . Such courses will usu-
ally be experimental: pursuing original research, testing new alignments of figures or materials, or trying out courses before including them in the department curriculum.

# Foreign Languages and Classics 

Chair of the Department: Mara Ubans, 514 Luther Bonney Hall, Portland Professor: Duclos; Associate Professors: Crochet, Dalvet, di Benedetto, Lepelley, Rolfe, Ubans

A foreign language major offers a uniquely rich and diverse humanities background. The study of languages sensitizes us to other cultures and the relativity of values, it frees us from the confines of monolingualism and provincialism, it increases our understanding of and competence in our native language and, most important, it is an inquiry into language as language: the structure, system, code by which we interpret the world to ourselves and others. Through in-depth study of literature we develop skills of close reading and literary analysis, and in composition courses we hone our writing skills.

A foreign language is also a valuable and marketable skill in many professions, especially international relations and trade, government service, travel, social services, the arts, and teaching.

## Programs and Requirements

The Department offers a major in French and broader, interdepartmental majors in foreign languages, classical studies, French studies, German studies, and Hispanic studies. Also classics, French, German, and Spanish minors are available which augment other majors in the College of Arts and Sciences. Courses in Italian are offered on a regular basis.

The Department also offers a number of courses in English translation requiring no knowledge of a foreign language and open to any student interested in foreign or classical literature and civilization. These courses are numbered 281-299. Courses in this category may be credited towards a major or a minor in the Department if the readings, exams, and papers are done in the target language.

Independent study courses, numbered 470, are available to qualified students with the permission of the instructor and the department chair.

## Policies

Beginner courses (101-102) are for students who have never studied the language. Courses numbered 103 are a review of this beginner's level. Intermediate level courses (201-202 for modern languages, 251-252 for the ancient languages) are for students with two successful years of high school language study. Those whose background does not fit any of these categories, especially Franco-Americans and students with Hispanic, German, or Italian backgrounds, should consult an instructor in the language before registering. Courses numbered 105-206 give students a reading proficiency in French or German for research in their field, grad-
uate school language requirements, or cultural enjoyment.
It is the policy of the Department that a student may receive 6 credits but no more for the elementary and intermediate levels each. The courses can be taken in any combination. (This does not apply to students in FRE 107-108.) Elementary level: any two courses from 101, 102, 103, or 105. Intermediate level: any two from 201, 202, or 206.

The Department grants credit in French, German, Greek, Latin, and Spanish to an enrolled student who presents evidence of competency in one of those languages by completing the appropriate Advanced Placement Examination of the College Entrance Examination Board. For more details, contact the chair of the Department.

## Language Laboratory

The language laboratory is located on the Portland campus in Payson Smith Hall, Room 203, and is open every weekday from 9 a.m. to 3 p.m. Students enrolled in beginner's or intermediate courses may register for supervised language practice amounting to a minimum of one hour a week in the laboratory; they will receive one extra credit (on a pass/fail basis) for regular and active attendance. Since the work done in the language lab is coordinated with classroom work, only the students enrolled in a language course can take the corresponding lab section for credit. Credit for the lab is granted only if the student passes the course. Any exception to this has to be approved by the chair of the Department. All students are welcome to use the language lab facilities for their own purposes, without credit.

Students are also urged to get extra practice in French, German, Italian, and Spanish by participating in informal conversation tables sponsored by the Department. Tutoring is available, often at no cost to the student. For information, see the Department secretary in Luther Bonney 411.

All major programs in the Department of Foreign Languages and Classics require that the student fulfill the requirements of the Core curriculum.

## Bachelor of Arts in French

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 36 .

Core Course (to be announced by the Department)
Language


FRE 292 Contemporary France
Literature (any two)
FRE 361 The Novel
FRE 362 Poetry
FRE 363 Theatre
Any two
FRE 460 Quebecer Literature
FRE 461 17th Century Literature
FRE 462 18th Century Literature
FRE 463 19th Century Literature
FRE 464 20th Century Literature
plus
FRE 465 Survey of French Literature
Electives (or any two of the above courses)
FRE 221 Practice in Writing
FRE 223 Practice in Conversation *

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 participation in informal conversation tables. They are expected to have reached proficiency in speaking and writing French before their graduation.

Each student's progress will be reviewed periodically by the French faculty. All majors must achieve at least 12 credits of B or better grades in their major courses. No grade of D will count toward fulfillment of a French major.

## Group Contract in Foreign Languages

The group contract major of the College of Arts and Sciences provides students with a flexible opportunity to tailor their major to their interests and needs in foreign language study. The following group contract majors are offered:

Foreign Languages
Classical Studies (concentration in either Greek or Latin)
French Studies
German Studies
Hispanic Studies
Please refer to p. 54 of this catalog or contact the chair of the Department of Foreign Languages and Classics for additional information.

## Minors

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 9 .

Since the knowledge of a foreign language, or languages, is valuable to all majors in other CAS disciplines, the Department offers minor programs in Classics (Latin or Greek), French, German, and Spanish. A given program consists of nine credits at the 300 level ( 200 level in classics) or above, selected from the following courses:

Classics Minor (Greek)
GRE 251, 252; 310; CLS 291
Classics Minor (Latin)
LAT 251, 252; 310; CLS 292
French Minor
FRE 321; 323; 305; 361, 362 or 363
German Minor
GER 321, 322; 351, 352; 281
Spanish Minor
SPA 321, 322; 351, 352

## Literature and Civilization in English Translation

CLA 283 The Epic Hero in Ancient Literature
Intensive readings in English translations of Gilgamesh, Iliad, Odyssey, Argonautica, Aeneid; discussion, papers. Cr 3.
CLA 284 The Tragic Hero in Ancient Literature
Intensive reading of selected plays in English translation by Aeschylus, Sophocles, Euripides, Seneca; discussion, papers. Cr 3.

## CLA 291 The Golden Age of Greece

The literature, history, politics, philosophy, art, and architecture of the fifth century B.C. with particular attention to the achievements of Athens. Lectures, discussion, pa-
pers, museum trip.
Cr 3.
CLA 292 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.

Cr 3.
FRE 281 Masterpieces of French Literature I Novels and plays representative of French literature from the beginning of the 19th century to the present. No knowledge of French is necessary.

Cr 3.
FRE 282 Masterpieces of French Literature 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.

Cr 3.
FRE 283 Contemporary French Thinkers
Readings and discussion of recent works of French literature selected for their philosophical and ethical importance: Saint-Exupery, Sartre, Camus, de Beauvoir, Teilhard de Chardin and others. No knowledge of French is necessary. Cr 3.

FRE 291 French Civilization: An Historical Approach
Aspects of the society, institutions, arts, literature, and religion of France, from the origins to the end of the 19th century. No French is spoken in the classroom.

Cr 3.
FRE 292 French Civilization: Contemporary France

## Classics: Greek and Latin

GRE 101 Beginning Greek I
Fundamentals of classical Greek. Emphasis upon acquisition of reading knowledge. Cr 3.
GRE 102 Beginning Greek II
Selections from Euripides' Alcestis. Prerequisite: GRE 101.

Cr 3.
GRE 251 Introduction to Greek Literature I A study of Plato's Apology, Crito and selections from the Phaedo. Prerequisite: GRE 102 or equivalent.

Cr 3.
GRE 252 Introduction to Greek Literature II A study of selected books from Homer's Iliad or Odyssey. Prerequisite: GRE 251. Cr 3.
GRE 310 Seminar in Greek Literature
Readings in Greek prose and poetry; a different author will be read each semester. Translation, supplementary reading, paper. Prerequisite: GRE 252.

Cr 3.

Institutions, education, society, economy, politics of France. No French is spoken in the classroom.

Сг 3.

## GER 281 The German Novelle

The study of the genre of the novelle and its development through the major literary movements from the early nineteenth century to the present. Authors read vary, but normally include Goethe, Tieck, E.T.A. Hoffmann, Kleist, C.F. Meyer, Storm, Musil and Mann. No knowledge of German is necessary.

Cr 3.
SPA 281 Masterpieces of Spanish Literature
The study of fiction, poetry, and essays representative of Hispanic literature of the 19th and 20th centuries. No knowledge of Spanish is necessary.

Cr 3.

GRE470 Independent Study
LAT 101 Beginning Latin I
Fundamentals of the Latin language. $\quad \mathrm{Cr} 3$.
LAT 102 Beginning Latin II
Continuation of LAT 101.
Сг 3.
LAT 251 Introduction to Latin Literature I Selected readings from masters of Latin prose and poetry. Prerequisite: LAT 102 or equivalent.

Cr 3.
LAT 252 Introduction to Latin Literature II Continuation of LAT 251.

Сг 3.
LAT 310 Seminar in Latin Literature
Readings in Latin prose and poetry; a different author will be read each semester. Translation, supplementary reading paper. Prerequisite: LAT 252.

Cr 3.
LAT 470 Independent Study

## FRE 105 Reading French

Beginner's course in French aiming exclusively at a reading knowledge of the language. No French spoken. Recommended also as preparation for language tests required by graduate schools. Cr 3.

FRE 107-108 Intensive Beginning French Intensive beginner's course, in the four skills of language learning: listening comprehension, speaking, reading and writing, with abundant opportunity for conversation in the classroom and for laboratory practice. The course meets every weekday for a 50 -minute period.

Cr 5.
FRE 201 Intermediate French I
Review of grammatical structures. Further
development of listening comprehension, speaking, reading and writing skills. Students are encouraged to register also for laboratory practice (one more credit). Prerequisite: FRE 102, FRE 103, or two years of high school French. $\quad \mathrm{Cr} 3$. (With lab, Cr. 4.)
FRE 202 Intermediate French II
Continuation of FRE 201.Cr 3. (With lab, Cr 4).

FRE 206 Readings in French
Further practice of the skill acquired in FRE 105 through an accelerated reading of books on various topics (fiction, history, science, etc.). Prerequisite: FRE 105, 102, 103, or instructor's permission. Cr 3.

## FRE 221 Practice in Writing

Advanced study of the French language. Proficiency in writing, vocabulary development and idiomatic expression are the objectives of the course. Prerequisite: FRE 202 or equivalent.

Cr 3.

## FRE 223 Practice in Conversation

Intensive oral practice, expository reports, debates, class discussions. Prerequisite: FRE 202 or equivalent.

Cr 3 .
FRE 251 Introduction to French Literature
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 201 or equivalent.

Cr 3.

## FRE 305 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 202 or equivalent.

Cr 3.

## FRE 321 Workshop in Writing French

Practice of free composition and translation. Prerequisite: FRE 221 or equivalent. Cr 3.
FRE 323 Workshop in Speaking French
Practice of French conversation for advanced students. Prerequisite: FRE 223 or equivalent.

Cr 3.
FRE 361 The French Novel
A study of novels and short stories, especially of the 19th and 20th centuries, and of the various critical approaches to fiction. Prerequisite: FRE 251 or equivalent. Cr 3.
FRE 362 French Poetry
A study of works by famous French poets and
of the critical approaches to French poetry. Prerequisite: FRE 251 or equivalent.* Cr 3.

## FRE 363 The French Theatre

A study of representative works by the major playwrights of France in the classical, romantic, and modern periods and of critical approaches to drama. Prerequisite: FRE 251 or equivalent.

Cr 3.

## FRE 460 Quebecer Literature

Reading and discussion of novels, short stories, poems, and plays by contemporary French Canadian writers Gabrielle Roy, Gerard Bessette, Jacques Godbout, M. Claire Blais, Marcel Dube, Saint-Denis Garneau, Alain Grandbois, and P.M. Lapointe. Prerequisite: FRE 361, 362 or 363.

Cr 3.

## FRE 461 17th-Century Literature

A seminar in 17th-century French literature based on selected themes which will vary each time the seminar is offered. The theme will be announced the year that the course is given. Prerequisite: FRE 361, 362 or 363.

Cr 3.

## FRE 462 18th-Century Literature

A study of the critical and revolutionary thought of the major 18th-century French thinkers (Montesquieu, Voltaire, Rousseau, Diderot) in an attempt both to define the role of the Enlightenment in the downfall of the Ancien Regime and to determine its place in the history of ideas. Prerequisite: FRE 361, 362 or 363.

Cr 3.

## FRE 463 19th-Century Literature

A seminar in 19th-century French literature based on selected themes which will vary each time the seminar is offered. The theme will be announced the year that the course is given. Prerequisite: FRE 361, 362 or 363.

Cr 3.

## FRE 464 20th-Century Literature

A seminar in 20th-century French literature based on selected themes which will vary each time the seminar is offered. The theme will be announced the year that the course is given. Prerequisite: FRE 361, 362 or 363.

Cr 3.

## FRE 465 Survey of Literature

An opportunity for senior students to review and complete their previous studies of French literature by surveying its development and styles through the centuries. Prerequisite: FRE 361, 362 or 363.

Cr 3.
FRE 470 Independent Study

## German

## GER 101 Beginning German I

Beginner's course in German. Initiation in the four skills of language learning: listening comprehension, speaking, reading, and writing. Students are encouraged to register also for laboratory practice (one more credit).

Cr 3. (With lab, Cr 4.)
GER 102 Beginning German II
Continuation of GER 101. Cr 3. (With lab, Cr 4.)

## GER 105 Reading German I

Elementary course in German aiming exclusively at a reading knowledge of the language. No German spoken.

Cr 3.
GER 201 Intermediate German I
For students who have completed GER 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: GER 102 or 103 .

Cr3. (With lab, Cr 4.)
GER 202 Intermediate German II
Continuation of GER 201. Cr 3. (With lab, Cr 4.)

GER 206 Reading German II
Further practice of the reading skill acquired in GER 105. Recommended also as preparation for language tests required by graduate schools. Prerequisite: GER 105, 102, 103 or instructor's permission. Cr 3.

## Italian

## ITA 101 Beginning Italian I

Beginner's course in Italian. Initiation in the four skills of language learning: listening comprehension, speaking, reading, and writing. Cr 3.(with lab, Cr 4.)

ITA 102 Beginning Italian II
Continuation of ITA 101. Cr 3. (with lab, Cr

GER 321 Composition and Conversation in German I
Systematic training in correct pronunciation and usage, and in vocabulary building, with written and oral practice. Prerequisite: GER 202 or equivalent.

Cr 3.
GER 322 Composition and Conversation in German II
Continuation of GER 321. Reading and discussion of historical, journalistic, and literary material covering life in Germany from World War I to the present. Prerequisite: GER 321 or equivalent.

Cr 3.

## GER 351 Introduction to German Literature

 IReading and discussion of selected works representing the major literary movements from Enlightenment to Realism. Readings are in German; class discussions and exams are in English. Prerequisite: GER 202 or GER 106 or an equivalent reading ability of German.

Cr 3.
GER 352 Introduction to German Literature II
Reading and discussion of selected works representing the major literary movements from Naturalism to the present. Readings are in German; class discussions and exams are in English. Prerequisite: GER 202 or GER 106 or an equivalent reading ability of German.

Cr 3.
GER 470 Independent Study

ITA 201 Intermediate Italian I
Reading of short stories and essays reflecting the wealth and variety of Italian culture. Classroom practice of conversation. Prerequisite: ITA 102.

Cr 3.
ITA 202 Intermediate Italian II
Continuation of ITA 201.
Cr 3.

## Spanish

## SPA 101 Beginning Spanish I

Beginner's course in Spanish. Initiation in the four skills of language learning: listening comprehension, speaking, reading, and writing. Students are encouraged to register at the same time for laboratory practice (one more credit.)

Cr 3. (With lab, Cr 4.)

SPA 102 Beginning Spanish II
Continuation of SPA 101.
Cr 3. (Withlab, Cr 4)

## SPA 201 Intermediate Spanish I

For students who have completed SPA 102 or the equivalent. Review of grammar. Classroom practice aiming at fluency in reading and speaking. Students are encouraged to register also for laboratory practice (one more credit). Prerequisite: SPA 102 or equivalent.

Cr 3. (With lab, Cr 4)
SPA 202 Intermediate Spanish II
Continuation of SPA 201.
Cr 3. (With lab, Cr 4.)

SPA 321 Composition and Conversation in Spanish I
Advanced study of the Spanish language. Frequent practice of composition. Conversation and oral reports. Prerequisite: SPA 202 or equivalent. Cr 3.

SPA 322 Composition and Conversation in Spanish II
Continuation of SPA 321.

SPA 351 Introduction to Hispanic Literature I
A survey of the important periods and trends in Spanish literature with reading of representative works. Prerequisite: SPA 202. Cr 3.
SPA 352 Introduction to Hispanic Literature II
Continuation of SPA 351.
SPA 470 Independent Study

# Geography-Anthropology 

Chair of the Department: Franklin D. Hodges, 300a Bailey Hall, Gorham Associate Professors: French, Hodges, Tizon, Yesner

The program leading to a major in geography-anthropology emphasizes the integration of the two disciplines. Among the elements that are integrated in the major are common interests in the relationship between human populations and their natural environment, decision-making strategies of human groups, and the health and nutritional status of human societies. The major is a 36 -hour interdisciplinary program wherein students are expected to take courses from both geography and anthropology. The program of study, beyond the basic requirements should be planned carefully, in close consultation with the student's departmental advisor, and should be approved by the latter. Such an arrangement allows for flexibility according to the student's interests while also providing close guidance and a control of educational quality by the department.

## Programs and Requirements

The Department offers the following programs: bachelor of arts in ge-ography-anthropology; applied geography minor in planning; and anthropology minor in health and human services.

All students with majors or specific discipline minors in the social sciences must achieve at least six credits with grades of B or better in the requirements of those majors or minors. No grades of D will be counted toward fulfillment of the major or minor requirements. Except for Independent Studies, no required course may be repeated more than one time.

All students are reminded that, in addition to meeting departmental requirements for the major, they must also meet the University's minimum proficiency requirements and the Core curriculum requirements. (These may be found on page 38 of this catalog.)

## Bachelor of Arts in Geography-Anthropology

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 36 .

All students must take: ANT 101, GEO 101, GEO 201, and GYA 400 or GYA 350-351.

Students electing to concentrate in anthropology must take:
GEO 104 or GEO 303
ANT 102
ANT 103
ANT 210 or ANT 305
AND
12 ANT hours

Students electing to concentrate in geography must take:
ANT 103 or ANT 210
ANT 213
GEO 102
GEO 104
AND
12 GEO hours
Additionally, all geography-anthropology majors are required to take: three hours of research writing or the equivalent; three hours of quantitative methods or the equivalent. Only 6 hours of internships and/or independentstudies may be applied toward the major.

Beyond these basic requirements, the student must set up a program of geography-anthropology courses to fulfill the remaining credits of the total 36 credits for the major with his/her advisor. All courses in that program must be approved in advance by the advisor.

## Applied Geography Minor in Planning

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 18.

Required courses: GEO 101, GEO 104
Choice of one from: GYA 350-351, GYA 400
Choice of one from: GEO 204, GEO 205
Choice of one from: GEO 209, GEO 210

## Anthropology Minor in Health and Human Services

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 18.

Required Courses: ANT 101, ANT 102, ANT 302, ANT 303, GEO 401
Choice of one from: GYA 350-351, GYA 400

## Archaeology Laboratory

The Archaeology Laboratory located in 317 Bailey Hall provides facilities for research in archaeology and related areas. Current facilities include human skeletons, fossil human skulls, a comparative faunal collection, and various research collections, primarily from Maine and Alaska. The Archaeology Laboratory also houses a small library including books, journals, slides, and maps. Opportunities are available for independent student research projects, and work-study positions are available in the laboratory each semester.

## Cartography Laboratory

The Cartography Laboratory located in 323 Bailey Hall provides facilities for map making and air photo interpretation. The room is open for faculty and student use daily. There is a map collection available including Maine maps, topographic maps, and various world regional maps. Student proctors are present at most hours of the day to offer assistance.

## Special Programs: Museum of Culture Change

The Museum of Culture Change is designed to tell the story of human culture by works created through the ages. In past years, the museum has served the University and community by providing public school tours, research opportunities, and exhibits.

For further information, contact Director Robert French, Department of Geography/Anthropology or the Dean of The College of Arts and Sciences.

## Geography-Anthropology

## GYA 100 Museum Aide

Museum aides serve on volunteer projects relating to research classification, maintenance and display of artifactual materials. Since the museum solicits input from students, their contributions are expected to show originality and complement the goals of the Museum of Cultural Change. A minimum of thirty (30) hours of service each semester is required for credit. Offered each semester.

Cr 1-3.

## GYA 106 The Local Environment

This is a field-oriented course that deals with the application of fundamental geographic concepts in the interpretation of areal development. The local area serves as the "laboratory" and provides models of geographic interaction that have applications on a broader scale. Offered every 2 years.

Cr 3-6.

## GYA 300 Archaeology Field School

The summer field school is designed to combine training in research methods of archaeology and geography. Students will receive intensive training in methods of site survey excavation and materials analysis. Several weeks will be spent at selected areas of coastal Maine involved in survey and excavation of sites, mapping sites and landscape features, and investigating potential food resources in site areas. This will be followed by some laboratory analysis of recovered materials. This course may be repeated up to twice with the permission of the instructor.

Cr 4-6.

## GYA 321 Historic Material Analysis

This lab/discussion course involves the analysis of materials derived from field survey and archaeological investigation of selected historic period North American sites. Activities include the chronological and distributional analysis of ceramics, glass, metal and other artifacts of the historic period. Students are

## Anthropology

ANT 101 Anthropology: The Cultural View
This course is a basic introductory survey of cultural anthropology. It examines the differences between cultures as well as cultural universals, and the relationship between social organization, ideology, economics, and political structure in different types of societies. It reviews the various theoretical approaches in cultural anthropology's attempt to explain human behavior, presenting examples from "primitive," intermediate, and complex cultures through readings and films. This course is required for all majors concentrating in anthropology. Offered each semester.

Cr 3.
encouraged to pursue specific research topics using documentary sources as well as assist in the curation of artifacts in the Museum of Cultural Change. Offered every 2 years.

Cr 3.
GYA 350-351 Internship in Applied Geogra-phy-Anthropology
Internships offer the student practical experience in working with public agencies, private firms, and municipalities engaged in applied geographical-anthropological activities including, but not limited to, planning, transportation, delivery of human services, and natural resources.
A written contract will be drawn up by advisor and student for each internship, specifying the number of credits sought and work required for these credits. As a general rule, internships will require at least eight hours of actual work per week. Interns will be expected to meet at least once everytwo weeks with instructor to discuss experiences and/or problems.
In addition, a major paper will be required from each student intern discussing an aspect of the internship or the work performed during the internship. The paper will be presented by the student at the end of the semester to a departmental seminar on applied geography-anthropology. Prerequisites: junior or senior standing in geography-anthropology. Offered each year.

Cr 1-6.
GYA 400 Independent Study in Anthropology or Geography
The department faculty offers independent study in a topic in anthropology or geography 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. Offered each semester.

## ANT 102 Biological Anthropology

Man's place in nature; the relationship between human biology and culture; the relevance of primate behavior and human evolution to understanding contemporary human society; human biological adaptations, including a discussion of population and nutrition; and contemporary human variation with an evaluation of the concept of race.

Cr 3.
ANT 103 Introduction to Archaeology
Introduction to Archaeology describes the methods and theories used by modern archaeologists to uncover information about past human life ways. Attention is given to
techniques of survey and excavation of archaeological materials; concepts of space and time in archaeology; and detailed analysis of artifacts and organic residues. Some attention will be given to specific topics such as the archaeology of Maine.

Cr 3.

## ANT 202 Origins of Civilization

This course traces the evolution of human culture from the origins of farming and domestication, to the development of complex societies. General processes of urbanization and social stratification will be investigated, and examples will be drawn from throughout the Old and New Worlds, including the classical civilizations of the Near East, Southeast Asia, Mexico, and Peru.

Cr 3.

## ANT 210 Culture Theory

This course is an historical survey of theory in anthropology from the early classical evolutionists to contemporary materialist and idealist approaches. It will examine the various theories in terms of their level of analysis, explanatory value, and relationship to the western society from which they emerged. This course is a requirement for those concentrating in anthropology. Prerequisite: ANT 101 or permission.

Cr 3.

## ANT 213 Strategies for Survival

This course examines interactions between human societies and their natural environments. Human adaptation is viewed as a problem-solving process, involving the development of strategies for maximizing energy efficiency and reproductive success, for warding off environmental stress, and for reducing conflicts. These management strategies are examined for a number of human societies, and are used to gain insight into modern decision-making processes. Prerequisites: ANT 101 or 102.

Сг 3.

## ANT 220 North American Indians

This course combines an ethnographic and archaeological perspective on the culture history and traditional cultures of native North Americans. Emphasis is placed on the relationship of aboriginal native cultures to their environments, and the evolution of complex societies in certain regions of North America. Also included is discussion of the fragmentation of Indian societies that followed the European invasion of North America. No prerequisites.

Cr 3.
ANT 222 Peoples of the North
This course is designed as a comprehensive summary of the prehistory, traditional culture, and contemporary life ways of peoples living in the northern hemispheres of both the Old and New Worlds-from Maine to Alaska, and from Siberia to Lapland. Special attention will be given to the origins of these
peoples; the problems of living in cold, northern environments; the effects of European contact; and the modern problems that they face ranging from the effects of urbanization to land claim disputes. Prerequisites: ANT 101 or 103 or permission of the instructor.

Сг 3.
ANT 232 Women in Cross-Cultural Perspective
Anthropologists have long considered a division of labor and status on the basis of sex a universal practice throughout most if not all of civilization's history. There has, however, been a great deal of controversy regarding the nature, origin, and future of sexual stratification. Is the superior status of men crossculturally "only in the eye of the beholder?" If not, why does it exist? Are its roots biological or cultural; is it inevitable? This course examines these provocative questions by looking at the range of women's roles in a variety of cultures, through readings, films, and slides. No prerequisites.

Сг 3.
ANT 301 Victims of Progress: Primitive Peoples in the Modern World
This course examines the disappearance of simpler societies as a result of the expansion of industrial society, and the implications of such a process for the future of humanity, from both a scientific and humanistic point of view. It also discusses the role of anthropology in explaining and promoting culture change, and reviews the various philosophies of development exhibited in modern society. Prerequisite: ANT 101.

Cr 3.

## ANT 302 Medical Anthropology

This course considers the interface between medicine and anthropology in terms of both human biology and society. The course develops concepts of health as effective adaptation to environmental stresses, including infectious disease, nutritional stress, and psychosomatic illness, among others. It traces the history of health and disease in human society from hunter-gatherers to modern urban, industrial communities, and examines the way in which human populations have attempted to deal with various agents of disease. The course examines the diversity of human theories of disease causation, and explores the role of modern medicine in effective health care delivery to persons of different cultural and ethnic backgrounds. Prerequisite: ANT 101 or permission of instructor.

Cr 3.
ANT 303 Food and Nutrition: An Anthropological Perspective
The purpose of this course is to examine the relationship between human population and their subsistence base, as a part of the larger study of human ecology. Although the funda-
mental purpose of the course is to understand prehistoric human diets, much attention will be given to examining dietary variation in modern human societies in order to gain insights into past societies. Tothat end, biological and demographic as well as cultural adaptations to different dietary regimes will be analyzed. Various human subsistence types will be examined (hunting and gathering, horticulture, pastoralism, etc.), and detailed attention will be given to methods for reconstructing prehistoric diets. Although previous anthropological and/or biological background may be useful, neither are required for mastering the concepts developed in this course.

Cr 3.

## ANT 305 Models in Archaeology

Using archaeological data, archaeological anthropology tests a wide range of hypotheses about human society. The introduction of the hypothesis testing approach into archaeology is the result of recent expansions in theory and methodology. The literature discussing those theoretical and methodological developments will be critically evaluated by the student. Special attention will be given to reconstruction of prehistoric subsistence and
settlement, and application of theory to public (conservation) archaeology. Prerequisite: ANT 103.

Cr 3.
ANT 306 Archaeological Laboratory Analysis
Students will be introduced to the analysis of materials collected on an archaeological site. Their work will be centered around the results of previous summers' archaeological excavations. Research projects will be associated with the same materials. Lecture material will center around environmental archaeology, with special attention given to topics such as faunal analysis. This course may be repeated up to twice with the permission of the instructor. Prerequisite: ANT 103.

Cr 4.

## ANT 450 Topics in Anthropology

This course is designed to undertake detailed, in-depth analysis of important topics and issues in such subfields of anthropology as sociocultural anthropology, biological anthropology and archaeology. Topics vary from semester to semester. Research papers are required. Prerequisite: junior standing or permission of instructor.

Сг 3.

## Geography

GEO 101 Principles of Geography
This course applies a problem-solving approach to the learning of basic geographic skills and concepts. Cultural factors are emphasized in presenting man/environment relationships as seen from the geographer's point of view. The course is a prerequisite for most upper-level geography courses and required for all majors concentrating in geography. It also provides models and concepts useful in many other disciplines. Offered each semester.

Cr 3.

## GEO 102 Physical Geography

This course examines the interrelationships between people and the physical environment. Climate, soil, vegetation, landforms, water and mineral resources are the topics which are covered in this introductory course. This course is required for all majors concentrating in geography. Offered each year.

Сr 3.

## GEO 102L Physical Geography Laboratory

Laboratory exercises acquaint the student with the materials, methods, and data with which the physical geographer works. Numerical data, climate and topograpic maps, and other forms of field data are employed to solve practical problems of human interaction with the physical environment. Co-requisite: GEO 102.

Crl.

## GEO 104 Cartography I

Mapping the landscape: principles of cartographic design. This is an introductory course in cartography focused on developing basic mapping and graphic communication skills essential to a wide variety of disciplines. The course will be flexible and adjusted to individual needs. Familiarization with basic charting technology and cartographic tools will be included. This course is required for all majors concentrating in geography. Offered each year.

Cr 3.

## GEO 120 Geography of Maine

This course will examine Maine as a geographic region. Physical and cultural attributes of the state will be analyzed. Political, economic and demographic factors will be emphasized in viewing the assets and problems of the Maine environment, and in planning Maine's future. No prerequisites. Offered each semester.

Cr 3.

## GEO 201 Cultural Geography

This course revolves around such components of culture as religion, art, music, settlement, economy type and their relation to one another. Concepts include spread, integration and landscapes of culture. A problem oriented discussion format is used to relate the ideas of other cultures with our own. Prerequisite: GEO 101. This course is required
for all majors concentrating in geography. Offered each year.

Cr 3.
GEO 204 Advanced Cartography (Cartography II)
This course is intended to build upon the basic cartographic skills introduced in GEO 104 and to develop new, more advanced skills in cartographic design and communication. The course will be tailored around individual student's needs and interests, and will include fundamental aspects and use of major types of map projections, statistical mapping, landform representation, and mapping point, volume and linear data. Prerequisite: GEO 104 or permission of instructor. Offered each year.

Cr 3.

## GEO 205 Air Photo Interpretation

Deals with the earth as perceived from the air and space. Hands-on analysis of various types of imagery includes basic photogrammetry plus air photo and satellite remote sensing interpretation. Applications to land use planning, archaeology, geology and military science are among the topics covered. Recommended as a companion course to Cartography 204. Offered each year. Cr 3.

GEO 206 Field Camp in Geography (also Farmington GEO 206)
This system-wide offering brings students and teachers of several campuses together to participate in a geographic field experience of regional focus. A University of Maine system host campus is selected on a rotating basis and an appropriate theme developed to integrate the field studies in time and space. Various methods of geographic field analysis, mapping and site interpretation are employed. Recommended for all majors concentrating in geography. No prerequisite. Cr 3.
GEO209 Introduction to Land Use Planning This course offers an overview of man/land relationships as they influence contemporary patterns of settlement and use of the land. It will discuss the logic of a planning process as a method of decision making, the formulation of goals and evaluation of alternative courses of action, standards and requirements for specific planning objectives (such as land use, energy, recreation, transportation), and the place of the planning function in government and the role of citizens and private groups. Introduction to basic planning tools and techniques including PERT, aerial pho-
tography, and methods of land inventory and classification will be presented. No prerequisite. Offered each year.

Cr 3.
GEO 210 Planning Maine Communities: Current Issues and Directions
This course will examine the issues facing Maine communities such as providing affordable housing, maintaining and improving the community's physical facilities such as streets, sewers, playgrounds, etc., disposing of solid and hazardous wastes, stimulating jobs and economic development, providing adequate transportation facilities, and preserving Maine's environment and lifestyle in the face of growth. It will also address how these issues can be addressed through the use of the planning process and sound planning techniques. Offered each year. Cr 3.

## GEO 303 Economic Geography

Economic Geography presents an examination of classes of economic activities and explains the reasons for their location. There are two major objectives: to make available to the student the skills which allow him to interpret and understand the present economic landscapes, and to critically evaluate the factors and trends which anticipate the future. Prerequisite: GEO 101 or ANT 101 or permission of instructor. Offered each year.

Cr 3.

## GEO 401 Food and Hunger

The course will examine agricultural systems in different parts of the world in terms of productivity, trade, economy and ecology. Physical and cultural inputs will be considered for each system. Trends and problems within the United States will be examined, with special emphasis given to the region of New England and the state of Maine. Prerequisite: GEO 101, ANT 101, or ANT 102 or permission of instructor. Offered every 2 years. $\quad$ Cr 3.

## GEO 402 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: GEO 101 or permission of instructor. Offered every 2 years.

Cr 3.

# Geosciences 

Chair of the Department: Irwin D. Novak, 112a Bailey Hall, Gorham Associate Professors: Ayers, Novak, Pendleton, Pollock; Assistant Professor: Swanson

## Programs and Requirements

Courses offered by the Department of Geosciences are grouped under the following headings: Astronomy; Earth Science (including Meteorology and Oceanography); Geology; Physical Science.

Degree programs in earth science and geology are offered in the College of Arts and Sciences. A student majoring in earth science or geology must achieve a 2.0 grade point average and no Ds in the major course.

## The Earth Science Programs

Two four-year programs are offered in the department. The first is a geology major and is available for those students intending to go to graduate school or to pursue a professional career in geology. The second, the earth science major, is designed so that upon completion a student may enter graduate school, or seek work in conservation, state and federal parks and planning agencies, and in industry. The Department is considering eliminating the earth science major; consult the department chair.

Geology or 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 earth sciences.

## Bachelor of Arts in Geology

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 71 .

Chemistry and Physics
CHY 113, $114 \quad$ Principles of Chemistry I
CHY 115, 116 Principles of Chemistry II
PHY 121-122 General Physics I

AND
PHY 123, 124

General Physics II
Mathematics
MAT 120 Introduction to Statistics
MAT $152 \quad$ Calculus A

It is recommended that freshmen in the geology major who lack at least two years of high school algebra and a semester each of geometry and trigonometry, take MAT 140, Precalculus Mathematics.

Geology

| GEY | 111,112 | Physical Geology |
| :--- | :--- | :--- |
| GEY | 113,114 | Historical Geology |
| GEY | 202 | Geomorphology |
| GEY | 203 | Mineralogy |
| GEY | 204 | Optical Mineralogy |
| GEY | 206 | Paleontology |
| GEY | 301 | Structural Geology |
| GEY | 302 | Sedimentology |
| GEY | 303 | Igneous and Metamorphic Petrology |
| GEY | 491,492 | Senior Thesis in Geology |
|  | OR |  |
| GEY | 498 | Independent Study in Geology |
| GEY | 495 | Geology Serninar |
| GEY | 496 | Special Topics in Geology |

Elective Courses: In addition to those courses listed above students are required to take six credit hours from the remaining electives.

| GEY | 205 | Geological Oceanography (also OCN 205) |
| :--- | :--- | :--- |
| GEY | 304 | Sedimentary Rocks |
| GEY | 310 | Glacial and Pleistocene Geology |
| GEY | 350 | Geological Field Methods |
| GEY | 401 | Advanced Petrology |
| GEY | 402 | Ore Deposits |
| GEY | 405 | Tectonics |

Students planning to attend graduate school are strongly recommended to include a course(s) in computer science, languages, and additional courses in mathematics and chemistry.
To be retained in the geology major program, students are required to maintain a minimum grade point average (GPA) of 2.0 in geology courses.

## Minor in Geology

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 20.

Required courses: GEY 111/112; GEY 113/114; GEY 203; GEY 301; GEY 202, or GEY 302.

## Bachelor of Artsin Earth Science

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 72.

| GEY | 111,112 | Physical Geology |
| :--- | :--- | :--- |
| GEY | 113,114 | Historical Geology |
| CHY | 113,114 | Principles of Chemistry I |
|  | OR |  |
| CHY | 115,116 | Principles of Chemistry II |
| PHY | 121,122 | General Physics |
| AST | 100 | Astronomy |
| MET | 100 | Meteorology |
| OCE | 100 | Oceanography |

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

Of the following courses, Arts and Sciences majors are required to take 29-30 credits, including at least 15 credits of 200 level and 9 credits of 300 level and PSC 498, Independent Study.

| AST | 103 | Astronomy: Experiments and Activities |
| :--- | :--- | :--- |
| AST | 210 | Observational Astronomy |
| EAS | 110 | Environmental Science |
| GEY | 116 | Environmental Geology |
| GEY | 202 | Geomorphology |
| GEY | 203 | Mineralogy |
| GEY | 205 | Geological Oceanography (also OCE 205) |
| GEY | 206 | Paleontology |
| GEY | 301 | Structural Geology |
| GEY | 302 | Sedimentology |
| GEY | 310 | Glacial and Pleistocene |
| OCE | 101 | Oceanography Lab |
| PSC | 498 | Independent Study |

## Astronomy

AST 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. Optional planetarium sessions and optional evening observations with telescopes are included. No
prerequisites. Offered fall and spring semesters. Cr 3.

## AST 103 Activities and Experiments

A one-credit course meeting weekly for two hours. May be taken concur rently with AST 100 to fulfill requirements for a science laboratory experience. Includes a study of the moon's orbit, Earth's orbital motion, proper
motions of stars, spectral classification, rotation of Saturn's rings, the Crab Nebula, variable stars, pulsars, and Hubble's law. Prerequisite: AST 100. Offered fall and spring semesters.

Crl.

## AST 105 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 coordi-
nate systems. No prerequisites. Offered fall and spring semesters.

Cr 3.

## AST 210 Observational Astronomy

Star charts, atlases, binoculars, cameras and telescopes are used to make observations of constellations, sun-spot activity, the moon, the planets and their satellites, star clusters, nebulae, double and variable stars. Prerequisite: AST 100 or equivalent. Fall semester only.

Cr 3.

## Earth Science

## EAS 110 Environmental Science

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

Cr 3.

## EAS 140 Energy, Man and Environment

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

Cr 3.

## EAS 160 Soil Science

An introductory course delving into the science of soil development, soil classification and soil use. The course is intended to meet the needs of beginning as well as experienced students in the earth sciences and related fields. Topics considered are soil make-up and morphology, soil chemical and physical properties, soil genesis, soil organic matter, soil mineralogy, soil ecology land use and Maine soils. Three-hour lecture, two-hour lab. Prerequisites: Physical Geology or permission of the instructor.

Cr 4.

## EAS 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.

Cr 3.

## EAS 260 Soil Formation and Classifications

The course delves into the macromorphology and micromorphology of the soil body, as well as the overall soil formation processes. Soil Formation and Classifications studies the
reasoning behind soil development and soil diversification. Major problem features such as: mottling, pans, organic fraction, clay minerals, etc., are studied in detail. The second portion of the course studies the 7th approximation and the overall world-wide systems for classifying pedons (soil bodies) as a useable, necessary art. Three hours lecture, two hours lab. Prerequisite: EAS 160, one semester of chemistry or permission of the instructor.

Cr 4.
EAS 300-301, 400-401 Cooperative Education in Earth Sciences
The student has the opportunity to relate academic knowledge to practical experience in a job situation. The University makes arrangements with certain institutions, businesses, and industries to employ qualified students for specific jobs for a set time period. The student's work is ordinarily in a related field and the work experiences increase in difficulty and responsibility as the student progresses through the sequence of courses. The experiences are approved on a case-bycase basis by the department. Evaluation is done through a written report done by the student together with the employer and a faculty supervisor. Prerequisite: junior class standing and a major in earth science. Each semester students may take each course only once.

Cr 1-5.

## MET 100 Meteorology

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.

Cr 3.
OCE 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.

Cr 3.
OCE 101 Oceanographic Laboratory
A laboratory course in which the student is
introduced to some of the techniques and technical processes involved in oceanic measurements and data reduction. Prerequisite: OCE 100 which may be taken concurrently. One two-hour laboratory session each week.

Crl.
OCE 205 Geological Oceanography (also GEY 205)

## Geology

## GEY 111 Physical Geology

A study of the ever-changing earth by wind, water, volcanism, crustal movement, and glaciation. Three hours of lecture. Each fall and spring. GEY 111 may be taken without GEY 112.

Cr 3.
GEY 112 Physical Geology Lab
Identification of common rocks and minerals, introduction to topographic maps, and development of the processes covered in lecture; field trips when weather permits. Each fall and spring. To be taken concurrently with GEY 111. Lab two hours. Cr 1.

## GEY 113 Historical Geology

Study of the earth's history in terms of physical, chemical and biological change from its origin to the present time, stressing the methods of determining chronology and conditions through fossils and structural characteristics. Prerequisites: GEY 111, 112. Two hours of lecture.

Cr 4.

## GEY 114 Historical Geology Lab

A study of rocks, minerals and fossils to determine the geological conditions at some ancient time. Introduction to paleogeographic and geologic maps. Field trips. To be taken concurrently with GEY 113. Three hours. Each spring.

Cr 0 .

## GEY 116 Environmental Geology

Application of the science of geology to environmental problems resulting from man's intense use of the earth and its natural resources. Prerequisites: GEY 111, 112 or permission of the instructor. Two 75 -minute lecture sessions. One two-hour lab. Cr 4.
GEY 202 Geomorphology (Also GEO 202)
Description and interpretation of landform development in terms of geologic structure, process, and stage. One, possibly two, weekend field trips. Prerequisite: GEY 113, 114. Two hours lecture. Two hours lab. Fall semester.

Cr 4.

## GEY 203 Mineralogy

An introduction to crystallography and a study of the physical properties and chemical structures of common rock-forming minerals. Laboratory analysis is an important part of

The 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: GEY 111, 112 or OCE 100 or permission of the instructor. Three hours lecture. Fall semester. Cr 3.
the course. Three hours lecture. Four hours lab. Prerequisite: GEY 111, 112. CHY 113, 114 (may be taken concurrently). Fall semester. Cr 4.

## GEY 204 Optical Mineralogy

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

Cr 4.
GEY 205 Geological Oceanography (Also OCE 205)
The origin and structure of the continental shelves and ocean basins. Coastal and oceanic processes; geomorphic development of the marine environment. Prerequisite: GEY 111, 112 or OCE 100 or permission of the instructor. Threehourslecture. Fall semester.

Сг 3.

## GEY 206 Paleontology

A description and classification of the important phyla of the fossil invertebrates and a survey of their use in brostratigraphic, evolutionary, and paleoecologic studies. One weekend field trip. Prerequisites: GEY 113, 114. Two one-hour lectures and one two-hour lab per week. Each fall.

Cr 3.
GEY 301 Structural Geology
An introduction to the mechanics of rock deformation, faulting, jointing, top-bottom criteria, and metamorphic foliations. The lab includes problems in descriptive geometry, stereonets, the Brunton compass, geologic maps and cross sections, and analysis of polyphase folding. Prerequisites: GEY 111, 112 and GEY 113, 114. Field trips. Twohours lecture, one hour recitation, two hours lab.Cr 4.
GEY 302 Sedimentology
Principles of sedimentation, facies, nomenclature, and sedimentary processes and environments. Students will analyze common field problems associated with these areas. Prerequisite: GEY 203. GEY 202 recommen-
ded. Some weekend field trips. Two hours lecture, three hours lab. Spring semester.

Cr 4.
GEY 303 Igneous and Metamorphic Petrology
The study of the origin of igneous and metamorphic rocks. Topics include operational thermodynamics as applied to igneous and metamorphic rocks, crystallization of silicate systems, mineral equilibria and paragenesis. Laboratory studies include work with hand specimens and thin sections. One or more day or weekend field trips. Prerequisite: GEY 204. Two hours lecture, four hours laboratory. Fallsemester.

Cr 4.

## GEY 304 Sedimentary Rocks

A study of stratigraphic principles, facies, paleocurrents, and sedimentary basins. The petrology of the sedimentary rocks is considered from burial to the onset of very low grade metamorphism. A field trip of four or five days duration is required. Prerequisite: GEY 204. (May be taken concurrently). Three hours lecture, two hours laboratory. Offered spring semester.

Cr 4.
GEY 3IO 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. One, possibly two, weekend field trips. Prerequisite: GEY 202. Two hours lecture, two hours lab. Spring semester.

Cr 3 .

## GEY 350 Geological Field Methods

A course in geological field methods intended to introduce to the student the tools and practical techniques used in collecting, compiling, and analyzing geological data. Students will have assignments in the igneous/metamorphic and surficial terrain of southern coastal Maine and sedimentary and volcanic terrain in eastern coastal Maine. Summer. Five weeks. Prerequisites: GEY 111, 112 and GEY 113, 114. GEY 203, GEY 301. Recommended: GEY 302, GEY 303, GEY 202.

Cr 6.

## GEY 401 Advanced Petrology

The course expands upon inaterial covered in GEY 303 to include a rigorous discussion of thermodynamics and applications to petrology. Topics covered include chemical and experimental petrology, generation and evolution of magmas, physical conditions of metamorphism, geothermometry and geobarometry. Laboratory work stresses pe-
trology of selected igneous and metamorphic rock suites. One or more day or weekend field trips. Prerequisites: MAT 152, GEY 303. Offered spring semester even years or on demand. Two hours lecture, four hours lab.

Cr 4.
GEY 402 Ore Deposits
A study of the geologic setting and processes involved in the formation of the major types of epigenetic and syngenetic metalliferous ore deposits. Prerequisite: GEY 301, 303. (GEY 303 may be taken concurrently). Afternoon and weekend field trips. Three hours lecture.

Cr 3.

## GEY 405 Tectonics

Major topics include the nature of the earth's crust and interior, continental drift, seafloor spreading and plate tectonics. The evolution of mountain ranges, continents, and ocean basins will be studied on a global scale. Current articles in scientific journals will be discussed. Lab includes graphical and dynamicclay modeling of plate tectonic processes. Prerequisite: GEY 301 or 303 or permission of instructor. Three hours lecture. Cr 3.

## GEY 490/491 Senior Thesis

The Senior Thesis is designed for the senior level student to pursue independent research in geology. The thesis is designed to be a scholarly effort in culmination of the student's baccalaureate program.

Cr 3.

## GEY 495 Geology Seminar

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

Crl.

## GEY 496 Special Topics in Geology

A critical and in-depth investigation of one of various topics and issues in different areas of geology (e.g. petrology, paleontology, tectonics, geomorphology). Prerequisite: senior standing. Each spring. Crl.

## GEY 498 Independent Study in Geology

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

Cr 1-3.

PSC 498 Independent Study in the Physical Sciences

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

## History

Chair of the Department: Eugene P.A. Schleh, 300 Bailey Hall, Gorham Professors: Cole, Eastman, Hunt, Schleh; Associate Professors: Albee, Bibber, Connick, Dietrich, Padula, Ventresco, Whitmore

History remains a venerable and enduring academic discipline because of the nature of time and the human need to gain perspective and direction by recovering a sense of the past. To do this requires the techniques of collecting, evaluating, organizing, and interpreting historical evidence. The history curriculum offers students the opportunity to learn the historian's craft through lectures, discussions, research, and writing.

History is one of the classic liberal arts disciplines that prepares students for a full and satisfying life as well as for careers in business, government, and nonprofit organizations. More particularly, history is widely recommended as preparation for graduate studies in business, law, and library science. Besides teaching, specific careers include service with federal, state, and local governments; archival and library work; social science research; editing of documents; publishing; writing and research for historical presentations on television and radio; and many others.

## Programs and Requirements

The Department of History offers a 39 credit-hour major which leads to a bachelor of arts in history; an 18 -hour minor for students majoring in other disciplines; and an honors program for outstanding majors, which offers students an opportunity to undertake an independent research project in their junior or senior year under the guidance of a member of the Department. In addition, the Department offers an exchange program with King Alfred's College in Winchester, England, and an internship program in cooperation with area historical societies, museums, libraries, and other institutions. Departmental offices have information on all of these programs.

Majors are encouraged to select history electives that focus on a particular country, continent, or era, and to pick courses from other departments which complement this concentration. It is strongly recommended that majors, especially those expecting to undertake graduate study, acquire proficiency in a foreign language.

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. Unusually well-prepared entering students may, upon passing an examination, gain exemption from any of the required courses. College Level Equivalency Program (CLEP) examinations are available in Western Civilization and United States history, and a department examination has been prepared for HTY 200 Reference, Research and Report Writing. See the Department chair for details. Majors and minors are reminded that, in addition to Department requirements, they must also meet those of the University Core curriculum.

Other courses in the College of Arts and Sciences have historical interest. Although they do not count for history credit, the major may wish to take some of them as supplementary electives.

## Bachelorof Arts in History

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 39.

European and American survey courses
HTY 101 Western Civilization I
HTY 102 Western Civilization II
HTY 131 United States History to 1877
HTY 132 United States History Since 1877
Third World survey courses (select two)
HTY 161 African History to Partition
HTY 162 African History Since Partition
HTY 171 Traditional East Asia
HTY 172 Modern East Asia
HTY 181 Latin America I
HTY 182 Latin America II
Research methods course
HTY 200 Reference, Research and Report Writing
Elective advanced history courses
Select six 200-400 level courses in consultation with your major advisor.

## Minor in History

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 18.

Students majoring in CAS disciplines who desire a concentration in history may develop an 18 credit-hour minor. The program of study must focus on an area, a chronological period, or methodological approach. The program must be developed in cooperation with a member of the history faculty, include the two-semester survey sequence appropriate to the area, period, or topic, and be approved by the chair of the department.

Requirements: appropriate two-semester șurvey sequence (approved by the advisor and department chair); and elective advanced history courses (four courses approved by advisor and department chair).

## HTY 101 Western Civilization I

A basic survey and introduction to the heritage of Western man from ancient to earlymodern times. Particular attention is given to the ancient civilizations of Egypt, Greece, and Rome. Medieval civilization is explored with a focus on the institutions it bequeathed to the modern world. The Renaissance and Reformation and the rise of the great nationstates are studied. Throughout the course important individuals are considered such as Alexander the Great, Caesar, Charlemagne, Michelangelo, and Elizabeth I. The course also introduces students to historical method. Cr 3.

## HTY 102 Western Civilization II

A basic survey and introduction to the heritage of Western man from early modern times to the atomic age. Particular attention is given to the Enlightenment, the French Revolution, the rise of the industrial era, the growth of nationalism, and the World Wars. Personalities such as those of Napoleon, Hitler, and Stalin are studied. The course also introduces students to historical method.

Cr 3.
*HTY 131 United States History to 1877
A basic survey and introduction to the field of American history, covering the political, social, and economic development of the United States through Reconstruction. Cr 3.

* HTY 132 United States History Since 1877

The course is a continuation of HTY 131. A survey of American political, social, and economic development since about 1877 . Cr 3.
*HTY 133 American History I
A survey of United States history which examines institutional development and change in major areas of American society and culture before 1900 by means of lecture case studies, a variety of paperbound readings, films, slides, music, and small-group discussions. (This course may not be used to fulfill requirements for major, minor, or concentration as of September, 1976).

Cr 3.

## *HTY 134 American History II

A continuation of HTY 133 which examines institutional change and development in modern American urban industrial society and culture since 1900. (This course may not be used to fulfill requirements for major,
minor, or concentration as of September, 1976).

Сг 3.
*HTY 131-132 and HTY 133-134 are both introductory courses, although their organization and emphasis differ. History majors may take HTY 133-134 only for general elective credit.

## HTY 161 Introduction to African History to Partition

A survey of African history from early migrations to the beginning of the Colonial era. The approach is both regional, stressing selected countries representative of their regions, and topical, cutting across political boundaries. Topics include the states of the Sudan, city states of East Africa, Islam, the slave trade, exploration, and partition. Cr 3.
HTY 162 Introduction to African History Since Partition
A survey of the Colonial era, the transformation of African societies, the rise of nationalist movements, wars of liberation, and early years of the new era of independence. Cr 3.

## HTY 163 Africa Through Its Literature

An examination of how African history has been portrayed through novels. Both historical re-creation novels and books reflective of the societies which produced them are used, with particular emphasis on English-speaking Africa. (Offered every other year.) Cr 3.

## HTY 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.

Cr 3.

## HTY 172 Modern East Asia

China and Japan since about 1700, emphasizing contrasting moves toward modernization in two traditional societies.

Cr 3.
HTY 181 Latin America I
This survey outlines the nature of the preColumbian Indian civilizations, their conquest by the European powers, and the creation of the Hispanic and Portuguese empires in America.

Cr 3.

## HTY 182 Latin America II

This survey begins with the shattering of Iberian colonialism, and moves rapidly into the 20th century. Special attention is given to Mexico, Brazil, Argentina, and Cuba, and their varying solutions to the problem of national development.

Cr 3.
HTY 200 Reference, Research and Report Writing
An introduction to research and writing, designed to prepare undergraduates for the requirements of upper-level courses in history and the social sciences with emphasis on
practical methods of utilizing a library, locating materials, taking and organizing notes, and writing and rewriting research papers and reports.

Cr 3.

## HTY 231 Ancient History I

The political, social, and economic history of the civilizations of the ancient Mediterranean world, with Egypt, the Near East, and Greece being studied. (Offered occasionally.)

Сг 3.
HTY 232 Ancient History II
A continuation of HTY 231 concentrating upon an examination of ancient Rome. (Offered occasionally.)

Сг 3.
HTY 235 Medieval Civilization
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: HTY 101 or permission.

Cr 3.

## HTY 241 Renaissance and Reformation

A study of the transformation of European society from the world of the Renaissance to the crisis of the Reformation. The course will concentrate on the development of Italian Humanism and its influence on Northern Europe. The rise of the Reformation will be examined through the personalities of Martin Luther and John Calvin and the intense feelings which engendered the religious wars and the Counter Reformation. Prerequisite: HTY 101 or permission.

Cr 3.

## HTY 242 French Revolution and Napoleon

The course takes the French Revolution as a climax of major intellectual, political, and social trends in eighteenth-century Europe. Thorough coverage is given to the Old Regime, the Enlightenment, and the influence of the American Revolution. There is indepth analysis of the coming, course, and outcome of the French Revolution itself, and its impact outside France. The Napoleonic era is handled as the culminating phase of the revolution and as a major influence on nine-teenth-century Europe. Prerequisite: HTY 102 or permission.

Сг 3.
HTY 243 Europe at the Turn of the Century (1871-1913)
This course concentrates on the culture and polities of .us fin de siecle Europe. The preWorld War I society will be viewed from a variety of perspectives, and will focus on various individuals who helped shape the times. Of particular interest will be the views and impact of Marx, Darwin, and Wagner within the framework of the Industrial Revolution and imperialism. Prerequisite: HTY 102 or permission.

Сг 3.

HTY 244 20th-Century Europe
An intensive survey of European developments in the 20th century. The course deals with such intellectual trends as the revolt against positivism, Freudian psychology, expressionism and surrealism in the arts, as well as with such phenomena as totalitarianism in its various forms (Nazism, Fascism, Soviet Communism). World Wars I and II and the post-1945 evolution of Europe are thoroughly analyzed. Prerequisite: HTY 102 or permission.

Cr 3.
HTY 256 World Wars I and II: European War and Diplomacy
A study of the origins, course, and consequences of the First and Second World Wars. The questions of inevitability and responsibility, the nature of total war, the workings of alliances, the effect of the military upon politics, the wisdom of the peace settlements, and the impact of war upon European society are among the subjects to be considered. Prerequisite: HTY 102, 132 or permission. Cr 3.

## HTY 261 History of England

A survey of England from Anglo-Saxon times to the beginning of the 20th century, with emphasis on the nature of English monarchy, the development of political institutions, and evolving constitutionalism. Particular attention is given to broad movements such as the Reformation, the Industrial Revolution, and Imperialism. Prerequisite: HTY 101 or permission.

Сr 3.

## HTY 263 Britain in the 20th Century

A study including the Victorian and Edwardian Age, Imperialism, the Monarchy, the Depression, appeasement, the English people in two World Wars, the question of Ireland, and the leadership of Lloyd George and Churchill. Prerequisite: HTY 102 or permission.

Cr 3.

## HTY 265 Italy, Unification to World War I

A political, intellectual, diplomatic, and social history of Italy from the Risorgimento to theeve of World War I. Considerable emphasis will be given to the role of the Papacy in Italian affairs. Majorliterary figures to be examined will include Foscolo, Leopardi, Manzoni, Verga, and Carducci. Prerequisites: HTY 101 and HTY 102 or permission. Cr 3.

## HTY 266 Fascist Italy

This course examines the development, practice, and theory of Fascism. Considerable attention will be centered on Benito Mussolini and his relationship to the Fascist Party, the people, the Catholic Church, and foreign affairs. Italian culture in the fascist era will be explored through literature and the arts. Prerequisite: HTY 102 or permission. Cr 3.

HTY 272 Germany To 1945
A study of the formation of the German Empire, the rise of a powerful industrial state, Weltpolitik and defeat in World War I, the Weimar Republic, Nazism and the Third Reich, Germany in World War II, and the partition of Germany in 1945. The course analyzes nationalism and examines cultural, social, and economic factors which help clarify Germany's role in the modern world. Prerequisite: HTY 102 or permission.

Cr 3.

## HTY 273 Germany Since Hitler

After intensive analysis of the impact of the Nazi era and World War II on Germans, the course analyzes the two German states in terms of: (a) their emergence, 1945-1949, and effects of the Cold War and occupation on each; (b) their political, economic, and social development since 1949; (c) the role of the Federal Republic of Germany in relation to the West and the role of the German Democratic Republic in the Communist bloc; (d) their relations with each other; (e) intellectual and cultural developments in both. Prerequisites: six hours of European history or international relations. HTY 272 desirable.

Cr 3.

## HTY 275 Russia to 1861

A survey of political, social, cultural, and economic history of the Russiaan people to the emancipation of the serfs. The course surveys geographic factors, influence of Byzantine civilization, the impact of invasions, and the development of Russia's unique problems. Prerequisite: one history survey or permission.

Cr 3.

## HTY 276 Russia Since 1861

A survey of political, social, cultural, and economic history from the emancipation of the serfs to today. The course deals with Tsarist autocracy and its weaknesses, pressures for reform, the intelligentsia, revolutionary parties, the Bolshevik Revolution, and Communist Russia since 1917. Prerequisite: one history survey or permission.

Cr 3.

## HTY 290 China and Cuba Under Commu-

 nismThis is a course in comparative history, focusing on developments in China and Cuba since the assumption of power by Communist regimes in 1949 and 1959 respectively. The principal topics dealt with include political events, the organization of power, economic and social development, and relations with the outside world.

Cr 3.

## HTY 300 History Internship

Professional experience in one of a variety of positions in public and private institutions which utilize the knowledge and research skills of historians. Students work one day per week, keep a journal, write an evaluation,
and are visited on the job by a faculty member. Open to selected students; see department chair for details. Graded pass/fail, so does not count for major credit. Can be taken twice.

Сг 3.

## HTY 301 American Colonial History

The first half of the semester is devoted to the discovery, exploration, and colonization of the American colonies. The second half concentrates on the social and political development of these colonies, touching upon various aspects of colonial life and emphasizing the growing maturation of society. Prerequisite: HTY 131 or permission. (Offered every other year.)

Cr 3.

## HTY 302 The American Revolution

A study of the 1763-1789 period, stressing the breakdown of Anglo-American relations; American independence and its ideological underpinnings; the Revolutionary War; the postwar struggle to strike a balance between too much government and too little; and the drafting and ratification of the U.S. Constitution. Prerequisite: HTY 131 or permission. (Offered every other year.)

Cr 3.

## HTY 305 Hamilton and Jefferson

A study of Hamilton and Jefferson including biographical information and the JeffersonHamilton political dichotomy and its subsequent influence. Following this, the course will present a general analysis of social, intellectual, political, economic, and diplomatic problems facing the "New Nation" between 1789-1815. Prerequisite: HTY 131 or permission. (Offered every other year.) Cr 3.

## HTY 306 The Age of Jackson, 1815-1850

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 sec-tional-slavery issue. Prerequisite: HTY 131 or permission. (Offered everyother year.) Cr 3.

## HTY 307 Civil War and Reconstruction

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: HTY 131 or permission.

Сг 3.
HTY 308 The Gilded Age in America, 18691898
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: HTY 132 or permission.

Cr 3.
HTY 309 Early 20th-Century America, 1898-1938
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: HTY 132 or permission.

Cr 3.
HTY 310 America Since 1938
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: HTY 132 or permission.

Cr 3.
HTY 321 History of Maine
A survey of Maine's social, economic, and political life from exploration and early settlement to the present.

Cr 3.
HTY 325 History of the American Frontier
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: HTY 131 and 132 or permission. (Offered every other year.)

Cr 3.

## HTY 331 History of Black Americans

An examination of the interaction of black people with American social, political, cultural, and economic institutions. Major topics include the African heritage, components of slavery, abolitionism, segregation, programs of race advancement, and the modern search for identity. Prerequisites: HTY 131 and 132 or permission.

Cr 3.

## HTY 333 The American Home

A survey of U.S. domestic architecture, considering the influence of changing tastes, as well as climate and technology, on the buildings in which Americans have lived. Attention will be given to the historical styles as illustrated in the homes of the well-to-do, but attempts also will be made to look carefully at where and how "the people" lived. The approach will include slide-illustrated lectures and on-the-spot observation. Prerequisite: six hours of U.S. history.

Сг 3.

## HTY 335 American Urban History

A survey of the American city: social, political, intellectual, and cultural components;
the changing nature of "community"; the course of urban development; and the emergence of urban life styles. Special attention is focused on the population movement to the city; the development of slums, ghettoes, and suburbs; the growth of municipal institutions and services; the relationship of city dwellers and government; and the emergence of "Megalopolis." Prerequisite: HTY 131 or permission. (Offered every other year.) Cr 3.
HTY 337 American Economic and Business History, 1607-1860
Economic and business developments in the United States from the first settlements to the Civil War. The course covers the British mercantile system, the colonial economy, the transportation revolution, the Southern plantation system, and the beginnings of American industrialization. Prerequisite: HTY 131 or permission. (Offered occasionally.)

Cr 3.
HTY 338 American Economic and Business History Since 1860
Economic and business developments in the United States from the Civil War to the present. The course covers the growth of a national market and distribution system, the revolution in agriculture, the rise of big business, the organization of labor, and the growing involvement of the federal government in business and the economy. Prerequisites: HTY 132 or permission. (Offered occasionally.)

Сг 3 .
HTY 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. The course examines major principles, assumptions, and values; the relation of American thought to class structure, ethnic and racial associations, mobility, and immigration; and the relation of American thought to contemporary intellectual patterns in the Western world. Prerequisite: HTY 131 or permission. (Offered every other year.) Cr 3.
HTY 342 American Social and Intellectual History II
A continuation of HTY 341 from 1865 to the present. Prerequisite: HTY 132 or permission. (Offered every other year.)

Cr 3.

## HTY 343 Diplomatic History of the United States I <br> This course covers the development of key United States foreign policies from the Revolution to the Spanish-American War. Prerequisite: HTY 131 or permission. <br> Cr 3.

HTY 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: HTY 132 or permission.

Cr 3.
HTY 347 Viewpoints in American History
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. (Offered occasionally.) Cr 3.
HTY 348 A History of Religion in America
A history of religion in American society from the colonial era to the present, examining theology, organization, leaders, critics, and the religious contribution to the American heritage. Prerequisites: HTY 131 and 132 or permission.

Cr 3.
HTY 350 CIA: U.S. Foreign Intelligence Since Pearl Harbor
This course traces the rise of the U.S. intelligence empire with case studies of its information gathering and covert action activities, as well as a consideration of the moral questions and political dilemmas, short and long term, posed by these operations. In effect, it is an examination of the underside of recent U.S. foreign relations. Prerequisite: six hours of history or social science or permission. Cr 3.
HTY 362 Contemporary Africa
An interdisciplinary seminar on contemporary Africa examining literature and the arts, social change, development and adaption in African politics, economic development, race relations, and international politics. (Offered every other year.) Cr 3.
HTY371 The United States and Asia
A history of the United States' interests in the Far East from 1789 to the present, considering economic and social contacts as well as diplomatic. Prerequisites: HTY 131 and 132. HTY 172 strongly recommended. Cr 3.
HTY 373 History of Late Traditional China
Before the nineteenth century no Chinese doubted-and few outsiders who saw it disa-greed-that the "Middle Kingdom" was the greatest of the world's civilizations. No society was larger, had stronger ties to its past, or had contributed more to the development of human culture. This course will explore the institutions and values of China in the period from 800 to 1800 , and its relationships with other societies. Prerequisite: HTY 171 recommended.

Cr 3.

## HTY 374 History of Modern China

After dealing with the nature of Chinese society and institutions as they existed around 1800, the course will take up problems of modernization, imperialism, revolution, warlordism, Japanese aggression, civil war, and the present communist regime. Prerequisite: HTY 172 recommended. Cr 3.

## HTY 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: HTY 172 recommended.

Cr 3.

## HTY 377 Chinese Thought

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: HTY 171 recommended.

Cr 3.
HTY 381 Latin America and the United States
A survey of U.S.-Latin American relations with emphasis on the efforts of the U.S. Government and multi-national corporations to adjust to the growth of nationalism, state capitalism, and socialism in Latin America.

HTY 383 The Society and Culture of Latin America
This seminar seeks to examine, through the use of popular novels and films, the principal characteristics of Latin American culture. Such elements as the role of dictators and revolutionaries, of machismo and imperialism, and of great haciendas and folkloric religions will be considered.

Cr 3.
HTY 392 Problems in Contemporary History An analysis of a selected controversial and contemporary problem. The topic to be studied and the method of approaching it will be chosen jointly by interested students and the staff. Prerequisite: permission of the instructor. (Offered occasionally.)

Cr 3.

## HTY 394 Selected Topics in History

An analysis of a selected controversial historical problem. The topic to be studied and the method of approaching it will be chosen jointly by interested students and the staff. Prerequisite: permission of the instructor. (Offered occasionally.)

Cr 3.
HTY 410 The European Revolutionary Tradition Since 1789
A seminar analyzing modern European revolutions, revolutionary leadership, and the dynamics of revolution, including the role of the revolutionary crowd. Revolutions analyzed range from the French Revolution to the Bolshevik Revolution and include 20th-century Fascist revolutions. Open to seniors and others by permission. Prerequisite: at least six hours of European history or equivalent in unusual cases.

Cr 3.
HTY 412 Totalitarianism: Nazism and Soviet Communism
A seminar which seeks to analyze and understand the 20th-century phenomenon of totalitarianism by in-depth historical case studies of Nazism and Soviet Communism. Such topics as the leader (Hitler/Stalin), the party (Nazi/Communist), the enforcement operation (SS/NKVD), concentration camps and Gulag Archipelago, propaganda techniques and results, internal administrative organization, and war machines (Wehrmacht/Red Army) will be included. Open to juniors, seniors, and graduate students with background in 20th-century European history and political science.

Cr 3.
HTY 493 Independent Study Semester
This is the course designator for students who participate in the History Department's semester abroad exchange program with King Alfred's College in England.

Cr 12.

## HTY 498 Independent Study in History

To provide juniors and seniors who have demonstrated critical and analytical capability an opportunity to pursue a project independently, charting a course and exploring an area of interest within their major field, bearing upon it previous course experiences, and emerging with an intellectually sound, coherent synthesis reflecting a high caliber of performance. Prerequisite: permission.

Cr 1-3.
Other courses in the College of Arts and Sciences have historical interest. Although they do not count for history credit, the major may wish to take some of them as supplementary electives. A current list may be obtained from the history chairman.


## Mathematics

Chair of the Department: Maurice J. Chabot, 230 Science Building, Portland
Professors: Estes, Fish, Guay, Kratzer, Mainville, Rogers; Associate Professors: Brown, Chabot, Foster, Irish, MacDonald; Assistant Professor: Soychak

The Department of Mathematics offers a four-year program leading to a B.A. in mathematics. The Department also provides the mathematics major courses for a B.S. in education (see College of Education). All students are reminded that, in addition to meeting departmental requirements for a major, they must also meet the requirements of the school or college involved, as well as the University Core curriculum requirements.

## Bachelor of Arts in Mathematics

As a mathematics major, a student may select one of the three options described below. However, as a prerequisite to other courses, all majors are required to complete successfully the calculus sequence (MAT 152, 153, 252), a foundation course (MAT 290), and a computer science course (COS 160). Each student must have an accumulative grade point average of at least 2.0 in major courses before being considered for a baccalaureate degree in mathematics.

## Concentration I

The minimum number of credits (exclusive of the University's Core curriculum) required for this concentration: 39.

Mathematics majors intending to pursue graduate work should choose this concentration. Those intending to teach at the secondary level should choose this concentration or the area major described below. Prospective graduate students are urged to take Real Analysis I and II, Abstract Algebra, Topology, and one year of French or German; those interested in teaching should take Abstract Algebra, College Geometry, Probability and Statistics I. To be eligible for student teaching in secondary mathematics, a student must have completed 30 hours of mathematics courses having a second digit 5 or greater, with an accumulative grade point average of at least 2.0 in these courses and have successfully completed MED 345.
A. Successful completion of one of the courses listed in each of the following areas is required:

1) Algebra

MAT 382
Abstract Algebra
MAT 380
Linear Algebra
2) Analysis

MAT 352
MAT 354
Real Analysis I
MAT 355 Complex Analysis
MAT 490 Topology
3) Applied Mathematics

MAT 350 Differential Equations
MAT 362 Probability and Statistics I
MAT 364 Numerical Analysis
MAT 366 Linear Programming
MAT 460 Mathematical Modeling
MAT 461 Introduction to Operations Research
4) Geometry

MAT 370 College Geometry
MAT 372 Non-Euclidean Geometry
MAT 371 Projective Geometry
B. Successful completion of at least nine additional hours of approved mathematics courses with second digit 5 or greater.

## Concentration II

The minimum number of credits (exclusive of the University's Core curriculum) required for this concentration: 57.

Those majors intending to enter industry or other applied fields should seriously consider this concentration or Concentration III. Majors who plan to preparefor 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, Economics and Management.
A. Successful completion of:

| MAT | 350 | Differential Equations |
| :--- | :--- | :--- |
| MAT | 362 | Probability and Statistics I |
| MAT | 363 | Probability and Statistics II |
| MAT | 380 | Linear Algebra |
| MAT | 460 | Mathematical Modeling |
| B. Successful completion of two of the following: |  |  |
| MAT | 354 | Topics in Advanced Calculus |
| MAT | 364 | Numerical Analysis I |
| MAT | 366 | Linear Programming |
| MAT | 461 | Introduction to Operations Research |
| MAT | 492 | Graph Theory and Combinatorics |

C. Successful completion of at least 18 hours in allied disciplines, outside the Department, which utilize mathematical techniques. The particular program of courses must be approved in writing by the Department.

## Concentration III

The minimum number of credits (exclusive of the University's Core curriculum) required for this concentration: 48 .
This concentration is designed for those students who wish to combine mathematical expertise with a knowledge of computer science.
A. Successful completion of five of the following courses:

| MAT | 350 | Differential Equations |
| :--- | :--- | :--- |
| MAT | 354 | Topics in Advanced Calculus |
| MAT | 355 | Complex Analysis |
| MAT | 362 | Probability and Statistics I |
| MAT | 363 | Probability and Statistics II |
| MAT | 364 | Numerical Analysis |
| MAT | 366 | Linear Programming |
| MAT | 380 | Linear Algebra |
| MAT | 450 | Partial Differential Equations |
| MAT | 460 | Mathematical Modeling |
| MAT | 461 | Introduction to Operations Research |

B. Successful completion of five additional approved computer science courses with second digit 5 or higher.

## Minor in Mathematics

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 20 .
An accumulative grade point average of at least 2.0 in these courses must be maintained, and successful completion of the following courses: MAT 152; MAT 153; MAT 290; COS 160; plus two additional MAT courses with second digit 5 or greater.

## Mathematics and Computer Science for Education Majors

The Department of Mathematics, in cooperation with Department of Computer Science and the College of Education, offers an area major of 51 hours of mathematics and computer science courses for students majoring in secondary education; the program consists of the following courses.
I. Successful completion of the following:
MAT 152 Calculus A

MAT 153 Calculus B

| MAT | 252 | Calculus C |
| :--- | ---: | :--- |
| MAT | 290 | Foundations of Mathematics |
|  | OR |  |
| COS | 280 | Discrete Structures |
| COS | 160 | Structured Problem Solving |

II. Successful Completion of one course from each of the following areas:

Algebra
MAT 380 Linear Algebra

MAT
382 Abstract Algebra
Analysis
MAT 352 Real Analysis I
MAT 354 Topics in Advanced Calculus
MAT 355 Complex Analysis
MAT 490 Topology
Applied Mathematics
MAT 350 Differential Equations
MAT 362 Probability and Statistics I
MAT 364 Numerical Analysis I
Geometry
MAT 370 College Geometry
MAT 371 Projective Geometry
MAT 372 Non-Euclidean Geometry
III. Successful completion of five of the following computer science courses:

| COS | 161 | Algorithms in Programming |
| :--- | :--- | :--- |
| COS | 250 | Introduction to Computer Systems |
| COS | 355 | Computer Architecture |
| COS | 285 | Data Structures |
| COS | 360 | Concepts of Higher Level Programming Languages |
| COS | 370 | Topics in Computer Science |
| COS | 374 | Numerical Analysis I (not to be taken in addition |
|  |  | to MAT 364) |

IV. Successful completion of six additional hours of electives in mathematics or computerscience with second digit 5 or greater.

V . The following professional education courses:

| EDU | 100 | Exploring Teaching as a Profession |
| :--- | :--- | :--- |
| EDU | 200 | Foundations of Education |
| HRD | 333 | Human Growth and Development |
| MED | 345 | Teaching Mathematics in the Secondary School |
| EDU | 324 | Student Teaching |
| Electives |  |  |

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 MED 345.

It is also recommended that CSE 345 Teaching Computer Science in the Secondary School be taken as an elective in the completion of the overall 120 credits required for graduation.

## Recommended Courses for Non-majors

Students who desire an introductory course to satisfy the Quantitative Decision Making portion of the Basic Competence requirement of the Core curriculum should consider MAT 104. For students majoring in other disciplines, but wishing to develop competency in using mathematics, the following courses are recommended. Individual course descriptions should be consulted to determine prerequisites: MAT 109; MAT 110 (or MAT 152 and MAT 153 for greater depth in calculus); or MAT 120 (or MAT 211 and MAT 212 for greater depth in probability and statistics).

It is expected that students will possess and be able to operate a calculator with memory and with at least the operation of add, subtract, multiply, divide and square root if they enroll
in MAT 120, MAT 211 , MAT 362 , or MAT 363
*Note that MAT 010 and MAT 011 carry credit only toward the associate degree.

## MAT 009 Developmental Mathematics

The Math Lab is a course designed for students who need to review math fundamentals. Instrtuction takes into consideration the individual differences people have in learning. This course is offered in a self-pacing format with a great deal of individual assistance. All students are given a diagnostic test prior to enrollment to determine their basic skills. Credit earned in MAT 009 does not apply or accumulate for any degree program at the University of Southern Maine. Students may register for this course more than once.

Cr 3.
MAT 010 Elementary Algebra
The first course of a two-course sequence designed for students who are deficient in high school algebra. Topics covered include number systems, functions, graphs, the solution of equations, and the solution of problems with a business orientation. No prerequisites.

## MAT 011 Intermediate Algebra

Cr 3.
A continuation of MAT 010. Prerequisite: MAT 010 or one year of high school algebra.

Cr 3.

## MAT 100 College Algebra

The real number system, algebraic operations, sets, equations, inequalities and their graphs, functions and relations, quadratic functions, exponential and logarithmic functions, theory of equations, systems of equations, permutations, combinations, probability, sequences and series, matrices and determinants, and mathematical induction. Prerequisite: two years high school algebra.

Сг 3.

## MAT 101 Trigonometry

Functions of an acute angle, reference angles, graphs of trigonometric functions, identities and fundamental relations, trigonometric equations and inequalities, functions of the sum or difference of two angles, functions of a double angle, inverse trigonometric functions, trigonometry of a triangle, polar form of complex numbers. Prerequisite: two years of high school algebra.

Cr 3.

## MAT 102 Basic Technical Mathematics I

This course, beginning with a review of basic algebra, includes the real number system, metric and British systems of measurements, geometry, and a study of functions. Topics are related to technical applications. Preruisite: two years high school algebra and one year of geometry.

Cr 3.

## MAT 103 Basic Technical Mathematics II

A continuation of MAT 102 to include topics from geometry, determinants and matrices, analytic geometry, trigonometry and vector and polar coordinates. Topics are related to technical applications. Prerequisite: MAT 102 or permission of the instructor. Cr 3.

## MAT 104 Topics in Mathematics

This course is designed to give students (not majoring in mathematics or computer science) an understanding of some key ideas in contemporary mathematics. The material is chosen to develop an awareness of the utility of mathematics in life and to instill an appreciation of the scope and nature of mathematics. Topics will be selected from: sets, logic, graphs, geometry, counting methods, probability, statistics, game theory, growth and decay laws, matrices, and mathematical programming. Prerequisite: Two years of high school algebra and one year of geometry.

MAT 109 Linear Systems
An introduction to vectors, matrices, and linear systems of algebraic equations and linear programming. Prerequisites: two years of high school algebra and one year of geometry.

Cr 3.
MAT 110 Elementary Mathematical Analysis A unified treatment of the elementary functions of analysis; their analytical properties including derivatives, integrals, and series, introduction to multivariate calculus; applications. Prerequisites: two years of high school algebra and one year of geometry, and a passing grade on an algebra competency test which will be administered at the first class meeting.

Cr 3.
MAT 120 Introduction to Statistics
An introductory course including basic probability, random variables, and their distributions; estimation and hypothesis testing; regression and correlation. Prerequisite: two years of high school algebra.

Cr 3.
MAT 131 Number Systems for Elementary Teachers
This is the first course in a three-course sequence in mathematics recommended by the Committee on the Undergraduate Mathematics Program of the Mathematical Association of America for prospective primary and elementary teachers. Major emphasis is placed on an intuitive approach to the real number system and its subsystems. Prerequisites: two years of high school algebra and one year of geometry.

Cr 3.

## MAT 140 Pre-Calculus Mathematics

A brief review of elementary algebra followed by a study of the algebraic, exponential, logarithmic, and trigonometric functions. Prerequisites: two years of high school algebra and one year of geometry, and a passing grade on an algebra competency test which will be administered at the first class meeting.

Cr 3.
MAT 152 Calculus A
This is the first of a sequence of three basic calculus courses covering functions of one or
more variables, graphs, limits, derivatives, integrals, optimization, infinite series, vectors, and various applications. Calculus A provides an introduction to the differential and integral calculus of functions of one variable. Prerequisites: two years of high school algebra plus geometry and trigonometry, or MAT 140.

Cr 4.

## MAT 153 Calculus B

A continuation of Calculus A. Calculus B will usually include infinite series and an introduction to vectors. Prerequisite: MAT 152.

Cr 4.
MAT 211 Probability
Common probability laws and distributions of discrete and continuous random variables; matrix operations and applications to probability. Prerequisite: MAT 110 or MAT 152.

Cr 3.
MAT 212 Statistics
Sampling distributions; estimation; hypothesis testing; introduction to regression analysis and analysis of variance. Applications primarily in business and economics. Prerequisite: MAT 211.

Cr 3.
MAT 231 Algebra for Elementary Teachers
The second course in a three-course sequence in mathematics recommended by the Committee on the Undergraduate Mathematics Program of the Mathematical Association of America for prospective primary and elementary teachers. Emphasis is upon the properties of operations in several different algebraic systems. Equations are studied in finite systems as well as in conventional algebra. Prerequisite: MAT 131.

Cr 3.
MAT 232 Geometry for Elementary Teachers The third course in a three-course sequence in mathematics recommended by the Committee on the Undergraduate Mathematics Program of the Mathematical Association of America for prospective primary and elementary teachers. Emphasis is upon constructions, congruence, parallelism, and similarity. Direct and indirect methods of proof are studied but the main approach is intuitive. Prerequisite: MAT 131.

Cr 3.
MAT 233 Probability for Elementary Teachers
An introductory course in probability designed for the elementary and junior high teacher. The course content includes empirical probability through conditional probability, random variables and their distributions, including binomial and normal distributions. Prerequisite: MAT 131.

Cr 3.
MAT 235 History of Mathematics for Elementary Teachers
A history of certain topics in number theory, geometry, and elementary algebra. Prerequisite: MAT 131.

Cr 3.

MAT 252 Calculus C
Multivariate calculus and vector calculus. Prerequisite: MAT 153.

Cr 4.
MAT 290 Foundations of Mathernatics
Selected topics in set theory, symbolic logic, and methods of proofs needed in more advanced mathematics courses. Prerequisite: consent of the department.

Cr 3.
MAT 292 Theory of Numbers
Basic course in number theory, including such topics as divisibility properties of integers, prime numbers, congruences, multiplicative number theoretic functions, and continued fractions. Prerequisite: COS 280 or MAT 290.

Cr 3.
MAT 350 Differential Equations
A study of various methods for solving ordinary differential equations and initial value problems including transform, numerical, and series methods. Prerequisite: MAT 252.

Cr 3.

## MAT 352 Real Analysis I

Limits, continuity, differentiation and integration of functions of one or more real variables, infinite series, uniform convergence, and other selected topics. Prerequisites: MAT 252 , and COS 280 or MAT 290.

Cr 3.

## MAT 353 Real Analysis II

A continuation of Real Analysis I. Prerequisite: MAT 352.

Cr 3.
MAT 354 Topics in Advanced Calculus
Selected topics on multivariate functions, vectors transformations, line integrals, and surface integrals. Prerequisites: MAT 252, and COS 280 or MAT 290.

Cr 3.
MAT 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 mappings. Prerequisite: MAT 252 or permission of instructor.

Cr 3.

## MAT 362 Probability and Statistics I

Probability laws, random variables and distributions, estimation and hypothesis testing, regression, correlation, analysis of variance. Emphasis on applications. Prerequisite: MAT 153.

Cr 3 .
MAT 363 Probability and Statistics II
An analysis of some of the methods used in MAT 362. Topics include moment generating functions. Functions of random variables, limit theorems, principles of estimation and hypothesis testing. Additional topics in regression and non-parametric methods. Prerequisites: MAT 362 and MAT 252. Cr 3.

## MAT 364 Numerical Analysis I

A study of the theory and application of computational algorithms for interpolation, equation solving, matrix methods, integration; error analysis. Prerequisites: MAT 252, COS 160, and permission of instructor. Cr 3.

## MAT 366 Linear Programming

A study of matrix algebra applied to the problem of optimizing a linear function subject to linear inequality constraints, utilizing the simplex procedure. Prerequisite: COS 280 or MAT 290.

Cr 3.
MAT 370 College Geometry
Selected topics from Euclidean geometry. Prerequisite: COS 280 or MAT 290 . Cr 3.

MAT 371 Projective Geometry
Synthetic and analytic projective geometry, including finite projective planes. Prerequisite: COS 280 or MAT 290.

Cr 3.
MAT 372 Non-Euclidean Geometry
A development of one or more of the non-Euclideangeometries. Prerequisite: COS 280 or MAT 290.

Cr 3.
MAT 380 Linear Algebra
An introduction to the theory of vector spaces and linear transformations. Prerequisite: COS 280 or MAT 290.

Cr 3.
MAT 382 Abstract Algebra
Algebraic structures, such as groups, rings, integral domains, and fields. Prerequisite: COS 280 or MAT 290.

Cr 3.

## MAT 390 History of Mathematics

The development of mathematics from ancient to modern times. Prerequisites: MAT 152 and COS 280 or MAT 290.

Cr 3.
MAT 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, projective geometry, graphs, and sets and logic. Prerequisites: junior elementary education major and permission of the instructor.

Cr 3.
MAT 432 Selected Topics in Mathematics for Elementary Teachers
A course designed to provide enrichment topics for the elementary teacher. The course will include such topics as awareness geometry, transformational geometry, analysis of shapes, number theory, and measurement. Prerequisites: junior elementary education major and permission of the instructor. Cr 3.

## MAT 460 Mathematical Modeling

An introduction to the process of formulating problems in mathematical terms, solving the resulting mathematical model and interpreting the results and evaluating the solutions.

Examples will be chosen from the behavioral, biological, and physical sciences. This course and MAT 461 complement each other. Prerequisites: junior or senior standing, some elementary calculus including differentiation and integration, elementary probability, and some computer programming experience.

Cr 3.
MAT 461 An Introduction to Operations Research
A study of some of the problem structures facing the decision maker in management and the social sciences and the methodologies used in reaching optimal solutions. Typical topics might be from among: allocation, scheduling, inventory, optimization, conflict resolution, game theory, waiting lines, decisions under uncertainty, simulation. This course and MAT 460 complement each other. Prerequisites: junior or senior standing, some elementary calculus including differentiation and integration, elementary probability, and some computer programming experience.

Cr 3.

## MAT 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: MAT 252 and COS 280 or MAT 290. Cr 3.

MAT 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: COS 280 or MAT 290. Cr 3.
MAT 497 Independent Study in Mathematics An opportunity for juniors and seniors who have demonstrated critical and analytical capability to pursue a project independently, charting a course and exploring an area of interest within their major field. Prerequisites: junior or senior standing, permission of the instructor, and permission of the department chairman.

Cr l-3.

## MAT 498 Topics

Selected topics in advanced mathematics. Prerequisite: permission of instructor. Cr 3.
MEO 200-201, 300-301, 400-401 Cooperative Education in Mathematics
The student has the opportunity to relate academic knowledge to practical experience in a job situation. The University makes arrangements with certain institutions, businesses, and industries to employ qualified students for specific jobs for a set time period. The student's work is ordinarily in a related field, and the work experiences increase in
difficulty and responsibility as the student progresses through the sequence of courses. The experiences are approved on a case-bycase basis by the department. Evaluation is
done with the employer and a faculty supervisor. Prerequisite: open to qualified students, subject to availability of suitable jobs.

Cr 1-5.

7-12 for the slow, average, and advanced pupil, with the use of instructional media. Prerequisite: junior or senior standing. Cr 3.

## Mathematics Education

MED 345 Teaching Mathematics in the Secondary School
Critical study of programs and techniques for teaching and learning mathematics in grades

## Music

Chair of the Department: Jerry L. Bowder, 100 Corthell Hall, Gorham Professors: Bowder, Cole; Associate Professors: Martin, Russell; Assistant Professors: Boden, Fithian; Instructor: Parchman; Lecturer: Freeman; Portland String Quartet in residence: Kecskemethy, Lantz, Adams, Ross. Applied Music Faculty Piano: Naydene Bowder, Thomas Bucci, Ronald Cole, Ocy Downs, Robert Glover, David Maxwell; Voice: Bruce Fithian, Linda Freeman, Rhonda Martin, Stewart Shuster; Organ: David Maxwell; Violin: Deidre Clark, Stephen Kecskemethy, Ronald Lantz; Viola: Julia Adams; Cello: Katherine Graffam, Paul Ross; Bass: Katherine Graffam; Flute: Rhonda Martin; Oboe: Neil Boyer; Clarinet: Thomas Parchman; Saxophone: Bill Street; Bassoon: Ardith Freeman; Trumpet: Bruce Hall, John Schnell; French Horn: John Boden; Trombone: Mark Manduca; Euphonium: David Winer; Tuba: David Winer; Percussion: Joseph Aiello; Harp: Deidre Carr; Classical Guitar: Christopher Kane, Michael Katz, Thomas Tessitore

The Department of Music offers a number of music ensembles 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 in education (bachelor of science in music education), in arts and sciences (bachelor of arts in music), or in music (bachelor of music in performance). In addition, minors in music are offered for students majoring in elementary education and in the College of Arts and Sciences. A master of science in education with a music concentration is available through the College of Education Graduate Division.

## Music Fees

An applied music fee of $\$ 48.00$ per semester for hour lessons, or $\$ 24.00$ per semester for half-hour lessons will be charged all music majors in addition to the University tuition fee. Applied lessons for music majors, beyond those required for the degree, will be subject to a fee of $\$ 135.00$ for half-hour lessons and $\$ 270.00$ for hour lessons in addition to the University tuition fee.

For a music minor the University will subsidize the applied music fee, to a maximum of eight credit hours, if the student demonstrates adequate proficiency. The student will pay $\$ 48.00$ per semester for hour lessons and $\$ 24.00$ per semester for half-hour lessons in addition to the University tuition fee.

Students other than music majors or minors will be accommodated for applied music lessons if a teacher's time is available, but will be subject to a fee of $\$ 135.00$ for half-hour lessons or $\$ 270.00$ for hour lessons in addition to the University tuition fee.

Students registering for applied music must report to the chair of the Department for assignment to an applied music teacher and scheduling of lessons. All fees must be paid before lessons commence.

## Admission Requirements

Admission to degree programs in music, major and minor, will be based on the following criteria: a) the applicant's high school record, including recommendations, and SAT achievement scores; b) an audition, which includes performance on the applicant's major instrument, and tests in aural comprehension, rhythmic recitation, and sight singing which are administered to each applicant individually by a member of the staff; and c) a written standardized musical achievement test.

Students who desire to apply for advanced standing in music curricula should apply to the chair of the Department for a special examination.

## Department Standards

Each student enrolled in the performance and music education degree programs will play a jury exam on his or her major instrument at the end of each academic year. The jury panel will determine a level of performance and submit a written evaluation which will be included in the student's file. Students are required to perform at the appropriate level of competence as established by the music faculty.

Each student must earn grades of C or better in all courses which count toward fulfillment of major requirements. D and F grades do not fulfill prerequisite requirements. However, an exception will be made for the following sequence courses: Theory I, II, III, IV; Solfeggio I, II, III, IV; Basic Conducting; Instrumental Conducting; and Vocal Conducting. In these courses a grade of D will allow the student to progress to the next semester in the sequence. If a grade of C or better is earned in this next semester, the preceding semester need not be repeated. If a grade of D or $F$ is earned in this next semester, both semesters must be satisfactorily repeated in proper sequence. No course may be repeated more than once. If a student fails in the second attempt to pass a course with a grade of $\mathrm{C}-$ or better, he or she will not be allowed to continue as a music major or minor.

Each student must attain a 2.25 minimum grade point average before being admitted to junior or senior level music major courses. Students who fall below academic or applied music standards will be placed on probation and will be suspended if they do not meet these standards by the end of the following semester.

## Programs and <br> Requirements

## Music Core Requirements

Each student enrolled as a major in a music degree program will take the following courses during his or her first and second years:

$$
\begin{array}{ll}
\text { MUS 120, 121, 210, 221 } & \text { History of Music } \\
\text { MUS 130, 131, 230, 231 } & \text { Music Theory } \\
\text { MUS 132, 133, 232, 233 } & \text { Solfeggio }
\end{array}
$$

## Bachelor of Science in Music Education

The degree of bachelor of science in music education prepares students for careers in music teaching. Students completing this course of study receive public school music certification for kindergarten through high school. Since a person must first be a good musician in order to be a good music educator, the program includes substantial work in music theory, ear training, music history, applied music, ensembles, and conducting, in addition to music education methods courses and field experiences. Students elect (l) instrumental concentration, (2) vocal concentration, or (3) a general program which includes major portions of both the instrumental and vocal concentrations.

The minimum number of credits (exclusive of the University's Core curriculum) required for the major, instrumental concentration: 95.5; vocal concentration: 88.5; or general concentration: 96.5.

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 Core curriculum requirements.

All music education majors are required to take the following 18 hours of professional education courses: EDU 324 Student Teaching; any HRD course; and either EDU 350 Modern Philosophies of Education or EDU 200 Studies in Educational Foundations.

Additionally, all music education majors will meet the following requirements:

1. Fulfillment of minimum requirements in both voice and piano, regardless of major instrument.
2. Beginning with the first semester of enrollment, participation in at least one major instrumental and one major vocal organization each semester. Students who are unable to meet the auditon requirements of either Concert Band or Chamber Orchestra will be assigned to Percussion Ensemble. Pianists will satisfy one credit of this requirement through accompaniment of singers or instrumentalists.
3. Successful completion of seven semesters of major applied music lessons.
4. Successful completion of recital class in each semester when registered for major applied lessons.
5. Presentation of a solo recital in the senior year (or junior year with special permission).
Piano Proficiency Requirement Each student must successfully complete the piano proficiency requirement by the end of the third week of the semester before student teaching. The student must enroll in applied piano each semester until the requirement is met. If the piano proficiency has not been met at the end of four credits of study, the student will continue applied piano at his or her 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 music teacher feel the student is qualified.

Requirements for the exam are as follows: a) play all major and minor scales (two octaves, hands together); b) play a prepared piece of the student's choice of at least the difficulty of a sonatina by Clementior Kuhlau; c) offer evidence of study of a representative selection of piano literature; and d) sight read a melody with chord symbols and a hymn style composition.

Vocal Proficiency Requirement All students in the music education program must complete at least one year of vocal study before student teaching. They must also pass the following requirements in a vocal proficiency examination before graduation:

1. Demonstrate and explain the principles of singing, including posture, breathing, tone production, and articulation.
2. Submit a list of 12 songs, including songs in English and at least one foreign language.
3. Perform from memory six songs, at least one of which is in a foreign language.
If the proficiency is not met after four credits of study, the student will continue to study for no credit at his or her own expense until this standard is met.

Student Teaching Student teaching is the culmination of a comprehensive, preprofessional, required sequence of activities that 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, serving 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 that encompasses both elementary and secondary as well as instrumental and vocal areas.

## Professional Education: Music Education Courses

Courses marked with an asterisk (*) are offered on a rotating basis. Students should work closely with their advisors in planning their courses of study in the music education program.
Music education majors must complete the following courses:
*MUE 221 Brass Class
*MUE 222 Percussion Class
*MUE 224 Woodwinds I
*MUE 225 Woodwinds II
*MUE 320 String Class-Violin
MUE 322 Elementary General Music Methods
For instrumental concentration, these additional courses must be completed:
*MUE 321 String Class-Viola, Cello.and Bass
*MUE 324 Instrumental Methods
*MUE 420 Marching Band Techniques
For vocal concentration, the student need select only one from *MUE 221, *MUE 222, and *MUE 224. Additionally, *MUE 323 Secondary Choral Methods must be completed.
For general concentration, these additional courses must be completed:

| *MUE | 324 | Instrumental Methods |
| :--- | ---: | :--- |
| *MUE | 323 | Secondary Choral Methods |
| *MUE | 321 | String Class-Viola, Cello and Bass |
|  | OR |  |
| *MUS | 355 | Vocal Pedagogy |

## Musicianship: Music Courses

Courses marked with an asterisk(*) are offered on a rotating basis. Students should work closely with their advisors in planning their courses of study in the music education program.

All music education majors must take the following courses:
Music Core Requirements, 28 credits

| MUS |  | Applied Music |
| :---: | :---: | :---: |
| MUS | 244 | Basic Conducting |
| MUS | 442 | Recital Class (seven semesters) |
| MUS | 401 and | Ensembles (seven semesters) |
| OR | 402 | nse |

The following courses apply to each specialized music education curriculum.

Instrumental concentration
MUS 150, $151 \quad$ Voice Lessons
*MUS $344 \quad$ Instrumental Conducting
*MUS 240,340 Instrumental Conducting Lab
*MUS 420
Orchestration
Vocal concentration
MUS 150, $151 \quad$ Voice Lessons (not additionally required of voice majors)
*MUS 255 Guitar
*MUS $345 \quad$ Vocal Conducting
*MUS 241,341
Vocal Conducting Lab

| *MUS | 421 | Choral Arranging |
| :---: | :---: | :---: |
| *MUS | 355 | Vocal Pedagogy |
| General concentration |  |  |
| MUS | 150, 151 | Voice Lessons (not additionally required of voice majors) |
| *MUS | 255 | Guitar |
| *MUS | 344 | Instrumental Conducting |
| *MUS | 340 | Instrumental Conducting Lab |
| *MUS | 345 | Vocal Conducting |
| *MUS | 341 | Vocal Conducting Lab |
| Either |  |  |
| ${ }^{*}$ MUS | 420 | Orchestration |
|  | OR |  |
| *MUS | 421 | Choral Arranging |
| Either |  |  |
| ${ }^{*}$ MUS | 355 | Vocal Pedagogy |
|  | OR |  |
| *MUE | 321 | String Class-Viola, Cello and Bass |

Bachelor of Arts in Music
This degree program 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 program aims to instill a thorough understanding of music and its relationship to contemporary society. The study of music history and theory as it relates to the repertoire is central in this curriculum. 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.

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 96.

Courses marked with an asterisk (*) are offered on a rotating basis. Students should work closely with their advisors in planning their courses of study in this degree program.

Music Core Requirements, 28 credits
*MUS $320 \quad$ Seminar in Music History
MUS 330,331 Form and Analysis I, II
MUS $332 \quad$ Counterpoint
Applied Music (4 credits)
Performance Ensembles (4 credits)
Music Electives (9 credits)
Electives including language proficiency, but not music electives (40 credits)
Language proficiency means completion of a second year of a language. This may be bypassed by examination for no academic credit.

The University will subsidize up to a total of 16 credit hours of applied music lessons for B.A. music students.

## Bachelor of Music in Performance

This degree program is designed to meet the needs of those who wish to prepare for a career in music performance and/or applied music teaching, and those who plan to do graduate work in applied music. The program aims to instill a thorough understanding of music and its relationship to contemporary society. Private lessons; solo, chamber and large ensemble performance; and the study of literature and pedagogy of the major instrument are emphasized. Basic understanding of the standards and opportunities for professional performance leads the student to realistic expectations for a career as a performer or teacher.

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 95.

Courses marked with an asterisk (*) are offered on a rotating basis. Students should work closely with their advisor in planning their course of study in this degree program.
Music Core Requirements, 28 credits

| MUS | 321 | Literature of the Major Instrument |
| :--- | :--- | :--- |
| MUS | 330,331 | Form and Analysis I, II |
| MUS | 332 | Counterpoint |
| MUS | 442 | Recital Class (eight semesters) |
| *MUS | 356 | Diction for Singers (voice majors only) |
| MUS | 170,171 | Applied Music, Major Instrument |
|  | 270,271, |  |
|  | 370,371, |  |
| MUS | 470,471 | Pedagogy of the Major Instrument |
| Music Electives ( 9 credits) |  |  |
| Merformance Ensembles (6 credits) |  |  |
| Plectives in any college (15 credits) |  |  |

Diction for Singers (MUS 356) is required of voice majors only and may be taken in lieu of three credits of music electives. Voice majors must meet a minimum proficiency in two foreign languages either by exam or through completion of the second semester of the basic course in the Department of Foreign Languages and Classics.

Performance majors must have a minimum of four credit hours of their ensemble requirements in the appropriate major ensemble. A student is expected to be enrolled in the appropriate major ensemble whenever registered as a full-time student. A minimum of two credit hours must be in Chamber Music.

All performance majors are required to pass a piano proficiency examination or to complete successfully two years of piano as a minor instrument. The content of the exam is appropriate to the student's major. In addition, performance majors must complete satisfactorily a short recital in the junior year and a full recital in the senior year.

## Minor in Music Education

The minor 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 implement successfully in their classrooms the planned programs recommended by music supervisors.
The number of credits (exclusive of the University's Core curriculum) required for the minor: 21 .
MUS 100; MUS 130, 131; MUS 132, 133; MUE 322; and MUS 150, 151 comprise the minor. Additionally, students must take an elective in music history and other music electives for two credits.

## Minor in Music (Bachelor of Arts)

This minor program is designed to provide an opportunity for candidates for the degree of bachelor of arts who demonstrateinterest and ability to continue music studies at the undergraduate level.
The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 20 .
The minor consists of elective courses in music and ensembles. However, MUS 100, MUS 110, and all MUE courses are not acceptable for the minor.

Applied music fees, to a maximum of eight credit hours, will be subsidized by the University only when the student demonstrates adequate proficiency.

## Courses Primarily for Non-Majors

MUS 100 Music Appreciation and History
A survey of music from the Gregorian chant to the modern times, covering musical practices of the renaissance, baroque, classical, romantic, and contemporary periods. Representative works by the outstanding composers of each period. Open to all students. Cr 3.

MUS 102 Music of the Portland Symphony
A course designed to increase the student's understanding and appreciation of the music scheduled for the Portland Symphony Orchestra's regular concerts of the semester. Attendance is required at the concerts in addition to regularly scheduled classes. Historical
background, biography of composer, musical analysis, rehearsal and performance techniques, and music criticism. Open to all students.

Cr 3.
MUS 103 Introduction to Jazz
A survey of jazz from its inception to the present day. Involves a study of the origins and stylistic development of jazz. Open to all students.

Cr 3.

## MUS 110 Fundamentals of Music

A background study of concepts and skills essential to an intelligent reading of music. The development of natural music abilities through participating in singing, rhythmic activities, and instrumental work. An appreciation of music through awareness of basic structures. Open to all students. Cr 3.

## MUS 202 Music in America

A survey of the important trends in music from colonial days to the present. Emphasis will be placed on the role of the native American composer in the development of sacred music, concert music, jazz, musical comedy, and pop music. Open to all students. Cr 3.
MUS 203 Music in the Twentieth Century
A study of trends in European and American music from the beginning of the century to
the present with emphasis on the literature of the major composers. Open to all students.

Cr 3.

## MUS 204 Symphonic Literature

A survey of music for the symphony orchestra from the pre-classical period of C.P.E. Bach to the present. Open to all students. Cr 3.
MUS 205 Chamber Music Literature: Portland String Quartet
A historical survey of the literature for chamber ensembles from the classical period to the present. Recorded and live performances will be studied in class. Open to all students. Cr 3.

## MUS 211 Class Piano

Practical class piano for the elementary teacher with little or no piano background. Course covers note reading, scales, accompaniment of simple songs, transposition, and sight reading. Open to all students. Cr 2.
MUS 334 Electronic Music I
Lectures, discussions, and exercises in sound generation and processing, with emphasis on voltage-controlled systems. The student's time will be divided between class sessions and actual work in the electronic studio. Open to all students.

Сг 3.
semble performance dealing with a variety of literature. The University Concert Band performs at least one major concert per semester and is active in presenting school assembly programs.

Cr 0.5.
MUS 405 The Chamber Singers
A select group of twenty-five singers specializing in music from the renaissance to the contemporary. Extensive touring throughout the state.

Cr 0.5.

## MUS 408 Wind Ensemble

Cr 0.5 .

## Small Ensembles

## MUS 403 Percussion Ensemble

A percussion ensemble open to all University students through audition.

Cr 0.5.
MUS 406 Chamber Music
A performance course open to all qualified students interested in forming chamber
groups: duets, trios, quartets, quintets, etc., under faculty supervision.

Cr 0.5.

## MUS 407 Jazz Ensemble

An instrumental ensemble specializing in the study and performance of jazz for large and small groups from Dixieland to present. Open to all students by audition. Cr 0.5 .

## Courses for Majors

Music History and Theory

## MUS 120 History of Music I

Medieval and renaissance periods: historical development and music practices from the Gregorian chant and early polyphony thrigal in England. Musical examples of outstanding composers are played, analyzed, and discussed. Music majors only or permission of the instructor.

Cr 3.
MUS 120 History of Music I
Medieval and renaissance periods: historical development and music practices from the Gregorian chant and early polyphony thrigal in England. Musical examples of outstanding composers are played, analyzed, and discussed. Music majors only or permission of the instructor.

Cr 3.

## MUS 121 History of Music II

Baroque period; continuation of MUS 120, from the establishment of opera in Italy and the rise of instrumental music, to the culmination of polyphony in the works of J.S. Bach. Music majors only or permission of the instructor.

Cr 3.
MUS 130 Music Theory I
Major and minor scales; intervals, triads, and chord connections; cadences; harmonization of soprano and bass lines utilizing primary triads. Music majors only or permission of the department.

Cr 3.

## MUS 131 Music Theory II

Triads in first and second inversion; modulational; non-harmonic tones (passing, auxiliary, appoggiature, suspension, and anticipation); dominant seventh chord (root position inversion, regular and irregular resolutions). Prerequisite: MUS 130.

Cr 3.
MUS 132 Solfeggio I
A course in sight singing and ear training. Music majors and minors only.

Cr 1.
MUS 133 Solfeggio II
A continuation of MUS 132. Prerequisite: MUS 132.

Cr 1.

## MUS 220 History of Music III

Classical and romantic periods; historical development and musical practices from the establishment of the sonata, string quartet, and symphony, through program music, musicdrama, and the rise of nationalism in music. Representative of outstanding composers are played, analyzed, and discussed. Music majors only or permission of the instructor. Cr 3.

## MUS 221 History of Music IV

Contemporary period; continuation of MUS 220, from Impressionism to recent tendencies. Melodic, harmonic, rhythmic, and structural features of twentieth-century American and European music and their re-
lationship to tradition. Music majors only or permission of the instructor.

Cr 3 .
MUS 230 Music Theory III
Diatonic seventh chords; modulation; expansion of nonharmonic tones; altered chords; Neapolitan sixth; augmented sixth chords; chromatic alterations; chorales and their harmonizations; composition in simple forms of the 18th and the 19th centuries. Prerequisite: MUS 131.

Cr3.

## MUS 231 Music Theory IV

Contemporary techniques of composition; 20th century harmony, theory, and related studies. Prerequisite: MUS 230.

Cr 3.

## MUS 232 Solfeggio III

An advanced course in sight singing and ear training. Prerequisite: MUS $133 . \quad \mathrm{Cr} 1$.
MUS 233 Solfeggio IV
A continuation of MUS 232. Prerequisite: MUS 232.

Crl.
MUS 320 Seminar in Music History
A concentrated study of selected topics in music history based on individual research. Prerequisites: History of Music I, II, III, and IV. For music majors or minors. Others only with permission of instructor. $\quad \mathrm{Cr} 3$.
MUS 321 Literature of the Major Instrument A survey of the literature for voice or a specific instrument. Except for piano or voice, which are offered in class sessions when the number of registrants warrants it, this will be scheduled as private study. Normally the piano and voice sessions will be offered in alternate years. For performance majors. Other music majors only with permission of the department.

Cr 2.

## MUS 330 Form and Analysis I

Study and analysis of music of the classical, romantic, and contemporary periods with emphasis on homophonic forms and styles. Prerequisite: Theory II.

Cr 3.

## MUS 331 Form and Analysis II

Study and analysis of music of the baroque and contemporary periods with emphasis on contrapuntal forms and styles. Prerequisite: Theory II.

Cr 2.
MUS 332 Counterpoint
Tonal counterpoint. The process of invention and fugue as exemplified in the music of the baroque era. Prerequisite: Theory III. Cr 3.
MUS 420 Orchestration
A study of the nature of the various instruments. Practice in scoring for instrumental combinations, orchestra, and band. Prerequisite: MUS 231.

Cr 3 .

## MUS 421 Choral Arranging

A course designed to prepare students to arrange vocal music for a variety of combina-
tions of voices in a variety of musical styles. Prerequisite: MUS 231.
MUS 497 Directed Study in Composition
To provide juniors and seniors who have demonstrated creative capability an opportunity to compose utilizing twentieth-century techniques. Prerequisites: MUS 231 and permission of instructor. Variable Cr 1-3.

MUS 498 Independent Study in Music
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. Music majors only. Departmental permission required.

Cr 1-3.
formance area (l credit) in fulfillment of applied music requirements. Restricted to sophomores.

Crl.

## MUS 251 Applied Music for Sophomores II

 A continuation of MUS 250.Cr 1.

## MUS 255 Guitar

An introduction to basic guitar skills. Emphasis is placed upon those skills which lead to playing effective accompaniments. Cr 1 .

## MUS 260 Applied Music for Sophomores I

May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A onehour lesson per week in the major performance area ( 2 credits) in fulfillment of applied music requirements. Restricted to sophomores.

Cr 2.
MUS 261 Applied Music for Sophomores II
A continuation of MUS 260.
MUS 270 Applied Music for Sophomores I
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A onehour lesson per week, with three hours' practice daily, would grant 3 credits for the performance major. Restricted to sophomores.

Cr 3.
MUS 271 Applied Music for Sophomores II
A continuation of MUS 270.
Cr 3.

## MUS 280 Jazz Improvisation I

A course designed to teach the student to improvise in the jazz idiom. Studies include jazz theory and standard jazz literature. Recommended for instrumental music majors. Prerequisite: MUS 131 or permission of the instructor.

Cr 2.

## MUS281 Jazz Improvisation II

A performance course designed to expand upon the improvisation principles presented in Jazz Improvisation I. Students will learn advanced jazz theory and use that knowledge to perform in the jazz language both in class and in lab situations. Prerequisite: MUS 280 or the equivalent.

Cr 2.

## MUS 340 Instrumental Conducting Lab

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.

Cr 0.5.
MUS341 Vocal Conducting Lab
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. $\quad \mathrm{Cr} 0.5$.

## MUS 344 Instrumental Conducting

Advanced development of non-verbal gestures through the art of instrumental conducting. Score reading analysis, rehearsal techniques and performance preparation. Prerequisite: MUS 244.

Cr 2.

## MUS 345 Vocal Conducting

Organization, training, and directing of choruses and glee clubs in high schools and junior high schools. Study and practice in rehearsal techniques, problems of diction, and emphasis on repertoire and musical style. Prerequisite: MUS 244.

Cr 2.
MUS 350 Applied Music for Juniors I
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. One half-hour lesson per week in the minor performing area (l credit) in fulfillment of applied music requirements. Restricted to juniors.

Cr 1 .

## MUS 351 Applied Music for Juniors II

A continuation of MUS 350.
Crl.
MUS 355 Vocal Pedagogy
A study of basic principles of vocal produc-tion-breathing, phonation, registration, and resonance-and a discussion of the techniques used to teach voice.

Crl.

## MUS 356 Diction for Singers

A study of the principles of English, Italian, German, and French diction through use of the International Phonetic Alphabet (IPA). An application of these basic principles to art songs in the four languages. Students shall perform songs in all four languages. This course is required of voice performance majors. Prerequisite: 3 semesters of voice study.

Cr 3.
MUS 360 Applied Music for Juniors I
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A onehour lesson per week in the major performing area ( 2 credits) in fulfillment of applied music requirements. Restricted to juniors. Cr 2.
MUS 361 Applied Music for Juniors II
A continuation of MUS 360.
Crl.
MUS 370 Applied Music for Juniors I
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A one-
hour lesson per week, with three hours' practice daily, would grant 3 credits for the performance major. Restricted to juniors. Cr 2.
MUS 371 Applied Music for Juniors II
A continuation of MUS 370.
Cr 3.
MUS 372 Pedagogy of the Major Instrument A study of the teaching methods and materials for voice or instruments. Except for piano and voice, which are offered in class sessions when the number of registrants warrants it, this will be scheduled as additional applied music time with an instrumental specialist. Normally the piano and voice sessions will be offered in alternate years. For performance majors. Other music majors only with permission of the department. Cr 2.

MUS 442 Recital Class
Performance in major field, stage deportment, and evaluation of performances. May be repeated for credit.

Cr 0.5.
MUS 450 Applied Music for Seniors I
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. One half-hour lesson per week in the minor performing area (l credit) in fulfillment of applied music requirements. Restricted to seniors.

Crl.

## MUS 451 Applied Music for Seniors II

A continuation of either MUS 450 or MUS 351 Crl.
MUS 452 Accompanying
A workshop course in applied accompanying under faculty supervision. One-half credit is awarded for each twenty hours of Universitysupervised accompanying, with a maximum of two credits in any academic year. Cr 0.5-2.

## MUS 453 Workshop in Music Drama

This course will focus on the union of musical ideas with dramatic situations and will explore the ways in which singers must convey the essence of a dramatic situation. The course will culminate either in the performance of a full-length opera, operetta, or musical comedy (in conjunction with the Theatre Department) or in an evening performance of opera arias, ensembles, or scenes. May be repeated for credit. A vocal performance major may take this course in lieu of one credit of chamber music.

Crl.
MUS 460 Applied Music for Seniors I
May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A onehour lesson per week in the major performing area ( 2 credits) in fulfillment of applied music requirements. Restricted to seniors. Cr 2.

## MUS 461 Applied Music for Seniors II

A continuation of either MUS 460 or MUS $361 \quad \mathrm{Cr} 2$.
MUS 470 Applied Music for Seniors I

May be taken in piano, voice, organ, guitar or any orchestra or band instrument. A onehour lesson per week in the major area, with three hours' practice daily, would grant 3 credits for the performance major. Restricted to seniors.

Cr 3.

## Music Education

MUE 221 Brass Class
Methods of teaching brass instruments including practical experience on the various instruments; elements of transposition. Prerequisites: MUS 131 and $133 . \quad \mathrm{Cr} 1$.
MUE 222 Percussion Class
Practical experience on and methods of teaching percussion instruments. Prerequisite: MUS 131 and 133.

Crl.

## MUE 224 Woodwinds I

Methods of teaching flute and clarinet. Practical experience on these instruments; elements of transposition. Prerequisite: MUS 131 and 133 . Cr 1 .

## MUE 225 Woodwinds II

Methods of teaching saxophone, oboe, and bassoon. Practical experience on these instruments; elements of transposition. Prerequisite: MUE 224.

Crl.

## MUE 320 String Class-Violin

Class methods and materials in teaching violin. Fundamentals of violin, including bowing, tone production, intonation, and fingering techniques extended into the third position. Prerequisite: MUS 131 and 133 .

Crl.
MUE 321 String Class-Viola, Cello and Bass
String methods and materials for beginning strings. Fundamentals of viola, cello and string bass. Rudiments of fingering, bowing,
and tone production. Prerequisite: MUE 320 . Cr l.

MUS 471 Applied Music for Seniors I I
A continuation of MUS 470.
Cr 3.
MUE 322 Elementary General Music Methods
Study of methods and materials in present elementary school music education, including those of Kodaly and Orff. Restricted to junior and senior music majors and minors.

Сr 3.
MUE 323 Secondary Choral Methods
Techniques and procedures for teaching choral music in junior and senior high schools. Restricted to junior and ors.

Cr 3.

## MUE 324 Instrumental Methods

The course will acquaint the instrumental music major with methods and procedures of teaching instrumental music in the public schools. Administering and organizing the program, recruiting, budgets, public relations, ensemble literature, scheduling and performance are issues addressed in the course. Discussions will focus on developing an effective instrumental music program in the public schools. Restricted to junior and senior music majors.

Cr 3.
MUE 420 Marching Band Techniques
The course is designed to prepare the music educator to organize and effectively teach Marching Band in the public school. A statement of philosophy is stressed. Marching styles, execution, music developing marching percussion, role of the drum major and effective instrument placement are emphasized in the course. Restricted to junior and senior music majors. Cr 2.

# Philosophy 

Chair of the Department: William J. Gavin, 47 Exeter St., Portland Professors: Gavin, Grange, F. Schwanauer; Associate Professor: Conway; Assistant Professors: Louden, Murphy
"Philosophy unties knots in our thinking; hence its results must be simple, but philosophizing has to be as complicated as the knots it unties."

Ludwig Wittgenstein, Zettel \#452
The place of philosophy at the center of any educational endeavor is as true today as it ever was. The perennial questions that philosophy addresses, such as "Who am I as a human being?, How should I act?, What can I know?, What are my obligations to others?, How should society be organized?", are fundamental issues with which education must wrestle and into which it must provide insight. Philosophy is a reasoned pursuit
of fundamental truths. It is a systematic investigation of the key assumptions which underlie our thinking and which ordinarily are taken for granted. Much of what is learned in philosophy can be applied in virtually any endeavor. This is both because philosophy touches upon so many subjects and, especially, because many of its methods and analyses are usable in any field. The study of philosophy is beneficial in terms of achieving the following:

General Problem-Solving Ability. The study of philosophy enhances in a way no other activity does one's problem-solving capacities. It helps one to analyze concepts, definitions, arguments, and problems. It contributes to one's capacity to organize ideas and issues, to deal with questions of value, and to extract what is essential from masses of information.

Communication Skills. Philosophy provides some of the basic tools of self-expression, namely: skills in presenting ideas through well-constructed, systematic arguments. One learns to build and defend one's own views, to appreciate competing positions.

Writing Skills. Writing is an important part of most philosophy courses. Philosophy teaches interpretive writing through its examination of challenging texts, comparative writing through emphasis on fairness to alternative positions, argumentative writing through developing students' ability to establish their own views, and descriptive writing through detailed portrayal of concrete examples: the anchors to which generalizations must be tied.

The Understanding of Other Disciplines. Many important questions about a discipline, such as the nature of its concepts and its relation to other disciplines, do not belong to that discipline, are not usually pursued within a discipline, and are philosophical in nature. Philosophy of science, for instance, is needed to supplement the understanding of the natural and social sciences which one derives from scientific work itself. Philosophy of art, social and political philosophy, the philosophy of religion are of similar value in understanding the respective fields of art, sociology, politics, and religion.

## Career Applications

Philosophers know, of course, that the important question is not what you can do with a field of study but rather what a field of study does with you. Nevertheless, it has been a welcome surprise within recent years to witness how many professions-business, law, nursing, for example, want and reward many of the capacities which the study of philosophy develops: the ability to solve problems, to communicate, to organize ideas and issues, to assess pros and cons, and to reduce complex data. These capacities represent transferable skills. For this reason, people trained in philosophy are not only prepared to do many kinds of tasks, they can also cope with change, or even move into new careers, more readily than others.

## Bachelor of Arts in Philosophy

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 30 .

Each major in philosophy will arrange a program of courses in conference with the chair or a member of the department assigned by him. The program will be designed in terms of the student's interests, needs, vocational plans, and the year in which the student declares a major. The major will require 30 hours of courses beyond a PHI 100-level course.

All philosophy majors must take four of the following history of philosophy courses offered by the department:

| PHI | 310 | Ancient Philosophy |
| :--- | :--- | :--- |
| PHI | 320 | Medieval |
| PHI | 330 | Early Modern Philosophy |
| PHI | 340 | Late Modern Philosophy |
| PHI | 350 | American Philosophy |
| PHI | 360 | Existentialism |
| PHI | 370 | Analytic Philosophy |

In the last year a senior tutorial is required. This tutorial consists of a major paper (minimum length: 50 pages) on a topic selected by the student and directed by one member of the Department. The student will meet with the mentor on a regular basis during the semester of the senior tutorial. Upon completion of the paper, an oral examination will be conducted by the full department.

Every major intending to pursue graduate study and teach in philosophy will be expected to take German or French through the intermediate level. German is preferred to French, although ideally both sets of courses should be taken. Any introductory philosophy course is a prerequisite to all other courses in philosophy.

## Minor in Philosophy

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 15.

Students who wish to pursue a minor in philosophy are required to take five courses beyond the introductory level, that is, any PHI 100 course.

These should include two courses in the history of philosophy: PHI 310; PHI 320; PHI 330; PHI 340; PHI 350; PHI 360; PHI 370.
One course which examines the foundations of philosophical inquiry: PHI 150; PHI 200; PHI 210; PHI 270.
Two courses which relate philosophical theories to contemporary problems: PHI 211; PHI 220; PHI 230; PHI 240; PHI 250; PHI 260; PHI 275; PHI 290; PHI 291.

PHI 101 Introduction to Philosophy: Man and His Will
Is there a human will at all? This course will concentrate on the issue of freedom vs. determinism. The importance of the human will insofar as it influences views of experience, politics, society, etc., will also be considered. Cr 3.
PHI 102 Introduction to Philosophy: The Quest for Certainty
Philosophy has often been defined as the attempt to become aware of the hidden assumptions we make in our everyday outlooks on life. The present course will deal with one of the most pervasive of these assumptionsthe thesis that human beings should pursue certainty and objectivity at any price. The history of philosophy will be utilized to trace and to criticize the identification of all true knowledge with certainty. Questions will be raised as to whether the quest for certainty is either feasible or beneficial to thehuman person. An analysis of some 20th-century alternatives, including existentialism and pragmatism, will be undertaken.

Сг 3.
PHI 103 Introduction to Philosophy: Human Alienation
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.

PHI 104 Introduction to Philosophy: Ways of Knowing
How much can we really know? Consideration will be given to some theories of knowledge and how they may be applied to science and human relations. Classic philosophical texts will be critically examined by way of illustration.

Сг 3.
PHI 105 Introduction to Philosophy: Theories of Human Nature
A study of some influential theories of human nature in Western culture. Among issues to be studied are: the question of method; freedom and determinism; materialism and dualism; and the nature of moral values. $\quad \mathrm{Cr} 3$.
PHI 106 Introduction to Philosophy: Why Philosophize?
The course centers about the exploration of a single question: what it means to think philosophically. In the context of this question, we will examine what are the sources of philosophical thought and whether philosophy can justify its claim to be the foundation of all reflective endeavor.

Cr 3.
PHI 107 Introduction to Philosophy: The Search for Identity
What is it all about? Where do I fit in? Who am I? This course will explore these and other questions of human orientation and selfawareness as they evolve through the history of Western philosophy. Selections from representative philosophical sources will be read and discussed.

Cr 3.

PHI 108 Introduction to Philosophy: Search for God
The concept of a personal Supreme Being, or God, or of an impersonal Universal Creative Energy has been a driving and dividing force in the history of civilization. This course will examine a broad spectrum of problems, issues, and areas of concern including such themes as: Can the existence of God be proven rationally; do the great religions of the world have a common core of experience that unifies them, or are they essentially incompatible; has science made religion obsolete; is religion a matter of faith or reason or both; what is the nature of the mystical experience; what is meant by such terms as God, immortality, soul, karma? Philosophers from both the East and the West will be read in the context of arguments both for and against the need, intelligibility, and meaning of God and religion.

Cr 3.

## PHI 109 Introduction to Philosophy: Law,

 Politics and SocietyThis course considers the place of law in political theory. After addressing the philosophical implications of Plato's and Aristotle's conceptions of law, the emphasis of the course will be on the origins and contemporary role of law in liberal political philosophy. After studying the development of liberal theory in the writings of Locke and Mill, the course concentrates on contemporary legal theory as it bear on the overall question of the role of law in liberal political theory.

Cr 3.
PHI 110 Introduction to Philosophy: Self and Society
To what extent does society shape our view of ourselves? The course will introduce the student to philosophical thinking as a mode of reflection on the meaning of our daily lives. We will analyze the individual consciousness, the court and the state, and current mythologies in terms of their influence on the discourse of social life and institutions. Emphasis will be given to the role of the philosopher in society and the task of philosophy in determining our possibilities for freedom. Students will gain skill in philosophical thinking: the formulation of philosophical questions, identification and analysis of philosophical theories, and in-depth criticism and evaluation of philosophical perspectives. Cr 3.

## PHI 150 Symbolic Logic

Techniques of modern deductive logic; properties of formal systems; logical implications and paradoxes of language. Cr 3.

## PHI 200 Metaphysics

An analysis of various theories of reality, together with a critical examination of their conceptual constructs, principles and metho-
dologies. Issues to be discussed include change, time, freedom and necessity, immortality and God, good and evil. Thinkers to be studied include Plato and Aristotle, Spinoza, Kant, Hegel, Whitehead and Heidegger. Prerequisite: any PHI 100-level course. Cr 3.

## PHI 210 Ethical Theories

Critical evaluation of major ethical theories and systems. Extensive reading in original texts. Analysis of contemporary ethical issues. Prerequisite: any PHI 100-level course.

Cr 3.

## PHI 211 Ethics in Business

This course will be an investigation of the wide range of ethical issues confronting business. It will study these issues primarily through an examination of specific case studies of business practices. It will also present various philosophical concepts of what constitutes right conduct and will attempt to see whether these concepts can assist the business person in resolving the ethical problems with which business is faced.

Cr 3.

## PHI 220 Philosophy of Art

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 PHI 100 -level course. Cr 3.
PHI 230 Philosophy of Religion
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 PHI 100-level course. Cr 3.

## PHI240 Political Philosophy

Critical evaluation of political philosophies, classical and contemporary; extensive reading in original texts; analysis of contemporary political issues. Prerequisite: any PHI 100-level course.

Cr 3.

## PHI 250 Philosophy of Science

An examination of two different models generally used in approaching scientific activity philosophically: the logical model and the historical model. Questions to be raised include whether these two approaches are mutually exclusive or whether one can subsume the other, and at what cost. Issues to be covered include description vs. explanation; scientific vs. non-scientific explanation; the issue of whether to include pragmatic and psychological dimensions of meaning in scientific explanations; the question of whether all facts are "theory-laden"; and the relationship between facts, laws and theories in science. Prerequisite: any PHI 100-level course.

PHI 260 Philosophy of Law
This course will deal with the philosophical foundations of law in the West. We will examine in detail the various schools of law beginning with the Greek view of law, mankind, and society, move up to the modern schools of Legal Positivism, Sociological Jurisprudence, and Natural Law, and attempt to delineate the strains of these positions within the American system of law. Prerequisite: any PHI $100-$ level course.

Сr 3.
PHI 270 Epistemology
An analysis of various theories of knowledge in reference to their methodologies and consequences. Texts to be read include Berkeley, Hume, Descartes, Kant, and Hegel. Prerequisite: any PHI 100 -level course.

Cr 3.

## PHI 275 Theories of Language

This course examines the nature of language from an interdisciplinary perspective. Philosophy, linguistics, and psycholinguistics will be employed to inquire into the structure and function of language, and its relation to perception and the human mind. Prerequisite: any PHI 100 -level course. This course is also offered as COM 275.

Сг 3.
PHI 290 Problems in Philosophy
Consideration of selected problems or systems of philosophical significance, including general problems of metaphysics, epistemology, axiology, specialized areas, etc. Prerequisite: any PHI 100 -level course.

Cr 3.
PHI 291 Death and Dying
Recent success in life-prolonging techniques has resulted in the creation of new disagreements over the proper definition of death. Which definition of death is the most adequate? Some have argued that dying, not death is the vitally important topic. Has the term death changed its meaning from time to time and place to place in human history? This course will deal with these and similar epistemological issues. Prerequisite: any PHI 100 -level course.

Cr 3.

## PHI 310 History of Ancient Philosophy

Philosophic thought from the pre-Socrates to the late Hellenistic period, with major emphasis on Plato and Aristotle. Prerequisite: any PHI 100 -level course. Cr 3.

PHI 320 History of Medieval Philosophy
The merger of the philosophic with the religious stream; ideas of Augustine, Thomas Aquinas, Bonaventure, and others critically examined; determining cultural factors explored. Prerequisite: any PHI 100 level course.

Cr 3.
PHI 330 History of Early Modern Philosophy Main currents of rationalism and empiricism are explored, as developed in major writings
from Descartes to Hume. Prerequisite: any PHI 100 -level course.

Сг 3.
PHI 340 History of Late Modern Philosophy Development of German idealism; emergence of social and scientific philosophies; contributions of Kant, Hegel, Marx, Schopenhauer, Nietzsche, Feuerbach, and others. Prerequisite: any PHI 100 -level course. Cr 3.

## PHI 350 American Philosophy

History and background of the origin of philosophical ideas in America; particular emphasis given to Peirce, James, Royce, Dewey. Prerequisite: any PHI 100 -level course. Cr 3.

## PHI 360 Existentialism

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 PHI 100-level course.

Cr 3.
PHI 370 Analytic Philosophy
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. Prerequisite: any PHI 100 -level course. Cr 3. PHI 398 Independent Study
Independent study undertaken under the mentorship of a professor in the department. Prerequisite: a minimum of two (2) 300 -level philosophy courses plus written permission of the instructor involved.

Ci 3.
PHI 400, 401, 402 Seminar in Philosophy
These numbers are used to indicate seminar courses dealing with a specific 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 (2) 300-level courses in philosophy, or permission of the instructor.

Cr 3.

## PHI 409 Senior Serninar

A research seminar designed to provide senior level students an opportunity to participate in the research efforts of individual faculty and collaborate with each other in the design, methodology and completion of their tutorials. Prerequisite: advanced standing as a philosophy major, and permission of the department.

Cr 3.

## PHI 410 Senior Tutorial

Designed to furnish senior philosophy majors with extensive training, under tutorial supervision, in analysis of a philosophical problem or system or philosopher, with a view to producing and presenting a senior paper for oral defense. Prerequisites: advanced standing as a philosophy major, and permission of the department.

Сг 3.

## Physics

Chair of the Department: Robert Coakley, 254 Science Building, Portland
Associate Professors: Armentrout, Coakley, Walkling
The Department of Physics provides physics and related courses for the freshman and sophomore years. Students successfully completing these years may transfer in the junior year of their program to the Orono campus and may receive the degree from UMO in either physics (College of Arts and Sciences) or engineering physics (College of Engineering and Science).

## Programs and Requirements

Physics students should plan to take the following courses in the first year: CHY 113, 114, and 115, 116 Principles of Chemistry I and II; MAT 152 and 153 Calculus A and B; PHY 121, 122, and 123, 124 General Physics I and II; COS 140 or 160 Computer Programming in FORTRAN or PASCAL; ENG 100 College Writing or a humanities or social sciences elective; ITT 231 Technical Graphics is strongly recommended. Planning for the second year should be done in consultation with the departmental advisor. These programs are flexible and adaptable to the goals of individual students.

The following curricula are offered by the College of Engineering and Science at the University of Maine at Orono; agricultural engineering; chemical engineering; chemistry; civil engineering; mechanical engineering; pulp and paper technology; surveying engineering. Reference to the UMO catalog for details is advised.

PHY 101 Introduction to Physics
An elementary approach to the study of mechanics, heat, electricity, and light, intended for the student who desires a one-semester introduction to physics. Students in the industrial arts program must register concurrently in PHY 102. Students majoring in any of the natural sciences are not directed to this course but rather to a more advanced introductory course. Prerequisite: high school algebra.

Cr 3 .

## PHY 102 Introduction to Physics Laboratory

 Laboratory experiments and additional material designed to supplement the topics considered in PHY 101. Prerequisite: concurrent registration in PHY 101 or permission of the instructor.Cr 1 .
PHY 105 Acoustics and Noise
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 demonstra-
tion. Occasional field experience may be provided. Prerequịsite: a course in high school algebra.

Cr 3.

## PHY 109 Radiation: Problems and Effects

An introduction to several current topics of vital importance such as the use of nuclear fission and fusion in power generation, radioactive materials and x-rays in medical diagnosis and treatment, measurement of radiation, safety considerations, and biological effects. Intended to aid the understanding of the non-scientifically trained citizen. Student participation and discussion will be encouraged. Lecture with demonstration and occasional student use of radiation-related equipment, and maximum use of external resources. Text: Offprints, articles, pamphlets, references, government documents. Prerequisites: None; high school physics and chemistry helpful. One two and one-half hour session per week.

Cr 3.

## PHY 11 I Elements of Physics I

An introduction to the fundamental concepts of mechanics, sound and heat. Lectures, problem solving, demonstrations, laboratory exercises and visual aids will be used to develop an understanding of physical phenomena. Prerequisites: high school algebra. Lecture three hours, lab two hours, recitation one hour. Not offered in 1983-1984. Cr 4.5.

PHY 112 Elements of Physics II
A continuation of Physics I considering the topics: optics, electricity and modern physics. Lecture three hours, lab two hours, recitation one hour. Not offered in 19831984.

Cr 4.5.

## PHY 121 General Physics I

An introduction to the fundamental concepts of mechanics, sound and heat, using calculus where necessary at a level appropriate to the background of the student. This course is recommended for students who plan further study in science, mathematics, or engineering. It should be taken with PHY 122. Prerequisite: prior or concurrent registration in MAT 152 or equivalent experience. Three hours of lecture and two hours of recitation per week.

Cr 4.
PHY 122 General Physics Laboratory I
Experiments designed to illustrate the concepts studied in PHY 121. Prerequisite: concurrent registration in PHY 121 or permission of the instructor. Two hours per week. Cr 1 .

## PHY 123 General Physics II

A continuation of PHY 121, introducing the concepts of electricity, magnetism, light, and atomic physics, using calculus where necessary at a level appropriate to the background of the student. This course is intended for students who plan further study in science, mathematics, or engineering. It should be taken with PHY 124. Prerequisite: PHY 121 or equivalent and one semester of calculus. Three hours of lecture and two hours of recitation per week.

Cr 4.

## PHY 124 General Physics Laboratory II

Experiments designed to illustrate the concepts studied in PHY 123. Prerequisite: concurrent registration in PHY 123 or permission of the instructor. Two hours per week. Cr 1.

## PHY 211 Introductory Modern Physics

A discussion of the more important topics which show the departure of physics from its classical roots, namely, the nature of atomic particles, methods of determining particle properties, the concept of quantization, atomic and nuclear structure, and radioactivity. Prerequisite: PHY 123, 124, and MAT 152.

Cr 3.

## PHY 212 Modern Physics Laboratory

A laboratory course designed to accompany PHY 211. The experiments will illustrate the determination of particle properties, spectroscopy, fundamental constants, radioactive decay, and safe methods of handling radioac-
tive materials. Concurrent registration in PHY 211 is required.

Cr 1.
PHY 221 Intermediate Mechanics
An intermediate treatment of classical mechanics and wave motion. Prerequisite: PHY 121, 122, and MAT 153.

Cr 3.
PHY 222 Mechanics Laboratory
A laboratory course designed to accompany PHY 221. The experiments will illustrate linear and rotational accelerated motion, conservation of energy and momentum, oscillations, and evaluation of the gravitational constant. Concurrent registration in PHY 221 is required.

Crl.
PHY 223 Intermediate Electricity and Magnetism
An intermediate treatment of static and current electricity and magnetism, leading to Maxwell's Equations and their applications. Prerequisites: PHY 123, 124, and MAT 153.

Cr 3.
PHY 224 Electricity and Magnetism Laboratory
A laboratory course designed to accompany PHY 223. The experiments will illustrate the fundamental concepts of electrostatics, circuits, instruments, and electromagnetism, and will establish the values of the fundamental constants. Concurrent registration in PHY 223 is required.

Cr 1.

## PHY 251 Principles of Electronics

An introduction to electronics including DC and $A C$ circuits, transistors, operational amplifiers, and combinatorial and sequential logic devices. The laboratory will cover the use of electronic instrumentation as well as illustrate principles. Prerequisites: MAT 152 or equivalent, or permission of instructor. Cr 3.
PHY 253 Microprocessor Electronics and Applications
A study of microprocessors and microprocessor interfacing. Programming of a representative 8 -bit microprocessor will be covered. Laboratory experience will cover both machine language programming and interfacing of the microprocessor. Prerequisites: PHY 251 and any COS programming course. Cr 3.

## PHY 390 Independent Study in Physics

A laboratory research investigation of an approved topic in physics, using the facilities of the University laboratories and/or those of industrial and professional laboratories. Prerequisite: consent of the instructor. Cr 3.

# Political Science 

Chair of the Department: Richard J. Maiman, 38 Chamberlain, Portland Professor: Maiman; Associate Professors: Coogan, Fisher, Roberts, Woshinsky; Assistant Professor: Erickson

Political science is the systematic study of politics and government and is widely recognized as one of the core disciplines within the liberal arts curriculum. The study of political science does not prepare students directly for any specific career, but it does provide substantive and analytic background which can lead to a variety of professions. Most obviously it serves those with an interest in entering politics and government. Political science majors go on to become town managers, city planners, budget specialists, foreign service officers, policy researchers, and hold a variety of management positions in local, state, national, and international organizations. Beyond government, a political science degree leads naturally to law school or other graduate training. Many journalists and broadcasters were political science majors. Business has recognized the analytic and management skills obtained through training in political science. Indeed, some studies have estimated that perhaps one-third of undergraduate majors undertake careers in business. Political science training is also useful in other rapidly developing fields such as polling, communications, campaign management, consulting, private and public interest group activity, and data analysis. College teaching has also been a traditional career for the political scientists. Demographics now suggest that entering freshmen can look forward to good job prospects by the time they have completed their graduate educations.

## Programs and Requirements

## Bachelor of Arts in Political Science

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 36 .

Each major must complete POS 101, 102, and 103. A grade of C minus or better is required to receive major credit in the department. Each major must select the balance of required courses from the following, taking at least one course from each of the following five areas of the department:

Judicial Process: POS 283; POS 284; POS 286; Comparative Political Systems: POS 235; POS 236; POS 237; POS 238; POS 240; POS 245; POS 247; POS 259; POS 332; Political Theory: POS 289; POS 290; POS 292; International Politics: POS 104; POS 239; POS 249; POS 275; POS 285; POS 289; American Political System: POS 120; POS 201; POS 210; POS 233; POS 251; POS 252; POS 257; POS 258; POS 357; POS 358.
Upper-level political science courses all require either POS 101 or POS 102 or the permission of the instructor. Note that POS 101 is not a prerequisite for POS 102.

In special cases the requirement of POS 101 may be waived if the student successfully completes an examination administered by the Department. In rare cases the Department may also grant credit for other political science courses. Students who wish to obtain the POS 101 waiver or receive credit for other departmental courses should petition the Department through its chair.

The Political Science Department offers students an opportunity to pursue a concentration in world affairs by selecting interdisciplinary courses from a recommended list. See the department chair for details.

The Department administers an elaborate, carefully structured internship program, open to majors and non-majors alike. Political science majors are especially encouraged to take advantage of the variety of internship opportunities as part of their undergraduate program.

The Political Science Department strongly urges its majors to take courses in economics, history, sociology, and computer science. For a number of majors, courses in geography-anthropology, psychology, philosophy, and communication would also be useful. All political science majors are encouraged to undertake at least one year of university level, foreign language study. Additional language study is recommended for those majors with an interest in comparative or international politics and for those considering graduate school.

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 Core curriculum requirements.

Political science courses are normally offered on the following schedule:

Every semester: POS 101, 102 and internships.
Yearly: (Fall) POS 104, 233, 283, 289. (Spring) POS 284, 290. (Either semester) POS 103, 235, 236, 237, 249, 251, 307, 357, 358, 385.
Approximately once every two years: POS 120, 201, 210, 238, 239, 240, 245, 247, 257, 258, 259, 275, 286, 292, 332, 389.
Note: POS 307 Statistical Methods for Social Research may be applied toward the Department's 36 -hour major requirement, but may not be used to satisfy the distribution requirement.

## Minor in Political Science

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 18.

Students who wish to complete a political science minor should take the following courses: POS 101 and POS 102; three additional courses, to be selected so that three of the five fields within the discipline are represented (see above for the listing of courses within each field); and one additional course in political science.

POS 101 Introduction to American Government
This course focuses on the political institutions, processes, behavior, and problems of government in the United States. The national government is emphasized. Key topics include: the Constitution, Supreme Court, Congress, Presidency, political parties, public opinion, and interest groups.

Сr 3.

## POS 102 People and Politics

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 ap-
proaches or methods which political scientists have found helpful for understanding real political behavior. Note: POS 101 is not a prerequisite for POS 102.

Cr 3.
POS 103 Political Science Research Methods
An introduction to the way political scientists conceive and carry out research projects. Students will learn the scientific method: how to formulate theories, gather data, and test hypotheses. They will be taught how to find political science sources in the library, how to document sources in footnotes and bibliography, and how to conduct legal research in a law library. Students will eventually complete a major research project. This course is required for all political science majors; they are strongly urged to take it during their first or second semester after entering the Department.

Cr 3.

POS 104 Introduction to International Relations
Examination of the relationships of nations in their efforts to deal with each other from differing political, economic, and cultural bases.

Cr 3.

## POS 120 Government and Politics of Maine

 This course concerns Maine State Government, including legislative, executive and judicial programs and powers as exercised within the system of Maine values, political parties, and interest groups. Open to political science majors and as an elective or special interest to the student who has an interest in the programs and politics of the state of Maine.Cr 3 .
POS 201 Women and Politics
An introduction to the way gender affects political behavior. Special attention will be given to the social, psychological, and legal factors which, over the years, have inhibited women from engaging in full-scale political activity. Special consideration will also be given to the way the women's movement and the ideas of feminism have encouraged growing rates of political participation by women. The course will include a thorough review of the different behavior patterns of women and men in politics.

Cr 3.

## POS 210 Inter-governmental Relations

This course examines attempts to bring about social and economic changes through governmental action. Functional and dysfunctional aspects of the political, economic, and social systems are considered. Attempts at intervention are examined through selected case studies in inter-governmental relations. Cr 3.
POS 233 The American City
The city in American political life; types of municipal governments; developments in in-ter-governmental relations; metropolitan area problems; the future of the city. Students will participate in a task force on a selected urban program.

Cr 3.
POS 235 Democratic Governments of Europe An introduction to the parliamentary system, through a study of the governmental operations and politics of Britain, France, and the Federal Republic of Germany. Other topics covered: the Common Market and prospects for European integration; relationship of democratic Europe with communist Europe.

Cr 3.

## POS 236 Communist Governments

This course offers a survey of existing communist social systems. The following topics will be considered: variation in political parties and statesystems, 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."

Cr 3.
POS 237 The Politics of the Soviet Union
An introduction to the USSR: Russian and Soviet political history; Marxism-Leninism; the party and state structures; the socialist economy; the impact of the regime on the individual.

Cr 3.
POS 238 Canadian Government and Politics An introduction to political life in Canada. Primary topics to be covered in the course: Canadian political culture, voting behavior, the parliamentary system, federalism, political parties, and interest groups. The place of Quebec and French-speaking Canadians within the Canadian political system will be given special emphasis.

Cr 3.
POS 239 Soviet Foreign Policy
A survey of Soviet foreign policy as a continuation of Tsarist policies and as a world movement. Major topics include: the Comintern and the Popular Front: impact of World War II; the emergence of the USSR as a superpower; and post-Stalin modifications. Case studies in contemporary foreign problems, including relations with the Communist world.

Cr 3.
POS 240 The Politics of Developing Nations
An examination of the thrust towards modernization in the Third World. Economic development, relationships with the world community, the role of the military, and various theories about the nature of the relationship between the Third World and the Communist and non-Communist industrial worlds are considered POS 101, 102 or 104 are recommended.

Cr 3.

## POS 245 British Politics

A survey of the contemporary Constitution of Great Britain. The workings of Parliament, the government, and the parties. Principal stress is on the main issues current in British politics.

Cr 3.

## POS 251 Public Administration

An examination of national, state, and local bureaucracies, including their processes of decision making, communications, leadership, internal and external political relationships. A continuing question will be, "How can those institutions be made responsive to the public?" Prerequisite: POS 101. Cr 3.

## POS 252 Budgets and Politics

A comparative examination of the budgetary processes of municipalities, states, and nations. The budget is the critical point at which goals intersect with resources. Students who complete the course will have a working understanding of various budgeting
techniques (such as PPBS, zero-based budgeting, and incremental budgeting) as well as an appreciation of their effectiveness, their impact on expenditures, and their political consequences. Prerequisite: POS 251 or permission of the instructor.

Cr 3.
POS 257 Political Parties
Development and present organization and operation of the American party system. Nature and function of major and minor parties, sectionalism, nominating system, presidential and congressional elections, the electorate, finance, interest groups. Cr 3.
POS 258 Public Opinion and Electoral Behavior
The role of public opinion in the American political system; definition and measurement; sociological and psychological influences; mass media; linkages to government; the role of public opinion in other nations; votiial elections. A major segment of the course will be devoted to the construction, implementation, and analysis of a public opinion poll.

Cr 3.

## POS 259 Psychology and Politics

This course is an introduction to the litical behavior. It will examine various theories of personality and motivation which explain why people act as they do in politics. It will focus on such questions as: Can "national character" explain political differencenations? What are the psychological causes of political extremism and mass movements? Are there "authoritarian" and "democratic" personalities? What are the needs or drives which lead people into full-time political activity? The bulk of the course will focus on elite, rather than mass, behavior. Prerequisite: POS 102.

Cr 3.
POS 275 United States Foreign Policy
A detailed evaluation of U.S. foreign policy focusing on such topics as: identification of U.S. policy; governmental agencies and personalities in the formulation and implementation of policy; the role of non-governmental influences. The course is designed to evaluate current policy goals and practices within the context of long-range goals.

Cr 3.
POS 283 The American Judicial System
The role of the judiciary in American politics, with emphasis on the United States Supreme Court. A series of case studies will cover such topics as economic regulation, civil rights, reapportionment, and war powers. Attention will also be given to the impact of judicial philosophies on decisionmaking. Prerequisite: POS 101.

Cr 3.
POS 284 American Civil Liberties
An analysis of judicial interpretations of Bill of Rights guarantees and their effects on po-
litical processes in the United States. Topics include church and state, freedom of speech and press, the rights of the accused and the convicted. Prerequisite: POS 283. Cr 3.

## POS 286 Administrative Law

The law made by and for administrative agencies. Topics include delegation, standing judicial review, and the merits and demerits of "discretionary justice." Prerequisite: POS 101.

Cr 3.
POS 289 Political and Social Thought I
An intensive study of ancient political and social philosophies. A textual criticism of the works of Plato and Aristotle is emphasized. Prerequisite: junior or senior standing. Cr 3.
POS 290 Political and Social Thought II
A study of selected political theories from Machiavelli to modern political philosophers. The basic approach is historical, but an attempt is made to relate theories of politics to the environments in which they developed. Prerequisite: junior or senior standing. Cr 3.
POS 292 American Political Thought
An examination of American historical and contemporary thinking on a variety of political topics including equality, revolution, liberty, property, war, and individualism. Prerequisite: consent of the instructor. Cr 3.
POS 307 Statistical Methods for Social Research
Emphasis on uses of statistics in the organization, interpretation, and presentation of research data. Measures of association and correlation; testing of hypotheses, probability, and sampling. Includes one hour per week of laboratory exercises. Also listed as SOC 307. Prerequisite: POS 102 or SOC 100 . Cr 4.

## POS 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: POS 235 or 236 , or permission of the instructor.

Cr 3.

## POS 247 The Politics of China

An introduction to the government of the People's Republic of China, 1949-present. Principal topics include: historical and cultural antecedents, Maoism, party and state institutions, socialization and communications, political participation, policy formation and implementation, and change over time.

Cr 3.

POS 249 The Middle East in International Politics
The crucial issues of international politicswar, revolution, superpower intervention, economic development and terrorism-converge in the Middle East on a regional basis. This course will examine the nature of Mideast regional politics and the foregin policies of the major constituents of the area. The purpose will be to secure an understanding of the conflict between Arab and Israeli worlds, the foundations of tension among the Arab states themselves, and the role played by the superpowers in stabilizing or disrupting the uneasy relationships of the region. Cr 3.

## POS 351 Federal Executive Internship

Provision may be made to gain professional experience in a department or agency of the federal government located outside of Washington, D.C. The course is open only to selected students. Participation in a seminar is required.

Cr 6.
POS 352 Internship in Private and Semi-Public Organizations
Provision may be made to gain professional experience in administration and research. The course is open only to selected students; see department chairman for details. Students will meet for a series of internship seminars, for which readings and reports will be required.

Cr 6.
POS 353 Municipal Administration Internship
Provision may be made to gain professional experience in a local government. The course is open only to selected students; see department chairman for details. Students will meet for a series of internship seminars. Readings and research reports are required, focusing on the management, financial control and administration of modern American cities, with emphasis on administration of personnel and finance, the city plan and line functions; public safety, transportation, health, welfare and housing. Cr 6.

## POS 354 State Internship

Provision may be made to gain professional experience in a department or agency of state government. The course is open only to selected students; see department chairman for details. Students will meet for a series of internship seminars, for which readings and research reports are required. The state government internship is available under the Maine State Government Internship Program.

Cr 6.

## POS 355 Congressional Internship

Provision may be made to gain professional experience in the local offices of Maine's U.S. Congressmen and Senators. The course is
open only to selected students; see department chairman for details. Students will meet for a series of internship seminars, for which readings and research reports are required.

Cr 6.
POS 356 Internship in Washington, D.C.
Provision may be made to gain professional experience in a congressional office, an agency of the national government, or with a private or semi-public organization in Washington, D.C. The course is open only to selected students; see department chairman for details. Readings and research reports are required.

Cr 9 .
POS 357 The American Presidency
This course examines the development of the modern presidency; the scope and exercise of presidential decision-making indomestic and foreign policy; and standards for assessing presidential performance. Prerequisite: POS 101.

Cr 3 .

## POS 358 The American Congress

The role of the national legislature in American politics is considered. The course undertakes a study of the men and women who reach Congress, the internal norms and procedures on national decision-making. Among topics covered are the committee system, leadership patterns in the Senate and the House, the public's influence on Congress, Congress and the Presidency, and Congressional policy-making in selected areas. Prerequisite: POS 101 or 102.

Cr 3.

## POS 385 Peace and National Security

This course seeks to develop a basic understanding of national security needs and of the requirements for a reduction of global tensions. It analyzes security frameworks in an international context, together with the politics of conflict. Issues relating to arms buildup and arms control are the focus of public policy and planning in foreign affairs. How might we maximize the risks to national protection? The course will raise critical questions and develop relevant tools of analysis for assessing the politics of security and control in a nuclear era.

Cr 3.
POS 389 International Law and Organization
Law and order in the international system present a range of problems both similar to and different from law and order in domestic society. Public international law and international organization are attempts to control the violence and anarchy of international society. While these approaches are open to criticism for being ineffective, they cannot be ignored as integral to the international political process. This course will study the history, theoretical significance and practical implications of attempts to control interna-
tional political interaction through law and organization.

Cr 3.

## POS 395 Independent Study I

A concentrated program of research or study on a particular subject of the student's selection. The topic will be chosen with the advice and under the direction of a faculty member. Admission by permission of the political science faculty.

Сг 3.

POS 396 Independent Study II
A concentrated program of research or study on a particular subject of the student's selection. The topic will be chosen with the advice and under the direction of a faculty member. Admission by permission of the political science faculty.

Cr 3.

## Psychology

Chair of the Department: William F. Gayton, 512 Science Building, Portland
Professors: Bishop, Gayton, Paradise; Associate Professors: Hearns, Sanborn, 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.

## Programs and <br> Requirements

## Bachelor of Arts in Psychology

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 40 .

Required Courses:
PSY 101 and 102 General Psychology (3 credits each semester) to be taken as a two-semester sequence

| PSY | 201 | Statistics in Psychology |
| :--- | :--- | :--- |
| PSY | 205 | Experimental Methodology |
| PSY | 223 | Child Development |
| PSY | 330 | Social Psychology |
| PSY | 333 | Psychopathology |
| PSY | 350 | Psychology of Learning |
| PSY | 351 | Learning Laboratory |
| PSY | 361 | Sensation and Perception |
| PSY | 365 | Physiological Psychology |
| PSY | 371 | History and Systems |

Other courses offered by the Department can be taken as electives to complete the 40 -hour minimum. PSY 101 and 102 are prerequisites for all additional psychology courses.

In addition, successful completion of the following three non-psychology courses is required for certification as a psychology major. These courses should be completed by the end of the sophomore year:

| MAT | 100 | College Algebra (Prerequisite for PSY 201) |
| :--- | :--- | :--- |
| BIO | 105 | Biological Principles |
| BIO | 211 | Human Anatomy and Physiology (Prerequisite <br> for PSY 365) |

Psychology 101 and 102 should be elected no later than the sophomore year by students who plan to major in psychology. All majors are required
to elect PSY 201 and PSY 205 no later than their junior year. PSY 201 may be taken concurrently with PSY 102. No grade of D in any psychology course will count toward fulfillment of the major requirement.

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 theschool or college involved, as well as the Core curriculum requirements.

The Department recommends that 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.

Psychology majors who plan to attend graduate school should keep in mind that Graduate Record Examinations must be taken no later than December of their senior year. Students should plan to complete as many psychology courses as possible by the end of the fall semester of their senior year.

## PSY 101 General Psychology I

An introduction to the study of behavior as a natural science. Among the topics covered are: method of inquiry, physiological foundations of behavior, sensation and perception, motivation and emotion, learning and thinking. This course is a prerequisite for all courses in the department.

Cr 3.

## PSY 102 General Psychology II

A continuation of Psychology 101. It deals with complex psychological processes such as ability testing, personality, conflict, behavior disorders and therapy, and social and industrial behavior. Prerequisite: PSY 101. Cr 3.
PSY 201 Statistics in Psychology
A general introduction to the techniques of descriptive, predictive, and inferential statistics. Emphasis is placed on measures of central tendency and variability, correlation, hypothesis testing, and simple analysis of variance. Prerequisites: PSY 101 and MAT 100 or permission of the instructor. Cr 3.

## PSY 205 Experimental Methodology

Emphasis on the principles, methods, and techniques of experimental psychology. Applications of general methodology and specific techniques to the design of experiments in behavioral research. Prerequisite: PSY 201.

Cr 3.

## PSY 220 Developmental Psychology

A study of the factors in human psychological growth traced from genetic predisposition through the prenatal and postnatal periods, childhood, adolescence, adulthood and aging to death. The major theorists relevant to each developmental period are considered. Prerequisites: PSY 101 and 102. NOTE: This course does not count toward major credit.

Cr 3 .

## PSY 223 Child Development

A systematic study of the behavior and psychological development of children during infancy, preschool and school-age periods. Analysis of the genetic, prenatal, and postnatal influences on physical, cognitive, and personality development. Prerequisites: PSY 101 and 102.

Cr 3.
PSY 224 Adolescent Development
A systematic study of the behavioral and psychological development of the adolescent. The adolescent personality and problems of adjustment in relation to the family, the school and the community. Prerequisites: PSY 101 and 102.

Cr 3.

## PSY 232 Psychology of Adjustment

A study of the development of personality patterns, modes of behavior, life styles, and coping mechanisms considered normal in this society. Consideration of their value to individual functioning. Prerequisites: PSY 101 and 102. NOTE: This course does not count toward major credit.

Cr 3.

## PSY 235 Psychology of Women

Psychology of women and psychological literature relevant to men and women. Some topics include physiological and personality differences between the sexes, sex-role development, role conflict, women and traditional therapy. NOTE: This course does not count toward major credit. Prerequisites: PSY 101 and 102 .

Cr 3.

## PSY 311 Industrial Psychology

Critical treatment of research methods in personnel selection and evaluation and current theories of individual behavior in complex organizations such as government and business. Prerequisites: PSY 101 and 102.

Cr 3.

PSY 320 Psychology of Personality
Consideration of current issues and findings in personality. Current research in such areas as locus of control, anxiety, field dependence, interpersonal trust, repression-sensitization, sensation-seeking, authoritarianism, need for achievement, and extroversion. A group research project is required. Prerequisites: PSY 101 and 102. Fall semester only.

Cr 3.

## PSY 330 Social Psychology

The psychological principles which enter into the social behavior of the individual. Areas of consideration include perception, communication, attitude formation, interpersonal attraction, and group behavior. Prerequisites: PSY 101 and 102.

Cr 3.
PSY 333 Psychopathology
The etiology, development, and manifestation of the major forms of mental illness with particular emphasis upon the neuroses and psychoses. Psychological, social, and biological factors which contribute to maladjustment are examined. Prerequisite: PSY 101 and 102 .

Cr 3.
PSY 335 Deviations of Childhood
Intensive readings and discussion of the etiology and manifestation of deviant patterns of behavior and functioning in children. Problems relating to the identification and management of such deviations are considered. Prerequisites: PSY 101 and 102 or permission of the instructor. Spring semester only.

Cr 3.

## PSY 338 Theories of Personality

A survey of the major contemporary approaches to the study of personality. Different theories are compared, their impact upon current thinking evaluated, and their research contributions assessed. Prerequisites: PSY 101, 102, and 320, or permission of the instructor.

Cr 3.

## PSY 340 Behavior Modification

An introduction to the principles of operant conitioning with emphasis on the application of operant techniques in educational, correctional, and therapeutic situations. Prerequisites: PSY 101 and 102.

Cr 3.

## PSY 343 Psychological Test Theory

The theoretical and statistical concepts underlying the development of various psychological tests. Individual and group tests of intelligence, personality, aptitude, and interest are examined and evaluated in terms of these concepts. Uses and abuses of psychological tests are considered. Prerequisite: PSY 201 or instructor's permission. Fall semester only.

PSY 350 Psychology of Learning
Experimental findings on the fundamental principles that underlie the acquisition and
retention of new behavior. Emphasis is placed on operant and respondent conditioning and the experimental analysis of behavior. Prerequisites: PSY 101 and 102. Cr 3.

## PSY 351 Learning Laboratory

An introduction to laboratory experiences designed specifically to demonstrate the basic principles of behavior conveyed in PSY 350. Topics include positive reinforcement, extinction, shaping, discrimination, schedules of reinforcement, generalization, and others. Prerequisites: PSY 101 and 102. PSY 350 must be taken either prior to or concurrently with PSY 351.

Crl.
PSY 352 Psychology of Motivation
A survey of theory, research methods, and experimental findings related to the search for the determinants of human and animal behavior. The course requires a research paper on a topic of interest to the student, and the planning of an experiment growing out of that interest. Laboratory. Prerequisites: PSY 101 and 102.

Cr 3.
PSY 355 Research in Personality
Examination of current research in personality. Intensive experience in designing, executing, reporting, and evaluating research in personality. This will include a research project. Prerequisite: PSY 320 or permission of instructor. Spring semester only.

Cr 3.
PSY 360 Cognitive Processes
Experimental findings and theoretical analyses of the acquisition, retention, and transfer of verbal behavior and a critical survey of theories and research on such topics as problem solving, creative thinking, reasoning, concept formation, decision making, thought and language, and related topics. Prerequisites: PSY 101 and 102.

Cr 3.

## PSY 361 Sensation and Perception

An examiion of perceptual processes in selected sensory systems. Emphasis on experimental methodology, research findings, and theoretical interpretations. Prerequisites: PSY 201 and 205.

Cr 3.

## PSY 365 Physiological Psychology

Basic neuroanatomy, neurophysiology, and endocrinology, and the relationships between nervous system functioning and behavior. Physiological analysis of sensory function, motivation, and learning. Prerequisites: BIO 101 and 111; PSY 101, 102.

Cr 3.
PSY 371 History and Systems of Psychology
A survey of the history of psychological thought from its beginnings in Greek philosophy to modern times. Special attention will be given to the influence of philosophy and natural science on the development of contemporary psychology. The course concludes
with a survey of the major systems. Prerequisite: 15 hours in psychology and/or instructor's permission.

Cr 3.
PSY 380 Psychology and the Law
This course represents an intensive study of the role of psychology in the legal process with particular emphasis upon the insanity defense, competency to stand trial, and involuntary commitments. Also considered are those psychological factors which relate to such topics as jury selection and deliberation, eyewitness testimony and credibility, and courtroom strategy. A term paper is required of all students. Prerequisites: PSY 101, 102, 333 and/or permission of the instructor. Spring semester only. Cr 3.
PSY 385 Contemporary Psychotherapies
A survey of contemporary psychotherapies including Gestalt therapy, logotherapy, bioenergetics, reality therapy, transactional
analysis, and rational-emotive therapy. Seminar format. This course is designed for advanced psychology majors planning to go on to graduate school in clinical or counseling psychology. Prerequisite: permission of the instructor. Fall semester only. Cr 3.
PSY 390 Selected Topics in Psychology
A critical in-depth investigation of one of various topics and issues in different areas of psychology (e.g., experimental, social, clinical, child-developmental, etc.) Each student is expected to complete a research project on the topic for the semester. Consult the Psychology Department for topics offered. Prerequisite: permission of the instructor. Cr 3 .
PSY 400 Research in Psychology I
This course is open to qualified majors in psycholog topics or conduct research projects. With permission of departmental chairman.

Cr 3.

## Social Work

Chair of the Department: Joseph D. Kreisler, 7 Chamberlain Ave., Portland
Professor: Steinman; Associate Professors: Deprez, Kreisler, Lazar, Rich; Assistant Professor: Lieberman; Field Work Coordinator: Asen

The program in social work prepares the student for the professional practice of social work at the entry level.

The social work curriculum of the Department is accredited by the Council on Social Work Education at the baccalaureate level. Students who receive a degree from an accredited undergraduate program in social work may apply to selected graduate schools of social work for advanced standing. If accepted the student may complete an M.S.W. degree program in one year instead of two.

Admission to the Social Work Department is initially on a provisional basis. Formal admission occurs after the student has completed the Department's admission application and has had an admission conference with his other faculty advisor. This normally takes place in the second semester of the sophomore year. Transfer students, who select social work as their major, should meet with their faculty advisor as soon as possible after they are admitted to the University.

Included in the social work course requirements are two semesters of field work. During these two semesters the student puts in 480 hours in his or her field assignment, which takes place in a community agency. A large number of social and community agencies in the Greater Portland area and in cities and towns of southern Maine have been most generous in their cooperation with the Department and in making available field instruction resources including supervision for students of the Department.

In planning their program, provisional and admitted students must regularly consult with their faculty advisor. Such consultation is designed to help the student explore career objectives, review Departmental re-

## Programs and Requirements

quirements, design the best possible combination of required courses and electives, and to facilitate a productive relationship between the student and the Department.

The students of the Department have organized a Social Work Majors Association. The organization seeks to facilitate communication between students and faculty, ensure student involvement in departmental deliberations, provide for professional growth, and act on issues and problems in the community. Student representatives attend faculty meetings and serve as full members on the Department's personnel and curriculum committees.

The Social Work Department has a policy of awarding credits for work experience to students when a thorough review of their work experience in the human services reveals that they have attained a level of competence equivalent to that expected of students in selected practice-oriented courses. See Department policy statement, "Advanced Credit Procedures for Community Lab." When credits are awarded for work experience they are assigned the following course designation: SWE 251 Community Laboratory in Social Welfare; credit for work experience.

## Bachelor of Arts in Social Work

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 40 .

The major in social work consists of 40 credits in required social work courses. In addition, 40 credits of foundation courses must be completed in other departments. Some of thee foundation courses may also be used to satisfy the Core curriculum requirements as appropriate.

Required Social Work Courses

| SWE | 101 | Introduction to Social Welfare |  |
| :--- | :--- | :--- | :--- |
| SWE | 102 | Introduction to Social Work |  |
| SWE | 352 | and 353 $\quad$ Methods of Social Work Practice I |  |
|  |  | and II |  |
| SWE | 354 | and 355 $\quad$ Field Work I and II |  |
| SWE | 361 | Dynamics of Organizations, Professions and Con- |  |
|  |  | sumers <br> SWE | 370 |
| Human Behavior in the Social Environment |  |  |  |
| SWE | 433 | Social Welfare Research |  |
| SWE | 450 | Social Problems and Social Welfare Policy |  |
| SWE | 456 | Issues in Social Welfare and Social Work |  |

Required Foundation Courses in Other Departments
Substitutions for, or waivers of any of these courses, require the written approval of a student's advisor.

| ENG | 100 | College Writing |
| :--- | :--- | :--- |
| ECO | 201 | Principles of Economics I |
| BIO | 101 | Biological Foundation |
| BIO | 102 | Biological Principles |
| POS 101 | or | POS 102 Introduction to Government |
|  | or | People and Politics |

PHI (Any introductory philosophy course)
PSY 101 and 102 General Psychology I and II
SOC $\quad 100$ Introduction to Sociology
SOC $\quad 371$ Sociology of Minorities
Four other advanced level sociology and/or psychology courses
These four other courses are selected with the advice and approval of the student's advisor.
Students are expected to achieve a grade of C - or better in all Department of Social Work and required foundation knowledge courses.

## SWE 101 Introduction to Social Welfare

Seeks to define a perspective within which to understand the needs, problems, and potential of humans as individuals and in groups. Describes and analyzes social welfare systems and social work practices as they currently respond to social needs, and as they might better facilitate the development of human potential.

Cr 3.

## SWE 102 Introduction to Social Work

An introduction to the practice of social work focusing on the nature of intervention, the roles and functions of social workers in the delivery of services in various settings and beginning practice skills. The course enables a student to make a more informed decision about his/her entry into the field. Field observation by student required.

Cr 3 .

## SWE 265 Women-Social Change

Examines the ways our culture affects and is affected by women in the areas of physical and mental health throughout their lifespan. Emphasis will be placed on an assessment of the problems women face in today's world as well as personal and political approaches to these problems.

Cr 3.
SWE 266 Concept of Self and the Handicapped Person
To enhance effective interaction and communication with handicapped persons, issues are examined from the perspectives of society and of the individual (handicapped and nonhandicapped). Topics include basic human needs and self-image, independence-dependence, anger-frustration, failure, the power of guilt and shame. All students participate in sensory exercises.

Cr 3.
SWE 267 Relating Professionally to Homosexuality
Provides an understanding pts of homosexuality. Employs recent theoretical, empirical and clinical literature to assess attitudes toward homosexuality. Examines motivation and skills to achieve constructive interaction between the professional and the homosexual. Cr 3.
SWE 274 Aging and Social Policy: A CrossCultural View
Examines similarities and differences between simple and complex societies in their treatment of processes of aging. Against this background the position of older Americans is considered in relation to various social institutions, together with the origin and implementation of social policies affecting them.

Cr 3.
SWE 275 Developmental Services to the Aging
Policy, administration, and implementation of human services to older people are studied
from a developmental standpoint. Examines implications of age bias (and its modification) for the nature of service. SWE 274 recommended but not required.

Cr 3.
SWE 278 Professional Practice with Older People
Enhances skills in human service practice with older people. Analyzes the sources and manifestations of both healthy and problematic aging. Applies concepts drawn from the behavioral and social sciences, and from clinical and community practice. Translates a developmental rather than a custodial view into everyday direct service.

Cr 3.
SWE 279 Skills for Serving the Frail Elderly
Enhances values and skills for guiding families to plan with (rather than for) older relatives; for performing periodic, differential functional assessments of clients' remaining strengths as well as their limitations; for utilizing the network of community supports; for discerning appropriate institutionalization and for discharge planning; and for advocacy and assertiveness with and on behalf of the frail elderly.

Cr 3.
SWE 288 Substance Use and Abuse: Alcohol and other Drugs
Examines the use and abuse of psychoactive substances: street drugs, prescription drugs, alcohol, caffeine, and nicotine. Consideration of thehistory, pharmacology, and physical and psychological affects of each substance. Exploration of prevention and treatment models, with special reference to those in use locally.

Cr 3.

## SWE 352 Methods of Social Work Practice I

An introduction to basic concepts and skills in social work interviewing and in the prob-lem-solving approach within the framework of systems theory. Study of the values and knowledge base of social work skills. Class discussion and assignments based on community lab experience (SWE 354) which must be taken concurrently. Prerequisite: SWE 101.

Сг 3.
SWE 353 Methods of Social Work Practice II A continuation of SWE 252 covering application of basic social work skills to areas of practice such as community organization, crisis intervention, group work. Class discussions and assignment based on community lab experience (SWE 355) which must be taken concurrently.

Cr 3.

## SWE 354 Field Work I

For social welfare majors: a required internship of 16 hours per week in approved agency settings, designed to relate social work theory to practice under professional supervision. Fall semester only. Prerequisites: SWE 101; 102; 352 (concurrent).

Cr 6.

SWE 355 Field Work II
A continuation of SWE 354. Spring term only. Prerequisites: SWE 352 and 354; SWE 353 concurrent.

Cr 6.
SWE 361 Dynamics of Organizations, Professions and Consumers
Provides a series of concepts for the study and critical evaluation of the bureaucracies, professions, and consumers of social work and other services. Examines a range of approaches to rendering human services more responsive to client needs. This course is offered one semester each academic year. Prerequisite: SWE 352, SWE 354 or permission of instructor.

Cr 3.
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 450 or permission of instructor.

Cr 3.
SWE 370 Human Behavior in the Social Environment
A study of the implications of theory and research related to human development for social welfare policy and social work practice. Prerequisites: SWE 101, 102 and PSY 101 and 102 or permission of instructor.

Cr 3.

## SWE 380 Child Welfare

A study of the process of growing under handicapping social conditions and the implications for social services and institutional change. Prerequisite: SWE 101 or permission of the instructor.

Cr 3.

## SWE 397 Department Projects

Individual or group projects, requiring independent study or field work in some aspect of social welfare, to be selected by students in consultation with faculty. Prerequisite: department permission.

SWE 433 Social Welfare Research
A study of the implications of social welfare research for social policy and social work practice. Students practice applications of concepts and methodology by means of projects. Prerequisite: SWE 101 plus senior standing or permission of instructor.

Cr 4.
SWE 450 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 352, SWE 354, ECO 201, POS 101 or 102, or permission of instructor.

Cr 3.
SWE 452 Methods of Social Work Practice III Provides further exploration of the theoretical knowledge and practice skills involved in utilization of particular interventive methods (e.g., child advocacy, organizational change and/or the more focused knowledge, methods, and skills needed for effective intervention with a particular population at risk: adolescents, the frail elderly, substance abusers). Prerequisite: permission of instructor.

Cr 3.
SWE 453 Methods of Social Work Practice IV A continuation of SWE 452.

Cr 3.
SWE 454 Field Work III
An advanced field experience in social work practice. Fall term only. Prerequisites: SWE 354 sion of the instructor. Cr var.

## SWE 455 Field Work IV

A continuation of SWE 454. Spring term only. Cr var.

SWE 456 Issues in Social Welfare and Social Work
Senior seminar for social welfare majors that seeks to integrate class and field experience. Open to others by permission only. Must be taken in student's final semester. Cr 3.

## Sociology

Chair of the Department: S. Henry Monsen, 120 Bedford St., Portland Professors: Giguere, Lacognata, Monsen, Beirne; Associate Professors: Anspach, Fullam, Grzelkowski, Lehman; Assistant Professor: Preston

Sociology is the study of social life and the social causes and consequences of human behavior. Sociology's subject matter ranges from the intimate family to the hostile mob, from crime to religion, from the divisions of race and social class to the shared beliefs of a common culture, from the sociology of work to the sociology of sport. Although teaching remains the dominant activity among the more than 15,000 sociologists today, other forms of employment are growing. An undergraduate major in sociology offers valuable preparation for careers in social work, social research, politics, public administration, law, business and education.

Students majoring in sociology may choose between two areas of concentration offered by the Department: general sociology and social policy.

Social Policy Concentration Students majoring in sociology may elect to concentrate in social policy. The department offers a sequence of social policy courses-Introduction to Social Policy, Theoretical Perspectives on Social Policy, and Seminar in Social Policy Research-as well as clusters of courses in substantive policy areas. Students are required to take all three social policy courses and to choose a substantive policy area. The choice of area will be determined by student interest in consultation with the coordinator.

The requirements of the concentration are shaped by its three objectives: (l) to provide the conceptual and analyticskills needed to plan and to evaluate contemporary social policies; (2) to reveal the theoretical bases of important social policies; (3) to provide an in-depth understanding of a substantive policy area. The curriculum of the concentration offers the student a basic understanding of social policy while allowing maximum flexibility to focus on a specific substantive policy area. Requirements for each concentration arelisted below.

In addition to the major, the Department also offers a minor in sociology. The minor is intended for those students with a major other than sociology but who wish to broaden their educational experience in a formally designated program of study. The minor program may be of particular interest to students in the schools of Nursing and Business, the College of Education, and non-social science disciplines in the College of Arts and Sciences.

## Criminology Degree

The Department of Sociology also offers a bachelor of arts degree in criminology. This program provides an integrated and coherent academic program focusing on the structures, institutions, and activities that define certain social behavior as criminal in modern society. For more information please see the catalog entry for Criminology or contact the Department.

## Alpha Kappa Delta

Juniors and seniors who have demonstrated an interest and involvement in sociology, who have completed at least four sociology courses and who have accumulated at least a 3.0 grade point average in sociology courses at the University are eligible for nomination to Alpha Kappa Delta, the national sociology scholarship and honor society.

## Student Involvement

Student involvement is a high priority for the Sociology Department. Students are involved in the research projects of the Department as well as the everyday administrative and advising life of the Department. Members of the Sociology Student's Association are involved in all departmental activities and decisions as full voting members of the Depart-
ment. These student members are elected by students each April, although vacancies sometimes occur during the year. Students who are interested in this kind of involvement are encouraged to talk to departmental faculty.

## Internships and Work Experience

The Department of Sociology has begun a new and expanded internship and work experience program. The expanded program helps place students in community agencies and organizations, including neighborhood organizations and a variety of agencies dealing with youth services. Credit internships actively seek to bring together student academic work and community involvement. Students interested in an internship or work experience placement are encouraged to meet with Professor Grzelkowski, internship coordinator.

## Colloquia

The Department of Sociology sponsors a colloquium series which seeks to bring together faculty and students in active discussion around a variety of topics. Several colloquia are scheduled each semester with faculty, students, and occasional visiting scholars, making presentations which serve as the focus of discussion. A schedule of current colloquia is available from the departmental office.

All students are reminded that, in addition to their meeting departmental requirements for a major leading to a baccalaureate degree, they must also meet the requirements of the College of Arts and Sciences, as well as the University's Core curriculum.

## Programs and

Requirements

## Bachelor of Arts in Sociology

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 47.

All students must complete 41 hours of coursework in sociology, and must also satisfy a cognate requirement consisting of 6 hours above the introductory level in a related discipline. All concentrations share a common core of 20 hours of required coursework.

Majors are encouraged to complete their courses in Methods of Social Research (SOC 205), Sociological Theory (SOC 300) and Statistical Methods (SOC 307) relatively early in their academic careers. Students should note that Sociological Theory II is a prerequisite for Senior seminar.
General Sociology Concentration
Common Requirements
SOC 100 Introduction to Sociology
SOC 205 Methods of Social Research
SOC 300 Sociological Theory I
SOC 301 Sociological Theory II
SOC 307 Statistical Methods for Social Research
One seminar from those numbered SOC 400-SOC 405
Concentration Requirements (three hours from each of the following areas)

SOC 310-319 Social Processes
SOC 330-339 Social Institutions
SOC 350-369 Units of Social Life
SOC $370-379$ or SOC 215 or SOC $200 \quad$ Social Problems
Electives in Sociology (9 hours)
Students in general sociology may satisfy their cognate requirement with any six hours above the introductory level in any of the following areas: anthropology; biology; criminology; economics; geography; history; mathematics; philosophy; political science; psychology; social welfare; computer science.

| Social Policy Concentration <br> Required Courses (Common) <br> SOC$\quad 100$ |  |  | Introduction to Sociology |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
| SOC | 200 | Social Problems | 3 |
| SOC | 205 | Methods of Social Research | 3 |
| SOC | 307 | Statistical Methods for Social Research | 4 |
| SOC | 300 | Sociological Theory I | 4 |
| Required | Courses (Concentration) | 3 |  |
| SOC | 202 | Social Issues and Social Policy |  |
| SOC | 304 | Theoretical Perspectives on Social Policy | 3 |
| SOC | 312 | Class and Inequality | 3 |
| SOC | 352 | Demography | 3 |
| SOC | 406 | Seminar in Social Policy Analysis | 3 |
| SOC | 395 | Internship | 3 |
| (SOC 406 | and SOC 395 must be taken in the | 3 |  |
| same semester) |  |  |  |

32 hours
Sociology Electives (9 hours)
To be selected in consultation with the student's advisor and the Coordinator of the Social Policy Concentration.
Cognate Electives (3 hours)
To be selected in consultation with the student's advisor and the Coordinator of the Social Policy Concentration.

## Minor in Sociology

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 19.

Ten credit hours are required courses; the remainder are electives. Required Courses: SOC 100; SOC 205; SOC 300 or SOC 356; sociology electives**
**Each student minoring in sociology elects a minimum of three up-per-division courses from those offered by the Department. These courses, chosen in consultation with the minor advisor, reflect the preprofessional or other interests of the student.

Note: Advisor to sociology minors: Professor David Fullam.

## Major Credit and Grade Policy

There are prerequisites for most major credit courses. See the departmental course listings for particulars. Courses to be taken for major credit at other institutions must be approved in advance. Grades of C - or better must be achieved in all courses for major or minor credit. Courses taken pass/fail are not acceptable.

## Introducing the Discipline

SOC 100 Introduction to Sociology
The fundamental concepts, principles, and methods of sociology; analyzes the influence of social and cultural factors upon human behavior; evaluates effect of group processes, social classes, stratification, and basic institutions on contemporary society. Cr 3.

SOC 200 Social Problems
Application of a sociological frame of reference to selected contemporary issues. Guides the student toward an understanding of why and how issues develop, how particular social
groups are affected by them, and what is involved in dealing with them. Prerequisite: SOC 100 or permission of instructor. Cr 3.

SOC 202 Social Policy and Social Issues
This course serves as an introduction to the field of social policy. It examines social policies which address contemporary social issues. Students acquire a conceptual knowledge of social policies, their historical development and ideological foundations, and the techniques of social policy analysis.

Cr 3.

## SOC 205 Methods of Social Research

Conceptualization and research design, data collection and analysis, logic of inquiry and research techniques. Includes one hour per week of laboratory exercises. Prerequisites: SOC 100 or permission of instructor. Offered each semester. Cr 4.
SOC 206 Computers and Social Science
An introduction to the problems, processes, and techniques of computer use in the analysis of social science data. The course will acquaint students with general computer use and processing; with some of the basic concerns and problems of social science data management and analysis; and with the actual use of some of the most common programs and statistical packages in social science. Emphasis will be on use of the Statistical Package for Social Sciences (SPSS). This course assumes little or no prior computer knowledge. Prerequisite: SOC 100 or permission of instructor. Not open to freshmen.

Cr 1 .

## SOC 300 Sociological Theory I

Critical evaluation of selected classical and contemporary models of the social world. Includes consideration of the foundations of sociological thought, the content of major classical theories and theory groups, and the socio-cultural settings within which they developed. Prerequisite: SOC 100 and two other SOC courses, or permission of instructor. Offered fall semesters.

Cr 3.

SOC 301 Sociological Theory II
An investigation of contemporary sociological theory. Traces descent of the classical statements through to the present, and identifies both linkages and discontinuities in sociological analysis. Attention is also given to the socio-cultural settings within which various schools of sociological theorizing presently flourish. Prerequisites: SOC 300 and two additional SOC courses, or permission of the instructor. Offered spring semesters.

Cr 3.
SOC 304 Theoretical Perspectives in Social Policy
This course investigates the relation between sociological theory and social policy. It critically examines the political and ideological underpinnings of various schools of social policy. In addition, the course identifies linkages and discontinuities between theory and policy. Prerequisites: SOC 100 or SOC 200 and SOC 202 or permission of instructor.

Cr 3.
SOC 307 Statistical Methods for Social Research
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. Prerequisites: SOC 205 or permission of instructor. Offered spring semesters.

Cr 4.

## Social Processes

## SOC 310 Social Change

Analysis of sociocultural factors related to social change and the dynamics of the change process. Prerequisite: SOC 100 or permission of instructor. Offered spring 1986. Cr 3.

## SOC 312 Class and Inequality

A systematic assessment of structured social inequalities in wealth, power, and status in industrialized societies. Emphasis is placed on assessing social policies employed to reduce, ameliorate, or sustain such inequalities. Prerequisite: SOC 100 or permission of instructor. Offered spring semesters. Cr 3.

SOC 315 Self and Society
A sociological examination of theory and re-
search in major areas relating personality and social systems; attitudes and behavior; socialization; social perception; bureaucratic structure and personality; etc. Emphasis on issues involved in relating two theoretical levels of analysis. Prerequisite: SOC 100 or permission of instructor. Offered fall 1985.

Cr 3.

## SOC 316 Sociology of Gender

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 or permission of instructor. Offered fall semesters. Cr 3.

SOC 330 Sociology of the Family
A sociological approach to the study of the family, including the structure of social relationships, the modern American family as a social institution, the cultural background of the family, and the impact of social change. Prerequisite: SOC 100 or permission of instructor. Offered fall 1984 and spring 1986.

Cr 3.

## SOC 331 Sociology of Education

An examination of the historical and sociopolitical development and structure of public and private education in contemporary American society. Topics include education as a bureaucratic enterprise, as a vehicle of social control, as a vehicle of social change and systems as a reflection of social consensus, dissension and conflict. Prerequisite: SOC 100 or permission of instructor. Offered spring 1985.

Cr 3.

## SOC 332 Industrial Sociology

Social factors involved in the development of industry; social consequences of technological change; social organization within industry; problems encountered within the social structure(s) of industry. Prerequisite: SOC 100 or permission of instructor. Not offered 1984-86.

Cr 3.

## SOC 333 Sociology of Medicine

A consideration of the socio-cultural dimensions of disease, responses to disease, and so-
cial mechanisms which are developed to prevent, treat, and otherwise deal with disease. Particular attention is paid to the historical development of understandings of health, disease, and care. Prerequisite: SOC 100 or permission of instructor. Offered fall semesters.

Cr 3.
SOC 334 Sociology of Religion
Review and critique of classical and contemporary sociological interpretations of religion, with emphasis on the changing character of religious expression in the twentieth century. Prerequisite: SOC 100 or permission of instructor. Offered spring 1986. Cr 3.

SOC 336 Law and Society
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 or permission of instructor. Offered fall semesters.

Cr 3.
SOC 337 Juvenile Justice
Examination and analysis of juvenile justice philosophies, processing, and treatment with an emphasis on historical and comparative materials. Prerequisite: SOC 100 or permission of instructor.

Cr 3.

## Units of Social Life

## SOC 350 Sociology of Urban Life

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 or permission of instructor. Offered fall 1984 and spring 1986.

Сг 3.

## SOC 352 Demography

Fertility, mortality, and migration as they impact on every aspect of life whether political, economic, or social and the reciprocal impact of these on the population variables. Specific applications include: the relationship of population growth and aging; population growth and the status of women; population growth and urbanization; food and population policy; population growth and economic development; population characteristics and life changes; population characteristics in marketing; crime and the age structure; fertility changes and the labor
market and the impact of immigration. Students are encouraged to explore their participation as population actors, making decisions which affect fertility, mortality and migration and being in turn affected by these population variables. Offered fall semesters.

Cr 3.
SOC 353 Social Movements
The rise and developments of social movements emphasizing structuring and institutionalization. Social movements and sociopolitical change. Prerequisite: SOC 100 or permission of instructor.

Cr 3 .
SOC 355 Politics and Society
Possibilities and limitations of political democracy in industrial, bureaucratic society. Capitalism and socialism, their underlying ideologies, and the resulting political structures will be contrasted. Emphasis on current American politics with comparative perspective when relevant. Prerequisite: SOC 100 or permission of instructor.

Cr 3 .

## SOC 356 Order and Control

An examination of basic processes involved in creation, maintenance and development of social order, with specific emphasis on the role of social control mechanisms and institutions in the larger issue of order. The course will include both structural/institutional and micro-sociological analysis. A comparative element will be introduced through examination of selected non-Western cultures and non-capitalist socio-political systems. The iss social order and control will conclude the course. Prerequisite: SOC 100 or permission of instructor.

Сг 3.

## Social Problems

## SOC 215 Criminology

This course focuses on the difficult question "What is crime?" and on problems concerning the measurement and distribution of crime. The criminology course examines some of the popular misconceptions and myths about crime, the creation and utility of official and unofficial crime statistics, popular presumptions about the causes of crime, and the institutional responses to crime in our society. This course is also listed as CRM 215. This course is one of the two basis courses in the Criminology Program, along with Law and Society (SOC 336). Prerequisite: SOC 100 or permission of instructor. Offered each semester.

Cr 3.

## SOC 371 Minority Groups

Considers the factors which produce and maintain structural social inequality based on minority status, and the social consequences of such inequality. Includes analysis

SOC 357 Bureaucracy in Modern Society
Examination of the nature and types of formal organizations, the relationships between them and the larger social context of which they are a part, and their internal structure. Prerequisite: SOC 100 or permission of instructor.

Cr 3.
SOC 361 Sociology of Franco-Americans
Description and analysis of the development and present state of the culture, institutions and social structure of Americans of FrenchCanadian descent in the United States. Comparisons with Quebec and Acadia will be made when pertinent. Prerequisite: SOC 100 or permission of instructor.

Сг 3.
of selected minorities both in the U.S. and cross-culturally. Prerequisite: SOC 100 or permission of instructor. Offered fall semesters.

Cr 3.
SOC 374 Mental Health and Mental Illness
An examination of theories of the "causes" of "madness" and the treatment of the mentally ill. Particular attention on the influence of culture on the definition of illnesses, the relationship between social factors and illness, and the social context of treatment. Prerequisite: SOC 100 or permission of instructor. Offered spring semesters.

Cr 3.
SOC 375 Sociological Perspectives on Deviance
The origin and nature of socially disapproved behavior. Analysis of societal interpretations of and responses to the deviant. Prerequisite: SOC 100 or permission of instructor. Offered spring semesters.

Cr 3.

## Advanced Seminars

SOC 400 Seminar in Sociology of Sociology
Focusing on synthesis, the seminar is meant to provide the sociology major with an overall view of the discipline and its perspective as well as an opportunity to consider current issues and the future of sociology. Prerequisite: senior standing in sociology.

Cr 3 .
SOC 401 Seminar in Sociological Classics
An in-depth study of selected seminal works in sociology. Aimed at the identification of major concepts and propositions. Prerequisites: SOC 300 or permission of instructor.

SOC 402 Seminar in Contemporary Marxism A survey of issues and debates within Marxist political, social, and economic theory. Spe-
cific topics examined include: law and the modern state; power and political process; the crisis of hegemony in late capitalism. Prerequisites: SOC 300 or permission of instructor. Not offered 1984-1986.

Cr 3.
SOC 403 Seminar in Social Thought
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. Not offered 1984-1986.

Cr3.
SOC 404 Seminar in Theory Construction
The vocabulary and logic of theory construction; from assumptions and isolated proposi-
tions to systematized theory. The course aims at enabling the student to understand the utility of theory and its relevance for empirical research. Prerequisite: senior standing in sociology. Not offered 1984-1986. Cr 3.

## SOC 405 Research Seminar

Focus on the actual conduct of sociological research. Students will formulate a research problem, develop a research design, collect and analyze data and report their findings. Prerequisites: SOC 205, SOC 307 and senior standing. Not offered 1984-86.

Cr 3.
SOC 406 Seminar in Social Policy Analysis
The goal of this course is to develop an understanding of the application of social science research methods to the evaluation of social programs. Students acquire a knowledge of the formal methods of policy analysis, learn to interpret the results of analytic studies and master the most commonly encountered specific techniques. The course must be taken concurrently with SOC 395 . Students apply analytic techniques to an evaluation of their internship. Prerequisite: SOC 304 or permission of instructor.

Cr 3.
SOC 390 Individualized Instruction I
Independent reading and/or research for ju-
niors and seniors. Apply to department chair. Prerequisite: 15 hours in sociology. Cr var.
SOC 391 Individualized Instruction II
Continuation of independent reading and/or research for juniors and seniors. Apply to department chair. Prerequisite: SOC 390 . Crvar.

## SOC 395 Internship

The course is designed to provide work/action experience and insight into professional roles in a variety of community agencies and organizations. The primary emphasis of the internship is the application of the social science perspective, substantive knowledge, and methodology to understand and illuminate a particular organizational situation. Thus, the internship can be understood as a participant observation experience within the context of social science research. It is primarily designed as a field experience/reflection opportunity for upper-level social science majors with substantive background/course-work in the area of internship placement. In addition to field placement, students are expected to meet for a series of internship seminars, for which readings and reports will be required. Offered each semester. Contact departmental internship coordinator for details. Cr 3 or 6 .

## Theatre

Chair of the Department: Thomas A. Power, Russell Hall, Gorham
Professors: Stump, Rootes; Associate Professors: Duclos, Power, Steele, Kading

The Theatre Department offers a four-year program leading to a B.A. degree in theatre. Students may choose to emphasize a particular area such as acting or directing or a moregeneral curriculum. An undergraduate degree in theatre offers valuable preparation for careers in the theatrical activities on an educational or professional level, as well as other nonrelated disciplines.

All students are reminded that, in addition to meeting departmental requirements for a major, they must also meet the requirements of the College of Arts and Sciences as well as the Core curriculum requirements.

## Programs and <br> Requirements

## Bachelor of Arts in Theatre

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 30 .

Incoming freshmen may declare their intent to major. For those declaring their intent to become a theatre major, the following courses are required:

ENG 100 College Writing (for other ways of satisfying this requirement, refer to the Core curriculum, page 00)
THE
101
Introduction to Drama

| THE | 120 | Fundamentals of Acting: Movement and <br> Improvisation |
| :--- | :--- | :--- |
| THE | 121 | Fundamentals of Acting: Scene Work <br> THE |
|  | 135, | Stage Craft |
| THE | 290 | Oral Interpretation |

Students who have declared an intent to become majors are then identified as candidates for matriculation in the Department of Theatre. They may request status as a major when the above requirements have been completed. When the request for major status is submitted, the Department will review the student's past record in terms of academic and practical potential for success. Notification of admittance or rejection will be issued. The student may appeal any rejection if desired.

A total of 30 credits in theatre, not to include those hours selected for major preparation, is required for graduation.
The following courses are required:

| THE | $136 /$ | Stage Craft II |
| :---: | :---: | :--- |
|  | 137 |  |
| THE | 210 | Play Analysis |
| THE | 220 | Acting III: Voice for the Actor |
| THE | 221 | Advanced Scene Work |
|  | or |  |
| THE | 320 | Acting V: Contemporary Acting Methods |
| THE | 330 | Stage Lighting (or THE 331 Scene Design) |
| THE | 340 | History of the Theatre I (or THE 341 History |
|  |  | of the Theatre II) |
| Any one course: |  |  |
| THE | 361 | Late 19th Century Drama of the Western World |
| THE | 362 | 20th Century Drama of the Western World |
| THE | 363 | Contemporary Avant-Garde Drama |
| THE | 460 | American Drama |

In addition to the above, a total of nine credits must be selected from the following allied areas, unless otherwise approved by the Department:

Art
ARH 273 Film as Image and Idea
ART 141 Fundamental Design I
ART $\quad 151 \quad$ Fundamental Drawing I
English
ENG 260 Shakespeare I
ENG 261 Shakespeare II
ENG 246 British Drama to 1642
ENG 366 Restoration and 18th Century Drama
ENG 352 Medieval Drama
Foreign Languages and Classics
CLA 252 The Tragic Hero in Ancient Literature
FRE 264 Avant-Garde Theatre in France
FRE 303 French Theatre in the 20th Century
Music
MUS 401 Gorham Chorale
MUS 403 A Cappella Choir
MUS 405 The Chamber Singers
Education
EDU 499 Photography for Classroom Use
Industrial Arts
ITT 210 Electronics Technology
ITT 241 Graphic Arts Technology
ITT 444 Photographic Reproduction

## Theatre Department Production Requirements

A. All theatre majors must participate in a minimum of five Theatre Department productions according to the following guidelines: (l) work performed on a minimum of two of these productions must be in the areas of tech/design;* (2) work performed on a minimum of two of these productions must be in the areas of acting/performing;* (3) these produc-
tions must be "in-house" Theatre Department productions; (4) these productions may be part of the requirements of a formal Theatre Department course; (5) students may receive work-study or unrestricted funds for this production work if Theatre Workshop credit is not received (THE 130, 131, 132, 133); (6) students may enroll in Theatre Workshop (THE 130, 131, 132, 133) for these productions if they are not receiving work-study or unrestricted funds as compensation for their production work.
*In the event that a student repeatedly auditions or requests tech positions for Department productions but is not given a role or a crew position, this effort will be considered a good faith effort on the part of the student and may fulfill the acting or tech/design minimum production requirements.
B. All theatre majors must enroll in four units of Theatre Workshop (THE 130, 131, 132, 133).

The Department will meet at least once a semester to review each major's progress and to call to the attention of the student any departmental concern.

## Minor in Theatre

The minimum number of credits (exclusive of the University's Core curriculum) required for the minor: 18.

The courses required are THE 120, THE 121, THE 101, THE 290, THE 135, and two courses from the following: THE 220, THE 221, THE 320, THE 330, THE 340, THE 210, THE 361, THE 362, THE 363, THE 460.

## THE 101 Introduction to Drama

A lecture-discussion course designed to provide students with a conception of the development of the theatre and its literature. The course consists of a survey of Greek medieval, Elizabethan, French neo-classic, and 18th, 19 th and 20 th century theatre and drama. Cr 3.
THE 120 Acting I-Fundamentals of Acting: Movement and Improvisation
This is a practical course designed to introduce the student to basic procedures necessary to experience the creative process in acting. The course is designed to cultivate the student's sense of both physical and mental self by increasing his imagination, creative, and technical abilities. Course utilizes movement, sensitivity, mime, and improvisational exercises. (Taught spring and fall semesters.) Cr 3.
THE 121 Acting II-Fundamentals of Acting: Scene Work
This is a practical course designed to introduce the student to basic skills of acting through stage movement, projection, characterization and scene work. Emphasis made on internal preparation by developing a role and on external techniques for projecting that role. (Taught spring and fall semesters.)

Cr 3 .

THE 122 Contemporary Dance I
Contemporary Dance I is designed for beginning dancers with no formal dance training or no dance training in recent yers. This class introduces basic contemporary dance skills and vocabulary. The class is divided equally into two areas of study. Physical and technical development are learned through strengthening and stretching exercises and body isolations. Proper body alignment is stressed for the most energy-efficient and in-jury-free movement both in and out of class. Dance phrases are designed to teach rhythmic and locomotor skills. Equal time will be devoted to studying choreographic techniques wherein students will learn how dances are created by creating their own. The Art of Making Dances by Doris Humphrey, plus selected writings by more contemporary choreographers will be used in the class. The class will be expected to attend several local dance performances during the semester. Prerequisite: THE 120 or THE 121 or permission of the instructor. Cr 3.
THE 123 Contemporary Dance II A continuation of THE 122.

Cr 3.

## THE 124 Intercollegiate Forensics

A course designed to acquaint students with intercollegiate competition. Students will compete at various forensic tournaments throughout the East. Permission of instructor is required.

Cr 1.

THE 125 Intercollegiate Forensics A continuation of THE 124.
THE 126 Intercollegiate Forensics A continuation of THE 125.

THE 127 Intercollegiate Forensics A continuation of THE 126.

Cr 1 .

THE 130 Theatre Workshop I
A course designed to give students practical application of theatre practices in the fields of acting, design, scene construction, costuming, properties, lighting, management, and directing. A laboratory course. Cr 1 .

THE 13I Theatre Workshop II
A continuation of THE 130. Prerequisite: THE 130.

Cr 1 .
THE 132 Theatre Workshop III
A continuation of THE 131. Prerequisite: THE 131.

Crl.
THE 133 Theatre Workshop IV
A continuation of THE 132. Prerequisite: THE 132.

Crl.
THE 135 Stagecraft I
A lecture/discussion/lab course in technical theatre and related topics relevant to technical direction. Specific areas of emphasis will include: theatre/stage terminology and organization; scene shop practices and use of shop tools; basic methods of construction, rigging, and moving scenery for the stage. The lecture portion of the course will be supplemented by actual construction, painting and mounting of a major University theatre production. (Concurrent enrollment in THE 137 Stagecraft Lab required.)

Cr 3.

## THE 136 Stagecraft II

A lecture/discussion/lab course in basic theatrical drafting/graphic practices relating to theatrical construction and design techniques. The primary emphasis of the course will be the execution of various types of theatrical design and construction, painting and mounting of a major University theatre production. (Concurrent enrollment in THE 137 Stagecraft Lab required.) Prerequisite: THE 135 or instructor consent.

Cr 3.

## THE 137 Stagecraft Lab

A lab course allowing practical application of theory discussed in THE 135, 136. (Concurrent enrollment in THE 135 or 136 required.)

Crl.

## THE 138 Make-up

The course will emphasize the fundamentals of design and application of theatrical makeup. Specific areas of study will include the use of painted highlight and shadow to alter facial features; tof the course will be the actual application of make-up, giving the student the opportunity to practice realistic and
abstract make-up techniques. An additional 30 hours of production work will be required of each student providing the opportunity to apply classroom techniques to the actual performance experience.

Cr 3.
THE 170 Public Speaking
An introductory course in the fundamentals of public discourse. Primarily a lecture-performance course, students will learn the basics of informative, persuasive, and entertaining speaking, as well as the processes of problem-solving and informative discussion. Emphasis is upon conception, analysis, structure, and modes of proof.

Cr 3.
THE 210 Play Analysis
Representative dramas for the stage are read, discussed and criticized using the Aristotelian elements of plot, character, thought, diction, music, and spectacle as analytical tools.

Cr 3.

## THE 220 Acting III- Voice for the Actor

This is a practical course designed to develop the actor's speaking voice through emphasis on breath control, articulation, and enunciation. Prerequisites: THE 120, 121. (Fall semester only.)

Cr 3.
THE 221 Acting I V-Advanced Scene Work
This is a practical course designed to develop advanced characterization techniques through the use of scene work. Emphasis will be placed on both serious/comic acting and on methods for preparing auditions. Prerequisite: THE 120, 121, or 220 or permission of instructor. (Spring semester only.) Cr 3.
THE 222 Contemporary Dance II
Contemporary Dance II is for a more experienced dance student. Expertise in executing basic dance skills (proper alignment, parallel and turned out positions, slides, triplets) and knowledge of dance vocabulary are assumed. Through practicing more complicated movement exercises and dance patterns students will increase their technical dance skills and understanding of kineseology. Entire dances or portions of contemporary choreography will be taught in this class. Choreographic work will consist of movement character development using the effort-shape system of movement analysis. This study of movement qualities will be taken from Cecily Dell's work in A Primer for Movement Description. Students will be expected to attend several dance performances during the semester. Prerequisite: THE 122 or permission of instructor.

Cr 3.
THE 223 Mime
Class instruction emphasizes mime technique, basic illusions, body graphics, and silent character studies. Solo and group work integrates elements of these four (4) major
areas of studtudents gain an understanding of the historical perspective of classical mime and its influence on contemporary approaches to the art form. Prerequisites: Fundamentals of Acting (THE 120 or THE 121) or permission of the instructor. Fall semester only.

Cr 3.

## THE 230 Creative Dramatics

Study of problems in introducing young people to theatre as a total art form. Course to include the development of children's plays through improvisation as well as traditional children's literature. Work with children in various community settings will provide practical experience for the student. Cr 3.

THE 234 Directing I
A basic course providing background and experience in play production including such topics as play analysis and $s$ influenced by cast and faculty options, rehearsal schedules, blocking action and related stage business. This course is particularly valuable for the classroom teacher. Practicum required. Prerequisites: $101,120,121$.

Cr 3.

## THE 240 Costuming I

The course will consist of an introduction to costuming; including basic design, basic construction and an introduction to the materials used in millinery, wig-making and special costume problems (armor, footwear, etc.). The major emphasis will focus on design and construction. Additional hours of production work will be required providing a practical application of classroom theory. (Concurrent enrollment in THE 137 is required.)

Сr 3.
THE 274 Journalistic Drama Criticism
This course will provide the student with a comprehensive analysis of the role of the writing critic in professional, community, educational, and amateur theatre. Stress will be placed upon development of a workable writing style. A minimum of five plays will be seen from which reviews will be generated. Prerequisite: THE 234 or by permission.

Cr 3.

## THE 290 Oral Interpretation

A course in the assimilation and analysis of literary material (poetry, prose, drama) with emphasis on the techniques used in reading written material aloud to an audience. Designed to stimulate an understanding and responsiveness to literature and to develop the ability to convey to others, through oral reading, an appreciation of that literature. Cr 3.
THE 320 Acting V-Contemporary Acting Methods
This is a practical course designed to broaden the basic skills of the actor through the use of new contemporary acting techniques and ap-
proaches. The course will include a continuation of audition preparation. Prerequisites: THE 120, 121, 220, 221, or permission of instructor. (Fall semester only.) Cr 3.

## THE 321 Acting VI-Acting Styles

This course deals with specific problems in interpretation of Shakespeare and classical and neo-classical tragic and comic styles. Emphasis will be placed on language and characterization, and on audition work. Prerequisites: THE 120, 121, 220, 221 or permission of the instructor. (Spring semester only.)

Cr 3.

## THE 330 Stage Lighting

Introduction to stage lighting design, elements of electricity, color, light sources, instrumentation, and control systems. Student will participate in lighting projects in practicum. Prerequisites: THE 135, THE 136.

Cr 3.

## THE 331 Scene Design

Lecture and practicum in stage scenic design. Emphasis on the visual art and drafting of designs. Prerequisites: THE 135 and THE 136, or permission of instructor.

Cr 3.

## THE 334 Directing II

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 $101,120,121,234,135,221$ and 320 . Senior or junior with permission.

Cr 3.
THE 335 Playwriting
A lecture-practicum course designed to acquaint the student with playwriting principles. Emphasis is placed on the one-act play form. Students will be required to complete a series of creative exercises culminating with writing of a one-act play. Prerequisites: THE 101 and THE 361 or 362 or $363 . \quad$ Cr 3.

## THE 340 History of the Theatre I

A study of the development of the drama, the physical theatre, and the modes of production from the ancient Greek period through to 1640 . Prerequisite: THE $101 . \quad \mathrm{Cr} 3$.
THE 341 History of the Theatre II
A study of the development of the drama, the physical theatre, and the modes of production from the Restoration to the present. Prerequisite: THE 101.

Cr 3.
THE 350 Theatre Management
Investigation of educational and professional theatre management roles, including: managing director; business manager; box office manager; publicity director; house manager. Practicum required. Prerequisites: THE 101, $234 . \quad \mathrm{Cr} 3$.

THE 361 Late 19th-Century Drama of the Western World
This course is designed to acquaint the theatre major and non-major with a broad range of dramatic literature of the early 19th century. Representative plays of Ibsen, Strindberg, Chekhov, Shaw, and others which exemplify the literary, social, political, and philosophical aspects of the age will be studied. Prerequisite: THE 101.

Cr 3.
THE 362 20th-Century Drama of the Western World
This course is designed to acquaint the theatre major and non-major with a broad range of dramatic literature of the 20th century. Representative plays of O'Neill, Odets, Anouilh, Brecht, Sartre, Wilder, Miller, Beckett, Osborne, Chayefsky, and others which exemplify the literary, social, political, and philosophical aspects of the age will be studied. Prerequisite: THE 101.

Cr 3.
THE 363 Contemporary Avant-Garde Drama
This course is designed to acquaint the student of theatre with the new voices in contemporary dramatic literature. Focus is upon such playwrights as Beckett, Genet, Pinter, Albee, LeRoi Jones, and representative plays from Off-Broadway Theatre. Prerequisite: THE 101.

Cr 3.
THE 390 Advanced Oral Interpretation
A continuation of THE 290.
Cr 3.
THE 391 Reader's Theatre
A study of principles and techniques utilized in the performance of a literary work in the Reader's Theatre style. Emphasis is on providing new insights into the material through oral performance.

Cr 3.

## THE 398 Theatre Internship

Students will assume a full one-semester internship with a professional theatre or Reader's Theatre Company. Students will be involved in management, acting, directing, or technical theatre as a member of the company. Each student will be assigned a faculty advisor who will make a biweekly evaluation of ongoing work. Participants will be required to keep a diary and/or portfolio to be reviewed by the faculty of the Theatre Department at the conclusion of the internship. All creative work done by the student will be evaluated by the advisor and at least one other or if possible all members of the department. Prerequisite: permission of the Theatre Department.

Cr 3-15.

## THE 399 Independent Study

The student will submit a written proposal defining the scope and the limitations of his/ her study, and must submit the project for independent study to the faculty one month
prior to the completion of the semester preceding study. This deadline should be published at least one month prior to the student's deadline. The faculty must approve and determine the credits given to the independent study. If the faculty does not meet before the semester is concluded, the student will not be eligible to do the study until the coming semester. The student will choose a supervisor. It will be the duty of this instructor to closely supervise, advise, and recommend to the student and assure all faculty that each will receive a copy of the proposal before the meeting at which the student's proposal will be presented to the entire faculty. At the completion of the independent study the student will take an oral examination conducted by the entire faculty and chaired by the advisor (Review Board). At the completion of the oral examination the faculty will advise the student's advisor as to their determination of a grade. The advisor will then determine the grade and submit the grade to the Registrar's Office. A student, generally, should not embark on a study until he/she has taken and completed all of the available coursework that is necessary to do the study in depth. Each theatre student is entitled to take six units in either Independent Study or Theatre Projects, or a combination of both not to exceed six units unless the specific proposal is unanimously approved by the theatre faculty.

Cr 3.

## THE 433 Project I

Investigation of special topics, or execution of special projects which fall within the purview of theatre. Students may select an interor intra-departmental committee of three professors to approve, assist, and oversee the project. Prerequisites: juniors and seniors only; precise definition of project and unanimous permission of committee. Students must obtain rules for this course from the department chairman. Credithours arranged.

## THE 460 American Drama

A study of drama in the United States. A brief history of early American playwrights followed by a close study of major figures, with O'Neill as the center. Others: Maxwell Anderson, Robert Sherwood, Tennessee Williams, Arthur Miller, and Edward Albee.

Cr 3.


# College of Education 

Dean: Dorothy D. Moore, 119 Bailey Hall; Assistant Dean: Bruce A. Allen Chair, Department of Professional Education: Melissa Costello; Chair, Department of Human Resource Development: Willard Callender.; Director of Graduate Education: Miriam Clasby; Director, Center for Professional Development: George Lyons; Director, Office of Clinical Experiences: Melissa Costello

Department of<br>Professional Education

Professors: R. Costello, Downey, Hodgdon, Neuberger, O'Donnell, Philippi; Associate Professors: Allen, Amoroso, Bouchard, Clasby, Cohen, Colucci, M. Costello, Deady, Gorman, Lyons, Milbury, Morrill, Silvernail, Smith; Assistant Professors: Davis, Foster, Rees, Wood; Instructors: Drew, Turlo

## Department of Human Resource Development

Professors: Callender, Southworth; Associate Professors: D. Moore, Sutton; Assistant Professors: Campbell, Davis, Lapointe

The College of Education is organized into three departments. The Professional Education Department Undergraduate Division offers an undergraduate degree in elementary education. The Professional Educational Department Graduate Division offers degrees in reading, instructional leadership, and educational administration. The Department of Human Resource Development offers graduate degrees in counselor education, adult education, and community agency and rehabilitation counseling. Additionally, undergraduate degree programs are offered with the College of Arts and Sciences in art education, music education, and secondary mathematics; and undergraduate degrees ore offered with the School of Applied Science in industrial education and vocational education.
The three departments are supported by the Office for Clinical Experiences, which coordinates field experiences such as practica, internships, and student teaching. The Educational Placement Office provides professional assistance in preparing students for employment opportunities.

The Professional Development Center serves undergraduate students, graduate students, and community educators. Services include maintenance of a resource laboratory which houses commercial education materials for examination and loan, specialized teaching resources, and a workshop area for teacher production of classroom materials; sponsorship of conferences and workshops responsive to the needs of educators; support of curriculum reviews by local schools through consultation and material provision; assistance in planning and implementation of field-based noncredit, recertification credit, and in-service graduate credit experiences; and assistance in securing other University, regional, and statewide staff development resources.

The Office of Graduate Education administers graduate programs in the College of Education. Information about these programs is available in the office (408 Bailey Hall) and the University's graduate catalog.

## General Information

Admission to an undergraduate program in the College of Education is initiated through the Admissions Office. Candidates for admission must be graduates of approved secondary schools or hold the high school equivalency diploma. A detailed description of the admissions procedure appears on page 9 of this catalog.

Education majors are assigned an advisor during the first semester they are enrolled in the College. Responsibility for successfully completing the requirements of a program resides with the student. It is, therefore, necessary that students carefully read the catalog section which describes program requirements, and confer at least once each semester with their advisor for approval of their programs.

Grade Point Average Students must earn an accumulative grade point average (GPA) of 2.5 for their complete baccalaureate program. Students must achieve a GPA of 2.5 for their liberal arts sequence. No more than one D grade will count toward fulfillment of the liberal arts sequence.

Students majoring in the elementary education program must achieve a grade point average of at least 2.5 in their professional educational requirements (EDU courses) prior to student teaching. No grades of D will count toward the fulfillment of the professional requirements.
Pass/Fail Option An undergraduate in the College of Education may register for a total of 18 hours of pass/fail credits. Required courses in the Core curriculum and the student's major may not 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 department chair is required. No University credit may be earned for courses described in the catalog taken through independent study. The approved independent study form is filed with the Registrar during the registration period.

Graduate Course Enrollment for Undergraduate Students An undergraduate student may be permited to enroll in graduate courses if the following conditions are met:

1. The student is a junior or senior in an approved undergraduate program.
2. The student has an earned GPA of 3.0.
3. The student has met all course prerequisites.
4. The student has received prior approval to enroll in the course from his/her advisor, course instructor, and the appropriate department chair.
5. The student is not displacing a graduate student in the course; that is, an undergraduate student may enroll in a course only after all qualified graduate students have had an opportunity to enroll in the course.
6. The student may not enroll in courses that are restricted to matriculated graduatestudents only.
Intern Programs A teaching internship is a cooperative teacher education program for elementary majors that the College of Education shares with participating school districts. In addition to being assigned to classroom teachers who help interns integrate theory and practice, the interns receive instruction on-site by University and public school personnel. Internship programs generally are designed as two-semester programs where the interns may earn up to 30 academic credits.

Exchange programs with King Alfred's College, Winchester, England and Whitelands College, London, England are also available. Students may elect to complete a semester of study, including student teaching, through this option.

## Elementary Education

The elementary education curriculum prepares graduates to teach in grades K-8. Details are provided in the following pages of this catalog.

## Secondary Education Mathematics Program

The secondary education program offers a major in mathematics. Graduates of this program are certified to teach mathematics in grades 7 through 12. Students enrolled in this secondary education program are also required to complete an 18 -semester hour minor of a subject commonly taught in the secondary schools. Details are provided in the following section.

## Art Education Program

Completion of a bachelor of science degree in art education certifies the graduate to teach or supervise art programs in all grades, K-12, of the public schools in the state of Maine. Admission to this program is through the Admissions Office of USM and is described on p. 9 of this catalog.

The program is made up of three components: (l) the University's core curriculum described on p. 38, (2) the art major, outlined on p. 61, and (3) the professional sequence which is listed on p. 62.

## Music Education Program

The aim of the music education program is to develop individual potential in the areas of musicianship and scholarship, as well as to present the most recent trends in the fields of music education. Upon satisfactory completion of the four-year program, graduates receive a bachelor of science degree with a major in music education and are certified by the state of Maine to teach music in grades one through twelve. The program qualifies graduates to teach or supervise all phases of vocal and instrumental music. Details are provided on page 124.

## Graduate Programs

The College of Education also offers a master of science degree in education, with a variety of major concentrations. Please refer to the graduate programs page in this catalog, and to the Graduate Catalog.

# Department of Professional Education 

The Department of Professional Education is primarily responsible for the development of the curriculum for elementary education majors. The Department also offers courses in the professional education sequence for persons majoring in art education, or music education, and offers a secondary education program in mathematics. A Certificate Program in Athletic Coaching for men and women is available through the physical education unit which is associated with the Department of Professional Education.

Programs and<br>Requirements

## Elementary Education

Completion of the Elementary Education curriculum qualifies graduates to teach in all grades kindergarten through eight in the public schools of the state of Maine. Students completing the prescribed program will be awarded a bachelor of science degree in elementary education.

Admission to the elementary education program is through the University of Southern Maine's Admissions Office. Admissions procedures appear on p. 9 of this catalog. Upon formal acceptance by the Admissions Office, students are designated pre-education candidates.

During the first semester of their matriculation, candidates are assigned advisors in the College of Education who will make recommendations for appropriated course selection. During the first two years of study pre-education candidates usually complete the Core curriculum prescribed by the University, described on p. 38. They also begin a liberal arts program of courses, and enroll in selected education courses.

Applications for admission as an elementary education major are accepted after pre-education candidateshave successfully completed 45 semester hours of bacclaureate level coursework. Applications may be obtained from advisors who will guide pre-education candidates through this process. The essential criteria for acceptance as an elementary education major are as follows:
A. Completion of the University's Core curriculum (No more than one D grade will count toward the fulfillment of the Core curriculum.)
B. An accumulative grade point average of 2.50
C. At least two recommendations
D. Completion of the following courses from the College of Arts and Sciences and the College of Education:

| EDU | 100 | Exploring Teaching as a Profession |
| :--- | :--- | :--- |
| EDU | 210 | Theoretical Foundations of Learning |
| EDU | 360 | Microcomputers |
| HRD | 333 | Human Growth and Development |
| MAT | 131 | Number Systems for Elementary Teachers |
| MAT | 232 | Geometry for Elementary Teachers |

Applications are reviewed by an Admissions Committee within the Department of Professional Education and forwarded with appropriate recommendations to the Dean of the College of Education. Applicants are advised of their acceptance or rejection prior to pre-registration for the next semester.

The program for elementary education majors is made up of four components: (l) the University's Core curriculum-37 semester hours; (2) an approved concentration of liberal arts courses-at least 36 semester hours; (3) a sequence of professional education courses- 15 semester hours of pre-service education courses and a 33 semester hour internship; and Seminar in Critical Issues in American Education, 3 semester hours.

The University Core curriculum described on p. 38 of this catalog is a set of courses selected by category that involves 37 semester hours of coursework. It should be noted that in some cases one course may be taken that will satisfy simultaneously two categories. Specifically, an interdisci-
plinary course (COR) may also satisfy a Methods of Inquiry/Ways of Knowing requirement; HRD 333 Human Growth and Development will satisfy a Social Science requirement, while at the same time satisfying a requirement of the professional education sequence; and MAT 131 Number Systems for Elementary Teachers will satisfy a Quantitative Decision requirement, while at the same time completing one of specified mathematics requirement of the Department of Professional Education.
A concentration of courses featuring a liberal arts specialty may be completed in one of several ways, all of which require the approval of a College of Education advisor.
(1) A liberal arts major as described in the College of Arts and Sciences section of this catalog. This option would lead to a double major.
(2) A self-designed major of at least 36 semester hours which is first approved by a College of Education advisor and then approved by the Faculty Council for Interdepartmental Majors in the College of Arts and Sciences.
(3) An interdisciplinary program of courses of at least 36 semester hours approved by College of Education advisor featuring a liberal arts specialty. The interdisciplinary themes include: humanities, fine arts, natural sciences, and social sciences.
(4) A department-approved sequence of 36 semester hours in a single liberal arts discipline.
The professional education sequence is composed of two parts (1) preservice education courses and (2) an internship.

| The Preservice Education Courses | Credits |  |  |
| :---: | :---: | :---: | ---: |
| EDU | 100 | Exploring Teaching as a Profession | 3 |
| EDU | 210 | Theoretical Foundations of Learning | 3 |
| EDU | 303 | Developmental Reading I | 3 |
| EDU | 336 | Children's Literature | 3 |
| EDU | 360 | Microcomputers | 3 |
| The Internship | (2nd semesterjunior year) | Credits |  |
| Enabling Experiences in a Public School Setting | 18 |  |  |
| EDU | 304 | Practicum in Elementary School Mathematics |  |
| EDU | 307 | Practicum in Elementary Science |  |
| EDU | 311 | Practicum in Language Arts |  |
| EDU | 358 | Practicum in Elementary Social Science |  |
| EDU | 321 | Developmental Reading II |  |
| PHE | 304 | Health \& Physical Education for Teachers |  |
| The Internship (lst semester of senior year) | Credits |  |  |
| EDU | 325 | Internship with Master Teacher | 12 |
| EDU | 335 | Exceptional Children in the Classroom | 3 |

During the final semester of the elementary education program students must complete their liberal arts component and EDU 400 Seminar in Critical Issues in American Education (3 credits).

## Certificate Program in Athletic Coachingfor Men and Women

This program is designed to prepare students for certain coaching responsibilities in schools and recreational programs. The curriculum includes an introduction to the organization and administration of athletics as well as practical work in assisting coaches in selected sports. Attention is also given to the prevention and care of the most common injuries occurring in athletic programs.

A certificate will be presented to students completing the minimum 15 -hour program. In addition, the proper notation will be made on the student's official transcript indicating proficiency in the area of athletic coaching as determined by the certificate program.

Course of Study in Athletic Coaching (15-credit program)
Required

| PHE | 203 | Athletic Training |
| :--- | :--- | :--- |
| PHE | 302 | Coaching Philosophy and Fundamentals |
| PHE | 314 | Organization and Administration of Athletics |


| PHE | 391 | Field Experience in Coaching |
| :---: | :---: | :--- |
| Electives |  |  |
| PHE | 209 | Officiating Basketball |
| PHE | 210 | Officiating Field Hockey |
| PHE | 211 | Officiating Soccer |
| PHE | 212 | Officiating Baseball/Softball |
| PHE | 303 | Coaching Basketball, Philosophy and Methods |
| PHE | 311 | Coaching Soccer, Philosophy and Methods |
| PHE | 312 | Coaching Football, Philosophy and Methods |
| PHE | 315 | Coaching Field Hockey, Philosophy and Methods |
| PHE | 316 | Coaching Volleyball, Philosophy and Methods |
| PHE | 318 | Coaching Gymnastics, Philosophy and Methods |
| PHE | 335 | Coaching Baseball and Softball, Philosophy and |
| Methods |  |  |
| PHE | 389 | Advanced First Aid and CPR |

EDU 100 Exploring Teaching as a Profession This course provides an introduction to the College of Education program for all elementary and secondary mathematics majors during the first year. The course is designed around lectures and seminars coordinated with field-based experiences in a school setting. The purpose is to enable students to make a valid career decision through an examination of the diversity of facets of education including teacher roles, educational settings, and curricular methods.

Сr 3.
EDU 151 Preprofessional Field Experience (For International Exchange Students)
This section is designed primarily for international exchange students. It allows an expanded preprofessional experience (requiring a minimum of four full daysper week in schools). Students are expected to participate in teaching activities as well as classroom management during this placement.

Cr 6.
EDU 200 Studies in Educational Foundations
This course provides an introduction to the study of American education. Problems and issues in contemporary education are examined from several perspectives, including the social, historical and philosophical. Cr 3.

## EDU 210 Theoretical Foundations of Learning

An interdisciplinary approach to the study of the learning process. Explores origins and domains of learning theories. Analyzes how major theories view the learning process. Applies theoretical content to motivation, concept development, classroom management, methodology and evaluation. Prerequisites: EDU 100 and HRD 333 (or concurrent).

Cr 3.
EDU 300 Introduction to Teaching in the Early Elementary Grades
This basic course is designed to provide an overview of curriculum, methods and mate-
rials utilized in early elementary education. Emphasis will be placed on teaching learning theory, learning styles, approaches to school and classroom organization, parent involvement, the teacher as a human being and the hidden curriculum. Students will work independently in a modular approach for one segment of this course.

Cr 3.
EDU 301 Elementary School Curriculum
This course is designed to provide an overview of the influences, methods, and materials that affect curriculum designs in the intermediate grades. Emphasis is given to four factors affecting curriculum development: (1) goals and objectives; (2) sources of content; (3) teaching strategies; and (4) evaluation. Prerequisite: HRD 333.

Cr 3.

## EDU 303 Developmental Reading I

A basic course encompassing the development of literacy. Content includes three major stages of reading progress, informal diagnostic techniques, and general awareness of instructional approaches and options. Case studies are used to illustrate characteristics of readers at each stage of literacy acquisition.

Cr 3.
EDU 304 Practicum in Elementary School Mathematics
A field-based course conducted primarily in the setting of actual elementary school classes. After several mathematics workshop sessions, the students will prepare and then teach several lessons in elementary school math classes. All planning and teaching will occur with guidance of the professor and the public school cooperating teacher. Prerequisite: MAT 131.

Cr 3.
EDU305 Teaching Elementary School Mathematics
The content of the course will focus on developing techniques for teaching mathematics to elementary grade pupils. Conducted in a setting of activity-oriented sessions, special attention will be devoted to explanations for
children about the fundamentals of mathematics, diagnosing methematical difficulties, organizing various modes of instruction, and exploring ways to enrich the curriculum. Prerequisite: MAT 131.

Cr 3.
EDU 307 Practicum in Elementary Science A field-based methodology course conducted primarily in an elementary school. After several science workshop sessions students prepare and teach sequential lessons in the actual K-6 classroom setting under the supervision of University staff and cooperating public school teachers.

Cr 3.
EDU 308 Science for Children
An alternative to EDU 307. This course is conducted in a University science resource center and provides opportunities for students to apply learning theory by exploring current science curricula. Emphasis is on content analysis and comparison and on implementation in public classrooms. A field experience is included whenever possible. Recommended prerequisite: EDU 210.

Cr 3.
EDU 310 Preparation of Classroom Instructional Materials
This lecture-laboratory course involves students in the creation of instructional materials using techniques such as dry mounting of flat pictorial materials, professional quality lettering, rudimentary photography and processing (including use of the darkroom), and the production of transparent projectuals. Labfee $\$ 10.00$.

Сг 3.

## EDU 311 Practicum in Language Arts

A field based course featuring recent methods and materials to the teaching of communication skills. Topics include spelling, handwriting, listening, creative expression, oral and written reporting.

Cr 3.
EDU 312 Teaching Language Arts in Elementary School
Recent methods and materials basic to the teaching of communication skills. Topics include spelling, handwriting, listening, creative expression, oral and written reporting. Use of tapes, records, filmstrips, and contemporary language arts books for the elementary school.

Cr 3.
EDU 316 Introduction to Learning Disabilities
This course is designed to serve as an introduction to the reasons why some children have difficulty in school. In pursuit of this goal, it will survey the field of exceptionality in general, and will focus specifically on origins, detection, and strategies of intervention for disabilities in the information processing model. Fall 1985 only.

Cr 3.
EDU 319 Measurement and Evaluation
Construction, selection, and use of educa-
tional achievement tests, including diagnostic and survey instruments. Skill in writing essay and objective types is developed. An inquiry into the validity and reliability of typical standardized tests. Elements and uses of statistics; tabulation of data; measures of central tendency, variability, and correlation.

Cr 3.

## EDU 321 Developmental Reading II

This course builds upon the concepts introduced in Developmental Reading I. Students are guided in designing specific instructional activities that correspond to the major stages of reading progress. Empirical demonstrations, methods, and materials for teaching reading are stressed.

Сr 3 .

## EDU 322 Remedial Reading

The course presents typical reading disabilities, including methods for diagnosing and planning corrective strategies. Consideration is given to methods and techniques appropriate for general classroom use. Prerequisite: a basic course in reading.

Cr 3.
EDU323 Independent Study in Education To provide juniors and seniors who have demonstrated critical and analytical capability an opportunity to pursue a project independently, charting a course and exploring an area of interest within their major field, bearing upon it previous course experiences and emerging with an intellectually sound, coherent synthesis, or an artistic or technical creation reflecting a high caliber of performance. May not be used as a substitute for currently described courses. Cr Var.

## EDU 324 Student Teaching

Full-time student teaching during the senior year is provided for one semester under direct supervision in off-campus situations for all who meet requirements. Opportunities for student teaching include: elementary, secondary mathematics, art, music, industrial arts, and vocational education. Prerequisites: vary according to major field of study. See curriculum listing in catalog. Applications due in the office of the Director of Clinical Experiences by February 1 each year.

Cr 12.

## EDU 325 Internship

Year-long internship during the junior and senior year is provided under direct supervision in off-campus teaching/learning centers for all who meet requirements. Professional courses are offered concurrently with internship. Opportunities for internship are available for elementary majors only. Cr 18.
EDU 326 Seminar in Elementary Education
A study of issues in elementary education: school law; professional and ethical procedures; organization of student teaching; and teacher relationships with schools, commu-
nity, and state. Visiting lecturers participate. Concurrent: enrollment in EDU 324 or EDU 325.

Cr 3 .

## EDU 330 Teaching Strategies

This course features the instructional approaches and techniques that will enable a teacher to translate the content of a curriculum into teaching/learning activities for the classroom. Emphasis will be placed on developing teaching strategies with respect to: planning, modes of instruction, classroom management, grouping schemes, utilization of resources, and evaluation.

Cr 3.
EDU 335 Exceptional Students in the Classroom
This course shall serve as an introduction to the unique characteristics and needs of exceptional students in grades K-8. Legislation and its implications, roles and responsibilities of the regular classroom teacher, resources and characteristics of exceptional students shall be discussed.

Cr 3.

## EDU 336 Children's Literature

This course emphasizes a creative, interdisciplinary approach to children's books, an understanding of the interests and developmental tasks of the child, and, by precept and example, methods of individualizing reading. The student will be expected to read children's books widely and in depth. Cr 3 .

## EDU 340 Language Acquisition

This course focuses on the development of language acquisition, 0-5 years; factors which affect language acquisition process; brief introduction to deviations in early language and speech function; and materials, methods, and skill development for facilitating language and speech development. Cr 3.
EDU 342 Theories and Practices in Early Childhood Education
In addition to familiarizing the student with the historical perspective of early childhood education, this course is designed to acquaint the student with the underlying philosophical bases of a wide variety of early education models and with the approaches for implementing these models. Content will be presented by means of films, filmstrips, recordings, guest speakers, group discussions, student presentations, and lectures. Cr 3.

## EDU 344 Teaching the Child Under Six

Philosophy, curricula, methods, and materials of the preschool child and teachers. Extensive observation and field experience are integral parts of the course. Prerequisite or corequisite: EDU 342.

Cr 3.

## EDU 346 Exceptionality and the Preschool Child

This course is designed primarily for students interested in exceptionality and the pre-
school child. It is intended to be a practical introduction to the field of exceptionality. Topics covered will include: definitions, labels, brief history of special education, the law, integration, attitudes, diagnosis and prescription, materials, and community resources.

Cr 3.

## EDU 348 Cooperative Experiences in Early

 Childhood EducationThis course is designed exclusively for early childhood education majors who are currently contributing to a preschool or K-3 program in a public or private school. Seminars and on-site visits by the instructor will be an integral part of the experience. Prerequisites: EDU 100 and instructor approval of the cooperative experience site.

Cr 3.
EDU 358 Practicum in Elementary Social Studies
A field based methodology course, conducted primarily in elementary/middle school. The content of this course will focus on teaching strategies appropriate for social studies. Emphasis is on content analysis and curriculum development.

Cr 3.
EDU 360 Microcomputer Applications in Education
This course is designed to orient the pre-service teacher with the terminology, operation, evaluation, and applications of microcomputers, hardware, and software, as related to American educational systems. Additionally, the course will deal with traditional electronic and electro-mechanical media as related to modern learning processes. Cr 3.
EDU 363 Emotional Problems of Exceptional Children
This course is designed to offer a cross-categorical view of exceptionality with emphasis on disabilities in the affective domain. Origins, detection, prevention, and strategies of intervention will be treated.

Cr 3.
EDU 366 Practicum in Learning Disabilities This course is designed to provide students with an advanced pre-professional experience with learning-disabled children. This experience is served coterminously 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. Spring 1986.

Cr 3 .

## EDU 368 Introduction to Communication Disorders

The common speech and language disorders found in school children will be discussed. For each disorder the probable causes, symptoms, and methods diagnosis and remediation will be covered. The course will also include the basic principles of articulatory phonetics.

Cr 3.

EDU 442 Organizing and Directing the Preschool
Comprised of a series of discrete modules, this course will focus on the implementation, organization, and continued functioning of the preschool. Equipment, daily routines, health and safety, licensing regulations, parent involvement, and funding will be among the topics explored. Students will spend considerable time while participating in this course.

Cr 3 .
EDU 399 Methods and Materials for Teaching Learning Disabled
This course reviews approaches and materials concurrently used for teaching children with learning problems. Remediation methods for perceptual, motor, cognitive, communication, and academic skills will be covered as well as ways to modify existing curriculum to meet existing needs. Prerequisite: EDU 316. Spring 1986.

Cr 3.

## Physical Education Courses

## PHE 102 Independent Activities

This course will allow students to earn credit for doing physical education activities outside the University. Students may select any activity which can be done independently or may enroll in a structured program, such as Y classes, aerobic dance classes, etc. Instructor permission required. Cr 1 or 2.

## PHE 103 Physical Fitness

An aerobic fitness class utilizing any of a number of aerobic activities, such as jogging, aerobic dance, calisthenics, etc. These activities are designed to place an aerobic demand on the participants and help promote a general improvement in cardiovascular fitness.

Crl.

## PHE 113 Cross Country Skiing

Instruction in the selection of equipment and clothing, maintenance of equipment and waxing techniques. Basic skills and techniques of ski touring will include walking, gliding, turning and kicking. Nominal charge for rental equipment, if needed. Crl.

## PHE 182 Fencing

An activity course with emphasis on basic skills. Ample opportunity for bouting, learning rules and etiquette and practicing the techniques of judging.

Crl.

## PHE 194 Badminton/Tennis

An activity course with emphasis on beginning and intermediate skills and techniques in both sports. Opportunity to learn rules, etiquette, skills and strategy for singles and doubles play.

Crl.

EDU 400 Seminar in Critical Issues in American Education
This seminar is devoted to the study of critical issues in American education examined from social, political, legal, historical and philosophical perspective. Students will critique and evaluate existing and proposed educational policy as it relates to the role of the school and the professional educator in contemporary society. Active student participation will be emphasized through individual and small group problem solving techniques and issues resolution activities. Designed for senior education majors who have completed their professional sequence and internship or student teaching experience.

Cr 3.

## EDU 499 British Exchange

A cooperative program between the College of Education of USM and King Alfred's and Whitelands Colleges in England. Students may elect to take up to 15 credits per semester with prior USM departmental approval.

Cr Var.

## PHE 198 Physiology of Health Fitness

The purpose of this course is to provide the student with a scientific background in exercise physiology and health concepts in order to develop and maintain a lifetime program of high level physical fitness and quality health. Satisfies PHE requirement. Cr 3.
PHE 201 Conditioning and Therapeutic Exercise
Discussions in practical application of various theories of athletic conditioning and therapeutic exercise, i.e., progressive resistance, circuit training, isometrics, interval training, aerobics, calisthenics, etc. Also, analysis of body alignment and how functional problems can be corrected with reconditioning exercises. Cr 2.

## PHE 203 Athletic Training

Care and prevention of athletic injuries; the use of proper field equipment, support methods, therapeutic modalities, pharmacology in athletics, and training techniques.

Cr 3.

## PHE 209 Officiating Basketball

Study and discussion of the rules with limited practical experience in the techniques of officiating basketball. Course is designed to prepare student for the National Federation Examination.

Cr 2.

## PHE 210 Officiating Field Hockey

Study and discussion of the rules of field hockey as well as practical experience in the techniques of officiating. Practical and written tests will be given. Opportunity to be-
come a rated official.
PHE 211 Officiating Soccer
Study and discussion of the rules of soccer as well as practical experience in the techniques of officiating. Practical and written tests will be given. Opportunity to become a rated official.

Cr 2.

## PHE 212 Officiating Baseball/Softball

Study and discussion of the rules of baseball and softball as well as practical experience in the techniques of officiating. Practical and written tests will be given. Opportunity to become a rated official.

Cr 2.
PHE 221 Experiential Education-The Outward Bound Experience-
Hurricane Island Outward Bound School (Winter)
Instruction in the basic and enabling skills in the art of safe mountain travel and winter camping. Course content includes crosscountry skiing, snowshoeing, map and compass reading and shelter building. The Outward Bound experience strongly emphasizes leadership development, interpersonal communication, team-building, and group prob-lem-solving. Fee course. 5-day program.

PHE 232 Experiential Education-The Outward Bound Experience-
Hurricane Island Outward Bound School (Winter)
Instruction in the basic and enabling skills in the art of safe mountain travel and winter camping. Course content includes crosscountry skiing, snowshoeing, map and compass reading and shelter building. The Outward Bound experience strongly emphasizes leadership development, interpersonal communication, team-building, and group prob-lem-solving. Feecourse. 10-day program.

Cr 3.

## PHE 242 Experiential Education-The Outward Bound Experience- <br> Hurricane Island Outward Bound School (Summer)

The course has two major parts: (l) training period and (2) final expedition. During the training period students are instructed and participate in sail theory, navigation, seamanship, first aid, rock climbing, camping skills and environmental awareness. The final expedition is designed to allow the student an opportunity to demonstrate the application of each newly learned skill. All students will participate in a solo, (an experience of self-isolation in a natural environment, designed for reflection into yourself.) In addition, the mission of Outward

Cr 2. Bound is to develop respect for self, care for others, responsibility to the community and sensitivity to the environment. Fee course. 10-day program.

Cr 3.
PHE 302 Coaching Philosophy and Fundamentals
This course covers various approaches to planning, organizing, and implementing practice sessions in preparation for athletic competition. The psychological and emotional aspects of coaching are also investigated. One segment of the course will be concerned with society's view of coaching as illustrated by today's literature. Cr 3.
PHE 303 Coaching Basketball, Philosophy and Methods
Emphasis on the methods of teaching and coaching basketball. Offense and defense, coach-player relationship, team selection, planning of practice sessions, and game situations will be areas of concentration. Cr 2.
PHE 311 Coaching Soccer, Philosophy and Methods
Emphasis on the methods of teaching and coaching soccer. Offense and defense, playercoach relationship, team selections, planning of practice sessions, and game situations will be areas of concentration.

Cr 2.
PHE 312 Coaching Football, Philosophy and Methods
Emphasis on the methods of teaching and coaching football. Offense and defense, player-coach relationship, team selections, planning of practice sessions, and game situations will be areas of concentration. Cr 2.

## PHE 314 Organization and Administration of

 AthleticsThis course covers the principles and practices of athletic administration as related to middle schools, junior and senior high schools. Cr 3.
PHE 315 Coaching Field Hockey, Philosophy and Methods
Analysis of the techniques and methods of coaching field hockey with emphasis on stick work, team strategy, and practice organization.

Cr 2.
PHE 316 Coaching Volleyball, Philosophy and Methods
Fundamentals of individual skills, team strategy, practice organization, and team play are emphasized.

Cr 2 .
PHE 318 Coaching Gymnastics, Philosophy and Methods
Analysis of skills fundamental to competitive gymnastics with emphasis on techniques of coaching floor exercise, uneven parallel bars, vaulting, and balance beam. Judging skills are also developed.

Cr 2.

PHE 325 Workshop in Experiential Education
Using the Gorham campus as a base, the student will embark on a unique wilderness experience, designed toward self-discovery through participation in challenging activities. A group of 12 students will participate in a general orientation on campus, then be taken off to start expeditions of backpacking, canoeing, rock climbing, rapelling, mountain rescue, and survival. Wilderness skills will be integrated with experience in self-discovery, and process of experiential outdoor education which can be later channeled into everyday life and future teaching situations.

PHE 335 Coaching Baseball and Softball, Philosophy and Methods
Emphasis on the methods of teaching and coaching baseball and softball. Offense and defense, player-coach relationship, team selection, planning of practice sessions, and game situations will be areas of concentration.

Cr 2.

PHE 343 Experiential Education-The Outward Bound Experience-
Hurricane Island Outward Bound School (Summer)
The course has two major parts: (l) training period and (2) final expedition. During the training period students are instructed and participate in sail theory, navigation, seamanship, first aid, rock climbing, camping skills and environmental awareness. The final expedition is designed to allow the student an opportunity to demonstrate the application of each newly learned skill. All students will participate in a solo, (an experience of self-isolation in a natural environment, designed for reflection into yourself.) In addition, the mission of Outward Bound is to develop respect for self, care for others, responsibility to the community and sensitivity to the environment. Fee course. 26-day program. Cr 6.

PHE 353 Teacher Training-Experiential Education-Hurricane Island Outward Bound School
A 28-day course for educators designed to blend the lessons of experiential education with more traditional forms of learning. Students will participate in a sailing expedition with instruction in developing teaching styles, methods of experiential education in inside/outside the classroom, improving student/ teacher relationship and leadership training. Fee course. 28-day program. Cr 6.

PHE 391 Field Experience in Coaching
Practical field work in a coaching area. The
student will be assigned as an assistant coach in a sport for a season. Supervision, evaluation, and guidance of the student will be provided by a staff member who is responsible for that coaching area. Prerequisite: PHE 203, PHE 302, PHE 314. Restricted to students in coaching certificate program. Cr l-
3.

PHE 304 Health and Physical Education for Elementary Teachers
A basic course for prospective teachers to develop knowledge and skills to acquaint them with essentials for sound program planning in the various areas of health and physical education. Topics include teaching methods and materials, curriculum, class organization, and lesson planning and evaluation in health and physical education. Observation and practical experience with children will be included.

Cr 2-3.
PHE 310 Experiential Learning in Outdoor Education
Ropes/Initiative Course Construction and Use
Participants can expect to gain first-hand knowledge and experience through actual participation in all phases of initiative course construction and operation. Of primary importance will be the understanding one receives from the experience for constructing a similar course in his/her own educational program.

## Mountaineering

Designed to gain knowledge in technical mountaineering and to improve capabilities in technical rock climbing.
Orienteering
Designed to gain knowledge in expedition planning and route finding.

Cr 3.

## PHE 389 Advanced First Aid and CPR

This course will cover the topics prescribed by the American Red Cross and the advanced first aid and emergency care course, including respiratory emergencies, artificial respiration, wounds, poisoning, water accidents, drugs, burns, emergency child birth, emergency rescue and transfer, and CPR. Successful completion of the course requirements will lead to: Advanced Red Cross First Aid and CPR certification.

Cr 3.
PHE 398 Independent Study in Physical Education
Provides students who have demonstrated critical and analytical capability an opportunity to pursue a project independently, charting a course and exploring an area of interest, bearing upon it previous course experience and emerging with an intellectually sound, coherent synthesis reflecting a high caliber of performance. Restricted to students in the PHE Leadership minor. Prerequisite: permission of instructor. Cr 1-3.

PHE 401 Practicum in Physical Education Leadership

Provides opportunity for a seminar approach to group thinking and discussion of problems of the beginning teacher. Areas of emphasis include organization, administration and conduct of programs of physical education,
intramurals, and recreation in the elementary and secondary school. Opportunity for each student to gain leadership experience in local area schools or recreational agencies under the supervision of qualified teachers/ leaders and a University instructor. Prerequisite: PHE 198, PHE 389, PHE 304, PHE 310.

Cr 3.

# Department of Human Resource Development 

The department is responsible for courses in human development and family studies. It provides graduate programs in adult education, counselor education, and community agency and rehabilitation counseling. For information regarding graduate programs, please consult the Graduate Catalog. Undergraduate courses offered by the department include courses in human development and educational psychology.

## HRD 331 Group Dynamics

An experimental study of the nature of group process and one's own functioning in a group. The developing awareness of self in relation to others in a group will be of primary importance. Specific techniques will include reading and participation in a seminar planned to aid in the exploration of self and others. Prerequisite: upperclass or graduate status and permission of the instructor.

Cr 3.

## HRD 332 Psychology of the Self

An exploration into the development of the self, primarily as an issue of personal growth. Topics might include alienation, loneliness, and verbal/non-verbal communication. Learning techniques center around readings, common class experience, and intensive small-group interaction. Prerequisite: permission of instructor.

Cr 3.

HRD 333 Human Growth and Development This course introduces developmental theory and research which encompasses the entire life span. Emphasis will be on prenatal development through adolescence, with an overview of adult development. A multi-disciplinary view of human development will be taken which considers stability as well as change throughout the life cycle. The interaction of hereditary and environmental factors will be considered in studying physical, cognitive, and psychosocial development.

Cr 3.

## HRD 335 Educational Psychology

Basic principles, techniques, and research in educational psychology. A special consideration given to the learning process, perception, motivation, individual differences, and measurement, with reference to the facilitation of effective teaching and. learning. Prerequisite: upperclass status. Cr 3.

# School of Business, Economics and <br> Management 

Dean: Duane R. Wood<br>Assistant to the Dean: Margaret Palmer-Wright; Staff Associate for Undergraduate Advising: Ronda Bridges; Director, Center for Real Estate Education: Charles Coit

## Department of Business <br> Administration

Professors: Findlay, Miaoulis, Neveu, Potts, Sturner, Wood; Associate Professors: B. Andrews, Chandler, Clarey, Hodson, Houlihan, Jagolinzer; Assistant Professors: Boyle, G. Parsons, H. Parsons

## Department of Associate Business Administration

Chair: Jean E. Gutmann, 118 Bedford Street, Portland
Professor: McKeil; Associate Professors: Aiello, S. Andrews, Gold, Gutmann, Purdy; Assistant Professors: Coit, Peterson, Sanders, Westfall

## Department of Economics

Chair: Robert C. McMahon, 227 Bonney Hall, Portland
Professor: Durgin; Associate Professors: Bay, McMahon, Phillips; Assistant Professor: Medley

The School of Business, Economics and Management offers a number of different programs to meet student needs. The School offers a two-year program in business administration leading to an associate of science in business administration degree. Four-year undergraduate programs leading to the degree of bachelor of science in business administration or economics are available in three areas of study: accounting, business administration, and economics. The School also provides a graduate program leading to the degree of master of business administration (see Graduate Catalog for information).

## Associate of Science in Business Administration

The associate program in business administration is designed 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 a baccalaureate program in business administration at this University or other institutions.

Associate degree graduates are equipped for employment at the junior management level in many fields of business. Some fields of business that graduates have entered are accounting, bookkeeping, business computers/data processing, sales, retailing, banking, finance, real estate, hospitality services, and management trainee programs.

While the program emphasizes business, it contains courses in liberal
arts including English, fine arts, social science, humanities, and mathematics. Options within the associate program include accounting; business computer programming; management; marketing; hotel, motel and restaurant management; and real estate. Also available is a transfer track option for those students planning to enter a baccalaureate program in business administration immediately after completion of the associate degree program.

The hotel, motel, and restaurant management option is a cooperative, two-year program developed jointly by Southern Maine Vocational Technical Institute and the A.B.A. program. The fourth semester is offered on the SMVTI campus in their Culinary School. Students are enrolled at the University but attend at SMVTI and must provide their own transportation.

## Admission Requirements

Any high school student may seek admission to the two-year associate degree program. A college preparatory background, while desirable, is not necessary. Applicants should complete the University of Maine application and specify the associate in business administration program. Candidates also must complete the Scholastic Aptitude Test.

Students admitted to the University will enter the School of Business, Economics and Management as associate degree students. However, in order to be admitted to one of the options in the associate business program, to complete the degree requirements a student must complete: (1) at least 23 semester hours with a minimum accumulative grade point average of 2.00 , and (2) the following set of courses with a minimum accumulative grade point average of 2.00: ABU 101; $A B U$ 102; $A B U$ 111; $A B U$ 112; MAT 010 or MAT 011 or MAT 100 or MAT 110; ENG 100.

An application for admission to the associate degree program should be completed and returned to the Dean's Office, School of Business, Economics and Management. An official transcript of credits earned at the University of Southern Maine and/or a copy of the transfer credit evaluation from other colleges or universities must be submitted with the application.

Although actual admission will not be approved until completion of at least 23 semester hours, required prerequisites, and required grade point averages, students may apply and be admitted pending completion of the semester's work in which they will have earned 23 or more credits. These students will be allowed to register early for the following term. If admission requirements are not completed, their admission will be revoked and any enrollments in 200 -level or above courses in the School of Business, Economics and Management will be cancelled.

## Other Policies

Students who have not been admitted to an associate degree program within the School will be allowed to enroll in associate business courses on a space-available basis according to the following criteria:

1. They have declared a major which requires the course in its curriculum.
2. They have been admitted to the minor in business administration or the minor in economics (applies to economics courses only).
3. They are juniors or seniors admitted to the University as degree candidates.
4. They are non-degree students.

To enroll in a 300 -level ACC, BUS, or ECO course, a student must have attained junior standing.

Associate of Science in Business Administration
The minimum number of credits required for the degree is 60 .
Basic Requirements ( 18 credits)
ENG 100 College Writing (3)
ENG 019 Written Business Communication (3)

Mathematics (6)-two courses selected from the following with approval of an advisor: MAT 010, MAT 011, MAT 100, MAT 110, MAT 211.
From courses approved for Core curriculum (6)

1. Either one Humanities from a) Literature or b) Other Times/ Other Cultures Or: one Fine Arts from a) Performance-Centered or b) History-Centered
2. Social Science

Required Courses in Business (18 credits)
ABU 101 Principles of Economics I
ABU 102 Principles of Economics II
ABU 111 Principles of Accounting I
ABU 112 Principles of Accounting II
ABU 190 Introduction to Computers in Business
ABU 280 Business Law
Associate Business Administration Program Concentration (24 credits)
Accounting Concentration
ABU 211 Accounting Applications I
ABU 212 Accounting Applications II
ABU 220 Business Finance I
ABU 240 Principles of Management
ABU 260 Marketing
ABU Program Electives (6)
General Elective (3)
Business Computer Programming Concentration
To continue in this concentration, a student must qualify for admission to an associate business administration program option, plus earn at least a grade of "B" (3.00) in ABU 191.
ABU 220 Business Finance I
ABU 240 Principles of Management
ABU 260 Marketing
ABU 191 Mainframe Tools and Structured Programming
ABU 291 COBOL I: Application and Documentation
ABU 295 Data Design and Handling
ABU 296 Business Information Systems
ABU 297 Advanced Database Systems
Business Management Concentration
ABU 220 Business Finance I
ABU 240 Principles of Management
ABU 243 Problems in Small Business
ABU 253 Human Relations in Business
ABU 260 Marketing
ABU Program Electives (6)
General Elective (3)
Business Marketing Concentration
ABU 220 Business Finance I
ABU 240 Principles of Management
ABU 243 Problems in Small Business
ABU 260 Marketing
ABU 264 Retailing
ABU 267 Sales Management
ABU Program Elective (3)
General Elective (3)
Hotel, Motel and Restaurant Concentration SMVTI Semester
ABU 220 Business Finance I
ABU 240 Principles of Management
ABU 260 Marketing
HMR 101 Food Fundamentals
HMR 104 Hotel Law
HMR 200 Food and Beverage Management
HMR 201 Quantity Food Preparation
HMR 202 Front Office Management

| Real Estate Concentration |  |  |
| :--- | :--- | :--- |
| ABU | 220 | Business Finance I |
| ABU | 221 | Principles of Real Estate |
| ABU | 222 | Real Estate Law |
| ABU | 224 | An Introduction to Appraising Real Property |
| ABU | 226 | Principles of Real Estate Finance |
| ABU | 240 | Principles of Management |
| ABU | 260 | Marketing |
| General Elective (3) |  |  |

## Transfer Track Concentration

This concentration is designed for those associate degree students who desire to enter a baccalaureate program in accounting or business administration immediately upon completion of their associate degree.

ABU Program Electives (6)
Select two from the following: ABU 100, ABU 211, ABU 212, ABU
221, ABU 222, ABU 224, ABU 226, ABU 291, ABU 292, ABU 294, ACC 202, BUS 190, BUS 290
Mathematics (6)
Select two courses from the following sequence depending upon mathematics courses taken to satisfy Basic Requirements above: MAT 110, MAT 211, MAT 212 (Students who complete MAT 110, MAT 2ll, and MAT 212, in their first nine hours of mathematics should select a course to fulfill the Core curriculum requirement in Reasoning.)
From courses approved for Core curriculum (12)
It is strongly advised that students in the Transfer Track Concentration take a COR designated course (e.g., COR 101, COR 102 etc.) to fulfill a Fine Arts, Humanities, or Social Science requirement below.

1. Natural Science with Lab
2. Social Science
3. Humanities from either a) Literature or b) Other Times/Other Cultures
4. Fine Arts from either a) History-Centered or b) PerformanceCentered

ABU Program Electives
To fulfill the ABU electives required in the above concentrations, students may select from the following courses:

| ABU | 100 | Introduction to Business |
| :--- | :--- | :--- |
| ABU | 191 | Mainframe Tools and Structured Programming |
| ABU | 211 | Accounting Applications I |
| ABU | 212 | Accounting Applications II |
| ABU | 221 | Principles of Real Estate |
| ABU | 222 | Real Estate Law |
| ABU | 224 | Introduction to Appraising Real Property |
| ABU | 226 | Principles of Real Estate Finance |
| ABU | 227 | Investment Management |
| ABU | 243 | Problems in Small Business |
| ABU | 253 | Human Relations in Business |
| ABU | 264 | Retailing |
| ABU | 267 | Sales Management |
| ABU | 291 | COBOL I: Application and Documentation |
| ABU | 292 | COBOL II: Advanced Programming Application |
| ABU | 294 | RPG Programming |
| ABU | 295 | Data Design and Handling |
| ABU | 296 | Business Information Systems |
| ABU | 297 | Advanced Database Systems |
| ACC | 202 | Principles of Management Accounting |
| ACC | 301 | Intermediate Accounting I |
| BUS | 190 | Personal Finance |
| BUS | 290 | Introduction to Computers in Business |
| MAT | 109 | Linear Systems |


| MAT | 110 | Elementary Mathematical Analysis |
| :--- | :--- | :--- |
| MAT | 211 | Probability |
| MAT | 212 | Statistics |

## Baccalaureate Programs in Business Administration and Economics

The primary objective of the undergraduate baccalaureate program in business administration is to develop the student's abilities to assume the responsibilities of management. The program aims at developing skills and an attitude of mind that will enable the student to cope successfully with the changing problems of management in the years ahead.

The program is implemented in three phases. First, the student acquires broad training in the arts and sciences for the necessary foundation upon which his or her 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 knowledge of certain fields which are particularly relevant to the study of management. Third, the student undertakes to acquire a deeper knowledge of the selected major field, either accounting or business administration. This is accomplished by taking 18-21 credit hours beyond the common requirements in business and economics.

The undergraduate program in economics provides a broad preparation for a variety of careers as well as for graduate study in economics, business administration, or law. Economics is a social science and as such must be studied in the perspective of a broad training in the liberal arts and sciences. Within the economics program, courses are available in such fields as: economics analysis, quantitative methods, international economics, and the economics of monetary and fiscal policy.

## Applied Studies

Within the four-year programs in accounting, business administration, and economics, the following opportunities are available.

Internship/Cooperative Education Program The School of Business, Economics and Management offers an Internship/Cooperative Education Program in which students, while working in business or industry, may earn academic credit. This program combines the efforts of employers and educators forming educational experiences in areas including accounting, marketing, finance production, management, and human resources development. Firms involved with the Internship/Cooperative Education Program represent such fields as public accounting, internal auditing, banking, securities and investments, retailing, and manufacturing. Frequently opportunities with non-profit organizations also are available. Students who desire further information should contact the director of the Internship/Cooperative Education program.

Small Business Institute The School of Business, Economics and Management, through the Small Business Development Center, sponsors a program called the Small Business Institute. Juniors and seniors are selected to provide management counseling to the area's small businesses. Under the program, students counsel and advise, in cooperation with a faculty advisor and representatives of the Small Business Administration, various businesses within southern Maine. The program provides an opportunity for relevant practical application of academic principles. Students may be involved in such areas as accounting, finance, management, marketing, and production. The course carries three hours of academic credit.

Double Majors Students may elect to complete the requirements for a double major in accounting and economics or in business administration and economics. Students may not seek a double major in accounting and business administration.

## Admissions Requirements

Students admitted to the University will enter the School of Business, Economics and Management as baccalaureate degree students. However,
to be admitted to a baccalaureate major within the School of Business, Economics and Management, a student must have completed at least 53 semester hours with a minimum accumulative grade point average of 2.00, and have completed one of the following sets of courses, depending upon the designated major, with a minimum accumulative grade point average of 2.00 .

Accounting Major: ENG 100, ACC 201, ACC 301, BUS 280, BUS 290, ECO 201, ECO 202, MAT 110, MAT 211, MAT 212
Business Administration Major: ENG 100, ACC 201, ACC 202, BUS 280, BUS 290, ECO 201, ECO 202, MAT 110, MAT 211, MAT 212
Economics Major: ACC 201, ECO 201, ECO 202, MAT 109 and MAT 110 or MAT 152 and MAT 153
An application for admission to the baccalaureate degree program in the School of Business, Economics and Management should be completed and returned to the Dean's Office. An official transcript of credits earned at the University and/or a copy of the transfer credit evaluation from other colleges or universities must be submitted with the application.

Although actual admission will not be approved until completion of at least 53 semester hours, the required set of courses and achievement of required grade point averages, students may apply and be admitted pending completion of the semester's work in which they will have earned 53 or more credits. These students will be allowed to register early for the following term. If admissions requirements are not met, their admission will be revoked and any enrollments in 300 -level or above courses in the School of Business, Economics and Management will be cancelled.

## Other Policies

Students who have not been admitted to a baccalaureate major within the School will be allowed to enroll in 300-level or above courses on a space-available basis according to the following priorities:
l. They have declared a major which requires the course in its curriculum.
2. They are admitted to a baccalaureate program within the School of Business, Economics and Management (baccalaureate students will not receive credit for these courses toward their major requirements except by prior approval of the Dean).
3. They are admitted to the University as degree candidates (baccalaureate students will not receive credit for these courses toward their major except by approval by the Dean).
4. They are non-degree students.

## Transfer from an Associate to a Baccalaureate Program

To be admitted to a baccalaureate major within the School of Business, Economics and Management from an associate degree program, a student must have: completed at least 53 semester credit hours with a minimum accumulative grade point average of at least a 2.40 in all associate business (ABU) courses and in all associate-level courses, and at least a 2.00 in all baccalaureate-level courses.

The student must also have completed one of the following sets of courses or their equivalents depending upon the desired major:

Accounting Major: ENG 100, ACC 201, ACC 301, BUS 280, BUS
290, ECO 201, ECO 202, MAT 110, MAT 211, MAT 212
Business Administration Major: ENG 100, ACC 201, ACC 202, BUS 280, BUS 290, ECO 201, ECO 202, MAT 110, MAT 211, MAT 212
Economics Major: ACC 201, ECO 201, ECO 202, MAT 109 and MAT 110 or MAT 152 and MAT 153.
In thesesets of courses, all baccalaureate courses (not associate business, ABU, or associate level) must be completed with at least a 2.00 accumulative grade point average. Associate business (ABU) courses must be completed with a minimum grade of C - to be considered equivalent to ACC 201, ACC 202, BUS 280, BUS 290, ECO 201, and ECO 202.

To be admitted from an associate degree program to baccalaureate status within SBEM, an individual must have completed at least 15 semester credit hours and no more than 53 semester credit hours with an accumulative grade point average of at least a 2.40 in all associate business (ABU) courses and in all associate level courses and at least a 2.00 in all baccalaureate level courses.

For those baccalaureate courses (not associate business, ABU, or associate level) listed below which have been completed, at least an accumulative grade point average of 2.00 must be earned. Associate business (ABU) courses must be completed with a minimum grade of C - to be considered equivalent to ACC 201, ACC 202, BUS 280, BUS 290, ECO 201, and ECO 202.

From the time of admission to baccalaureate status within SBEM, an individual must fulfill the remaining criteria for admission to a major in the same manner as any other baccalaureate student.

## Degree Requirements

All students must complete at least 120 credit hours of coursework. To be eligible for the B.S. degree, a student must have attained an accumulative grade point average of 2.00 or higher in all courses taken in baccalaureate programs at the University and in all baccalaureate courses in accounting (ACC), business (BUS), and economics (ECO).

## Bachelor of Science in Business Administration

The minimum number of credits (including the University's Core curriculum) required for the degree: 120

Core Curriculum Requirements (28-31 credits)
Basic Competence

1. English Composition (3) Students who fulfill the English Composition Competence of the Core curriculum without earning credits must complete 3 credits of electives from CLA, ENG, FRE, GER, GRE, LAT, or SPA courses.
2. Skills of Analysis/Philosophy (3)
3. Quantitative Decision Making

This requirement will be fulfilled by taking the mathematics courses stipulated below under the supplementary requirements.
Methods of Inquiry/Ways of Knowing

1. Fine Arts
a. Performance-centered arts (3)
b. History-centered arts (3)
2. Humanities
a. Literature (3)
b. Other Times/Other Cultures (3)
3. Social Science (not to include ECO courses) (6)
4. Natural Science (4)

Interdisciplinary COR course. May be double-counted to fulfill the fine arts, humanities or social science requirements.
Supplementary Requirements

1. Mathematics (9)
a. MAT 110 Elementary Mathematical Analysis
b. MAT 211 Probability
c. MAT 212 Statistics
2. Social Science (6)

To be selected from ANT, CRI, COM, GEO, HTY, POS, PSY, SOC, and SWE courses.
Basic Requirements for Accounting and Business Administration (18)
ACC 201 Principles of Financial Accounting
BUS 280 Business Law
BUS 290 Introduction to Computers in Business
ECO 201 Principles of Economics I
ECO 202 Principles of Economics II
ECO elective (300-level or above)

| Major in Accounting or Business Administration |  |  |
| :---: | :---: | :---: |
| 1. Common Courses (18) |  |  |
| BUS | 320 | Business Finance |
| BUS | 340 | Principles of Management |
| BUS | 360 | Marketing |
| BUS | 371 | Operations Research/Management Science |
| BUS | 375 | Production/Operations Management |
| BUS | 450 | Business Management and Policy |
| 2. Major Field |  |  |
| A. Accounting (21) |  |  |
| ACC | 301 | Intermediate Accounting I |
| ACC | 302 | Intermediate Accounting II |
| ACC | 303 | Intermediate Accounting III |
| ACC | 305 | Cost Accounting |
| ACC | 313 | Federal Tax Reporting |
| ACC | 401 | Advanced Accounting I |
| ACC | 410 | Auditing |
| Or |  |  |
| B. Business Administration (18) |  |  |
| ACC | 202 | Principles of Management Accounting |
| BUS | 327 | Investment Management |
| BUS | 452 | Organizational Behavior |
| Six credits from ACC, BUS, ECO electives (300-level or above) |  |  |
| Three | dits f | m BUS electives (300-level or above) |

General Electives (17-23)

## Minor in Business Administration

In order to be admitted to the minor in business administration, a student must havecompleted at least 24 credit hours with a grade point average of $2.50(\mathrm{~A}=4.00$ scale $)$ or higher. For admission to the minor the student must have completed MAT 110 or MAT 152 with a grade of C or higher. The student must also complete MAT 211 and MAT 212 , or MAT 362 , before taking any 300 level business course (BUS 320, BUS 340, BUS 360).

A student majoring in business administration or accounting in the School of Business, Economics and Management may not minor in business administration; nor may a student with an associate degree in business earn a minor in business administration.
To fulfill the requirements for a minor in business administration, a student must complete the following courses with an overall average of at least a 2.00 . A minimum of four of the following seven courses required for the minor must be taken at the University of Southern Maine.

| ACC | 201 | Financial Accounting | 3 credits |
| :--- | :--- | :--- | :--- |
| ACC | 202 | Principals of Management Accounting | 3 credits |
| ECO | 201 | Principles of Economics I | 3 credits |
| ECO | 202 | Principles of Economics II | 3 credits |
| BUS | 320 | Business Finance | 3 credits |
| BUS | 340 | Principles of Management | 3 credits |
| BUS | 360 | Marketing | 3 credits |

## Bachelor of Science in Economics

The minimum number of credits (including the University's Core curriculum) required for the degree: 120

Core Curriculum Requirements (28-31 credits)
Basic Competence

1. English Composition (3)

Students who fulfill the English Composition Competence of the Core curriculum without earning credits must complete 3 credits of electives from CLA, ENG, FRE, GER, GRE, LAT, or SPA courses.
2. Skills of Analysis/Philosophy (3)
3. Quantitative Decision Making

This requirement will be fulfilled by taking the mathematics courses stipulated below under the supplementary requirements.
Methods of Inquiry/Ways of Knowing

1. Fine Arts
a. Performance-centered arts (3)
b. History-centered arts (3)
2. Humanities
a. Literature (3)
b. Other Times/Other Cultures (3)
3. Social Science (not to include ECO courses) (6)
4. Natural Science (4)

Interdisciplinary COR course. May be double-counted to fulfill the fine arts, humanities or social science requirements.
Supplementary Requirements (12)
MAT 109 Linear Systems
MAT 110 Elementary Mathematical Analysis
MAT 211 Probability
MAT 212 Statistics
An optional, more rigorous mathematics sequence is available to those students who desire it. They may take MAT 152 Calculus A and MAT 153 Calculus B instead of MAT 109 and MAT 110, but these students must still take MAT 211 and MAT 212.

General Electives (41-44)
A less mathematics-oriented B.A. degree with a major in economics is offered by the Department of Economics through the College of Arts and Sciences. (See p.81.)

## Minorin Economics

A minor in economics is available to students in any major within the University. A description of requirements follows.

To gain admission, students must be in good standing at the University and submit a signed Economics Minor Authorization Form to the Dean of the School of Business, Economics and Management. The 21 credit hours below must be completed with at least a 2.00 accumulative grade point average: ECO 201; ECO 202; ECO 301; ECO 302; either MAT 120, or MAT 212, or MAT 362; and six additional credits of 300-level or above ECO electives.

## Minor in Mathematics

In cooperation with the Department of Mathematics, a minor in mathematics is available to all economics majors. The optional mathematics minor is: 21 credit hours ( not to include statistics courses), with 12 of the credit hours in MAT 152, 153, and 252. The remaining 9 credit hours are to be selected from the following: MAT 290, MAT 352, MAT 354, MAT 366, MAT 380, MAT 460; COS 260.

## Master of Business Administration

The School offers a master of business administration degree. For those interested in this program a separate brochure is available at the School of Business, Economics, and Management office. Please refer to the Graduate Catalog for further information.

Associate Degree Program
ABU 100 Introduction to Business
An examination of the significant relationships between business and the social, political, and economic environment of our society for the purpose of evaluation of goals, values, ethics, and practices in the business world. Historical development of business and capitalism is covered. The industrial and commercial structures and functions in our society are described. Social relationships internal to the firms are explored. Special problems concerning mass production, automation, and employment are discussed along with other current and future issues and problems related to business and our society.

Cr 3.

## ABU 101 Principles of Economics I

A theoretical analysis of the basic characteristics, institution, 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. (Cannot be applied toward Core Curriculum Requirement in Social Science)

Cr 3.

## ABU 102 Principles of Economics II

A theoretical analysis of the firm, and its role in the transformation of scarce economic resources into the goods and services demanded by consumers. Special attention is focused on the development of a market mechanism for the exchange of goods, services, and resources within a capitalistic economy. Topics discussed include consumer preferences and consumer behavior, production theory and production costs, the monopoly firm, and resource pricing. (Cannot be applied toward Core Curriculum Requirement in Social Science).

Cr 3.

## ABU 111 Principles of Accounting I

An introduction to the accounting cycle, working papers, and financial statements. A practical emphasis on accounting methodology with coverage of inventory control, cash control, depreciation of plant assets and payroll.

Cr 3.

## ABU 112 Principles of Accounting II

A study of the procedures of accounting for owner's equity, long-term investments and the cost of manufacturing goods. The proprietorship, partnership, and corporation accounting techniques are developed in a practical approach. Prerequisite: ABU 111. (not for SBEM baccalaureate students) Cr 3.

ABU 190 Introduction to Computers in Business
This course focuses on the role of the com-
puter as an aid in managerial decision making. Business applications are emphasized in the use of modern generic software and an introduction to programming fundamentals. Provides a basic knowledge of computer concepts; "hands-on" problem solving with the computer; and the impact of computers on the business world. Required for the ABA program. Transfers to baccalaureate program, butdoesnot replace BUS 290. Cr 3.
ABU 191 Mainframe Tools and Structured Programming
This course is an intensive introduction to modern mainframe computer systems, programming and data files. Mainframe system topics include Virtual Operating Systems, System Commands, Editors, and Electronic Mail. Structured Programming covers all standard control structures, arrays, functions, and subroutines. Both sequential and keyed file structures will be used throughout the programming. Prerequisites: ABU 111 and ABU 190, or permission of the instructor.

Cr 3.

## ABU 211 Accounting Applications I

This course further prepares students for paraprofessional accounting careers through extensive hands-on practice with a variety of common small business record-keeping systems, including microcomputers, and payroll tax reporting. In addition, students will be introduced to federal and Maine income tax return preparation for individuals and small businesses. Prerequisites: ABU 111, ABU 112.

Cr 3.

## ABU 212 Accounting Applications II

The accounting knowledge and skills developed in prior courses in this sequence will be applied to such financial management topics as: internal control, record-keeping system design and analysis, cash flow control and analysis, budgeting and forecasting, choice of organizational form, and analysis of accounting results. Students will be expected to use a microcomputer electronic spreadsheet program for financial analysis. Prerequisites: ABU 211.

Cr 3.
ABU 220 Business Finance I
A study of the promotion, organization, and financing of the single proprietorship, partnership, and corporation. Such topics as fund flows, ratio analysis, breakeven analysis and leverage, time value of money concepts, cost of capital and capital budgeting are examined. Prerequisites: ABU 101, ABU 102, ABU 111 and ABU 112.

Cr 3.
ABU 221 Principles of Real Estate
An overview of real estate fundamentals, including rights and interests in land; forms of ownership; contracts; records, and forms;
taxes and assessments; appraisals; insurance; brokerage; property management; and landuse control.

Cr 3.
ABU 222 Real Estate Law
A study of real property law in general and Maine law in particular, land titles, acquisition and transfer, methods of ownership, rights of husband and wife, rights of landlord and tenant, easements, fixtures, land descriptions, mortgages, deeds, taxes, contracts, legal elements of brokerage relationship, selected environmental and land use regulations, coastal island registry, physical regulations of subdivisions, zoning and selected federal laws. (Completion of this course with a grade of 75 , or better, provides onethird of an approved course of study for those who wish to prepare for the State of Maine real estate brokers license examination.) Offered only in the evening.

Cr 3.
ABU 224 An Introduction to Appraising Real Property
This is an intensive course covering all real property appraising concepts and the technical skills employed in their applications to residential property. The course is designed for the beginning appraiser, real estate broker, lender, builder, and assessor. Included is a summary introduction to real estate economics and urban land studies. This is the first of three courses accepted by the Society of Real Estate Appraisers for credit toward a professional designation. Offered only in the evening.

Cr 3.

## ABU 226 Principles of Real Estate Finance

Methods of financing various types of real estate including sources of funds, analysis of lenders, risks, types of loans, government influences and participation, financing instruments, loan processing, defaults and foreclosures. Offered only in the evening. Cr 3

## ABU 227 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: ABU 101, ABU 102, ABU 111, and ABU 112.

Cr 3.
ABU 240 Principles of Management
A comprehensive survey of all phases of the management of industrial and business enterprises. The influence of industrial relations is interspersed with the treatment of management's technical problems. Prerequisites: ABU 101, and ABU 102.

Cr 3.

## ABU 243 Problems In Small Business

A study of the aspects of management that relate most specifically to the management of small business. The course covers areas of
business planning, development, and operation which the prospective owner/manager must consider seriously early in his/her thinking. During the course each student will develop a comprehensive small business plan. Prerequisites: ABU 102, ABU 1ll, ABU 112, ABU 260.

Cr 3.

## ABU 253 Human Relations in Business

Introduction to the behavioral sciences, emphasizing typical behavioral problems faced in business by employees and management. Lectures, case analysis, and outside readings are supplemented by involving the student in role playing and analyzing collected data. Prerequisite: ABU 240.

Cr 3.

## ABU 260 Marketing

A study of the marketing organization with a focus on product policies, distribution policies, promotional and pricing policies. Market research is implemented by getting students involved in casework, controversial issues, and local business community projects. Prerequisites: ABU 102.

Cr 3.

## ABU 264 Retailing

Study of the retail distribution structure and of the problems involved in successful store operation under current conditions. Prerequisites: ABU 260.

Cr 3.
ABU 267 Sales Management
Analysis of the problems facing marketing management in formulating sales policy and in managing the sales organization. Prerequisite: ABU 260.

Cr 3.
ABU 280 Business Law
This course, an introduction to the study of business law, includes origins of the law, the conduct of a civil lawsuit, contract, agency, and property law, the law of negotiable instruments and secured transactions, and an overview of partnership and corporation law.

Cr 3.
ABU 291 COBOL I: Applications and Documentation
An introduction to programming in the COBOL language, it includes practice in the structure, rules, and vocabulary of COBOL using exercises in structured problem analysis, program specification techniques, and coding. Programs will focus on simple business problems and generally accepted business procedures. Prerequisites: A grade of B (3.00) or better in ABU 191 or permission of the instructor.

Cr 3.
ABU 292 COBOL II: Advanced Program Applications
It emphasizes applying the techniques for developing and documenting a complete business program. Major focus will be on data design, non-sequential file updating, job control language, program calls, and program
optimization. Prerequisites: ABU 291 and ABU 295, or permission of the instructor.

$$
\text { Cr } 3 .
$$

ABU 294 RPG Programming
An introduction to programming in the RPG language, its focus is on the use of RPG to manipulate files in the process of producing necessary business reports. Programming assignments will focus on report specifications, file handling, and editing. Prerequisites: ABU 191 or permission of the instructor. Cr 3.

## ABU 295 Data Design and Handling

A course in the design, use and management of advanced data file structures and elementary databases. Content includes data storage, file and database concepts, the actual development and use of direct access methods such as hashing and keys, and the development of primitive databases using both pointer and inversion organization. Prerequisites: A grade of B or better in ABU 191 or permission of the instructor. Cr 3.

ABU 296 Business Information Systems
The purpose of this course is to develop an understanding of the interrelationships and requirements for an integrated business data processing system in order to provide accurate and timely management information. It examines the most common business applications. Prerequisites: ABU 240 and ABU 191, or permission of the instructor.

Cr 3 .

## ABU 297 Advanced Database Systems

This course examines the design, use and management of modern database systems. The concept of 3-level databases, along with the difference between production database systems and 4th generation languages, is studied. A state-of-the-art 4th generation language is extensively used to demonstrate query and non-procedural languages, MIS and DSS concepts, and distributed workstation processing. Prerequisites: ABU 240, ABU 291 and ABU 295, or permission of the instructor.

Cr 3.

## Baccalaureate Program

ACC 201 Principles of Financial Accounting
An introduction to accounting principles and concepts. Emphasis is placed on understanding financial statements and the accountng for assets, liabilities, equities, revenue, and expenses.

Cr 3.
ACC 202 Principles of Management Accounting
This course is designed for non-accounting majors. It deals with the selection and preparation of information which will serve to support and assist management in planning and controlling a firm's operations: the emphasis is on information needs for management decision making. Included are analysis of financial statements, changes in financial position, cost-volume-profit analysis, budgeting, income tax considerations, and quantitative techniques integrated with more traditional approaches. Prerequisite: ACC 201. Cr 3.

## ACC 301 Intermediate Accounting I

A study of accounting theory including the conceptual framework, financial statements, the accounting for cash, temporary investments, receivables, and inventories. (Sophomores may enroll on a space-available basis.) Prerequisite: ACC 201.

Cr 3.

## ACC 302 Intermediate Accounting II

The study of accounting theory including property, plant and equipment, intangible assets, current liabilities, long-term corporate capital, income tax allocation, and earnings per share. Prerequisite: ACC 301, and junior standing.

Cr 3.

## ACC 303 Intermediate Accounting III

The study of accounting theory and practice relating to pension liabilities, leases, interim reporting, segment reporting, accounting changes, price level and current value accounting, statement of changes in financial position, and income tax allocation, other topics. Prerequisite: ACC $302 . \quad$ Cr 3.

## ACC 305 Cost Accounting

Concepts and analytical procedures necessary to the generation of accounting data for management planning and control and product costing. Emphasis is on job costing, process costing, standard costs, and variance analysis and direct costing. Prerequisite: ACC 202 or ACC 301, and junior standing.

Cr 3.

## ACC 313 Federal Tax Reporting

An overview of federal tax laws as they affect individuals, partnerships, corporations, and related topics. Prerequisite: ACC 201, and junior standing. Cr 3.
ACC 401 Advanced Accounting I
The study of accounting principles and theory relating to mergers and consolidations, not-for-profit organizations, and foreign currency. Prerequisite: ACC 303.

Cr 3.

## ACC 402 Advanced Accounting II

The study of accounting principles and theory related to partnerships, estates and trusts, installment sales, consignments, franchises, receiverships, retail land sales, and other miscellaneous advanced topics. Prerequisite: ACC 303.

Cr 3.

## ACC 410 Auditing

A study of auditing philosophy and theory relative to the examination of financial statements and other data. Coverage includes internal control, auditing standards and procedures, and the legal and ethical responsibilities of the independent auditor. Prerequisite: ACC 303.

Cr 3.

## ACC 420 Senior Seminar in Accounting

A review of APB opinions, FASB statements, SEC role in accounting, and other current issues. Prerequisite: ACC 303 and senior standing, or permission of instructor.

Cr 3.

## BUS 190 Personal Finance

In dealing with the problems of managing personal finances, primary emphasis is placed on methods of measuring and evaluating expenditures to assure optimal benefit from the income. It includes an evaluation of typical occupations and incomes; of life insurance with the various types, investments and mutual funds; of the borrowing of money and use of credit; of taxes and estate plannings. The course work will be a series of readings with brief case problems in each of the major areas. (When taken by business or accounting majors, this course will give general elective credit.)

Cr 3.
BUS 280 Business Law
This course, an introduction to the study of business law, includes a thorough survey of the preparation for and conduct of a civil lawsuit, a brief discussion of criminal law, and a broad overview of contracts, agency, negotiable instruments, partnerships, corporations, secured transactions, labor law, and bankruptcy. This course is intended to provide a broad overview of business law and the Uniform Commercial Code.

Cr 3

## BUS 290 Introduction to Computers in Busi-

 nessThe role of the computer as an aid in managerial decision making. Computer operation and programming fundamentals including flow charting and program writing in one of the common computer program languages emphasizing business applications. Cr 3.
BUS 320 Business Finance
This course introduces the student to the theories and techniques of managing capital sources and uses within the framework of shareholder wealth maximization. Lecture, problems, cases. Prerequisites: ECO 201, ECO 202, ACC 201, ACC 202 or ACC 301, MAT 110, MAT 211, MAT 212, and junior standing.

Cr 3.
BUS 327 Investment Management
Provides the planning and management of investment programs for all types of investors. Evaluates the various media of investments in
terms of theirrisks and profits. The functions of the stock market and its behavior are examined. Prerequisite: BUS 320.

Cr 3.
BUS 340 Principles of Management
A comprehensive survey of all phases of management in public and private sectors. The influences of human, social, and political factors are interspersed with the treatment of management's structural and technical processes. Analyses focus on such themes as planning, decision making, organizational design, supervisory skills, communications, and information systems. Prerequisites: ECO 201 and ECO 202, and junior standing. Cr 3.

## BUS 346 Personnel Management

The selection, training, and management of personnel in private and public sectors, including elements of wage and salary administration, testing, training, and labor relations. Designed for the student interested in administration, office management, or personnel work in education, business, engineering, public service, and other fields. Prerequisite: BUS 340 or permission of instructor. Cr 3.
BUS 348 Industrial Relations
A study of industrial relations patterns in the U.S. Major focus is on the relationship between management and labor (organized and unorganized), and the bargaining, administration, and interpretation of contracts, the problem of dispute settlement, and a 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.

Cr 3.

## BUS 349 Women and Management

For both men and women in business, education, and other work settings. It explores the changing business and organizational environment created by the increase of women in professional and managerial positions. The course examines theoretical concepts pertaining to women in management. Both women and men who are or aspire to be managers will benefit from this course. Prerequisites: BUS 340 or permission of the instructor.

Cr 3.

## BUS 360 Marketing

An introduction to the field of marketing normally through the use of a computer simulation game. The concepts of market segmentation, marketing mix strategy, and market systems development are presented along with an analysis of consumer behavior and the need for marketing research. Prerequisites: ACC 201, ECO 201, ECO 202, BUS 290, MAT 110, MAT 211, and junior standing. Cr 3.

BUS 363 Adver tising
Students will explore the evolution of advertising; forms and medium used and their relationship to the product, the climate, the target market, all within the framework of the marketing concept. Prerequisite: BUS 360.

Cr 3.

## BUS 367 Managerial Marketing

Students gain experience making marketing decisions as managers of a computer-simulated firm. The emphasis is on applying a "systems" approach to marketing decision making and on integrating knowledge gained in the other functional business areas into a strategic market planning framework. Prerequisites: BUS 360, BUS 371 .

Cr 3.

## BUS 369 Marketing Research

Consideration of market research as a management planning and evaluative tool. Emphasis on problem formulation, exploratory research, research design, basic observational and sampling requirements, data analysis, interpretation and sampling. Prerequisites: BUS 360 and MAT 212.

Cr 3.
BUS 371 Operations Research/Management Science
A survey of quantitative methods and tools which are commonly used in sophisticated managerial decision making. Mathematical models are constructed and applied, with the computer's aid, to a wide range of real world business situations. Topical coverage includes decision analysis, inventory models, network analysis, simulation, queuing models, applied stochastic processes, dynamic programming and non-linear programming. Prerequisites: BUS 290, MAT 110, MAT 211, MAT 212, and junior standing.

Cr 3.

## BUS 375 Production/Operations Manage-

 mentAn introduction to the problems and topics associated with the management of production operations and the delivery of services. The primary emphasis is upon the design of model-based planning and control systems. Specific applications of such systems are used to illustrate general concepts as well as implementation difficulties. Prerequisite: BUS 371.

Cr 3.

## BUS 381 Business Law II

An opportunity to continue the study of business law and to evaluate thoroughly selected topics such as corporate reorganizations and combinations, antitrust law, business organization, and tax planning and estate planning. This course is designed for students who want to do in-depth analysis of selected areas in business law. Prerequisite: BUS 280 or ABU 280 with permission of instructor. Cr 3.

BUS 391 Computer-Based Decision Modelling and Simulation
A more in-depth examination of the role of the computer as an aid in managerial decision making. Emphasis is placed upon strengthening the student's ability to build and properly utilize computer-based decision models and simulation for problem solving in the public and private sectors. Prerequisites: BUS 290 or COS 160, MAT 211, MAT 212, and junior standing. Cr 3.
BUS 395 Cooperative Education/Intern-ship-Business Administration I
The student has the opportunity to relate academic knowledge to practical experience in the business world. The University can make 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 director. Open to first- and second-semester juniors and seniors in the School of Business, Economics, and Management with permission.

> Cr l-5.

BUS 396 Cooperative Education/Intern-ship-Business Administration II
Open to second-semester juniors and seniors in the School of Business, Economics and Management with permission. Prerequisite: BUS 395.

Сг 1-5.
BUS 397 Cooperative Education/Intern-ship-Business Administration III
Open to seniors in the School of Business, Economics and Management with permission. Prerequisite: BUS 396.

Cr l-5.

## BUS 445 Compensation Administration

It provides a basic understanding of the tasks, responsibilities, and objectives of compensation and managing compensation programs. Techniques for determining wages, salaries, and benefits and their application to actual situations in order to design, develop, and administer compensation programs will be covered. The implications of process and policies on parties internal and external to the organization will be investigated. Prerequisites: BUS 346 or permission of the instructor.

$$
\text { Cr } 3 .
$$

BUS 450 Business Management and Policy
Administrative practice at the higher levels of business management through case analysis and discussion. The course attempts to coordinate the background of business majors in the formulation and administration of sound business policy. Prerequisites: BUS 320, BUS 340, BUS 360, BUS 371.

Cr 3.

BUS 452 Organizational Behavior
An analysis of the interplay between individual and group behavior, leadership styles and the culture of an organization. The findings of behavior science are applied to such processes as motivation, influence, the structure of work, organizational design, leader-group relations and organizational change. Models, case studies, simulations, and applications. Prerequisites: BUS 340 or permission of instructor.

Cr 3.
BUS 490 Independent Readings and Research Selected topics in the various areas of accounting, finance, management, and marketing may be studied and researched on an independent basis. Prerequisites: senior standing and permission of the instructor and chair of the department.

Cr l-6.

## BUS 491 Small Business Institute

This course is designed to allow the student to apply the concepts of business administration, economics, and accounting to operational problems in the field. Assignments are arranged by the School of Business, Economics and Management in conjunction with agencies such as the Small Business Administration for an off-campus consulting experience in a business firm or other appropriate institutional setting. Prerequisites: open to qualified juniors and seniors with approval.

Cr 3.
BUS 499 Special Topics in Business and Management
EDC 300 Economic Concepts and Research Materials for Educators
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. Prerequisite: permission of the instructor.

Cr 3.

## ECO 201 Principles of Economics I

A theoretical analysis of the basic characteristics, institutions, and operational activities of a modern capitalistic economy which is involved in the transformation of scarce economic resources into the goods and services demanded by consumers. Topics discussed include inflation, unemployment, government monetary and fiscal policy to achieve full employment and economic growth.

Cr 3.

## ECO 202 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, ser-
vices, and resources within a capitalistic economy. Topics discussed include consumer preferences and consumer behavior, production theory and production costs, the monopoly firm, and resource pricing.

Cr 3.
ECO 301 Macroeconomic Analysis
A theoretical analysis of the basic forces that cause inflation, growth, and fluctuations in economic activity. The effects on employment and other factors are thoroughly treated. Stabilization policies are examined and evaluated. Prerequisites: ECO 201, ECO 202, and junior standing.

Cr 3.
ECO 302 Microeconomic Analysis
Price, income, and employment theory as tools in the study of economics. Prerequisites: ECO 201, ECO 202, and junior standing.

Cr 3.
ECO 305 Mathematical Economics
This course will cover the development and application of contemporary quantitative methods to the analysis of economic theory. Primary emphasis will be placed upon optimization theory and techniques for solving systems of simultaneous equations. These tools will be developed within the framework of economic models. Prerequisites: ECO 201, ECO 202; MAT 109 and 110 or MAT 152 and MAT 153, and junior standing.

Cr 3.
ECO 306 Econometrics
Econometrics is a special field of economics in which models are used to test the validity of hypothesized theoretical relationships against actual data. Topics covered include: the bivariate linear regression model, heteroscedasticity, multicollinearity, serial correlation of errors, and two-stage least squares. Econometric forecasting and simultaneous equation estimation will be discussed. Prerequisites: ECO 201, ECO 202, MAT 212, and junior standing. Cr 3.

## ECO 310 Money and Banking

This course examines the structure and operation of the financial system with major emphasis on commercial banking; reviews the structure of the Federal Reserve System and analyzes the tools of policy; develops alternative monetary theories; and discusses major issues in monetary policy. Prerequisites: ECO 201, ECO 202, and junior standing. Cr 3.

## ECO 315 Political Economy

The course provides an overview of various perspectives on the U.S. economic system, its dynamics, problems, and its relation to the political sphere. Topics treated include: inequality and discrimination; crisis and state intervention; growth and the environment; military spending, productivity and growth;
the U.S. and the world economy; and policies for the future. Prerequisite: ECO 201, and junior standing.

Cr 3.
ECO 320 Labor Economics
This course emphasizes the application of economic analysis and concepts to a variety of labor problems such as the supply and demand for labor, labor markets, wage determination, wage differentials and structures, and wages and inflation. In addition, there will be a brief review of the evolution of the American labor movement and public policy toward labor. Prerequisites: ECO 201, ECO 202, and junior standing.

Cr 3.

## ECO 340 History of Economic Thought

A survey of the development of basic economic principles and theories from pre-industrial times to the present. Major emphasis is on the Classical School (Smith, Ricardo, and Malthus), and its critics, the development of the Austrian School, the synthesis of Neo-Classicism, and the emergence of macro-economics. Prerequisites: ECO 201, ECO 202, and junior standing.

Cr 3.
ECO 350 Comparative Economic Systems
The structures and operating principles of the major contemporary economic systems are examined and compared. Prerequisite: ECO 201, and junior standing.

Cr 3.
ECO 351 Economic Systems of the Soviet Union
A study of the development, institution, and structure of the Soviet economy. Emphasis on current theories and problems of central planning. Prerequisites: ECO 201, ECO 202, and junior standing.

Cr 3.

## ECO 360 Economic Development

The theories and practices of interregional and international economic development. Special attention is given to developmental problems of emerging nations. Prerequisite: ECO 201, and junior standing.

Cr 3 .

## ECO 370 International Trade

The principles and practices of international trade and finance are thoroughly treated. Special emphasis is given to current trends in the international economy and to United States commercial policy. Prerequisites: ECO 201, ECO 202, and junior standing. Cr 3.
ECO 380 Public Finance and Fiscal Policy
Public expenditure theory; principles of taxation; the federal budget and alternative budget policies; federal tax policy; fiscal pol-
ivy \{or stabilization; federal debt. Prerequisites: ECO 201, ECO 202, and junior standing.

Cr 3.
ECO 381 State and Local Public Finance
Development of the federal system; fiscal performance; intergovernmental fiscal relations; state and local revenue systems; budgetary practices; state and local debt. Prerequisites: ECO 201, ECO 202, and junior standing.

Сг 3.
ECO 385 U.S. Economic Policy
This course examines currently perceived problems of the U.S. economy. A range of views of these problems and associated policy proposals are considered. Topics including the proper role of government, determinants of productivity change, domestic and foreign investment, and foreign competition are examined as sources of problems. Free market, traditional monetary and fiscal, as well as new "industrial" policies are considered as potential solutions. Prerequisites: ECO 201, 202, and junior standing.

Cr 3.

## ECO 390 Energy Economics

The purpose of this course is to assist the student in analyzing the "energy crisis" from an economic perspective. Topics to be covered include: the concepts of energy and efficiency, the role energy plays in the U.S. economy, stocks of energy resources and the role of the government in creating and/or curing the crisis. Various energy related policies will be reviewed. Some time will be devoted to an analysis of alternate energy sources and technologies. Prerequisites: ECO 201, ECO 202, and junior standing.

Cr 3.

## ECO 450 Readings in Economics

A series of readings and discussions of important books of a socio-economic and politicoeconomic nature-books with which the well-informed economics major should be familiar but which, due to time constraints, have not been integrated into the stud hours of economics.

Cr 3.
ECO 490 Independent Readings and Research in Economics
Independent study and research of various student-selected areas of economics. Prerequisites: senior standing and a completed independent study form (available from Registrar).

Cr l-3.


# School of Applied Science 

Dean: Brian C. Hodgkin, 260 Science Building, Portland Assistant Dean: Arthur O. Berry, 103 IEC, Gorham

The School of Applied Science is an academic unit of the University delivering science, engineering, computer science, and technology programs which serve the needs of southern Maine. The School is organized into three departments: the Department of Computer Science, the Department of Technology, and the Department of Engineering. Through these departments, the School offers bachelor's and master's degrees, including the B.S. in computer science, industrial technology, and vocational technology. The School provides industrial arts and vocational/occupational courses in support of B.S. degrees in industrial arts education and vocational/occupational education offered by the College of Education. The School offers the M.S. degree in computer science, and through a cooperative arrangement, the M.S. degree in engineering is extended from the University of Maine at Orono. The Department of Engineering also offers introductory undergraduate courses in engineering to prepare students for transfer to the University of Maine at Orono's engineering programs. The School also works closely with the University's Department of Continuing Education for Business and Industry to provide courses and programs serving the needs of the region.

Further information regarding the School's graduate programs may be found in the Graduate Catalog.

## General Information

Admission to an undergraduate program in the School of Applied Science is initiated through the University Admissions Office. Candidates for admission must be graduates of an approved secondary school and meet such other admissions requirements as are set out on page 9 of this catalog.

General academic policies will be found in the Academic policies section of this catalog. Specific policies and requirements are set forth in the sections dealing with the individual departments of the School. All students are reminded that, in addition to meeting departmental requirements for a major, they must also meet the requirements of the University Core curriculum.

# Department of Computer Science 

Chair of the Department: John R. Heath, 228 Science Building, Portland Associate Professors: Heath, Schroff, Welty; Assistant Professor: Briggs

The Department of Computer Science offers a four-year program leading to a B.S. in computer science. In cooperation with the Department of Mathematics, it offers an additional major in computer science and mathematics. Students may receive either a B.S. in computer science with an additional major in mathematics or a B.A. in mathematics with an additional major in computer science. The Department also provides computer science major courses for a B.S. in education (please see the section on the College of Education).

## Programs and Requirements

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 Core curriculum requirements.

## Bachelor of Science in Computer Science

The minimum number of credits (exclusive of the University's Core curriculum) required for the major: 44.

The program in computer science offers a background in digital computing together with special courses designed to prepare the undergraduate for a career in computer programming or for further study in computer science. Each student must have an accumulative grade point average of at least 2.0 in major courses before being considered for a baccalaureate degree of computer science.

Computer science courses have been made available to visually handicapped or legally blind students. The adapting hardware and software is not braille oriented, per se, but enlarges computer input and output to increase accessibility. Visually handicapped students interested in computer courses or majors must contact the coordinator of handicap services to verify accessibility.
A. Successful completion of the following courses:

| COS | 160 | Structured Problem Solving-PASCAL |
| :--- | :--- | :--- |
| COS | 161 | Algorithms in Programming |
| COS | 250 | Introduction to Computer Systems |
| COS | 280 | Discrete Structures |
| COS | 285 | Data Structures |
| MAT | 152 | Calculus A |
| MAT | 153 | Calculus B |
| MAT | 362 | Probability and Statics I |

B. Successful completion of four additional COS courses numbered 300 and above.
C. Successful completion of two additional mathematics courses with second digit 5 or greater, excluding MAT 290.

## B.S. in Computer Science with an Additional Major in Mathematics

The minimum number of credits (exclusive of the University's Core curriculum) required for the double major: 54.

Each student must have an accumulative grade point average of at least 2.0 in the major courses before being considered for a baccalaureate degree. Students should see the chair of the Department of Mathematics for advising.
A. Successful completion of the following courses:

| MAT | 152 | Calculus A |
| :--- | ---: | :--- |
| MAT | 153 | Calculus B |
| MAT | 252 | Calculus C |
| COS | 160 | Structured Problem Solving - PASCAL |
| COS | 161 | Algorithms in Programming |
| COS | 250 | Introduction to Computer Systems |
| COS | 285 | Data Structures |
| MAT | 290 | Foundations of Mathematics |
|  | OR |  |
| COS | 280 | Discrete Structures (but not both) |

B. Successful completion of one course from each of the following areas:

1) Algebra

MAT 380 Linear Algebra
MAT 382 Abstract Algebra
2) Analysis

MAT 352 Real Analysis
MAT 354 Topics in Advanced Calculus
mAT 355 Complex Analysis
MAT 490 Topology

| 3) Applied Mathematics |  |  |
| :--- | :--- | :--- |
| MAT | 350 | Differential Equations |
| MAT | 362 | Probability and Statistics I |
| MAT | 364 | Numerical Analysis I |
| MAT | 366 | Linear Programming |
| MAT | 460 | Mathematical Modeling |
| MAT | 461 | Introduction to Operations Research |
| 4) Geometry |  |  |
| MAT | 370 | College Geometry |
| MAT | 371 | Projective Geometry |
| MAT | 372 | Non-Euclidean Geometry |

C. Successful completion of three of the following computer science courses, to include at least one 400 level course:

| COS | 355 | Computer Architecture |
| :--- | :--- | :--- |
| COS | 360 | Concepts of Higher Level Programming Language |
| COS | 370 | Topics in Computer Science |
| COS | 374 | Numerical Analysis (not to be taken in addition <br> to MAT 364) |
| COS | 450 | Operating Systems  <br> COS 458 |
| Advanced Data Structures |  |  |
| COS | 469 | Introduction to Compiler Construction |
| COS | 472 | Artificial Intelligence |

D. Successful completion of six additional hours of electives in mathematics or computer science with second digit 5 or greater.

## Minor in Computer Science

The minimum number of credits (exclusive of tbe University's Core curriculum) required for the minor: 18.

A minor in computer science may be obtained by successfully completing the courses listed below with an accumulative grade point average of 2.0 in these courses: COS 160; COS 161; COS 250; COS 280; and two additional COS courses with first digit 2 or greater.

## Computer Science and Mathematics for Education Majors

The Department of Mathematics (College of Arts and Sciences) and the Department of Computer Science (School of Applied Sciences), in cooperation with the College of Education offer an area major of 51 hours of mathematics and computer science courses for students majoring in secondary education; the program consists of the following courses.
I. Successful completion of the following:

| MAT | 152 | Calculus A |
| :--- | ---: | :--- |
| MAT | 153 | Calculus B |
| MAT | 252 | Calculus C |
| MAT | 290 | Foundations of Mathematics |
|  | OR |  |
| COS | 280 | Discrete Structures |
| COS | 160 | Structured Problem Solving |

II. Successful completion of one course from each of the following areas:

| Algebra |  |  |
| :--- | :--- | :--- |
| MAT | 380 | Linear Algebra |
| MAT | 382 | Abstract Algebra |
| Analysis |  |  |
| MAT | 352 | Real Analysis I |
| MAT | 354 | Topics in Advanced Calculus |
| MAT | 355 | Complex Analysis |
| MAT | 490 | Topology |
| Applied Mathematics |  |  |
| MAT | 350 | Differential Equations |
| MAT | 362 | Probability and Statistics I |
| MAT | 364 | Numerical Analysis I |

Geometry

| MAT | 370 | College Geometry |
| :--- | :--- | :--- |
| MAT | 371 | Projective Geometry |
| MAT | 372 | Non-Euclidean Geometry |

III. Successful completion of five of the following computer science courses:

COS 161 Algorithms in Programming
COS 250 Introduction to Computer Systems
COS 355 Computer Architecture
COS 285 Data Structures
COS 360 Concepts of Higher Level Programming Languages
COS 370 Topics in Computer Science
COS 374 Numerical Analysis I (not to be taken in addition to MAT 364)
IV. Successful completion of six additional hours of electives in mathematics or computer science with second digit 5 or greater.
V. The following professional education courses:

EDU 100 Exploring Teaching as a Profession
EDU 200 Foundations of Education
HRD 333 Human Growth and Development
MED 345 Teaching Mathematics in the Secondary School
EDU 324 Student Teaching
Electives
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 MED 345.

It is also recommended that CSE 345 Teaching Computer Science in the Secondary School be taken as an elective in the completion of the overall 120 credits required for graduation.

A minor in computer science may be obtained by successfully completing 21 hours of the following computer science courses: COS 160; COS 161; COS 280; CSE 345; and two courses from the following: COS 250, COS 285; COS 374, or COS 370.

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

COS 100 Computers and Society
A general course designed for students not majoring in mathematics or computer science. Topics will include: history of data processing technology; study of the tools and methods; the application of computers and their economic and social implications; and an introduction to a programming language.

Cr 3.

## COS 140 Programming in FORTRAN

A study of programming techniques and applications using FORTRAN. Prerequisite: Two years of high school algebra or equivalent.

Cr 3.
COS 160 Structured Problem Solving: PASCAL
A study of problem-solving techniques and applications using PASCAL. This course is primarily for students with a computer science major or minor or a strong serious inter-
est in computer science. Prerequisite: two years of high school algebra or equivalent.

Cr 3.
COS 161 Algorithms in Programming The development of algorithms and their implementations in a higher-level programming language, with emphasis on proper design principles and advanced programming concepts. Prerequisite: COS 160 (PASCAL).

Cr 3.
COS 230 Programming in COBOL
A study of the programming language used primarily in business. Prerequisite: COS 140 or COS 160.

Cr 3.
CSE 234 Computer Programming for Elementary Teachers
The course introduces the elementary education major to programming techniques and applications using the BASIC language. No
programming skills will be assumed. Prerequisite: MAT 131.

Cr 3.
COS 240 Programming in PL/l
A continuation of the study of programming principles through study of the PL/l language. Prerequisite: COS 140 or COS 160.

Cr 3.
COS 250 Introduction to Computer Systems An introduction to the structure and organization of digital computers and the use of assembly language programming systems. Prerequisite: COS 161.

Cr 3.
COS 280 Discrete Structures
Concepts of modern algebra, set theory, Boolean algebra, elements of graph theory, and their application to computer science. Prerequisite: COS 161.

Cr 3.
COS 285 Data Structures
Basic concepts of data, strings, stacks, arrays, and lists. Representations of trees and graphs. Storage systems and structures, searching and sorting techniques. Multilinked structures. Prerequisite: COS 250 and COS 280 or permission of instructor. Normally offered only in Spring semester. Cr 3.

## Selected Undergraduate Courses

## COS 355 Computer Architecture

Fundamentals of the design and organization of digital computers. Topics include applications of Boolean algebra to logical design; machine algorithms used in addition, subtraction, multiplication, etc.; types of memory; synchronous and asynchronous operation; minimization of logic circuits. Also, concepts from microprocessors and large parallel computers. Prerequisites: COS 280 or MAT 290 and COS 250. Normally only offered in the spring semester.

Cr 3.

## COS 357 File Organization

Study of various external storage media including magnetic tape, disk and bubble memory. Various file organizations such as sequential, direct, and indexed sequential will be studied in detail. Some concepts of how file organization supports data base systems may also be included. Prerequisite: COS 285.

Cr 3.
COS 360 Concepts of Higher-Level Programming Languages
An examination of basic concepts and special facilities in higher-level programming languages via the consideration of several representative languages. Emphasis on scope of declarations, storage allocation, data structure variety, binding time of constituents, and control organization. Introduction to the formal definition of programming languages. Prerequisite: COS 285. Normally offered only in the fall semester.

Cr 3.

COS 370 Topics in Computer Science
Topics to be covered may include philosophy of computers, history of computers, computers and society, simulation, graphics, and other advanced topics. Prerequisite: COS 250 or permission of the instructor. Cr 3.
COS 372 Software Engineering
A study of methods applied to large-scale software development, including topics such as project management, software design, verification and validation. Prerequisite: COS 285.

Cr 3.
COS 374 Numerical Analysis I
A study of the theory and application of computational algorithms for interpolation, equation solving, matrix methods, integration; error analysis. Prerequisites: MAT 252, COS 160, and permission of instructor. Cr 3.
COS 380 Introduction to Theory of Computing
Introduction to the basic concepts of finite automata and Turing machines; finite state acceptors and regular sets; linear sequential circuits, complexity results for finite networks, elementary notions of recursive and recursively enumerable sets. Prerequisite: COS 280 or MAT 290.

Cr 3 .
COS 450 Operating Systems
Computer resource management. Topics include an in-depth study of concurrent cooperating processes; virtual systems; segmentation and paging; I/O device handling; protection and security; deadlock; race conditions. Prerequisites: COS 285, COS 355.

Cr 3.
COS 452 Computer Graphics
A study of the techniques involved in computer graphics systems. Topics include: pointplotting and line drawing in two- and threedimensional space; clipping and windowing; geometric modelling; algorithmic solutions to the hidden line and hidden surface problems. Prerequisite: COS 285.

Cr 3.
COS 469 Introduction to Compiler Construction
Definition of a language, context-free grammars, rigorous definition of a typical small language in BNF, design and implementation of a compiler for programs within this language. Prerequisite: COS 285.

Cr 3 .

## COS 472 Artificial Intelligence

An introduction to the underlying concepts and applications of intelligent systems. Topics include computer representations of knowledge; heuristic search techniques and computer problem solving; learning; game playing; automatic theorem proving; pattern recognition; natural language questionanswering. Prerequisites: COS 280, COS 285.

COS 497 Independent Study in Computer Science
An opportunity for juniors and seniors who have demonstrated critical and analytical capability to pursue a project independently, charting a course and exploring an area of interest within their major field. Prerequisites: junior or senior standing and permission of the department chairman and instructor.

Cr 1-3.
CSE 345 Teaching Computer Science in the Secondary School
Critical study of programs and techniques for teaching secondary school courses in computer literacy, computer organization, and computer programming. Prerequisite: junior or senior standing.

Cr 3.

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. Students already employed may qualify. 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 with the employer and a faculty supervisor. Prerequisite: open to qualified students, subject to availability of suitable jobs. Course is graded on a pass-fail basis only. Cr 3.

# Department of Technology 

Chair of the Department: Arthur Berry, 103 Industrial Education Center Professor: Berry; Associate Professors: Anderson, Carter, Faulkner, Kirk, W. Moore, Nannay, Zaner; Assistant Professor: Bazinet

Technology is the study of the creation and utilization of adaptive systems including tools, machines, materials, techniques and technical means, and the relation of the behavior of these elements and systems to human beings, society, and the civilization process. Technological concepts are presented through a variety of approaches including the lecture, technical laboratories, field experiences, industrial visitations, and cooperative programs.

The curricula of the Department of Technology provide a blend of cultural, technical, and professional courses designed to prepare individuals for teaching or industrial positions. Recognition is given to prior learning, where appropriate. Four degree programs are offered.

The undergraduate program in industrial arts education is designed to prepare students to organize, manage, and teach programs of industrial arts in elementary and secondary schools. Laboratory courses in energy and transportation, graphic communication, and manufacturing and construction provide a technical/conceptual background.

Vocational/occupational education recognizes prior learning and skill obtained through occupational experience. It is designed to prepare students for teaching in vocational/technical education or other occupational training programs and requires a minimum of three years of occupational experience as a prerequisite for the degree program. Emphasis is placed on the development of cultural and professional education.

Industrial technology is a management-oriented curriculum designed to prepare an individual for supervisory/technical/managerial roles in industry. Two options are available. For the individual without technical skills, shop/laboratory experiences provide for development of technical proficiency. For those with prior learning through occupational training/ experience, trade and technical competencies are evaluated and credit granted. Both options, in cooperation with the School of Business, Economics and Management, provide a basic preparation in business ad-

## Programs and Requirements

ministration. Students may concentrate in one of seven areas to prepare themselves for future employment.

The vocational technology program is an occupationally oriented curriculum designed for individuals who desire to prepare for managerial/ supervisory roles. The program recognizes nontechnical occupational experience, assesses prior learning, and offers four areas of concentration in business management. A minimum of three years of occupational experience is required as a prerequisite for the degree program.

## Admissions Requirements

Applicants for industrial arts education, or those without occupational experience desiring to pursue the industrial technology program, must visit the Industrial Education Center for a tour of the facility and interviews with the faculty. Applicants will be notified of the appropriate procedure to follow and the dates available for on-campus visits.

Applicants with a minimum of three years of occupational experience who desire to pursue the industrial technology, vocational/occupational education, or vocational technology programs must submit evidence of a minimum of three years of occupational experience and appear for a personal interview. Candidates should contact the Department office for an appointment to discuss the evaluation of prior work experience in the vocational/technical field.

## Bachelor of Science in Industrial Arts Education

The number of credits (including the University's Core curriculum) required for the degree: 125 .
Core Curriculum (40-49 credits)
Basic Competence 0-9
Methods of Inquiry/Ways of Knowing
a. Fine Arts 6

1. Performance-centered
2. History-centered
b. Humanities 6
l. Literature
3. Other Times/Other Cultures
c. Social Sciences 6
(Students must take HRD 333 Human Growth and Development in addition to another Social Science course.)
d. Natural Sciences 10

Interdisciplinary course 3
In addition, students must take 9 credits of electives.
Technical (54 credits)
Required courses
ITP 300 Modern Industry
ITT 102 Introduction to Technology
ITT 211 Electronics Technology
ITT 221 Power Technology
ITT 231 Technical Graphics
ITT 241 Graphic Arts Technology
ITT 251 Metal Technology
ITT 261 Wood Technology
ITT 271 Plastics Technology
ITT 311 Communications Electronics
ITT 323 Energy and the Consumer
ITT 331 Engineering Design Graphics
ITT 342 Photo Offset Lithography
ITT 351 Machining and Fabrication
ITT 361 Production Manufacturing in Wood
Technical Electives (select any three)
Energy and Transportation
ITT 312 Computer Technology
ITT 313 Electrical Construction

| ITT | 321 | Automotive Systems |
| :--- | :---: | :--- |
| ITT | 322 | Automotive Diagnosis and Tuneup |
| ITT | 413 | Instrumentation |
| ITT | 414 | Digital Electronics |
| ITT | 423 | Fluid Power |
| ITT | 424 | Fluid Power Systems |
| Graphic Communication |  |  |
| ITT | 332 | Architectural Drawing and Design |
| ITT | 334 | Energy Efficient Residential Design |
| ITT | 343 | Communication Design |
| ITT | 434 | Industrial Production Illustration |
| ITT | 435 | Systems Analysis and Design |
| ITT | 444 | Photographic Reproduction |
| ITT | 445 | Color Reproduction Theory |
| Manufacturing and Construction |  |  |
| ITT | 300 | Crafts Technology |
| ITT | 352 | Fabrication and Forming |
| ITT | 362 | Residential Construction |
| ITT | 363 | Wood Science |
| ITT | 452 | Metallurgy and Metrology |
| ITT | 482 | Materials Testing (Metals/Wood) |
| ITT | 490 | Special Problems in Industrial Arts |
| Professional Education (25 credits) |  |  |
| IEA | 190 | Preprofessional Field Experiences |
| IEA | 290 | Contemporary Teaching in IA |
| *IEA | 380 | Curriculum Materials in IA |
| *IEA | 381 | Methods of Teaching IA |
| EDU | 324 | Student Teaching/Seminar |
| ED | ITr |  |

*Minimum 2.5 cumulative index required and must be maintained in order to register for IEA 380, IEA 381, and EDU 324 and for graduation from the program.

## Bachelor of Science in Industrial Technology

The number of credits (including the University's Core curriculum) required for the degree: 125 .

Option \#1: Skill Development
Core Curriculum (37-46 credits)
Basic Competence 0-9
Methods of Inquiry/Ways of Knowing
a. Fine Arts 6

1. Performance-centered
2. History-centered
b. Humanities 6
l. Literature
3. Other Times/Other Cultures
c. Social Sciences 6
(Students must take ECO 201 Economics I in addition to another social science course.)
d. Natural Sciences 16

Interdisciplinary course 3
Technical (5l credits)
Required courses

| ITP | 310 | Plant Layout and Material Handling |
| :--- | :--- | :--- |
| ITP | 320 | Occupational Safety |
| ITP | 330 | Production Control |
| ITP | 340 | Quality Control Fundamentals |
| ITP | 360 | Motion and TimeStudy |
| ITT | 102 | Introduction to Technology |
| ITT | 211 | Electronics Technology |
| ITT | 221 | Power Technology |
| ITT | 231 | Technical Graphics |


| ITT | 241 | Graphic Arts Technology |
| :--- | :--- | :--- |
| ITT | 251 | Metals Technology |
| ITT | 261 | Wood Technology |

Technical Electives (select a minimum of 9 credits from one of the groups below)- 15 credit hours required

Energy and Transportation
ITT 311 Communication Electronic

ITT 312 Computer Technology
ITT 313 Electrical Construction
ITT 321 Automotive Systems
ITT 322 Automotive Diagnosis and Tuneup
ITT 323 Energy and the Consumer
ITT 413 Instrumentation
ITT 423 Fluid Power
ITT 424 Fluid Power Systems
Graphic Communication
ITT 331 Engineering Design Graphics
ITT 332 Architectural Drawing and Design
ITT 334 Energy Efficient Residential Design
ITT 342 Photo Offset Lithography
ITT 343 Communication Design
ITT 434 Industrial Production Illustration
ITT 435 Systems Analysis and Design
ITT 444 Photographic Reproduction
ITT 445 Color Reproduction Theory
Manufacturing and Construction
ITT 271 Plastic Technology
ITT 300 Crafts Technology
ITT 351 Machining and Fabrication
ITT 352 Fabrication and Forming
ITT 361 Production Manufacturing in Wood
ITT 362 Residential Construction
ITT 363 Wood Science
ITT 452 Metallurgy and Metrology
ITT 472 Materials Testing (Wood/Metal)
ITP 330 Computers in Industry and Technology
Optional Electives
ITP 491 Industrial Internship I
ITP 492 Industrial Internship II
ITT 490 Special Problems in Industrial Arts
Education and Business (30 credits)
Required courses ( 18 credit hours)
ITP 300 Modern Industry
ITP 350 Conference Leading
ITP 370 Occupational and Trade Analysis
ABU 111 Principles of Accounting I
ABU 240 Principles of Management
ECO 202 Principles of Economics II
Professional Concentration (select one area) - 12 credit hours
Area 1-General
ABU 211 Accounting Applications I
ABU 190 Introduction to Computers in Business
ABU 220 Business Finance I
ABU 260 Marketing
Area 2-Personnel Management
ABU 211 Accounting Applications I
BUS 346 Personnel Management
BUS 348 Industrial Relations
ECO 320 Labor Economics
Area 3-Accounting
ACC 301 Intermediate Accounting I
ACC 302 Intermediate Accounting II

| ACC | 305 | Cost Accounting |
| :--- | ---: | :--- |
| BUS | 320 | Business Finance |
| Area | 4-Marketing and Distribution |  |
| BUS | 346 | Personnel Management |
| ABU | 260 | Marketing |
| BUS | 363 | Advertising |
| BUS | 367 | Managerial Marketing |
| Area | Electronics |  |
| EET | 051 | Analog Systems |
| EET | 061 | Digital Systems |
| EET | 071 | Micro-Computer Architecture and Design |
| Area $6-C o m p u t e r ~ S c i e n c e ~$ |  |  |
| COS | 160 | Structured Problem Solving: PASCAL |
| COS | 161 | Algorithms in Programming |
| COS | 250 | Introduction to Computer Systems |
| COS | 350 | Systems Programming |

Option \#2: Occupational Experience
Core Curriculum (37-46 credits)
Basic Competence 0-9
Methods of Inquiry/Ways of Knowing
a. Fine Arts 6

1. Performance-centered
2. History-centered
b. Humanities 6
3. Literature
4. Other Times/Other Cultures
c. Social Sciences 6
(Students must take ECO 201 Economics I in addition to another social science course.)
d. Natural Sciences 16

Interdisciplinary course 3
Technical ( 51 credits)
Required courses ( 15 credit hours)
ITP $310 \quad$ Plant Layout

ITP 320 Occupational Safety
ITP 330 Production Control
ITP 340 Quality Control Fundamentals
ITP 360 Motion and Time Study
Technical Assessment ( 36 credit hours)
ITT 400 Occupational Experience, verified (credits will be determined by rating plan)
ITT 440 Related Occupational Experiences (two options, total credits to be no more than the difference between those granted for ITT 400 and 36 credits)

Option \#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 option.
Option \#2: Approved employment with a company may qualify a student under this option. Arrangements must be approved by the advisor in advance. The experiences should provide opportunities for updating occupational technical skills and knowledges. Credit will be determined on the basis of one credit for each three full weeks of employment with a maximum of three credits for each period of approved continuous full-time employment. A daily log, summary, report, and evaluation by a supervisor will constitute part of this option.

For additional information concerning either option of ITT 440, consult your advisor.

| Education and Business (30 credits) |  |  |
| :---: | :---: | :---: |
| Required courses (18 credit hours) |  |  |
| ITP | 300 | Modern Industry |
| ITP | 350 | Conference Leading |
| ITP | 370 | Occupational and Trade Analysis |
| ABU | 111 | Principles of Accounting I |
| ABU | 240 | Principles of Management |
| ECO | 202 | Principles of Economics II |
| Professional Concentration (select one area) 12 credit hours |  |  |
| Area 1-General |  |  |
| ABU | 211 | Accounting Applications I |
| ABU | 190 | Introduction to Computers in Business |
| ABU | 220 | Business Finance I |
| ABU | 260 | Marketing |
| Area 2-Personnel Management |  |  |
| ABU | 211 | Accounting Applications I |
| BUS | 346 | Personnel Management |
| BUS | 348 | Industrial Relations |
| ECO | 320 | Labor Economics |
| Area 3-Accounting |  |  |
| ACC | 301 | Intermediate Accounting I |
| ACC | 302 | Intermediate Accounting II |
| ACC | 305 | Cost Accounting |
| BUS | 320 | Business Finance |
| Area 4-Marketing and Distribution |  |  |
| BUS | 346 | Personnel Management |
| ABU | 260 | Marketing |
| BUS | 363 | Advertising |
| BUS | 367 | Managerial Marketing |
| Area 5-Electronics |  |  |
| EET | 051 | Analog Systems |
| EET | 061 | Digital Systems |
| EET | 071 | Micro-Computer Architecture and Design |
| Area 6-Computer Science |  |  |
| COS | 160 | Structured Problem Solving: PASCAL |
| COS | 161 | Algorithms in Programming |
| COS | 250 | Introduction to Computer Systems |
| COS | 350 | Systems Programming |
| OR |  |  |
| cos | 358 | Data Structures |

## Bachelor of Science in Vocational/Occupational Education

The number of credits (including the University's Core curriculum) required for the degree: 120 .

Core Curriculum (40-49 credits)
Base Competence 0-9
Methods of Inquiry/Ways of Knowing
a. FineArts 6

1. Performance-centered
2. History-centered
b. Humanities 6
3. Literature
4. Other Times/Other Cultures
c. Social Sciences 9
(Students must take HRD 333 Human Growth and Development in addition to two other social science courses.)
d. Natural Sciences 13

Interdisciplinary course 3
Electives 3

ITT 400-Occupational Experience, verified (see below; credits will be determined by rating plan)

ITT 440-Related Occupational Experiences (two options, total credits to be no more than the difference between those granted for ITT 400 and 45 credits)

Option \#1: This course 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 option.
Option \#2: Approved employment with a company may qualify a student under this option. Arrangements must be approved by the advisor in advance. The experiences should provide opportunities for updating occupational technical skills and knowledges. Credit will be determined on the basis of one credit for each three full weeks of employment with a maximum of three credits for each period of approved continuous full-time employment. A daily log, summary, report, and evaluation by a supervisor will constitute part of this option.

For additional information concerning either option of ITT 440, consult your advisor.

Professional Education ( 27 credit hours)
Required Courses: All courses 3 credits except as noted

| IEV | 305 | Curriculum Development in Vocational Education |
| :--- | :--- | :--- |
| IEV | 310 | Methods and Materials of Instruction in Vocational |

IEV 340 Shop Organization and Management

IEV 350 Philosophy of Vocational Education
IEV 411 Measurement and Evaluation (vocational)
ITP 300 Modern Industry ITP 370 Occupational and Trade Analysis EDU 324 Student Teaching/Clinical Experiences (required for all candidates with less than three years of successful teaching experience)-6 credits

Recommended Electives (all 3 credit courses)-May be elected to meet credit requirement for degree, if needed

| IEV | 315 | Learning and Programmed Instruction |
| :--- | :--- | :--- |
| IEV | 320 | Coordination of Cooperative Education |
| IEV | 330 | Principles and Practices of Vocational Guidance |
| IEV | 382 | Preparation of Instructional Materials |
| IEV | 420 | Trends in Vocational Education |
| IEV | 450 | Local Administration and Supervision of |
|  |  | Vocational Education |
| IEV | 455 | Development of Technical Education |
| IEV | 460 | Independent Study in Vocational Education |
| ITP | 350 | Conference Leading |

## Bachelor of Science in Vocational Technology

The number of credits (including the University's Core curriculum) required for the degree: 120 .

Core Curriculum (37-46 credits)
Basic Competence 0-9
Methods of Inquiry/Ways of Knowing
a. Fine Arts 6

1. Performance-centered
2. History-centered
```
b. Humanities 6
l. Literature
2. Other Times/Other Cultures
c. Social Sciences 6
(Students must take ECO 201 Economics I in addition to another
social science course.)
d. Natural Sciences 13
Interdisciplinary course 3
Electives 3
```

Technical Assessment (45 credits)
ITT 400-Occupational Experience, verified (credits will be determined by rating plan; see below)

ITT 440-Related Occupational Experiences (two options, total credits to be no more than the difference between those granted for ITT 400 and 45 credits)

Option \#1: This course 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 option.
Option \#2: Approved employment with a company may qualify a student under this option. Arrangements must be approved by the advisor in advance. The experiences should provide opportunities for updating occupational technical skills and knowledges. Credit will be determined on the basis of one credit for each three full weeks of employment with a maximum of three credits for each period of approved continuous full-time employment. A daily log, summary, report, and evaluation by a supervisor will constitute part of this option.

For additional information concerning either option of ITT 440, consult your advisor.

| Education and Business (30 credits) |  |  |
| :--- | :---: | :--- |
| Required Courses (l8 credit hours) |  |  |
| ITP | 300 | Modern Industry |
| ITP | 350 | Conference Leading |
| ITP | 370 | Occupational and Trade Analysis |
| ABU | 111 | Principles of Accounting I |
| ABU | 240 | Principles of Management |
| ECO | 202 | Principles of Economics II |
|  |  |  |
| Professional Concentration (select one area)-12 credit hours |  |  |
| Area l-General |  |  |
| ABU | 211 | Accounting Applications I |
| ABU | 190 | Introduction to Computers in Business |
| ABU | 220 | Business Finance I |
| ABU | 260 | Marketing |
| Area 2-Personnel Management |  |  |
| ABU | 211 | Accounting Applications I |
| BUS | 346 | Personnel Management |
| BUS | 348 | Industrial Relations |
| ECO | 320 | Labor Economics |
| Area 3-Accounting |  |  |
| ACC | 301 | Intermediate Accounting I |
| ACC | 302 | Intermediate Accounting II |
| ACC | 305 | Cost Accounting |
| BUS | 320 | Business Finance |
| Area $4-$ Marketing and Distribution |  |  |
| BUS | 346 | Personnel Management |


| ABU | 260 | Marketing |
| :--- | :--- | :--- |
| BUS | 363 | Advertising |
| BUS | 367 | Managerial Marketing |

## ITT 102 Introduction to Technology

An introductory study of industry and technology and their impact on our culture. Emphasis on the role of industrial education in developing an understanding of basic concepts and functions of industry and technology is stressed. The conceptual areas of energy and transportation, manufacturing and construction, and graphic communication are defined and developed. Required for all entering program majors. Lecture and lab.

Cr 3.

## ITT 211 Electronics Technology

A study of the fundamental concepts of electronics. Laboratory experiences with typical circuits found in power supplies, amplifiers, and receivers. Use of test equipment including meters, the oscilloscope, signal generators and component checkers. Opportunity to practice soldering and printed circuit development is also provided.

Cr 3.

## IT T 221 Power Technology

Power Technology is designed as an introduction to the broad field of power. Power is examined from the standpoints of generation, transmission, and application. Emphasis will be placed on understanding through study and manipulative experiences in the power laboratory. Experiences will include assembly and disassembly procedures, design and construction, testing, diagnosis, service, power measurements and safety considerations as applied to heat engines. Cr 3.

## ITT 231 Technical Graphics

Concepts of spatial relationships and visualizations with related techniques. Basic skill development and understanding taught through freehand illustrations as well as conventional instruments and devices. Multiview projections, pictorial techniques, primary and secondary auxiliaries, detail and assembly working drawings, and reproduction techniques. Contemporary industrial practices and processes.

Cr 3.

## IT T 241 Graphic Arts Technology

A study of the common reproduction systems with significance in the graphic arts industries and technology. Designing, composing, reproduction, assembling, and finishing of printed materials utilizing conventional reproduction techniques. Emphasis on letter press, offset lithography, and screen printing, with related experiences in rubber stamp
making, block printing, embossing, and photo enlarging.

Cr 3 .
ITT 251 Metal Technology
A study of metal manufacturing industries. Introduction to concepts of designing, planning, fabrication, finishing, and distribution as they pertain to these industries. Selection, use, and care of equipment. Safety practices.

Cr 3.

## ITT 261 Wood Technology

A basic course in wood technology, including wood properties, basic hand and machine tool processes, assembly and finishing. Cr 3.

## ITP 300 Modern Industry

Evolution and contemporary structure of American industry and its impact upon the social, economic, and cultural environment. Major areas and functions of industry explored inetude: personnel administration, research and development, production, finance, marketing, and service. Industrial visitations and reports.

Cr 3.

## IT T311 Communication Electronics

A detailed study of communication circuits and applications; including receivers, transmitters, antennas, and satellites. Opportunity provided to obtain an Amateur Radio license. Prerequisite: ITT 211 or permission of instructor.

Cr 3.

## ITT 312 Computer Technology

Study of the function and applications of programmable calculators, micro-processors, and digital computers. Laboratory experiences relating to digital electronics and using the computing facilities of the University. Prerequisite: ITT $2 l l$ or permission of instructor.

Cr 3.

## IT T 313 Electrical Construction

A study of electrical wiring, control circuits and motors, as they relate to industrial and residential applications. Laboratory experiences and field study are used to enhance the student's learning. Prerequisite: ITT 211 or permission of instructor.

Cr 3.
ITT 321 Automotive Systems
Automotive Systems is an extension of the basic concepts of power technology as they are applied to the automobile. Automotive technology is examined through analysis, operation, and service of electrical and fuel systems. Experiences include testing and measurement as well as overhaul procedures.

Includes theory of design, construction, and operation of basic systems in automotive products. Prerequisite: ITT 221 or permission of instructor. Cr 3.

ITT322 Automotive Diagnosis and Tuneup
Automotive Diagnosis and Tuneup is designed as an in-depth study of automotive ignition and carburetion systems. Theory, operation, and testing of ignition, carburetion, and pollution control systems is included. Opportunities for independent research and problem solving are provided. Prerequisite: ITT 321 or permission of instructor. Cr 3 .

## ITT 323 Energy and the Consumer

Designed as an introduction to the efficient use of energy from the consumer standpoint. Areas explored include the use of energy to condition homes, commercial structures and other buildings, as well as the use of power in motive devices. Activities include analysis, testing and owner maintenance of these energy using devices. Prerequisite: ITT 221 or permission of instructor.

Cr 3.

## ITT 331 Engineering Design Graphics

Engineering Design Graphics will expose the student to contemporary industrial practices and techniques of advanced spatial and dimensional theory utilizing orthographic and pictorial techniques. Emphasis will be on design criteria selection and implementation employing standard scientific procedures. Both individual and team assignments will be used. Prerequisite: ITT 231 or permission of instructor.

Cr 3.
ITT 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: ITT 331 or equivalent or permission of instructor.

Cr 3.

## ITT 342 Photo Offset Lithography

Theory and practice in lithographic and photo-offset printing with emphasis upon camera work, stripping, platemaking, presswork, and finishing. Photographic conversion of line and halftone copy and copy preparation are also included. Prerequisite: ITT 241 or permission of instructor.

Сг 3.

## ITT 343 Communications Design

An introduction to the principles of layout and design in preparing camera copy for graphic reproduction. Emphasis on design elements and fundamentals, manuscript, and illustration preparation, graphic and photographic techniques, and production specifi-
cations. Prerequisite: ITT 241 or permission of instructor.

Сr 3.
ITT 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: ITT 251 or permission of instructor. Cr 3.
ITT 352 Fabrication and Forming
Concepts, principles, and activities in TIG welding, sheet metal fabrication, and casting techniques as they relate to the manufacturing and construction industries. Group and individual problems and activities. Prerequisite: ITT 351 or permission of instructor.

Cr 3.
ITT 361 Production Manufacturing in Wood Production and wood manufacturing problems including production planning, mass production, jigs, fixtures, special machine operations, and advanced finishing techniques. General maintenance procedures on production equipment. Group and individual research assignments and related technical problems. Prerequisite: ITT 261 or permission of instructor.

Cr 3.

## ITT 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 pananing, earth-moving principles considered in research activities. Group and individual problems. Prerequisite: ITT 261 or permission of instructor. $\mathbf{C r} 3$.

## ITT 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: ITT 261 or permission of instructor.

Cr 3.

## ITT 300 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: ITT 251 and 261, and permission of instructor. Cr 3 .
ITT 271 Plastics Technology
A study of plastics as a material and the basic industrial process used to produce plastic products. Included are basic polymer chemistry, injection molding, extrusion, blow molding, compression and transfer molding, thermoforming, roll forming, lamination,
casting, expansion, thermofusion, fabrication and bonding, product applications, mold design and construction. Cr 3.
ITT 413 Instrumentation and Process Control
A study of instruments and sensing devices used to observe and/or control processes in our industrial society. Laboratory and field experiences to research and/or construct an instrument of interest to the student. Prerequisite: ITT 211 or permission of instructor.

Cr 3.

## ITT 414 Digital Electronics

A study of the fundamentals of digital logic and logic systems. Laboratory experiences with typical circuits using semiconductor devices, including diodes, transistors and integrated circuits. Prerequisite: ITT 211 or permission of instructor.

Cr 3.
ITT 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.

Cr 3.

## ITT 424 Fluid Power Systems

Application of fluid power and fluidic systems to manufacturing and construction industries. Prerequisite: ITT 423 or permission of instructor. Cr 3.
ITT 434 Industrial Production Illustration Principles and techniques employed by contemporary industry to graphically describe industrial products, technical concepts, and service information. The media range will include chalk, ink, pencil, charcoal, water color, tempera, pressure sensitive transfer symbols, and various methods of graphic reproduction. Engineering and architectural problems. Prerequisite: ITT 331 or permission of instructor.

Cr 3.

## ITT 435 Systems Analysis and Design

Research applied to solving basic engineering problems. Contemporary systems of analysis and design. Economic factors, resource utilization, planning, design, model construction, follow-up studies and evaluation techniques applied to specific practical problems. Prerequisite: ITT 331 or permission of instructor.

Cr 3.

## ITT 444 Photographic Reproduction

Photographic concepts, processes, and techniques utilized in graphic reproduction. Experience in contact printing, continuous tone enlarging, duotones, posterization, and color separation. Prerequisite: ITT 241 or permission of instructor.

Cr 3.

ITT 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: ITT 251 or permission of instructor.

Cr 3.
IT T 482 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: ITT 361 or 351 or permission of instructor.

Cr 3.
ITT 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.

Cr 3.
IEA 190 Preprofessional Field Experiences
Provides an exploratory opportunity in public/private school or educative agencies to assist students in becoming acquainted with the teaching profession and to examine various options in the field of industrial arts. Cr 2.
IEA 290 Contemporary Teaching in Industrial Education
This course is designed to develop verbal communication skills in the field of industrial arts. Basic understanding of related terminology in industrial education will be emphazied. Students will become knowledgeable of contemporary industrial arts programs at the elementary, junior high, and senior high school levels. Prerequisites: IEA 190. Cr 2.
IEA 380 Curriculum Materials in Industrial Arts
Development of curriculum materials for contemporary programs in industrial arts. Emphasis on unit preparation, performancebased objectives, and task analysis essential for identifying content and an effective instructional delivery system. Individualized and class instruction. First of a two-course sequence prior to student teaching. Prerequisites: 100/200 level technical core, ITP 300, 2.5 GPA , and recommendation of faculty.

Cr 3.
IEA 381 Methods of Teaching Industrial Arts Utilization of prepared plans for micro- and participation-teaching. Instructional ipedia preparation and utilization. Audio and video tape presentations and critiques. Introduction to criterion-referenced evaluation techniques. Safety principles and classroom control stressed. Basic organization and administration procedures for implementing
a modern program of industrial arts. Orientation to student teaching. Prerequisites: 100/ 200 Level Technical core, ITP 300, 2.5 GPA, and recommendation of faculty.

Cr 3.

## ITP 360 Motion and Time Study

A study of techniques to utilize available resources (men, material, machines and facilities) in the most effective and economical manner giving full recognition to the human factors involved in engineering work methods and time measurements.

Cr 3.

## ITP310 Plant Layout and Material Handling

 A study of materials flow, layout production, assembly and service departments, manufacturing, buildings, service departments, handling equipment, and packaging techniques.Cr 3.

## ITP 320 Occupational Safety

Theory of industrial safety with emphasis on fundamental concepts in the industrial environment. Emphasis will be placed on the psychological, sociological, and physiological aspects of industrial safety. Consideration will be given to OSHA and its impact on the work environment.

Cr 3.

## ITP 330 Production Control

Production control as a system, types of process organization, planning and scheduling, inventory control, forecasting production control and production planning. Some of the techniques developed in Operational Research will be used to solve problems in Production Control.

Cr 3.

## ITP 340 Quality Control Fundamentals

An overview of fundamental concepts and principles of quality control. The course will cover techniques utilized from the simplest products test to process control engineering and will include incoming material control, inspection sampling and quality control management. The course will cover practical application for installing quality control systems using actual case studies developed by participants.

Cr 3.
ITP 370 Occupational and Trade Analysis Identification of occupational or trade fields, units, operations, and items of related information.

Cr 3.

## ITP 380 Computers in Industry and Technology

A study of emerging and current computer applications utilized in industry and technology. Computer operation, programming fundamentals, computer-aided design, graphics, interfacing, and application programs relating to industry. Provides a basic knowledge of computer concepts and general applications and the impact of computers on industrial technology. Lecture and lab.

Cr 3.

IEV 305 Curriculum Development in Vocational Education
This course is concerned with developing specific course content from an occupational analysis. The identification of educational needs and objectives precedes the selection and organization of relevant matter. Prerequisite: ITP 370.

Cr 3.
IEV 310 Methods and Materials of Instruction in Vocational Education
This course treats the general and specific materials and methods of teaching vocational courses. Deals with both the theoretical and practical aspects. Prerequisites: ITP 370 and IEV 305.

Cr 3.
IEV 312 Teaching Students With Special Needs
A course designed for vocational educators who need to learn how to serve handicapped, disadvantaged and gifted youth. It is structured to aid vocational teachers in working with special education personnel and to provide skills needed in planning instruction for students with special needs.

Cr 3.

## IEV 315 Learning and Programmed Instruction

The first application of the laboratory and scientific study of the learning process, including the principles of learning which are derived from experimental study and which have provided a foundation for advances in the techniques of learning.

Cr 3.
IEV 320 Coordination of Cooperative Education
The role of the coordinator in organizing and conducting a program of work-study experience in high school. Introduction to cooperative half-time training, community survey, advisory committees, laws and regulations; and examination of the responsibilities and activities of the coordinator.

Cr 3 .

## ITP 350 Conference Leading

A course in philosophy and techniques of organizing and conducting successful conferences. Each participant will assume the responsibility of planning and leading a simulated conference.

Cr 3.
IEV 330 Principles and Practices of Vocational Guidance
Discussion and study with the intent to develop a better understanding of principles and objectives of vocational guidance. Cr 3.

## IEV 331 Practicum-Vocational Guidance

Field experiences in identification of content and relevant information for vocational counseling. Individual and group activity, visitations, tours, and career counseling techniques.

Cr 3.

IEV 340 Shop Organization and Management
Basic principles of planning, organizing, and managing an industrial or technical shop or laboratory. Selection and arrangement of equipment including specification writing. Control of personnel for efficient shop management. Prerequisite: IEV 310

Cr 3.
IEV 350 Philosophy of Vocational Education A survey of the history and philosophy of vocational education in the United States with emphasis upon recent developments. Cr 3.

## IEV 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 spictorial materials, professional- quality lettering, rudimentary photography and processing (including use of the darkroom), and the production by several techniques of transparent projectuals.

Cr 3.
ITT 400 Trade Experience, Verified (see ITT 440, Option No. 2 below)

Credits will be determined by rating plan.
IEV 411 Measurement and Evaluation in Vocational Education
The construction, selection, and use of achievement and performance tests in indus-trial-technical education. Skill in writing test items is developed. Elementary statistics for the industrial-technical instructor, including grading, are stressed. Prerequisites: ITP 370 and IEV 310 . Cr 3.

## IEV 420 Trends in Vocational Education

Identification, analysis, and discussion of major problems and trends in vocational education.

Cr 3.
ITT 440 Related Occupational Experiences
Two options, total credits to be no more than the difference between those granted for ITT 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 advisor 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 fulltime 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 ITT 440, consult your adviser.

IEV 450 Local Administration and Supervision of Vocational Education
Procedure and practices utilized in establishing, promoting, coordinating, supervising, controlling vocational programs on the local level. Cr 3.
IEV 455 Development of Technical Education Programs
Planning and development of technical education programs including the determination of needs and organization of programs for secondary and post-secondary schools. Cr 3.
IEV 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.

Cr 3.

# Department of Engineering 

Chair of the Department: Brian C. Hodgkin, 260 Science Building, Portland

The Department of Engineering, in association with the other departments of the School of Applied Science, is committed to providing undergraduate and graduate education by a faculty engaged in research and actively involved with business and industry both regionally and nationally. At the undergraduate level, the department offers introductory courses in engineering to students planning to continue study in the field at the University of Maine at Orono or elsewhere. At the graduate level, the department offers, in association with UMO, the M.S. degree in electrical engineering and the master of engineering degree in electrical engineering.

## Programs and Requirements

The department coordinates and offers a first-year basic program that is applicable to continuing studies at the UMO campus leading to degrees in various engineering curricula. All USM engineering students in good standing are eligible to transfer to UMO for their second, third, and fourth years.

Engineering students should plan to take the following courses in the first year: CHY 113, 114, and 115, 116 Principles of Chemistry I and II; MAT 152 and 153 Calculus A and B; PHY 121, 122, and 123, 124 General Physics I and II; COS 140 or 160 Computer Programming in FORTRAN or PASCAL; ENG 100 College Writing or a humanities or social sciences elective; ITT 231 Technical Graphics is strongly recommended.

The following curricula are offered by the College of Engineering and Science at the University of Maine at Orono: agricultural engineering; chemical engineering; chemistry; civil engineering; electrical engineering; engineering physics; forest engineering; mechanical engineering; pulp and paper technology; surveying engineering. Reference to the UMO catalog for details is advised.

## EET 51 Analog Systems

Linear and non-linear operation of solid-state electronic devices with emphasis on the operation and applications of the operational amplifier. Prerequisite: course in basic electronics.

Cr 4.

## EET 61 Digital Systems

An introduction to the design of digital systems including combinatorial logic, sequential machines and the use of MSI and LSI circuits. No prerequisites, however, designed for students with a basic electrical background. Classroom and lab experiences. Cr 4.
EET 71 Microcomputer Architecture and Applications
The microcomputer and its component parts including microprocessors, registers, memory and I/O. Programming and applying the microcomputer in engineering systems. Cr 4.

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. Not offered in 1983-84.

Cr 3.
GEE 102 Introduction to Engineering Design II
A continuation of GEE 101, which is prerequisite. Applications of graphic science with creative problems in descriptive geometry, pictorial drawing, engineering design, and mapping. Not offered in 1983-1984. Cr 3.
MEE 212 Thermal Engineering
Elementary thermodynamics, mechanical apparatus, power plant equipment; ${ }^{\bullet}$ engineering calculations relative to heat, power, work, and mechanical and electrical energy. Prerequisites: physics and chemistry one year each.

Cr 3.

## MEE 221 Materials Science

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

Cr 3.

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

Cr 3.

# University of Southern Maine School of Nursing 

Dean: Nancy P. Greenleaf; Acting Associate Dean for Undergraduate Affairs: Sallie Nealand

Faculty in Nursing<br>Associate Professors: Burson, Cotton, Dorbacker, Drew, Dubowick, Fournier, Jensen, MacPherson, Normandeau, Shoobs, Tryon, Tukey; Assistant Professors: Bailow, Bergstrom, Connors, Czupryna, Greenleaf, Healy, Heidema, Henderson, Peake-Godin, Tiffany, Nealand, Rodgers; Instructors: Booton, Dyer, Elliott, Ellis, Moody, Perry, Roche, Stone, Vezina

Assistant Dean, University of Southern Maine School of Nursing, Orono campus: Marjorie Keller
Program Coordinator, University of Southern Maine School of Nursing, Ft. Kent campus: Marjorie Lawson
Director, University of Southern Maine School of Nursing Learning Resource Laboratory: Sarah Whitney

Faculty in Therapeutic Recreation
Coordinator, Therapeutic Recreation Programs: James V. Sullivan
Professor: Sullivan; Associate Professor: Meyer; Assistant Professors: Martin, McCullough, Willard

The University of Southern Maine School of Nursing offers programs in nursing and therapeutic recreation. The dean of the School of Nursing based at the University of Southern Maine is responsible for coordinating all nursing degree programs offered in the University of Maine system. These include a graduate program which leads to a master of science degree with a major in nursing, an associate program which leads to an associate degree with a major in nursing and a baccalaureate program which leads to a bachelor of science degree with a major in nursing. (Please refer to the Graduate Catalog for further information.) The associate degree program is offered at the Augusta and Presque Isle campuses (please refer to the catalogs of those campuses for further information). The baccalaureate degree nursing program is offered by USM at the following three campuses: USM, UMO, and UMFK. Because the School of Nursing administers the program at all three sites, this catalog is the primary reference for those desiring baccalaureate degrees at any site.

## Programs and Requirements

The School of Nursing has developed a special component of its baccalaureate program for RNs. This challenge program allows the possibility of completing a B.S. in nursing in as little as a year after fulfilling the prerequisites for admission (pleaserefer to challenge section of the catalog for further information). The therapeutic recreation program offers both associate of science and bachelor of science degrees in therapeutic recreation at the USM campus and is described more fully on page 221 of this catalog.

The philosophy of the School of Nursing incorporates the following goals and beliefs: Professional nursing practice focuses upon assisting individuals, families, and communities to achieve a state of optimal health. The roles of the professional nurse are in the areas of health promotion, maintenance, and restoration. The student nurse will develop skill in the nursing process and in leadership, advocacy, research, and collaboration. The graduate of the program will be prepared to practice professional nursing with all age groups in a variety of settings, to collaborate with consumers and health professionals to improve health care delivery, and to contribute to the improvement of the practice of professional nursing.

## Baccalaureate Program in Nursing

The School of Nursing offers a baccalaureate nursing program with an upper-division major for professional study. The aims of the program are to: provide a baccalaureate education in nursing; prepare a beginning professional nurse for practice in a variety of settings; prepare a beginning professional nurse who can respond to the health needs of consumers and the community; and provide a foundation for graduate study in nursing.

Each nursing student must complete a minimum of 121-126 credits which include nursing, core competencies, general education, liberal arts and sciences, and other supporting courses. Upon successful completion of the program the student is awarded a bachelor of science degree with a major in nursing, and is eligible to take the State Board Examination for R.N. licensure. The School of Nursing is approved by the Maine State Board of Nursing and is accredited by the National League for Nursing.

## Undergraduate Admissions

The baccalaureate nursing curriculum offered by the School is an up-per-division major concentrated in the junior and senior years. Candidates apply to the program for admission to the junior year. This usually means that the candidate applies in the fall of the sophomore year, in order to be considered for the next junior class.

Application for admission to the School of Nursing is distinct from applying to the University of Maine for admission to any of its campuses. Students must be accepted by both the University and the School of Nursing, through separate admissions processes, in order to be enrolled in the baccalaureate program. Although the detail is discussed below in the sections on admissions policy and procedure, it is important to stress that those candidates who are not currently matriculated at any of the three baccalureate campuses must apply to the University of Southern Maine as well as applying to the School of Nursing.

## Admission Policy

Admission to the University of Southern Maine School of Nursing at Portland, Orono, and Fort Kent is competitive. The decision to admit to the School is made by the Admission Committee of the School of Nursing. The decision is based on the student's record of accomplishment in the prerequisites to the nursing major, and on measures of student readiness for professional study. RNs wishing to enter the program to earn a baccalaureate degree in nursing should also consult the challenge part of this section.

Most students do not have all prerequisites for the nursing major completed at the time they apply for admission into the School. Admission is conditional for the coming year, based on satisfactory completion of the prerequisite requirements before the beginning of the nursing major.

Those admitted must have completed a minimum of 60 credits of academic work acceptable to the University prior to enrolling in the nursing major.
Enrollments in the School of Nursing are limited. Therefore it is possible that a number of candidates who meet the minimum requirements for admission will not be accepted. They will be placed on a waiting list and awarded admission if accepted candidates decide not to enroll.

Invariably, with a three-campus program, the number of student openings available at each site does not coincide exactly with the first preferences for campus as stated by the accepted applicants. Policy regarding campus selection is as follows:

The decision to admit is based on a review of the candidate's qualifications without regard to the stated campus of preference. Thus, the School of Nursing endeavors to select the best possible candidates, and does not penalize applicants who express a preference for an oversubscribed campus. Once the accepted and waiting list groups have been determined, campus assignments are made. Although most accepted candidates will be assigned to their first choice of campus, some will be offered admission on an alternative campus. If some acceptees to an oversubscribed campus decide not to enroll, thoseplaced at a campus not of their first choice will be given the opportunity to change campus assignment.

## Admission Procedure

If you wish to be accepted for enrollment for the Fall of 1986, you must begin the application process in the Fall of 1985.

A USM School of Nursing application should be requested as soon as possible, as it will contain specific instructions and a timetable for completing all application requirements.

Check that all the prescribed prerequisite courses can be completed prior to the fall semester of admission.

Review the following categories, determine what type of applicant you are, and follow the appropriate procedures:

Applicants who are currently enrolled at the University of Southern Maine, or the University of Maine at Orono, or the University of Maine at Fort Kent:

1. Obtain School of Nursing application by writing to USM School of Nursing, 96 Falmouth St., Portland, Me. 04103 or by calling 207-780-4130.
2. Submit all of the following documents to School of Nursing Admissions Committee, University of Southern Maine, 96 Falmouth Street, Portland, Me. 04103
a. Completed School of Nursing application by $12 / 15 / 85$
b. One official transcript from every college/university attended, including fall semester 1985 grades, if currently enrolled.
c. Three letters of reference from teachers and/or employers.

Applicants who are currently enrolled at any other branch of University of Maine System (Farmington, Augusta, Machias, Presque Isle) or from any other university or college; or applicants not currently enrolled in any college or university:

1. Obtain School of Nursing and University of Southern Maine applications by writing to USM School of Nursing, 96 Falmouth Street, Portland, Me. 04103 or by calling 207-780-4130.
2. Submit the following documents to School of Nursing Admissions Committee, University of Southern Maine, 96 Falmouth Street, Portland, Me. 04103:
a. School of Nursing application by 12/15/85.
b. One official transcript from every college/university attended, including fall semester 1985 grades, if currently enrolled.
c. Three letters of reference from teachers and/or employers.
3. Submit the following documents to: Admissions Office, University of Southern Maine, 103 Corthell Hall, 38 College Avenue, Gorham, Me. 04038
a. University of Southern Maine Application.
b. One official transcript from every college/university attended, including fall 1985 grades if currently enrolled.

## Prerequisites for the Nursing Major

Prerequisite courses to the upper-division nursing major consist of competencies (English Composition, Quantitative Decision Making, Skills of Analysis/Philosophy), physical and behavioral sciences, humanities, and fine arts. Pre-nursing candidates must achieve a minimum of 2.25 grade point average in order to be eligible to apply for admission to the upper-division nursing major. D grades or below are not acceptable in the prerequisite areas except in a general elective course.

| Prerequisite Requirement Areas (62-67 credits) |  |
| :--- | ---: |
| ${ }^{*}$ General Education Requirements |  |
| $\quad$ English Composition | $0-3$ credits |
| Philosophy | 3 credits |
| Humanities | 6 credits |
| Fine Arts | 6 credits |
| General Electives | 9 credits |
| $\quad$ (cannot be nursing. Only 3 credits in Physical Education) |  |

$24-27$ credits
Physical Science Requirements
$\quad$ Each must include a lab component and have been taken within
eight years of enrollment in the School of Nursing.
General Biology
Human Anatomy \& Physiology
Organic or Bio-chemistry
Inorganic Chemistry
Microbiology

| Social Science Requirements |  |
| :--- | ---: |
| Introductory Psychology | 3 credits |
| Introductory Sociology | 3 credits |
| Social Science Elective | 3 credits |
| Human Growth \& Development (life span preferred) | 3 credits |
| Human Nutrition (must include metabolic component) | 3 credits |
| Introduction to Statistics (any department) | 3 credits |
|  | 18 credits |

*Pre-nursing candidates taking prerequisite courses at the University of Southern Maine campus must meet Core curriculum requirements of that campus. Please refer to Core curriculum section of this catalog.

## Upper-Division Nursing Major

The upper-division nursing major (junior and senior years) is offered by the University of Southern Maine School of Nursing and consists of clinical nursing courses, courses supportive of nursing content, and elective courses. Clinical nursing courses are organized in a manner that facilitates the integration of nursing and other disciplines. These courses focus on the use of the nursing process to promote, maintain, and restore the health of clients. Students have experiences which involve assessment, planning, implementation, and evaluation of care for individuals of all ages, families, groups of clients, and communities along the health continuum. Inpatient and outpatient hospital settings, community health agencies, community experiences, nursing homes, schools, and industries are used for clinical experience.

Nursing majors are required to have the Medical History and Physical Examination Form completed and on file at the University of Southern Maine Student Health Services before enrolling in clinical nursing courses.

Nursing majors must purchase uniforms before entry into the junior year. Information regarding uniforms will be forwarded to students after notification of acceptance. In addition, a $\$ 15.00$ fee per semester (junior and senior years) is required as a clinical fee. Cost for books is approximately $\$ 150.00$ per semester. Clinical learning experiences take place in a variety of settings and geographic locations. It is the student's responsibility to provide his/her own transportation for junior and senior clinical experiences. Professional liability insurance and health insurance are strongly recommended for students in the School of Nursing. Cardiopulmonary resuscitation (CPR) is required prior to entry into clinical experiences.

Upper Level Courses
Junior Year
First Semester Credits
$\begin{array}{lll}\text { NUR } & 300 & \text { Nursing Process I }\end{array}$
BIO 345 Pathophysiology 3
NUR 303 Patterns of Emotional Disorders 3
Second Semester Credits
NUR 305 Nursing Process II 8
NUR 302 Pharmacology 3
Senior Year
First Semester Credits
NUR $400 \quad 7$
*NUR 401 Health-Related Research 3
OR
*NUR 406 Community Health 3
Second Semester Credits
NUR 405 Nursing Process IV 6
NUR 406 Community Health 3
OR
NUR 401 Health-Related Research 3
NUR 407 Leadership in Health Care 5
*Offered both fall and spring semesters.
Note: Six credits of general electives and three credits of nursing electives are required during the upper-division for graduation with a major in nursing. No more than three credits of pass/fail in general electives will be accepted. Coursestaken prior to enrollment in the upper-division may be acceptable to fulfill these requirements.

## Challenge Policy for Registered Nurse Students

The University of Southern Maine recognizes the need and desirability for registered nurses to attain a baccalaureate degree within the state. The School of Nursing faculty believes in a flexible approach to attaining this goal. We realize that RNs returning to school face life complexities such as changes in established roles, financial strains, and family and work responsibilities. Every effort is made to aid in the integration of the personal and educational changes that will occur in moving toward the B.S.N. degree. Faculty on the USM School of Nursing Challenge Committee are eager to meet with prospective candidates. Please contact the School to make an appointment.

In response to the need for baccalaureate programs for RNs, the School has developed the challenge process. Inherent within this process is the recognition that RNs may have attained the prior knowledge and skills that are necessary to challenge successfully selected upper-division courses. The process includes taking specific examinations to demonstrate
that knowledge. The first Nursing Process course is offered during May and June and is specifically tailored for RNs.

The following policy applies for each challenge student:

1. The applicant must: a) meet general admission requirements of the University; b) be in the process of completing the prerequisites of the nursing major; have a minimum of 2.25 grade point average; and c) be a registered nurse who has graduated from a National League for Nursing accredited program.
2. A challenge exam may be taken only once for each course.
3. A student must apply and be admitted to the USM School of Nursing prior to enrolling in NUR 300 (please refer to admission policy and procedure in this section of the catalog).
4. Students must successfully complete NUR 300 Nursing Process I prior to challenging NUR 305 Nursing Process II and NUR 400 Nursing Process III.
5. When challenging NUR 305 and NUR 400 (courses which include a clinical component), there will be a written exam which must be passed prior to taking the clinical exam. Each component of the challenge exam must be passed satisfactorily, otherwise no credit will be given.
6. The student who does not successfully complete the challenge exam may take the course in keeping with the University policy on repeating courses. No grade is recorded if an exam is not successfully completed.
For further information regarding the challenge process, credit, times, and fees, contact the University of Southern MaineSchool of Nursing.

| Challenge Sequence |  |
| :--- | ---: |
| Course | Credit Process |
| 1. NFS 252-Human | 3 written |
| Nutrition | examination |

2. Support Courses:
A. BIO 345

Pathophysiology
B. NUR 302

Pharmacology
C. NUR 303

Patterns of Emotional Disorders
3. Clinical Nursing Courses:
A. NUR 300

Nursing Process I
B. NUR 305

Nursing Process II
C. NUR 400

Nursing Process III

3 written examination
3 written examination
3 written examination

Time
Fall semester before admission into University of Southern Maine School of Nursing

Fall or spring semester Fall or spring semester
Fall or spring semester

First Summer
Session
take and successfully complete this course
8 student sequentially challenges
7 these two courses via paper-pencil examinations, clinical performance evaluation \& other required written work

July and/or August

Retention/Progression: It is expected that students remain with their class. To do so, the student must maintain class standing with a grade point average of 2.00 . The clinical courses in the nursing major are sequential and must be passed with a minimum grade of C before progressing to the next level. All support courses (Pathophysiology, Patterns of Emotional Disorders, Pharmacology, Health-Related Research, Community Health), general electives, and nursing electives taken at the upperdivision must be passed with a minimum grade of C or above.

A student who receives a D grade in a clinical nursing course or $\mathrm{D} / \mathrm{F}$ grade in a support course, but is able to maintain a grade point average of 2.00, will be allowed to repeat the course one time when that course is offered again. A student who receives a D grade in a clinical nursing course or a D/F grade in a support course and is unable to maintain a grade point average of 2.00 will be suspended from the School of Nursing and either suspended from the University in accordance with University policies or required to change his/her major to a different program.

A student who receives an F grade in a clinical nursing course or who receives an F grade in more than one support course or whose grade point average falls below 2.00 will be suspended from the School of Nursing and either suspended from the University in accordance with University policies or required to change his/her major to a different program.

Incomplete Grades: A temporary grade may be given by the faculty when a student, because of extraordinary circumstances, has failed to complete course requirements in a nursing course. The clinical courses in the nursing major are sequential; therefore, the incomplete grade in a clinical nursing course must be replaced by a letter grade before progressing to the next level.

Leave of Absence: A leave of absence may be granted to a student who is experiencing a health or other personal problem. The student must request a leave of absence. Such a leave may also be recommended by the faculty. If granted, the leave of absence will be for a period of no longer than one year. To request a leave of absence, the student must submit a letter to the Dean who will decide on the student's request. To return, the student must submit to the Dean a written request for reinstatement within one year. If the student does not request reinstatement within the year, he/she will lose his place in the class and will need to reapply for admission.

Withdrawal: Withdrawal from a clinical nursing course interrupts progression in the nursing program. Reinstatement into the program must be initiated by the student within one academic year and reviewed by the Academic Standing Committee. The Academic Standing Committee determines the reinstatement status within the program. If the student does not initiate a request for reinstatement within one academic year, the student will be automatically suspended from the School of Nursing. If the student withdraws or is suspended from the School of Nursing, the student will either be suspended from the University in accordance with University policies or required to change his or her major to a different program.

Administrative Suspension: A student may be suspended from the School of Nursing for other than academic reasons.

Re-entering School: Any student who is suspended from the School of Nursing due to an F in a clinical course, 2 Fs in support courses or an administrative suspension must receive the Dean's permission to reapply to the School of Nursing.

Graduation Requirements: To be eligible for graduation with a bachelor of science degree with a major in nursing, the student must have successfully completed all requirements, and a minimum of 121-126 credit hours with a grade point average of at least 2.00

Student Appeal Policy: A student who feels there is a just cause for an academic grievance regarding final course grades or discrimination may initiate an academic appeal. A copy of the policy and procedure is available in the Dean's office.

## University of Southern Maine School of Nursing Baccalaureate

 Program at Extended SitesThe University of Southern Maine School of Nursing offers the upperdivision nursing major at the University of Maine at Orono and the University of Maine at Fort Kent. The University of Southern Maine School of Nursing prerequisites, admission policies and procedures, and degree requirements will apply to all nursing majors at University of Maine at Orono and University of Maine at Fort Kent extension sites. For further information, contact the University of Southern Maine School of Nursing Undergraduate Admissions Committee.

## Graduate Program in Nursing

The School of Nursing offers a master of science degree program in nursing. The aims of the School of Nursing's graduate program are to:

1. prepare professional nurses for roles of leadership in nursing practice, education and administration, and
2. provide a foundation for doctoral study in nursing.

For further information, refer to the University of Southern Maine Graduate Catalog.

## NUR 300 Nursing Process I

Introduces the student to basic cognitive, affective, and psychomotor skills fundamental to nursing practice. Utilization of nursing process is emphasized to assist individuals to promote and maintain optimal health. Concepts and selected theories provide a basis for understanding the factors which facilitate and/or inhibit the growth and development of human beings. Didactic classroom and experiential learning in the Learning Resource Lab provides the opportunity to practice and develop basic skills which will be applied in selected clinical settings. Prerequisites: junior level standing in the School of Nursing. Concurrent: BIO 345, NUR $303 . \quad$ Cr 9.

## NUR 302 Pharmacology

Basic concepts in pharmacology including major drug categories, drug interactions, the use of the nursing process in the therapeutic administration of drugs, legal implications, and the physical and psychological effects of drugs on various age groups will be emphasized. Prerequisites: Human Anatomy and Physiology, BIO 345. Concurrent: NUR 305. Open to other than nursing students with permission of faculty. Cr 3.

## NUR 303 Patterns of Emotional Disorders

Emotional disorders are examined in relation to various bio-psycho-social and cultural factors. Traditional and contemporary treatment models will be discussed. Prerequisites: Growth and Development, General Psychology. Concurrent: NUR 300. Open to other than nursing students with permission of faculty.

Cr 3.

## NUR 305 Nursing Process II

Utilizes the nursing process in promoting, maintaining, and restoring the health of individuals and families experiencing short-term
alterations in health which do not significantly disrupt potential but do require nursing and/or other intervention. Prerequisites: NUR 300, BIO 345. Concurrent: NUR 302.

Cr 8.
Nursing Elective
Study of a selected area in nursing. Open to other than nursing students with permission of faculty.

Cr 3.
NUR 395 Nursing Independent Study
Individualized study in an area of nursing with the permission of the instructor. $\mathrm{Cr} 1-3$.

## NUR 400 Nursing Process III

Utilizes the nursing process in the promotion, restoration, and maintenance of health with individuals, families, and groups experiencing long-term alterations in health. Collaborates and consults with health team members in a variety of settings. Prerequisites: NUR 302, 305, 303. Concurrent: NUR 401 or 406.

Cr 7 .

## NUR 401 Health-Related Research

Various types and methods of research, concepts basic to the research process including sampling, validity, reliability, and ethics will be introduced. The student will evaluate and utilize health-related research and consider implications for nursing practice and the nurse as a researcher. Prerequisites: statistics. Open to other than nursing students with permission of faculty. Cr 3.

## NUR 405 Nursing Process IV

Utilize the nursing process in the promotion, restoration, and maintenance of health with individuals, families, and groups experiencing depleted health/health crisis. Collaborates and consults with health team members in any setting. Prerequisite: NUR 400. Concurrent: NUR 406 or $401,407 . \quad$ Cr 6.

## NUR 406 Community Health

Introduces concepts and principles basic to the development and maintenance of community health. Emphasis is on population aggregates in the community as the unit of service. The epidemiological process is stressed in surveying current major health issues. Must be taken during the senior year. Open to other than nursing students with permission of the faculty.

Cr 3
NUR 407 Leadership and Issues in Professional Nursing
Theories of leadership, organizations, and planned change are presented. The student will analyze systems and methods of health care delivery and identify factors and strategies which inhibit or facilitate change. Professional and ethical issues, legislation, and emerging role in nursing will be analyzed. An experiential component is required and varies with the student's learning objectives
and interests. Prerequisites: NUR 400 Concurrent: NUR 405, 401 or $406 . \quad$ Cr 5.
Nursing Elective
Study of a selected area in nursing. Open to other than nursing students with permission of faculty.

Cr 3 .
NUR 495 Nursing Independent Study
Individualized study in an area of nursing with the permission of the instructor. $\mathrm{Cr} 1-3$.

## NFS 252 Human Nutrition

A course designed to show how the given nutrients serve to meet the metabolic processes required for life. A physiologic and biochemical approach is used. Prerequisites: Anatomy and Physiology; General and Organic Chemistry; Biochemistry. For challenge information of NFS 352, contact the School of .US Nursing. Challenge arrangements must be madeby October 1.

Cr 3.

## Therapeutic Recreation Programs

* The School of Nursing offers two degree programs for students interested in pursuing careers in therapeutic recreation. The associate degree program in therapeutic recreation consists of 60 credit hours. Upon completion of the degree requirements, the student riay seek employment as a therapeutic recreation assistant or recreation generalist and is eligible for certification by the National Council for Therapeutic Recreation Certification.

The baccalaureate degree program in therapeutic recreation consists of 122.5 credit hours. Upon completion of the degree requirements, the student may seek employment as activity coordinators, therapeutic recreation specialists, or recreation generalists.

In addition to the two degree programs, a wide selection of professional recreation and leisure courses, as well as activity classes, is available. Students are encouraged to pursue recreation and leisure course offerings as appropriate to their academic program.

## Associate Degree Program in Therapeutic Recreation

The minimum number of credits required for the degree: 60 .
The two-year program in therapeutic recreation consists of the following courses leading to the associate of science degree:
A. General Foundation Courses Credits Required

| ENG | 100 | College Writing | 3 |
| :--- | :--- | :--- | :--- |
| BIO | 019 | Biological Basis for Human Activity | 3 |
| THE | 170 | Public Speaking | 3 |
| COM | 171 | OR |  |
| Interpersonal Communication | 3 |  |  |

Electives (one from each area)
Humanities
3
Social Sciences 3
General Elective 3
B. Major Requirements

REC 110 Introduction to Recreation and Leisure Services 3
REC 113 Preprofessional Field Experiences 2
REC 120 Introduction to Therapeutic Recreation and Disabilities
REC 211 Programming Leadership in Recreation 3
REC 216 Advanced First Aid and Emergency Care 3
REC 230 Methods and Materials in Therapeutic Recreation

| REC | 290 | Organization and Administration of Recreation | 3 |
| :---: | :---: | :--- | :--- |
| REC | 294 | Pre-internship | 1 |
| REC | 295 | Internship | 9 |
| Two courses from the following: |  |  |  |
| REC | 215 | Social Recreation | 3 |
| REC | 222 | Recreation Activities for Special Populations | 3 |
| REC | 231 | Artsand Crafts in Therapeutic Recreation | 3 |
| REC | 233 | Environmental Recreation | 3 |
| Two elective courses in recreation | 6 |  |  |

Transfer into the B.S. Degree Program in Therapeutic Recreation from other USM Academic Programs

Students in the associate degree program in therapeutic recreation who have a 3.5 cumulative average or a 3.0 average in selected courses may transfer to the four-year therapeutic recreation program providing space is available. Students interested in this option should meet with their advisor and then apply in writing to the Baccalaureate Degree Program Coordinator for transfer.

Students enrolled in other programs of study must meet with the appropriate therapeutic recreation coordinator to discuss transfer requirements. Such students will be required to provide a copy of their academic transcripts and a letter which explains their reasons for wanting to transfer. Acceptance into the program is dependent on the student's academic performance, letter of application, and space availability.

## Baccalaureate Degree Program in Therapeutic Recreation

The minimum number of credits required for the degree: 122.5 .
In satisfying Core curriculum requirements, students are urged to take MUS 110 Fundamentals of Music, for the fine arts performance-centered arts section. PSY 101 Introduction to Psychology and SWE 101 Introduction to Human Services are recommended for fulfulling the social requirement. BIO 105 and 106 Biological Principles are recommended for the natural sciences requirement.

The four-year program in therapeutic recreation consists of, in addition to the Core requirements, the following courses leading to the bachelor of science degree.


| Required courses outside of the program |  |  |  |
| :--- | :--- | :--- | :--- |
| THE | 170 | Public Speaking | 3 |

BIO 211 Human Anatomy and Physiology 3
BIO 212 Practical Human Anatomy and Physiology 1.5
SWE 266 Concept of Self and the Handicapped Person 3

| HRD | 331 | Group Dynamics | 3 |
| :--- | :--- | :--- | :--- |
| COM | 290 | OR |  |
| Small Group Communication | 3 |  |  |

Advanced Science—elect one of ANT 302; BIO 200; BIO 201; BIO 331; BIO 345; HRD 333.

Recreation Elective Courses (select 12 credits)
*REC 100 Recreation and Leisure Activities
(l credit per activity)
Cycling, Horsemanship, Karate
*REC 101 Tennis
*REC 102 Volleyball
*REC 103 Wallyball
*REC 105 Racquetball
*REC 106 Lifeline: Walk/Jog
*REC 107 Lifeline: Aerobic Dance
*REC 108 Lifeline: Aquatics
*REC 109 Lifeline: Weight Training
REC 215 Social Recreation 3
REC 217 Small Boat Handling and Seamanship 2
REC 219 Personal Fitness 3
REC 221 Developmental and Utilization of Therapeutic Recreation Resources 3
REC 222 Recreation Activities for Special Populations 3
REC 223 Dance in Recreation/Leisure 3
REC 226 Leadership in Recreation/Leisure Activities 3
REC 231 Arts and Crafts in Therapeutic Recreation 3
REC 233 Environmental Recreation 3
REC 235 Urban Recreation 3
REC 250 Adapted Aquatics
REC 314 Leisure Counseling Methods and Techniques
REC 343 Perceptual-Motor Development and Learning
REC 357 Parks and Recreation Facilities and Design
REC 398 Independent Study in Recreation/Leisure
*A total of 6 credits in the areas of recreation and fitness activities may be used to fulfill graduation requirements. However, the same activity course may not be repeated.

General Elective Courses. The number of general electives will depend upon the number of credits remaining after the student has fulfilled the Core curriculum basic competence requirements.

| COM | 310 | Nonverbal Communication |
| :--- | :--- | :--- |
| SWE | 267 | Relating Professionally to Homosexuality |
| SWE | 274 | Aging and Social Policy: A Cross Cultural View |
| SWE | 275 | Developmental Service to the Aging |
| SWE | 278 | Professional Practice with Older People |
| SWE | 288 | Substance Use and Abuse: Alcohol and Other |
|  |  | Drugs |
| PSY | 220 | Developmental Psychology |
| PSY | 330 | Social Psychology |
| PSY | 333 | Psychopathology |
| PSY | 335 | Deviations of Childhood |
| PSY | 340 | Behavior Modification |
| EAS | 110 | Environmental Science |
| NUR | 402 | Patterns of Emotional Disorders |
| HRD | 333 | Human Growth and Development |
| EDU | 316 | Introduction to Learning Disabilities |
| EDU | 363 | Emotional Problems of Exceptional Children |
| EDU | 368 | Introduction to Communication Disorders |
| SOC | 333 | Sociology of Medicine |
| THE | 122 | Contemporary Dance I |

REC 100 Recreation and Leisure Activities Cycling; Horsemanship; Karate. Two-hour laboratory. 1 credit per activity.

101 Tennis; 102 Volleyball; 103 Wallyball; 105 Racquetball; 106 Lifeline-Walk/Jog; 107 Lifeline-Aerobic Dance; 108 LifelineAquatics; 109 Lifeline-Weight Training. 1 credit per activity. These courses provide the student with the opportunity to learn and participate in one of the above activities. With reference to the Lifeline fitness activity courses, a student must attend a minimum of 25 class sessions out of a ten-week session.

REC 110 Introduction to Recreation and Leisure Services
Concepts of leisure and recreation and play are covered from historical to contemporary societies. Leisure awareness and all the intricacies of the leisure/recreation experience and how these experiences relate to concepts of time and work are included. Cr 3.

REC 113 Pre-Professional Field Experience
This course will provide students with the opportunity to observe, analyze, and evaluate therapeutic recreation programs in various settings. Students will visit the Center for the Blind, the Baxter School for the Deaf, the Cerebral Palsy Center, two nursing homes, Maine Medical Center's Department of Rehabilitation, and the Woodford's West Educational Center. Written reports on each one of these visitations will be required. In addition, students will be expected to read four articles relating to therapeutic recreation and write summary reports on each of the articles read. Prerequisite: REC $110 . \quad \mathrm{Cr} 2$.
REC 120 Introduction to Therapeutic Recreation and Disabilities
Concentrated study of recreation service to the disabled. Inquiry into the elements of therapeutic recreation and a clinical study of selected disabilties is included.

Cr 3.
REC 130 Introduction to Therapeutic Recreation Services
Examination of the development of therapeutic recreation in treatment and community settings. Concentrated study of the elements of therapeutic recreation service stressing rehabilitation, leisure education, and diversional recreation. Examination of interaction problems between special population members and members of the nondisabled public. A holistic health approach is emphasized throughout the course. (Four-year majors only).

Cr 3.
REC 211 Programming Leadership in Recreation
This course provides the student with the principles of program planning. In particu-
lar, the course addresses the process of identifying the problems that exist in recreation, setting goals and objectives, selecting and implementing the program design, and developing an evaluation procedure. In addition, the student learns many of the detailed technical skills that are essential to achieve positive results in programming. Prerequisite: REC 110.

Cr 3.

## REC 215 Social Recreation

Practice in leadership and participation in New Games, mixers and ice breakers; board or card games; musical activities, square and folk dance, dramatic activities; tag games and games with balls, special events. Cr 3.

REC 216 Advanced First Aid and Emergency Care
This course will cover the topics prescribed by the American Red Cross in their advanced first aid course, including respiratory emergencies, artificial respiration, wounds, poisoning, water accidents, drugs, burns, emergency childbirth, emergency rescue and transfer, and other topics. Successful completion of the course requirements will lead to advanced Red Cross first aid certification.

Cr 3.
REC 217 Small Boat Handling and Seamanship
The objective of this course is to inform the student on all phases of boating. Information of purchasing, annual and continual maintenance, equipment, safety, rules, piloting, and navigation. All of this should insure the student's full enjoyment of this popular recreational pursuit. Two hours lecture. Cr 2.
REC 219 Personal Fitness
This course is intended to help the student understand the basics of health/physical fitness and the importance of it in relation to total lifestyle. In addition to lecture/discussion, all students will go through a fitness evaluation and be expected to attend exercise lab three times per week. Offered both semesters, 90-minute lecture, three hours lab. Cr 3.
REC 221 Development and Utilization of Therapeutic Resources
This course is designed to provide basic instruction in audiovisual and media production techniques for people working with the handicapped and in homes for the elderly. It will include the basic operation of audiovisual equipment such as 16 mm projectors, slide projectors, and tape recorders. Handson preparation of visual displays, bulletin boards, schedule boards, lettering techniques, duplication and mimeo techniques. The course will focus on locally available resources for program planning for the handicapped. Prerequisite for associate degree candidates: REC 120.

Cr 3.

REC 222 Recreation for Special Populations An overview of recreation activity classifications and curricula. Examination of activities for special populations including movement and dance, music, drama, arts and crafts, and adapted sports and games. Cr 3.

REC 223 Dance in Recreation/Leisure
Students will be given an opportunity to learn how to plan, organize, and administer various types of dance and movement programs as they pertain to both regular and special populations.

Cr 3.
REC 226 Leadership in Recreation/Leisure Activities
Students will learn a variety of recreation activities through participation. Classroom sessions cover the rules and techniques of the sports as well as efficiency of movement.

Cr 3.
REC 230 Methods and Materials in Therapeutic Recreation
Philosophy, motivational techniques, utilization of equipment, methods of instruction, and organizing materials and groups relating to special populations. Prerequisite for associate degreecandidates: REC 120 . Cr 3.
REC 231 Arts and Crafts for Special Populations
This course will explore and assist students in learning how to make various crafts in a laboratory setting. Examples of crafts that students will be taught to make are hooked rugs, macrame, and other appropriate projects. Prerequisite for associate degree candidates: REC 120.

Cr 3.
REC 232 Methods in Therapeutic Recreation Program Design
Emphasis on therapetuic processes and the development of individualized rehabilitation programs utilizing recreational activities. Assessment and evaluation methods, goal-setting strategies, activity analysis, and task analysis are examined as well as the contents of selected activity programs. (Four-year majors only). Prerequisite: REC $130 . \quad$ Cr 3.

## REC 233 Environmental Recreation

Overview of basic environmental and outdoor education concepts and teaching strategies as they apply to resource-based recreation. Examination of selected resource-based recreation activities for general and special population members. Participation in outdoor learning experiences are required. Prerequisite for associate degree candidates: REC 120.

Cr 3.
REC 235 Urban Recreation
A course designed for those interested in exploring contemporary urban life in an experi-
mental manner. Students will participate in a variety of field investigations, lectures, and discussions which address the problem of orienting oneself to new urban environments, and will explore the values held by each student that might affect their ability to meet the leisure-time needs of urban residents.

Cr 3.
REC 241 Leadership and Supervision in Recreation
This course provides students with a basic knowledge of the theories, supervisory skills, techniques, and specific communication skills for effective leadership and supervision in recreation. Prerequisite: REC 110. Cr 3.
REC 250 Adapted Aquatics
This course is designed for therapeutic recreation majors who are interested in organizing swimming programs for the handicapped and for experienced swimming instructors desiring to update their background in this field. It will offer all the necessary skills and techniques for teaching handicapped people how to swim and to discover the joys of participating in water activities.

Cr 3 .
REC 277 Weight Training: An Approach to Strength, Health, and Fitness
Designed for both men and women, this course will examine various methods and routines of weight training for the development of muscular strength, endurance, cardiovascular benefits, and weight control. The course will consist of both theory and practical application.

Cr 3.
REC 278 Leisure Programming for Older Americans
Identification, exploration, and study of leisure program content and methodological strategies for older Americans in a variety of settings including multipurpose senior centers, community programs and nursing homes. Programming concerns will be based on and related to an understanding of the biological and psychosocial aspects of the aging process.

Cr 3.
REC279 Health and Fitness for Older Americans
Emphasis throughout this course is on the positive values and benefits of better health and fitness in the development of a high quality lifestyle for older persons. The "cutting edge" of the course is to identify and study all aspects of positive health and fitness as they relate to the aged. Class sessions are organized so that students not only gain theoretical knowledge but also valuable laboratory experiences by working directly with older persons.

Cr 3 .

REC 290 Organization and Administration of Recreation
This course acquaints students with the need for, and nature of, recreational programs, with special consideration given to skills and techniques necessary to organize and administer recreation programs. Prerequisite: REC 110.

Cr 3 .
REC 294 Pre-internship
In this course students will develop objectives for Internship (REC 295) and complete all business necessary to secure an Internship placement. This must be taken immediately prior to Internship.

Cr 1.

## REC 295 Internship

Preprofessional assignment in appropriate recreation settings (e.g., nursing homes for the aged, institutions, agencies, halfway houses, hospitals, parks, camps, playgrounds, schools for the handicapped, penal institutions, and rehabilitation centers). Faculty supervision and guidelines provided. Prerequisite: REC 113, 294, and 30 credit hours.

Cr 9.
REC 314 Leisure Counseling Methods and Techniques
The intent of this course is for students to study and learn how to help people plan for and find enjoyment in leisure. Theories and techniques of counseling will be included. Students will also study problems which individuals and groups encounter in their search for recreation and leisure experiences which have intrinsic value and give meaning to their lives. Prerequisite: REC 110 or permission of the instructor.

Cr 3.

## REC 343 Perceptual-Motor Learning

An introduction to motor development and motor learning including psychological theories and implications for skill instruction and research.

Cr 3.
REC 357 Parks and Recreation Facilities and

## Design

An introduction to the general principles of modern design and maintenance of recreation and park facilities at the federal, state, municipal, and commercial levels. Resource people, field trips, and films are an integral part of this course as well as a written project.

Cr 3.

## REC 370 Therapeutic Recreation and Mental

 HealthAn overview of the concept of mental health and mental health rehabilitation as related to leisure and activities therapy. This course introduces the student to the broad perspectives of leisure in relation to mental health, then focuses upon specific uses of recreation as a behavioral change agent for people with
mental health problems. Prerequisites: REC 130, REC 232.

Cr 3.
REC 380 Therapeutic Recreation and Physical Disabilities
The psycho-social aspects of physical disabilities with specific reference to planning, implementing, and evaluating leisure activities. Various approaches to human growth and development, and to ways in which experiential exercises will facilitate the learning process. Prerequisites: REC 130, REC 232. Cr 3.
REC 390 Therapeutic Recreation and Developmental Disabilities
An analysis of the motor and psycho-social behavioral dimensions related to developmental disabilities. The specific and direct uses of recreation as a rehabilitation agent will be examined. Classroom and practical exercises will provide experience in supervision and programming techniques. Prerequisites: REC 130, REC $232 . \quad$ Cr 3.
REC 398 Independent Study in Recreation Leisure
This course is intended to provide students with an opportunity to pursue a project independently, to chart a course and explore an area of interest bearing upon it based on previous course experiences. A course outline must be prepared by the student and a final written paper is required. Prerequisite: permission of the instructor.

Cr 3.
REC 480 Management and Supervision in Therapeutic Recreation
Examination of management roles in therapeutic recreation settings stressing supervisory functions with an emphasis on the leadership and training of professional and non-professional personnel. Class discussions and projects will relate directly to the students' internship experiences. Prerequisites: REC 290, REC 494, REC 495.

Cr 3.
REC 490 Senior Seminar in Therapeutic Recreation
Small-group research and discussion of selected health and rehabilitation related issues which can affect the delivery of therapeutic recreation services in community and treatment settings. Students will be required to view their discipline of study through the examination of the research and literature of other disciplines. Prerequisites: REC 494, REC 495.

Cr 3.

## REC 494 Pre-internship

In this course students will develop object ives for Internship (REC 495) and complete all business necessary to secure an Internship placement. This must be taken immediately prior to Internship.

Cr 1 .

## REC 495 Internship

This course is to be taken in the senior year. Students are required to work a minimum of 32 to 40 hours a week at a camp, recreation department, school, agency, hospital, institution, or nursing home. Students are expected to select three different experiences,
approximately five weeks at each, when possible, and must keep a daily log of their experiences to be passed in to the instructor at the end of the semester. A University supervisor will visit and evaluate each student at least three times during the internship. Prerequisite: REC 494.

Cr 9.

# Division of Basic Studies 

Acting Director: John W. Bay<br>Director, Off-Campus Centers and Instructional Delivery: Kathleen H. Bouchard; Television Technical Operations Specialist: Forest N. Spaulding; Program Developer, Instructional Television: Caroline Hendry

The Division of Basic Studies, an academic unit of the University established in 1973, has responsibility for offering courses and administering associate degree programs at a number of off-campus locations in Maine as well as delivering courses via television and newspaper. The Division sponsors or co-sponsors off-campus centers in Bath, Saco, Sanford, and downtown Portland (Intown Center). Each of these centers offers comprehensive academic counseling and other student services to assist students who wish to take courses or to pursue associate degree programs. Also available are selected courses that meet the needs of baccalaureate students.

## Instructional Television (ITV)

Programs of Study

Beginning in September 1984, credit courses were offered for the first time on the University of Southern Maine's new Instructional Television (ITV) system. Courses are offered "live" on color television through a system which simultaneously connects classrooms at the Gorham and Portland campuses, off-campus centers in Sanford, Saco, and Intown Portland, and interconnects local cable television systems in Greater Portland, Sanford/Springvale, and Biddeford/Saco. Students at each location are able to hear and see the class in session and, at most locations, using a specially developed microphone system, they are able to talk to the instructor during class.

By 1986, plans call for the ITV system to be expanded to the town of Bath and to be connected to additional cable systems and selected businesses and government agencies.

Information about the ITV system may be obtained. by contacting the Division of Basic Studies.

## Associate Degree Offerings

Through the Division of Basic Studies, students may pursue a variety of associate degree programs at locations that are geographically convenient. Specific degree offerings include:

Selected Studies (A.S.)
Liberal Arts (A.A.)
Business Administration (A.S.)
(with options in accounting,
business, computer
programming, management, marketing, and real estate)

General Admission Requirements Students desiring to pursue any associate degree program through the Division of Basic Studies are required to meet the admissions requirements as outlined under the specific
degree program. Students questioning their qualifications should contact an academic counselor at the off-campus center of their choice to discuss possible alternatives.

Changing to a Baccalaureate Degree Program Students desiring to change to one of the University's baccalaureate degree programs are advised to consult with an academic counselor regarding the process and the applicability of coursework toward their intended program.

* The Human Services program will be discontinued at the end of the 1985-86 academic year.


## Developmental Studies

The Developmental Studies Program provides students with courses designed to help them achieve proficiency in writing (ENG 009) and in mathematics (MAT 009, MAT 010, MAT 011). Prior to enrollment in any of these courses, students will be administered the Writing Placement Examination and the Mathematics Placement Examination.

The Division of Basic Studies administers University courses and programs at four off-campus center locations. These are in the towns of Bath (a cooperative program with the University of Maine at Augusta), Saco, Sanford, and downtown Portland (Intown Center). Each center offers geographical convenience and personal attention. A comprehensive array of services, which include registration for and information about all campus programs, as well as admissions, financial, and career and academic counseling, are offered. A variety of courses such as computer science, chemistry, biology, and many others are offered which meet the requirements for associate and baccalaureate degree programs. Also available is a program in writing and mathematics designed to meet the needs of those students who wish to strengthen their skills in these areas. Courses are offered both in the day and evening to accommodate the various schedules of students.

## Off-Campus Centers

## Bath Center

The University of Maine at Augusta and the University of Southern Maine (through the Division of Basic Studies) coordinate course offerings at the Bath Center. Classes are held in local facilities in the towns of Bath, Wiscasset, and Topsham both during the day and evening. USM degree program offerings include associate degree programs in selected studies and business (with options in accounting, management, marketing, business computer programming and real estate). Those desiring information about counseling services, financial aid, courses, and degree programs should contact: Bath Center; Rt. 1, Woolwich Commons; Woolwich, Maine 04530; (207) 442-7070.

## Intown Center

The Intown Center offers a Selected Studies degree program in a supportive, small school environment. Tutoring in basic English and math as well as the computer assisted instruction lab are available to students. Also available is a University Child Care Services infant and day care center. The center provides creative and supportive child care for infants through early teens with professionally trained teachers and aides. Geographically convenient in downtown Portland, the Intown Center is located at 68 High Street, Portland, Maine 04101. For more information on programs and services, please call (207) 780-4115 or 7804124.

## Saco Center

Located at Thornton Academy (Fairfield Street), the Saco Center offers courses carefully selected to fit program requirements for the Core and for completion of associate degrees, as well as some selections from a variety of baccalaureate programs. All courses are held on site at Thornton Academy with library resources available at nearby Dyer Library. In
addition, a full range of student services is provided. For more information about programs, financial aid, or other academic counseling services contact: Saco Center; Fairfield Street; Saco, Maine 04072; (207) 2824111.

## Sanford Center

The University, through the Sanford Center, offers degree program opportunities in liberal arts, selected studies, and business (with options in accounting, business computer programming, marketing, management, and real estate). Persons interested in more information (academic, admissions, financial aid, registration, career counseling, veterans advising, etc.) should contact: Sanford Center; 72 Pleasant Street, Springvale, Maine 04083; (207) 324-6012.

## Other Locations

The Division of Basic Studies also offers courses at a variety of other locations. For information, contact the Division office at 780-4470.

## Programs and Requirements

## Selected Studies

Selected Studies is a program which leads to an associate degree. Students may design their own programs, thereby ensuring maximum flexibility in course scheduling. This program is often used by students who desire other associate or baccalaureate degree programs but who do not meet the requirements for admission to that program. In addition, to assist students who may later wish to transfer to a baccalaureate program, the selected studies program requirements are closely akin to the University Core curriculum requirements. As a part of the selected studies curriculum, students enroll in courses designed to develop basic educational competence in writing and mathematics and acquire academic skills to help ensure their future success in college.

Admission Requirements

1. New Students: open to persons holding a high school diploma or equivalent. Entering students are required to take the University Placement Examinations prior to initial registration.
2. Transfer Candidates: Transfer candidates are eligible to apply for admission. Upon admission, students are required to take the University Placement Examinations prior to initial registration.
The minimum number of credits required for the degree: 60 .
Required Courses

| ${ }^{\text {*ENG }}$ | 100 | College Writing <br> "MAT |
| :--- | :---: | :--- |
| 010 | Beginning Algebra <br> or above |  |
| FRS | 100 | Freshman Seminar |

Humanities Elective
Fine Arts Elective
Social Science Elective
Natural Science Elective
Electives
*Prior to enrollment in Writing and Mathematics, students are administered the Writing Placement Examination and the Mathematics Placement Examination. Students are placed in the course that most closely coincides with their skill level.

## Academic Progress

In addition to the policies outlined in the USM catalog regarding minimum grade and academic suspension, by the end of the second semester of enrollment after matriculation, to continue in the Selected Studies Program, students must have successfully completed or otherwise satisfied all of the following: ENG 009, MAT 009, and FRS 100.

## Change from Selected Studies to Another Major/School/College

To be eligible to change from the Selected Studies Program to another associate degree program of the University, a student must meet the following requirements:

1. A grade point average of at least 2.00
2. Completion of the English Composition requirement of the Core Curriculum (see page 38 for ways of meeting this requirement).
3. Completion of at least nine semester hours of graded coursework, not including courses taken on a pass/fail basis.
4. Completion of any other requirements called for by the program to which the student wishes to change.
To be eligible to change from the Selected Studies Program to a baccalaureate degree program in the College of Arts and Sciences, College of Education, to the pre-nursing program in the School of Nursing, or to the associate degree program in the School of Business, Economics and Management, a student must meet the following requirements:
5. A grade point average of at least 2.00
6. Completion of the English Composition requirement of the Core Curriculum (see page 38 for ways of meeting this requirement).
7. Completion of at least 15 semester hours of graded coursework, not including courses taken on a pass/fail basis.
8. Completion of at least three courses in different areas of the Methods of Inquiry/Ways of Knowing section of the Core curriculum or courses required by the program to which the student wishes to change.
9. Completion of any other requirements called for by the program to which the student wishes to change.
Students wishing to change to associate or baccalaureate level programs in other schools or colleges of the University are urged to see the dean of that school or college to discuss the intended transfer.

## Liberal Arts

This two-year program is offered in conjunction with the College of Arts and Sciences. Graduates may change to a baccalaureate degree program with a maximum transferability of credits.

Admission Requirements: Admission is based upon the candidate's academic background and is consistent with admission requirements for the University's baccalaureate programs in the College of Arts and Sciences. Details of this program may be found on p. 53 of this catalog.

## Business Administration

The associate program in business administration is offered off-campus in conjunction with the School of Business, Economics and Management and is designed to serve two purposes: to preparestudents 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 a baccalaureate program in business administration at this University or another institution.

While the program emphasizes business, it contains liberal arts courses including composition, fine arts, social sciences, humanities, and mathematics. Options within the associate program offered off-campus include accounting, business computer programming, management, marketing, and real estate.

Admission Requirements: Any high school graduate may apply for admission to the two-year associate degree program. A college preparatory background is not necessary. On their application, students should specify the associate in business administration program. Candidates must also take the Scholastic Aptitude Test. Details of this program may be found on p. 178.

## Human Services (with options in Developmental Disabilities, Mental

 Health, and Gerontology)The human services program (offered through the University and extended from the University of Maine at Orono) is designed to provide liberal arts education and professional courses, including supervised practica in the area of the student's program option. Graduates will be prepared for entry and middle-level positions within the human service delivery system. The human services programs are approved by the National Council for Standards in Human Service Education.

The Human Services program will be discontinued at the end of the 1985-86 academic year.

## Developmental Disabilities Curriculum

The developmental disabilities option is designed to prepare individuals to work primarily in direct service under professional supervision within an area of specialization, such as: mental retardation, cerebral palsy, epilepsy, autism, or other handicapping conditions.

The minimum number of credits required for the degree: 62

## Mental Health Curriculum

The mental health program is designed to meet the needs of the mid-dle-level workers in the field. It provides the graduate with skills to work, under professional supervision, in a variety of mental health settingsmental health institutes, comprehensive mental health centers, and public and private human service community agencies.

The minimum number of credits required for the degree: 62 .

## Gerontology Curriculum

This program is designed to prepare the graduate for a number of existing and new entry-level jobs in community-based and institutional programs for the elderly.

The minimum number of credits required for the degree: 63 .

## DBS 016 Biosurvival

This course presents material to help the individual develop basic skills and knowledge for a greater enjoyment of the out-of-doors and, if necessary, a better chance of survival. The course consists of lectures, demonstrations, student participation and individual projects. Besides written exams, students will be expected to participate in a cooking demonstration involving common wild edibles. A 48 -hour survival experience will be offered as an optional part of the work. Examples of topics covered are: alternatives in firemaking, shelter and clothing, traps and tracks, survival tools and first aid. There is a strong emphasis on the proper identification and use of wild plants for food. $\operatorname{Cr} 3$.

## DBS 017 Marine Biology of the Southern Coast of Maine

This course, a basic though intensive introduction to the animals and plants commonly found along the Maine coast, will emphasize field collections and laboratory identification. Trips to rocky coast, mud flat, sand beach and tidal marsh habitats are planned. This will permit students to collect, describe, identify and compare the organisms found in
several distinct marine habitats. In this way, students will develop an understanding of how different environmental characteristics select the different animal and plant communities found. Classroom discussions, audio-visual presentations and lab exercises will supplement the field work where appropriate. Car-pooling for field trips will be arranged in class.

Cr 3.

## ENG 009 Developmental English

This course is designed to help students who need to develop writing proficiency to enter ENG 100, College Writing. This course is taken on a pass/fail basis. All students are given a diagnostic test prior to enrollment to determine their basic skills. Credit earned in ENG 009 does not apply or accumulate for any degree program at the University of Southern Maine. Students may register for this course more than once. $\quad \mathrm{Cr} 3$.

## ENG 019 Written Business Communication

Training in the writing of effective business reports, letters, and related material. All students are given a diagnostic test at the initial class session to determine their basic skills.

Cr 3.

FRS 100 Freshman Seminar
An orientation to the University emphasizing its purpose, programs, and services. Basic academic skills, expectations, career planning and other topics will be covered. Pass/ fail; this course may be counted for elective credit only. Enrollment open only to freshmen with less than 25 credits. Cr 3.
HUS 100 Introduction to Human Services
A non-theoretical course designed as an orientation to the national, state, and local human service delivery system. The human service specialty areas, the service models, and the human service profession will be presented. Interrelationships within all human service and health professions will be discussed in addition to professional ethics, confidentiality, and relevant professional terminology. Basic helping skills will be presented and practiced. This course is designed to afford the student more confidence entering the practicum situation and is a prerequisite to all practicum placements.

Cr 3.

## HUS 101 Group Processes

Directed to an understanding of group functioning and leadership, this course considers factors involved in group cohesions and group conflict. Attention is given to communication systems, emotional styles, and role functions in groups. Techniques of role playing, psychodrama, and socio-drama are considered. During the laboratory experience, the small group studies itself and puts communication and sensitivity skills into practice. Prerequisite: PSY $101 . \quad$ Cr 3.

## HUS 102 Practicum in Human Service

This course offers experiential learning in three of the functional human service areas (e.g. mental health, mental retardation, gerontology, chemical addiction, child development, etc.). The student begins to practice skills of objective observing, reporting and recording, interpersonal relationships, interviewing, and other helping relationship skills under professional supervision. In a small weekly group seminar with the course instructor, each student should acquire an indepth understanding of the human service delivery system, and explore topics such as confidentiality, ethics, professionalism, values, and human rights and dignity. Each student will spend five weeks within three different agencies. Prerequisites: open only to students who are HUS degree candidates; HUS 011 and permission of the instructor. Lec. 2, 8 hours field experience per week.

Cr 4.
HUS 130 Nature and Needs of the Developmentally Disabled
An overview of developmental disabilities. The physiological, psychological, educa-
tional, and familiar characteristics of developmental disabilities. Mental retardation, cerebral palsy, epilepsy, autism, and other handicapping conditions closely related to mental retardation. The historical development of treatment for the developmentally disabled. Current definitions and concepts. The practicum site will be used to assist in the identification and knowledge of the developmentally disabled. Prerequisite: HUS 050 and/or permission of instructor. Cr 3.
HUS 140 Introduction to Gerontology
An introduction to the theory and practice of gerontology. This course will (1) trace the historical, legal, and political aspects of services to the elderly; (2) consider the economic, physiological, psychological adjustments of older persons, as well as the transportation, communication, learning, and social aspects; (3) give consideration to the unique cultural, social, and communication needs of ethnic minorities, and (4) provide understanding of the role and function of a gerontology specialist.

Cr 3.

## HUS 203 Practicum in Human Service

This second practicum course is designed to offer students experiential learning within the human service options of their choice. This course begins a specialization within a functional area (e.g., gerontology, chemical addiction counseling, mental health). Students are exposed to the delivery system of their human service options with consideration to four elements of the system: prevention, non-residential care, residential care, and after care services. Within this context students continue to refine helping relationship skills and acquire functional specialization. A weekly conference will provide interaction sessions in which students will share experiences, and demonstrate acquisition of helping skills. Students will be assigned to two human service agencies within their service option. Prerequisites: open only to students who are HUS degree candidates, HUS 102 and permission of the instructor. Lec. 2, 8 hours field experience per week. Cr 4.
HUS 204 Practicum in Human Service
This is the third sequential experiential learning practicum course. Students spend the entire semester in a human service agency related to their chosen functional area. Students gain a deeper understanding of the delivery system within their specialty area and an increased sophistication in helping relationship skills. A weekly seminar provides interaction sessions in which the student will share experiences and demonstrate the acquisition of the helping and changeagent skills. Prerequisites: open only to students who are HUS degree candidates; HUS

203 and permission of the instructor. Lec. 2, 16 hours field experience.

HUS 205 Interviewing-Counseling
An examination of and practice with the techniques of psychological interviewing for the purposes of gathering data and/or modifying human behavior. Current theories and techniques of counseling and psychotherapy will be studied and experience with interviewing and counseling techniques will be gained under professional supervision. Cr 3.

HUS 207 Behavioral Research Methodology
An introduction to the nature, methods, principles, and techniques of behavioral research. Emphasis is placed upon understanding the journal reports of research and the potential application of research to human services.

Cr 3.
HUS 209 Behavior Modification Techniques Concepts and techniques of behavior modification as it applies to the developmentally disabled. The practicum site supplements classroom experience. Identifying and recording behavior, outlining consequences, and identifying and implementing procedures to modify behavior. Students expected to develop modification program which could effectively be used at their practicum site. Cr 3.
HUS 231 Methods of Working with the Developmentally Disabled
Methods to improve physical, social, educational, and perceptual-motor skills of the developmentally disabled. Recreational and leisure time resources within the community. Social adjustment of the developmentally disabled. Basic tenets of personal and social guidance. Students expected to directly apply course content to their practicum setting. Prerequisite: HUS 130 and/or permission of instructor.

Cr 3.
HUS 232 Resource Awareness and Utilization Community, regional, state, and federal resources discussed with the goal of establishing a better awareness of resource utilization. Interrelationships between public and private programs, development of program financing, and discussion of program models. Current provisions and programs relative to educational planning. Development of an in-depth awareness of sheltered workshop and boarding home programs. Guest lecturers from local and state agencies. Open discussion.

Cr 3.
HUS 241 Activity/Recreational Leadership This course introduces the student to the procedures, practices, and aids for organizing
and conducting programs to maintain the physical, social, and emotional functioning of the elderly. A variety of existing programs sponsored by a range of public and private agencies, organizations, and community groups will be examined in order to understand the underlying goals that guide those in position to direct and influence services provided for the elderly. Prerequisite: HUS 140 or permission of the instructor. Cr 3.
HUS 242 Physiology and Pathology of Elderly This course is designed to familiarize the student with the developmental, physiological process of aging and commonly occurring pathophysiology of the elderly. The signs and symptoms, diagnosis, treatment, and prognosis of geriatric illnesses are presented. Emergency treatment procedures and referral mechanisms are discussed.

Cr 3.

## HUS 260 Senior Seminar

Students select from a series to be arranged by the coordinator each spring semester. Topics may include such specialties as behavioral engineering, community service methods, mental health methods, activity therapies, corrections. Professionals with specialties in topic area will teach the seminars. Reading, discussions, and practical experience integrated in the seminar. Prerequisite: open to program majors, or with permission.

Cr 3.

## MAT 009 Developmental Mathematics

The Math Lab is a course designed for students who need to review math fundamentals. Instruction takes into consideration the individual differences people have in learning. This course is offered in a self-pacing format with a great deal of individual assistance. All students are given a diagnostic test prior to enrollment to determine their basic skills. Credit earned in MAT 009 does not apply or accumulate for any degree program at the University of Southern Maine. Students may register for this course more than once.

Cr3.

## MAT 010 Elementary Algebra

The first course of a two-course sequence designed for students who are deficient in high school algebra. Topics covered include number systems, functions, graphs, the solution of equations, and the solution of problems with a business orientation. No prerequisites.

Cr 3.
MAT 011 Intermediate Algebra
A continuation of MAT 010. Prerequisite: MAT 010 or one year of high school algebra.

Cr 3 .

# Reserve Officers Training Corps 

Professor: Lieutenant Colonel Gary S. Willison (U.S. Army)


#### Abstract

Army ROTC Army ROTC offers male and female students of the University an opportunity to earn a commission in the United States Army while pursuing a bachelor's degree. Students register for military science courses as part of their regular undergraduate curriculum. For information, contact the ROTC office at 780-5255 or visit the office at 51 College Avenue, Gorham campus.


Air Force ROTC USM offers Air Force ROTC through a contact with the Air Force ROTC unit at the University of New Hampshire. For more information contact the Army ROTC office at 780-5255.

The Army ROTC program consists of a basic course and an advanced course. Normally, the basic course is taken during the student's freshman and sophomore years. However, other students may enroll in the basic course by receiving permission from the professor of military science. Students who have received previous military training (veterans, military academies, Junior ROTC, etc.) may be granted credit for the Basic Course or portions thereof as determined by the professor of military science. ROTC Basic Camp may be taken in lieu of the Basic Course as outlined in the course descriptions.

Students who complete or receive credit for the basic course may apply to the professor of military science for admission to the advanced course. If admitted the student receives $\$ 100$ per month during his/her junior and senior years. Students who complete the advanced course are appointed second lieutenants in the United States Army, and can be commissioned in the National Guard, the Army reserve, or the active Army.

Scholarships Army ROTC scholarships for 2 and 3 years are available on a competitive basis. The scholarships are awarded annually. They defray the cost of tuition, books, lab fees, and school supplies. You can receive more information on these scholarships by calling 780-5255 or by visiting the ROTC office at 51 College Avenue, Gorham campus.

## The Basic Course - Army ROTC

To complete the basic course, the student must complete the core curriculum or the student must complete ROTC Basic Camp (MIS 29). The core curriculum consists of MIS 111, 112, 221, and 222. The student may enter the basic course by taking any of the courses listed below, provided the course is listed in the schedule of classes for the semester concerned.

## MTL 000 Leadership Laboratory

Leadership Lab is a requirement for all ROTC cadets. The purpose of Leadership Lab is to provide an environment wherein cadets can develop and improve their military leadership skills. Counseling and periodic evaluation of cadet performance are the primary methods used. (In case of class conflicts, an alternate Leadership Lab will be arranged to meet student requirements.) Cr 0 .

MIS 111 Introduction to ROTC and the U.S. Army
The purpose and organization of the ROTC Program. The role of officers. The development of military customs, courtesies and traditions. An overview of the defense establishment is presented. The importance of the Reserve Components (U.S. Army Reserve and Army National Guard) is outlined; the future direction of the U.S. Army is discussed. Student participation in Leadership Laboratory is required.

Cr 1 .
MIS 112 National Security
Soviet and United States principles of war are presented. Technological advances are highlighted and their influence on warfare. The organization of the U.S. Army and the national defense structure are discussed. Factors and instruments of national power and the attainment of national objectives. Partic-
ipation in Leadership Laboratory is required.

Crl.
MIS 221 Map Reading and Squad Tactics
Reading and interpreting maps and aerial photographs is taught. Marginal information, map grid coordinates, scale and distance, directions, use of the compass, intersection/ resection, elevation and relief, GM angle, and map substitutes are a part of the map reading instruction. Squad organization, movement techniques, and actions are taught and practiced in a field environment. Student participation in Leadership Laboratory is required.

Cr 2.
MIS 222/HTY 349 American Military History
Development of the United States military system from colonial times to present. Examination of the principles of war and how they impact on military organizations and tactics are discussed. Student participation in Leadership Laboratory is required.

Cr 2.

## MIS 229 ROTC Basic Camp

A six-week summer camp conducted at Fort Knox, Kentucky. The student receives pay, and travel costs are defrayed by the Army. The environment is rigorous, and is similar to Army Basic Training. The training includes the role and mission of the U.S. Army, map reading and land navigation, first aid, marksmanship, leadership, physical training, drill and parades, and tactics. Completion of MIS 29 satisfies all basic course requirements. Six different cycles offered during the summer. Basic course applicants are accepted during the spring semester. Students apply for enrollment to the professor of military science. Selection for attendance is based on qualifications and merit. Cr 6.

## MIS 331 Leadership

Exposure to the branches of the Army. The development and conduct of military instruction is outlined. Exposure to the various leadership theories and to the leadership environment are discussed and experienced. Fundamentals of leadership, human behavior, communication, and contemporary human problems are reviewed and practiced. Student participation in Leadership Laboratory is required.

Cr 3.

## MIS 332 Advanced Tactics

Exposure to military equipment and military tactics at the squad, platoon, and company level. Advanced Camp prerequisites are com-
pleted. Student participation in Leadership Laboratory is required.

## The Advanced Course

The courses listed below are required for completion of the advanced course. In addition, students are required to attend a sixweek ROTC Advanced Camp at Fort Bragg, North Carolina between their junior and senior year. In exceptional cases, ROTC Advanced Camp may be deferred by the professor of military science until the student completes the senior year. Selected students may attend Ranger School in lieu of ROTC Advanced camp.

## MIS 441 Military Management

Students are exposed to military law. An analysis of legal problems facing small unit leaders is conducted. The Code of Conduct, management theory, motivation theory, training, personnel, and logistics management practices are taught. Management by Objective (MBO) and Organizational Effectiveness (OE) theories are discussed. A framework of ethical actions are discussed and practiced. Student participation in Leadership Laboratory is required. Cr 3.

## MIS 442 Operations Seminar

Students are exposed to larger unit operations at the brigade and battalion level. The sequence of command and staff actions and the problem-solving process are taught. The organization of the division, the brigade, and the battalion is outlined. Preparation of combat orders is taught and practiced. A discussion of current military problems in the leadership/management area is conducted. Student participation in Leadership Laboratory is required.

Cr 3.
MIS 499 Independent Study
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 guidance of a faculty member.

Cr l-6.

## Special Courses

Special courses are available to individuals in the ROTC program on a competitive and voluntary basis. Those courses are: Airborne School, Ranger School, Air Assault School, the Northern Warfare Training School, and Jungle School. Information on these courses is available through the Army ROTC office.

Cr 0 .

# Graduate Programs 

Associate Provost: Stephen J. Reno, Office of Graduate Affairs 106 Payson Smith, Portland, 780-4386
The following graduate programs are available at the University of Southern Maine. The programs are described in detail in the Graduate Catalog.

School of Applied Science: Computer Science and in cooperation with the Univerity of Maine at Orono: Electrical Engineering. College of Education: Adult Education, Counselor Education, Educational Administration; Exceptionality; Instructional Leadership, Reading; School of Business, Economics and Management: Business Administration; School of Nursing: Nursing; Inter-College Program: Public Policy and Management; University of Maine School of Law: Law (Juris Doctor)

## School of Law

Dean: L. Kinvin Wroth

Professors: Cluchey, Delogu, Gregory, Lang, Loper, Potter, Rogoff, Ward, Wroth, Zarr; Associate Professors: Brett, Carson, Freehling, Friedman, Kandoian, Seibel; Assistant Professor: Soifer; Lecturers: Allen, Beirne, Davidson, Haines, Lipez, Morris, Patterson, Priest, Rieser; Adjunct Professors: Godfrey, Petruccelli, Wernick.

The University of Maine School of Law is a small school that has long offered a high quality of legal education to a carefully selected student body. With a fine faculty, excellent library resources, and a nationally oriented curriculum strong in basic legal courses, the Law School takes pride in educating men and women who will become capable and motivated attorneys.

The academic program is rigorous and demanding. Thanks to the School's size, however, its students have the benefit of small classes, frequent and informal contact with the faculty, and a friendly atmosphere. These factors do much to ease the strains attendant upon entry to an exacting profession.

The School averages $75-80$ students per class, of whom approximately 40 percent are women; the number of students in the School is about 240, making it one of the smallest in the country. The student body is remarkably varied in age, professional and academic experience, and background.

The School's faculty consists of 16 full-time and a number of part-time instructors. It is drawn from many specialties and represents a diversity of backgrounds and interests.

The School is fully accredited by the American Bar Association and is a member of the Association of American Law Schools.

Established at Portland in 1961, the Law School is the successor to the University of Maine College of Law which existed in Bangor from 1898 to 1920. It is an administrative unit of the University of Southern Maine, but has responsibilities to the statewide University system. The school is located in a modern building, fully accessible for handicapped students, that provides excellent facilities for classroom and seminar discussion, library research, moot court participation, clinical practice, legal publications, and student activities. The Law School shares the building with the University of Southern Maine's Center for Research and Advanced Study and the University administration.

## Summer Session

Director: Susan M. Silvernail

During the summer the University offers over 250 credit and noncredit courses, and a number of institutes and programs. The Stonecoast Writers' Conference, an Elderhostel program, economic education institute for the classroom teacher, and a music camp for talented high school musicians, represent just a few of the many programs available for people of all ages. Over 8,000 people attend summer conferences held in University facilities, in addition to the 3,000 students who enroll in academic courses. Cultural events such as musicals, concert series, and poetry readings are also featured. Classes are held days and evenings in several schedule formats. The campus offers residence hall accommodations and meals at reasonable rates. Child care is also available for faculty, staff, students, and conference participants.

For further information, contact the Summer Session Office, University of Southern Maine, 106 Payson Smith, Portland, Me. 04103 or telephone 780-4076.

# Center for Research and Advanced Study 

Director: Robert J. Goettel

The purpose of the Center for Research and Advanced Study is to contribute to the development of Maine's economic, social, and environmental well-being through applied research and advanced study. The Center serves and assists governments, industries, institutions and the people of Maine to solve policy, operational, organizational, and employee problems. The staff of the Center and associated faculty work in interdisciplinary teams to address issues related to economic development, the formation and management of business enterprises, health and human services, education, marine resources, and state and local goverment. Since the Center's inception in 1972, projects have been supported by numerous state and local agencies in Maine, other New England states, the federal government, private foundations, and the business community.

Staff of the Center come from a wide range of research and leadership roles in state, local, and federal governments, private business, not-forprofit organizations and institutions, research and development organizations, and university appointments. The academic fields in which Center staff have been trained include economics, sociology, psychology, political science, business administration, public administration, law, education, health, social work, communications, and counseling.

The Center for Research and Advanced Study is organized in three cooperating institutes.

## Director: Stephen P. Simonds

The Human Services Development Institute's (HSDI) research program focuses on policy, management, employee, and training issues in order to improve the effectiveness and efficiency of public and private
human service systems. Health care; services for children, youth, aging and families; special needs of the handicapped; and alcoholism are among the areas targeted for research and technical assistance. Interdisciplinary teams are assembled to carry out activities supported typically by state and federal grants and contracts. Special expertise in HSDI has developed in program evaluation, research methodologies, data collection and analysis, financial and cost analysis, literature searches, production and communication technologies.

Marine Law Institute

## Director: Alison Rieser

The Marine Law Institute is committed to research and education in the field of coastal and ocean resource law and policy. Its research considers interjurisdictional problems in marine resource management, the use of scientific knowledge in marine law, and issues affecting the resources of the Gulf of Maine. The Institute is jointly sponsored by the University of Maine School of Law and the Center for Research and Advanced Study. It is a component of the Center for Marine Studies of the University of Maine at Orono.Its policy research and educational projects are supported by grants and contracts from government agencies and private foundations. The quarterly publication, Territorial Sea, is partially supported by subscribers.

## New Enterprise Institute

## Acting Director: Richard Clarey

The New Enterprise Institute was formed in 1974 as a business development and research project in the Center for Research and Advanced Study. Its mission is to develop innovative educational mechanisms that increase the capacity of entrepreneurs and smaller enterprises to manage innovation and growth, and to translate that into development that strengthens the Maine economy. Supported by both public and private sources, the New Enterprise Institute provides management counseling to entrepreneurs, businessowners and executives; contributes graduate courses in entrepreneurship and executive development through the School of Business, Economics and Management; organizes technical and marketing programs and seminars for trade and professional associations. The institute provides business, financial, and market information and assistance through the Enterprise Information Service and the Small Business Development Center; and is developing microcomputer-based education programs targeted to small-and mid-sized firms.

In addition to the three institutes the Center provides research and development services in several program areas including economic studies and organized camping.

## Division of Public Service

Director: William G. Mortensen<br>Administrative Associate: Ellen M. Corkery

The Division of Public Service is responsible for the development, coordination, and support of the University's noncredit programs. It offers a wide range of noncredit activities to meet the professional and personal needs of the residents of southern Maine. During 1984-1985, over 30,000 persons participated in conferences, seminars, workshops, short courses, and certificate programs sponsored by the Division.

CEU Award System The Division administers the Continuing Education Unit (CEU) Award System. The CEU is a nationally accepted unit of measurement applicable to noncredit continuing education. CEU courses are generally designed for a specific audience and are often used for professional development in a particular industry or profession. The CEU permits the individual to participate in many kinds of programs while accumulating a uniform record available for future reference. One CEU is awarded for 10 hours of participation in an approved program of continuing education.

The following information indicates the variety and scope of the University's noncredit activities. Specific inquiries about these programs should be directed to the appropriate department. General inquiries should be directed to the Division of Public Service at 96 Falmouth Street, Portland, Maine 04103, 780-4030.

## Department of Continuing Education for Business and Industry

Director: William G. Mortensen; Program Coordinator: Dana R. Darling

The Department of Continuing Education for Business and Industry (CEBI) assists southern Maine employers by offering a variety of seminars, courses, and programs to meet identified needs. Through its advisory boards, the department involves business and industry representatives in the planning, implementation, and evaluation of its offerings. Those individuals represent nearly all sectors of the regional economy as well as small, medium, and large firms.

CEBI's instructional staff consists of faculty and staff from USM and individuals from business and industry. The expertise represented by these extensive resources covers nearly every potential topic of interest to area organizations.

All offerings of the department are noncredit and carry CEUs when they meet the requirements of certificate programs.

Representatives of business, industry, and nonprofit organizations desiring more information about the department's programs or services should contact Dana R. Darling, Department of Continuing Education for Business and Industry, University of Southern Maine, 96 Falmouth Street, Portland, Me. 04103; telephone 780-4092/93.

## Department of Conferences

Director: Kevin P. Russell; Conference Specialist: Beth Gleason
The Department of Conferences provides planning and coordination to groups wishing to use the University's conference facilities and services. The Department occasionally provides workshops and seminars which bring together qualified individuals to share new information and ideas, upgrade professional skills, or to impart new techniques.

The Department's conference planning and management services are extended to professional and trade associations, government agencies, private business and community groups and organizations. Programs can be conducted on either campus, or off-campus wherever an appropriate meeting site can be arranged.

An experienced conference staff is available to plan, coordinate, and facilitate the delivery of programs of virtually any size or duration. By using the University's conference services, the program initiator is free to concentrate fully on program content.

During the summer and, to a lesser extent, during the academic year, the University's classrooms, auditoriums, recreational facilities, and dining services are available for use by conference groups. Residence halls are also available for housing during the period mid-May to end of August. All meetings are within easy reach of major educational facilities on both campuses. Two libraries allow conference participants ready access to reference materials. The University also maintains two well-equipped audio-visual departments, as well as a print shop.

Conference fees are determined by the Department of Conferences with the assistance of the conference sponsor's planning committee. While program costs will vary with the number of participants, duration of program, and special requirements, program fees are kept reasonable by utilizing University facilties and services whenever possible. The staff prepares a budget for each conference or workshop and presents to the sponsor a financial statement at the successful completion of the program.

Each summer the Department of Conferences offers a number of camps for junior and senior high school age students. Offerings for the summer included Soccer School, "SWISH" Basketball Camp, "STIX" Field Hockey Camp, Southern Maine Music Camp, and the Computer Camp. The Department also offers Elderhostel each summer for people over 60 years of age.

For information about these and other conference services at USM please call 780-4074.

# Department of Continuing <br> Education for Nursing and Health Professions 

Director: Mary Ann Rost

The Department of Continuing Education for Nursing and Health Professions develops, offers, and evaluates noncredit programs in a variety of formats to meet the learning needs of nurses and other health professionals at locations throughout the state of Maine. Programs offered by the Department are held at college campuses, in health facilities, and other appropriate locations and include workshops, seminars, conferences, and courses. Programs are available either on a fee basis or through specifically designed contracts with health care agencies.

Programs offered by the Department of Continuing Education for Nursing and Health Professions are conducted in cooperation with health agencies, health care officials in the state of Maine, or at the request of a group or individual. Examples of groups served are: nurses, pharmacists, dieticians, physical therapists, occupational therapists, and social workers.

All programs are awarded CEUs and are approved by professional associations including The Maine State Nurses Association, and Maine Commission of Pharmacy. The following are examples of programs recently offered by the Department: The Annual Nurse-Pharmacist Conference; Nursing Care Plans: Applying Nursing Process; Physical Assessment Skills; Annual Nursing Research Day; Costing Out Nursing Care; Communicating Effectively; Facing Death.

The Department of Community Programs offers a wide range of programs including professional development in selected areas, personal enrichment, and career and skill enhancement. The Department seeks to bring the University and community closer together through the development of timely and relevant noncredit programs. Community Programs are generally designed for adults with full-time home and career responsibilities who desire practical courses which meet a specific need and which are offered at convenient times and locations.

Courses are taught by instructors who are recognized experts in their fields. Instruction is usually personalized so that participants can apply the knowledge and skills obtained to their specific situation.

Because of the rapidly changing programs within the personal enrichment category, only professional certificate programs are described in this catalog. Please contact the Department of Community Programs at 780-4045 for specific information regarding programs and courses of study in both categories.

Personal Enrichment Areas of Study: career development; interpersonal skills; creative skills; self-help; arts; parapsychology; women's issues.

Certificate Program for Legal Assistants This paraprofessional program will provide a sequence of training leading to a certificate in the broad range of legal services known as general practice.

The Legal Assistant Program is designed primarily for part-time students and courses are offered either twice a week in the evenings or in a one- or two-day seminar format.

Those wishing to obtain the certificate must apply for acceptance to the program and meet admission requirements. Only accepted candidates will be allowed to enroll in courses. The curriculum includes the following courses.

Level I: Introduction to Law and Paralegalism; Legal Research and Source Materials; Litigation; Estates, Wills and Trusts; Real Estate; Business Organizations; Bankruptcy/Secured Transactions; Domestic Relations; Legal Writing. Required seminars: Orientation to the Legal Assistant Profession, Interpersonal Skills and Interview Techniques.

Advanced courses in several areas of specialization may be offered on a demand basis. Internships are also available with the approval of the Program Coordinator.

Computer Resource Center The department has a Computer Resource Center in which to teach computer literacy and more advanced user skills. Participants in the Center's programs get hands-on experience with IBM personal computers in order to become quickly familiar with a variety of business software and gain practical, usable skills. The courses offered use a "Computer Driver's Education" approach which allows people to use computers, much as they use automobiles, to accomplish a goal, rather than become experts on the computer's architecture. In addition to providing a variety of courses, the Center can design and deliver custom training programs to business on a contract basis.

## Lifeline Program

## Director: Robert Folsom

Assistant Director: Thomas Downing; Admissions Coordinator: Marcia Libby; Exercise Specialists: Len Jordan, Jerie Bugbee, Marjorie Podgajny; Exercise Counselor: Nick Branch; Medical Director: Peter K. Shaw, M.D.

The Lifeline Adult Fitness Program is a comprehensive approach to total fitness through various programs of prevention, intervention, and re-
habilitation. Members of the University community and the Greater Portland community participate in numerous Lifeline activities.

Lifeline also promotes adult learning through noncredit courses in stress management, smoking cessation, and nutrition/weight control. All Lifeline activities are designed to promote positive healthy lifestyles through education and exercise. Many of the fitness activities require medical clearance. Application to all programs should be made well in advance. All inquiries are welcome at 780-4170.

Admissions Process Aspart of the initial entryintomost Lifeline programs each person participates in a comprehensive admissions process. This includes exercise counseling, health risk appraisal, a full fitness evaluation including treadmill, and computerized exercise prescription. This experience is designed to meet the individual needs of the participants as they prepare to enter a formalized exercise program.

## Aerobics Program

Walk/Jog is a program designed for the sedentary person who, for one reason or another, is not in good physical condition. It is essentially a routine of walking/jogging, calisthenics, stretching, and relaxation techniques. Exercise begins slowly and progresses each week. At the end of ten weeks, one may elect to go into the intermediate program.
Aquatics is a cardiovascular exercise program for those who prefer swimming. Non-swimmers may also participate, as many of the exercises can be performed in the shallow end of the pool. A combination warmup/ water calisthenics routine is followed by a peak exercise period where heart rates are elevated to improve cardiorespiratory endurance. The exercise session will end with a cool down period of slow walking and swimming and final stretch downs on the pool deck.
Aerobic Dance is a choreographed exercise program focusing on aerobic conditioning, muscular endurance, postural flexibility, and relaxation. Simple dances ranging from slow stretching warm-ups to strenuous rhythmical routines are followed by mat work to improve muscle tone, strength, and flexibility. The program develops proper body alignment and maximum range of motion. The final movements of each class are devoted to explore various relaxation techniques.

Bodyshop helps people improve their posture and strength in a supervised program of weight training. A complete assortment of weight training equipment is available including Nautilus, Universal, and free weights. The Bodyshop Program is a sensible approach to progressive resistance weight training for improving body tone, muscular strength, power, and endurance. Individually prescribed programs of exercise are designed to meet the particular goals and needs of each participant.

Each applicant will be interviewed. At this time a body assessment will be conducted which includes height, weight, flexibility, strength, body composition, blood pressure, and girth measurements as well as an evaluation of respiratory function. Objectives and goals of each individual are also discussed at this time.

Employee Health/Fitness can assist a company in the development, implementation, and evaluation of multi-faceted programs based on the needs of both the company and its employees. Such tools as corporate health profiles, employee needs assessments, and health risk appraisals are available to aid in this process. Employee health/fitness programs can be instituted at both large and small companies.

Senior Lifeline is designed for persons over 60 years of age, including those who require a low level of exercise. Cardiovascular conditioning, determined by individual age-predicted heart rates, includes stationary bike riding, walking, or a combination of walking and jogging. Emphasis is placed on flexibility and postural muscle strength, accomplished through slow stretches and muscular improvement of specific muscle
groups. Senior Lifeline should be considered a maintenance exercise program where individuals progress at their own rate.

Heartline is a program of cardiac rehabilitation for post-coronary and high risk individuals. This is a physician-supervised class, utilizing walking, jogging, and swimming to recondition persons who need close supervision while exercising. All participants must be referred to Heartline by their personal physician. While Heartline provides medical supervision during the exercise session, it is not intended to replace the role of the primary physician. Throughout the program, periodic reports are sent to the primary physician and all significant events are promptly reported. Heartline is intended to improve communications between the participant and his or her personal physician. All necessary forms are provided by the Heartline office. All participants must enter the program at the start of a new session.

The Heartline Cardiac Rehabilitation Program provides exercise three times a week for twenty weeks. Exercise progresses from low-level stretching calisthenics and walking during the first ten weeks, to moderately vigorous developmental calisthenics and perhaps jogging during the second ten weeks. Although done in a group, all exercise is individually prescribed and suited to each individual's functional capacity.

Pulmonary Rehabilitation is a comprehensive program of exercise, education, and proper medical management for patients with chronic obstructive pulmonary disease. This is accomplished by increasing their awareness of their disease and its management, and through participation in a progressive cardiopulmonary exercise program, thereby enabling adaptation to improve lifestyles. Participants are enrolled in the program only after referral from their primary care physician.

This program provides the opportunity for patients and their families to have instruction in anatomy and physiology of respiration; the conditions that interfere with normal respiration; medications; diet; breathing exercise; relaxation; and respiratory hygiene. Personal counseling and community resources are made readily available to all participants. Because Lifeline believes that learning is active rather than passive, patients are considered as part of the involved team and are expected to share responsibility for their care. Class and activities are planned so that the patient has an opportunity to practice skills, integrate knowledge, and be involved in individualizing his or her home program. Participants who are accepted into this program should express a need for help, offer personal goals, and quit smoking or be willing to attend non-smoking classes.

Low Back Pain is a six-week program consisting of progressive low-level exercise routines combined with periodic educational sessions. Emphasis is placed upon the improvements of postural and muscular strength and endurance, body flexibility, and relaxation techniques. Along with the exercise sessions specific time is devoted to topics relating to low back problems. Such items as body anatomy and physiology, causation factors, body mechanics, and nutrition will be integrated into the ten-week program. Medical clearance is required for all participants regardless of age. Appropriate medical forms will be provided for your physician to sign.

Youth Weight Training/Conditioning Program is a supervised training program for boys and girls 14 to 17 years of age. Courses are offered throughout the year utilizing the Lifeline Bodyshop. The program is designed to teach proper conditioning values and techniques; increase muscular strength and endurance; increase flexibility; and increase cardiovascular conditioning.

Lifeline Leisure Learn Program provides recreational, group, or individual activities, leagues, clinics, and physical fitness opportunities for its members. Leisure-Learn offers some of the following: yoga, weight training, basketball, volleyball, saunas, racquetball, aikido, squash, jogging, and many others.

## Lifeline Lifestyle Courses

Stress and Lifestyle is a six-week course which deals with stress theory and management. Physical, psychological, and socio-cultural dimensions of stress will be discussed. Methods of stress management will be presented for discussion and experimental involvement. Topics will include relaxation training, aerobic exercise, and personality factors.

Weight Reduction is a nine-week course using a many-sided approach to weight reduction. The primary emphasis is on the individual identification and solution to problem eating behaviors which may lead to or maintain overweight conditions. Proper nutrition and eating plans are emphasized and developed for participants, along with discussion on the value and myths of exercise.

No-Smoking-"I Quit" This course, offered for four weeks, two times per week, is designed to assist the smoker in making the decision to stop smoking and does not offer false hopes of 100 percent success. The primary purpose is to help the smoker identify reasons for smoking and through group support make some decisions about possibly stopping.

Note: Certain Lifeline programs may be taken for academic credit. Information on these courses may be found in the course registration outline.

# University of Southern Maine Alumni Association 

Director: AnneM. Theriault

The University of Southern Maine Alumni Association enrolls more than 18,000 active members representing alumni of Gorham Normal School, Gorham State Teachers College, Portland Junior College, Portland University, University of Maine in Portland, Gorham State College, Gorham State College of the University of Maine, University of Maine at Portland-Gorham, and the University of Southern Maine.

The Association is governed by a 16 -member Board of Directors and a 30 -member Advisory Council.

The Alumni Association of USM works to expand the tradition of service both to the alumni and the USM community, carrying on a tradition established some 90 years ago at the Gorham campus, and more recently at the Portland campus. Students are urged to visit the Alumni House and to get acquainted with the personnel and programs of the Alumni Association before graduation. All students, as well as former students, are cordially welcomed.

The Alumni Office is located in Alumni House on the Portland campus. The land surrounding the Portland campus was first cleared for settlement during the lifetime of George Cleeves, who obtained it from Sir Ferdinando Gorges in 1637. Eventually the land, known as the Back Cove Farm, was transformed into a businessman's country estate under the ownership of James Deering in 1802. The land was acquired in 1946 for Portland Junior College, a predecessor to the University of Southern Maine and the Alumni House is now the only remaining building of that original property.

# Administration of the University of Southern Maine 

Administrative Organization as of June 1, 1985

President: Robert L. Woodbury, 228 Deering Avenue, Portland tel: 780-4480<br>Provost: Helen L. Greenwood, 228 Deering Avenue, Portland tel: 780-4485<br>Executive Assistant to the President: William B. Wise, 228 Deering Avenue, Portland tel: 780-4482<br>Executive Director for Financial Resources: Samuel G. Andrews, 209 Deering Avenue, Portland tel: 780-4484<br>Executive Director for Human Resources: Beth I. Warren, 102 Corthell Hall, Gorham tel: 780-5486<br>Executive Director for University Relations: Alyce S. O’Brien, 602 Research Center, Portland tel: 780-4440

## Administrative Offices Serving Students

Admissions
Dennis P. Farrell, Director
Advising and Information
Richard H. Sturgeon, Director
Alumni Association
Anne M. Theriault, Director
Applied Science, School of
Brian Hodgkin, Dean
Arts \& Sciences, College of
Robert J. Hatala, Dean
Athletics
Richard A. Costello, Director
BasicStudies, Division of
John Bay, Acting Director
Business, Economics and Management, School of
Duane R. Wood, Dean
Business Office
William B. Bullock, Business Manager
Child Care Services
Stephen F. Lehane, Director
Counseling b Career Development
Ira Hymoff, Director
Education, College of
Dorothy D. Moore, Dean
Educational Media Services
Ronald W. Levere, Acting Director
Educational Services
John Keysor, Dean

EEO/Employment Services
Freda D. Bernotavicz
Financial Aid, Student
Richard R. Campbell, Director
Graduate Affairs, Office of
Stephen J. Reno, Associate Provost
Law, University of Maine School of
L. Kinvin Wroth, Dean

Library
George Parks, Librarian
Nursing, School of
Nancy P. Greenleaf, Dean
Police and Safety
Coin P. Hauk, Director
Public Service, Division of
William G. Mortensen, Director
Registrar's Office
Steven Rand, Acting Registrar
Research and Advanced Study, Center for
Rober t J. Goettel, Director
Residence Life
Charles H. Lamb, Director
Student Affairs
Domenica T. Cipollone, Director
Summer Session
Susan M. Silvernail, Director
Student Testing \& Assessment, Office of
David L. Silvernail, Director

## EMERITI

Bowman, James A. (1949-1974) Gorham State Teachers College, B.S., 1947; Boston University, Ed.M., 1951; Associate Professor Emeritus of Educational Psychology
Clarke, Alfred (1946-1971) Dartmouth College, A.B., 1928; Admissions Director Emeritus
Dickey, Edna F. (1946-1973) University of New Hampshire, B.A., 1933; M.A., 1936; Associate Professor Emerita of History
Emerson, Horton W., Jr. (1962) Professor of History; Colby College, A.B., 1949; Yale University, PhD., 1957
Goodwin York, Jeanette L. (1955-1981) Sargent College, B.S., 1944; Springfield College, Ed.M., 1955; Associate Professor Emerita of Physical Education and Dance
Hanna, John G. (1963-1984) Trinity College, 1963; Harvard University, M.A., 1946; Boston University, Ph.D., 1958; Professor Emeritus of English
Hopkinson, David B. (1959-1983) University of Maine, B.S., 1942; University of Vermont, M.S., 1949; University of Maine, M.E., 1961; P.E.(Maine); Associate Professor Emeritus of Engineering
Kern, Abraham K. (1959-1977) Bowdoin College, A.B., 1936; University of Maine, M.Ed., 1956; Professor Emeritus of Biology

Kerr, Elizabeth F. (1957-1974) Marygrove College, B.S., 1939; Columbia University, A.M., 1946; Ed.D., 1956; Professor Emerita of Education
Lawrence, Harold Merrill (1946-1972) Boston University, B.S., 1940; Business Manager Emeritus
MacLean, Jean (1958-1975) Boston University, B.S., 1930; Yale University, B.N., 1933; University of Chicago, M.S., 1948; Professor Emerita of Psychiatric Nursing
Miller, Robert N. (1946-1977) Colby College, A.B., 1936; Professor Emeritus of Geology Mitchell, John (1947-1977) Fitchburg State College, B.S., 1939; University of Minnesota, M.A., 1947; Pennsylvania State University, Ed.D., 1954; Professor Emeritus of Industrial Arts
Peabody, Mildred (1952-1973) Gorham State College, B.S., 1939; Boston University,

Ed.M., 1952; Associate Professor Emerita of Education
Peirce, John A. (1965-1984) University of Maine, B.S., 1962; University of Virginia, M.A., 1965; Ph.D., 1971; Professor Emeritus of Political Science
Romanyshyn, John M. (1953-1981) University of Oklahoma, B.A., 1942; University of Chicago, M.A., 1952; Professor Emeritus of Social Welfare
Saldanha, Estelita L. (1966) Professor of Psychology; University of Lisbon, B.A., 1943; University of Nebraska, B.S., 1946; M.A., 1947; Cornell University, Ph.D., 1950
Sawtelle, Gwen D. (1938-43;53) University of Minnesota, B.S., George Peabody College for Teachers, M.S., 1939; Associate Professor Emerita of Arts
Sawyer, Elizabeth C. (1943-1971) University of Maine, B.S., 1928; Boston University, M.A., 1943; Middlebury College, M.A., 1963; Assistant Professor Emerita of English Weeks, Ernest E. (1951-59;67-83) Bowdoin College, A.B., 1939; Tufts University, M.A., 1949; Columbia University, Ph.D., 1965; Professor Emeritus of English
Whitten, James M. (1951-1982) Colby College, A.B., 1944; University of Maine, M.A., 1955; Associate Professor Emeritus of Education
Whitten, Maurice M. (1955-1983) Colby College, A.B., 1945; Columbia University, M.A., 1949; Ohio State University, Ph.D., 1971; Professor Emeritus of Chemistry
Witherill, Robert D. (1966-1983) Colby College, A.B., 1947; University of Maine, M.A., 1953; M.Ed., 1962; Associate Professor Emeritus of Economics
Wood, Esther E. (1930-1972) Colby College, A.B., 1926; Radcliffe College, M.A., 1929; Associate Professor Emerita of Social Sciences York, Robert M. (1962-1984) Bates College, A.B., 1937; Clark University, M.A., 1938; Ph.D., 1941; Professor Emeritus of History
Young, Anne P. (1965-1984) Boston University, B.S., 1943; M.A., 1944; University of Chicago, Ph.D., 1951; Professor Emerita of History

Aiello, Frederick (1983) Associate Professor of Associate Business Administration, Northeastern University, B.S., B.A., 1971; M.B.A., 1974
Albee, Parker E., Jr. (1966) Associate Professor of History; Dartmouth College, A.B., 1961; Duke University, M.S., 1964; Ph.D., 1968
Allen, Bruce A. (1970) Acting Assistant Dean, College of Education and Associate

Professor of Mathematics Education; Gorham State College, B.S., 1960; M.S., 1967; Boston University, Ed.D., 1973
Amoroso, Henry C. (1982) Associate Professor of Education; St. Michael's College, B.A., 1966; Goucher College, M.Ed., 1966; University of Wisconsin, Ph.D., 1978
Anderson, Andrew L. (1975) Associate Professor of Graphic Communication; University of Wisconsin at Platteville, B.S., 1973; M.S., 1975; Iowa State University, Ph.D., 1983
Andrews, Bruce H. (1974) Associate Professor of Business Administration; University of Connecticut, B.A., 1967; Polytechnic Institute of New York, M.S., 1969; Ph.D., 1980
Andrews, Samuel G. (1966) Executive Director for Financial Resources; Babson College, B.S., 1964; University of Maine, M.S., 1966

Anspach, Donald F. (1970) Associate Professor of Sociology; Franklin and Marshall College, A.B., 1964; Western Reserve University, M.A., 1966; Case Western Reserve University, Ph.D., 1970
Armentrout, Charles E. (1960) Associate Professor of Physics; University of Maine, B.A., 1955; Wesleyan University, M.A., 1958; Columbia University, M.S., 1970
Ashley, Kathleen M. (1978) Associate Professor of English; Duke University, B.A., 1969; M.A., 1970; Ph.D., 1973

Austin, Joseph M. (1981) Assistant Director of Residence Life; University of Maine at Orono, B.A., 1976; M.Ed., 1981
Avery, Deborah D. (1974) Job Developer, Counseling and Career Development
Ayers, George H. (1959) Associate Professor of Physical Science; 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.S., 1952; Ph.D., 1965
Bailow, Judith K. (1978) Assistant Professor, School of Nursing; Ohio State University, B.S., 1961; Boston University, M.S.N., 1967

Banner, Gerald T. (1968) Collection Development Librarian; New School for Social Research, B.A., 1965; Pratt Institute, M.L.S., 1967
Baron, Catherine A. (1976) Administrative Manager, Human Services Development Institute, Center for Research and Advanced Study
Barton, Winston (1982) Media Productions Specialist; University of Maine at Orono, B.S., 1976; Utah State University, M.Ed., 1980
Bartram, Curtis E. (1981) Mechanical Engineer; University of Maine, B.S.M.E., 1979

Bay, John W. (1965)Acting Director, Division of Basic Studies and Off-Campus Programs, Instructional Television and Assistant to the Provost and Associate Professor of Economics; Saint Ambrose College, B.A., 1961; Boston College, M.A., 1964; Ph.D., 1966
Bazinet, Gregory P. (1979) Assistant Professor of Industrial Education; University of Southern Maine, B.S., 1977; M.S., 1981
Beaulieu, Kimberly M. (1984) Instructor in Nursing; Westbrook College, A.S., 1977; University of Southern Maine, B.S., 1982; Boston University Graduate School, M.S., 1983
Bearce, Jeana Dale (1965) Professor of Art; Washington University, B.F.A., 1951; New Mexico Highlands University, M.A., 1954
Beirne, Piers (1982) Professor of Sociology and Legal Studies; Essex University (England), B.A., 1971; Durham University (England), Ph.D., 1975
Benedict, Diane (1984) Assistant Professor of English; Goddard College, B.A., 1976; M.F.A., 1979

Benson Mary Ann (1982) Coordinator of Placement and Academic Internships; SUNY at Cortland, B.A., 1973; SUNY at Plattsburgh, M.S., 1976
Benton, Kathie L. (1980) Assistant Dean for Student Academic Services, College of Arts and Sciences and Director, Office for Prior Learning Assessment; University of Mississippi, B.A., 1969; Memphis State University, M.Ed., 1975; Ed.D., 1980

Bergstrom, Linda (1980) Assistant Professor, School of Nursing; Gustavus Adolphus College, B.A., 1973; Teacher's College, Columbia University, M.Ed., 1980
Bernard, Anne (1978) Research Assistant, Human Services Development Institute, Center for Research and Advanced Study Bernotavicz, Freda (1985) Employment Services Consultant/EEO Director; Nottingham University (England), B.A., 1963; Syracuse University, M.S., 1966
Berry, Arthur O. (1955) Professor of Industrial Education, Gorham State College, B.S., 1950; Pennsylvania State University, Ed.M., 1954; University of Connecticut, Ph.D., 1967 Bibber, Joyce K. (1967) Associate Professor of History; Westbrook Junior College, A.A., 1956; Barnard College, B.A., 1958; Stanford University, M.A., 1962; Ph.D., 1969
Bishop, John S. (1968) Professor of Psychology; University of New Brunswick, B.A., 1953; Dalhousie University, M.A., 1957; University of London, Ph.D., 1958
Boden, John C. (1981) Assistant Professor of Music; Northwestern University, B.M., 1974; University of Missouri at Kansas City Conservatory, M.M., 1981

Bondeson, Janice M. (1981) Research Assistant, Human Services Development Institute, Center for Research and Advanced Study; Wheaton College, B.A., 1960
Booton-Brown, Raella (1985) Assistant Professor of Nursing; Tuskegee Institute, B.S.N., 1954; Boston University, M.S.N., 1961
Bouchard, Joey A. (1968) Associate Professor of Physical Education; Springfield College, B.S., 1960; M.Ed., 1961; Boston University, C.A.S., 1968

Bouchard, Kathleen H. (1969) Director of Off-Campus Centers and Instructional Delivery; Western Michigan University, B.A., 1966; Indiana University, M.S., 1969
Bowder, Jerry L. (1960) Professor of Music; University of Washington, B.A., 1952; Lewis and Clark College, M.M., 1956; Eastman School of Music, Ph.D., 1960
Boyle, Conrad L. (1982) Assistant Professor of Marketing; United States Military Academy, B.S., 1959; University of Florida, M.B.A., 1964; University of Washington, Ph.D., 1982
Brady, E. Michael (1984) Associate Professor, Department of Human Resource Development, College of Education; St. Mary's Seminary \& University, A.B., 1971; The University of Connecticut, MSW, 1977; St. Mary's Seminary \& University, M. Div., 1980; The University of Connecticut, Ph.D., 1982
Brady, James B. (1969) Head of Special Services, State University of New York at Albany, B.S., 1967; M.L.S., 1969; University of lllinois, C.A.S., 1977
Branch, Nicholas G. (1980) Lifeline Exercise Counselor; Beloit College, B.A., 1973
Braziel, Lawrence (1977) Director of Management lnformation Systems; Southwest Missouri State University, B.S., 1966; Florida State University, M.A., 1974
Brett, Tybe Ann (1983) Associate Professor of Law; Barnard College, B.A., 1977; Columbia University School of Law, J.D., 1979
Bridges, Ronda (1983) Staff Associate for Student Advising, School of Business, Economics and Management; University of Southern Maine, A.S.B.A., 1984
Briggs, David A. (1984) Assistant Professor of Computer. Science; Swarthmore College, B.A., 1975; University of Massachusetts at Amherst, M.S., 1984
Briggs, Wayne F. (1965) Director of Purchasing/Payroll; University of Maine PortlandGorham, B.S., 1975
Brown, William A. (1960) Associate Professor of Mathematics; Bowdoin College, B.A., 1954; University of Maine, M.A., 1959 Brysh, Janet F. (1976) Librarian, Center for Research and Advanced Study; Marymount College, B.A., 1958; Hunter College, M.A., 1964; Rosary College, M.L.S., 1968

Bubier, Jill L. (1984) Research Assistant, Marine Law Institute, Center for Research and Advanced Study; Bowdoin College, B.A., 1974; University of Maine School of Law, J.D., 1978

Buch, Camille (1983) Staff Associate for Publications; Central Washington University, B.A., 1977; Central Washington University, M.A., 1982
Bugbee, Jerie L. (1980) Lifeline Exersise Specialist; University of Buffalo, B.S., 1973; University of New Hampshire, M.S., 1981
Bullock, William B. (1970) Business Manager; Cornell University, B.S., 1954; M.B.A., 1959

Burke, Kathy Ann (1983) Student Financial Aid Staff Associate; University of Southern Maine, B.A., 1981
Burke, L. Morrill (1959) Associate Professor of English; Bowdoin College, A.B., 1949; University of Washington, M.A., 1951; Columbia University, Ph.D., 1971
Burson, Janet Z. (1978) Associate Professor, School of Nursing; Syracuse University, B.S., 1964; Oregon State University, M.S., 1975
Burtchell, Veda (1972) Coordinator of Space and Scheduling
Callender, Willard D., Jr. $(1962 ; 1972)$ Professor, Department of Human Resource Development, College of Education; Bates College, A.B., 1958; University of Connecticut, M.A.. 1960; Ph.D., 1967

Cameron, Julia M. (1983) Director of Publications, Bates College, B.A., 1972
Campbell, Anne B. (1978) Project Coordinator/Child Development Specialist, Maine Children's Resource Center and Assistant Professor of Education; Vermont College, A.A., 1961; Scarritt College, B.A., 1965; George Peabody College, M.A., 1967; Ed.S., 1969; University of Illinois, Ph.D., 1975
Campbell, Richard R. (1973) Director, Student Financial Aid; University of Maine at Portland-Gorham, B.S., 1974
Carner, Frank K. (1970) Associate Professor of English; Temple University, B.S., 1964; M.A., 1967; Ph.D., 1976

Carper, Thomas R. (1967) Associate Professor of English; Harvard University, A.B., 1958; New York University, M.A., 1967; Boston University, Ph.D., 1973
Carson, Loftus, C. II (1980) Associate Professor of Law; Cornell University, B.S., 1968; Princeton University, M.P.A., 1970; Harvard University, J.D., 1973; University of Pennsylvania, M.B.A., 1980
Carter, Richard H. (1964) Associate Professor of Industrial Education; Gorham State College, B.S., 1954; University of Maine, Ed.M., 1964; Boston University, C.A.S., 1971
Caswell, Robert S. (1980) Director of Media Relations; University of Southern Maine,
B.A., 1974

Chabot, Maurice J. (1965) Associate Professor of Mathematics; Assistant Dean for Administrative Services, College of Arts and Sciences; University of Maine, B.A., 1961; Bowdoin College, M.A., 1965
Chandler, Joseph (1968) Associate Professor of Business Administration; Bowdoin College, A.B., 1942; University of Maine, M.B.A., 1967; University of New Hampshire, M.A., 1971
Chipman, Carol K. (1980) Academic Counselor; University of Southern Maine, B.A., 1976
Cifrino, Carole A. (1984) Coordinator, Intown Center; University of Connecticut, B.S., 1978; University of Southern Maine, M.S., 1985

Cipollone, Domenica T. (1977) Director, Student Affairs; University of Cincinnati, B.A., 1969; University of the Americas (Mexico), M.A., 1974

Clarey, Richard J. (1979) Associate Professor of Management; Acting Director, New Enterprise Institute, Center for Research and Advanced Study; Bowdoin College, B.A., 1961; Dartmouth College, M.B.A., 1963; Cornell University, Ph.D., 1968
Clark, Molly (1984) Teacher, Child Care Services, Smith College, B.A., 1961; Columbia University, M.A., 1962
Cluchey, David P. (1979) Professor of Law and Public Policy; Yale University, B.A., 1968; State University of New York, M.A., 1970; Harvard Law School, J.D., 1973
Coakley, Robert W. (1984) Associate Professor of Physics; Ohio State University, B.S., 1965; Dartmouth College, M.A., 1968; University of Vermont, Ph.D., 1974
Coburn, Andrew F. (1981) Research and Advanced Study Associate, Human Services Development Institute, Center for Research and Advanced Study; Brown University, A.B., 1972; Harvard Graduate School of Education, Ed.M., 1975; Brandeis University, Ph.D., 1981
Coffin, Richard N. (1964) Associate Professor of English; Bowdoin College, B.A., 1951; Harvard University, A.M., 1952; Boston University, Ph.D., 1962
Cohen, Libby G. (1980) Associate Professor of Special Education; University of Connecticut, B.A., 1967; Russell Sage College, M.S., 1971; Boston University, Ed.D., 1977
Coit, Charles S. (1977) Director, Center for Real Estate Education and Assistant Professor of Associate Business Administration; Yale University, B.S., 1966; Boston College, J.D., 1971
Cojuc, Juan-Ricardo (1984) Assistant Professor of Communication; Universidad Ibero Americana, Mexico, B.A., 1973
Cole, Phillip A. (1957) Professor of History;

Boston University, B.S., 1954; M.A., 1955; Ph.D., 1963
Cole, Ronald F. (1963) Professor of Music; Bowdoin College, B.A., 1961; Eastman School of Music, M.A., 1963; Indiana University, Ph.D., 1975
Coleman, Loren (1983) Research Assistant, Human Services Development Institute, Center for Pesearch and Advanced Study; Southern Illinois University, B.A., 1976; Simmons College School of Social Work, M.S.W., 1978
Collins, Mary I. (1976) Research Associate and Staff Development Director; Boston University, B.A., 1963; University of Colorado, M.S.W., 1968

Colucci, Nicholas D., Jr. (1969) Associate Professor of Education; Gorham State College, B.S., 1963; University of Connecticut, M.A., 1964; Ph.D., 1969

Como, Rose S. (1984) Research Assistant, Human Services Development Institute, Center for Research and Advanced Study; Bowdoin College, A.B., 1984
Connick, George P. (1966) Associate Professor of History; Stanford University, B.A., 1957; San Jose State College, M.A., 1960; University of Colorado, Ph.D., 1969
Connors, Denise D. (1984) Assistant Professor of Nursing; St. Francis Hospital, R.N., 1966; Boston College, B.S., 1975; M.S., 1977; Brandeis University, M.A., 1982
Conway, Jeremiah P. (1978) Associate Professor of Philosophy; Fordham University, B.A., 1970; Yale University, M.Phil., 1974; Ph.D., 1978
Coogan, William H. III (1972) Associate Professor of Political Science; Boston College, B.A., 1963; Rutgers University, M.A., 1964; University of North Carolina, Ph.D., 1971
Coombs, William R. (1984) Research Assistant, Small Business Development Center, Center for Research and Advanced Study; Nasson College, B.S., 1965; University of Maine at Orono, M.B.A., 1966
Corkery, Ellen M. (1966) Administrative Associate, Division of Public Service; Husson College, A.B.A., 1966; University of Southern Maine, B.A., 1983
Corson, Doane B. (1966) Maintenance Project Coordinator; Southern Maine Vocational Technical Institute, 1958
Costello, Melissa H. (1953) Associate Professor of Education and Director of Clinical Experiences; Gorham State College, B.S., 1952; University of Maine, Ed.M., 1957; C.A.S., 1960
Costello, Richard A. (1953) Director, Intercollegiate Athletics and Professor of Health and Physical Education; University of Alahama, B.S., 1952; University of Illinois, M.S., 1953; Springfield College, D.P.E., 1965

Cotton, Jean (1967) Associate Professor, School of Nursing; Simmons College, B.S., 1960; Boston University, M.S., 1962
Critchley, Judith A. (1974) Benefits Specialist Crochet, Monique Y. (1970) Associate Professor of French; University of Paris, Sorbonne, Licence d'Anglais, 1959; Diplôme d'Etudes supérieures and C.A.P.E.S., 1960; Doctorat de l'Université de Paris, 1969
Crosby, Marilyn C. (1970) Coordinator of Gorham Student Health Center and Family Nurse Practitioner, Clara Maass Hospital, RN, 1960; University of Maine at PortlandGorham, B.S., 1978; University of Southern Maine, F.N.P. 1982
Czupryna, Louise (1980) Assistant Professor, School of Nursing; Northeastern University, B.S., 1973; University of Colorado, M.S., 1976
Dalvet, Yves F. (1968) Associate Professor of French; Laval College, B. A., 1940; New York University, M.A., 1965; Yale University, M.Phil., 1969

Darling, Dana R. (1983) Coordinator, Department of Continuing Education for Business and Industry; University of Southern Maine, B.S., 1972; M.S., 1977
Davis, Carol Lynn (1982) Assistant Professor, Department of Human Resource Development, College of Education; University of Maine at Orono, B.A., 1968; M.S., 1977; Ph.D., 1983
Davis, Everett A. (1966) Assistant Professor of Education; Gorham State College, B.S., 1961; Indiana University, M.S.Ed., 1966; Ed.S., 1972
Davis, Michael N. (1985) Research and Advanced Study Associate, Small Business Development Center, Center for Research and Advanced Study; Ohio University, B.A., 1981; M.A., 1982
Deady, John E. (1981) Associate Dean for Information and Development, College of Arts and Sciences and Associate Professor of Education; Amherst College, B.A., 1947; University of Massachusetts, M.S., 1950; Harvard University, Ed.D., 1956
Delogu, Orlando E. (1966) Professor of Law and Legal Studies; University of Utah, B.S., 1960; University of Wisconsin, M.S., 1963; J.D., 1966

Deprez, Luisa S. (1976) Associate Professor of Social Welfare; Keuka College, B.A., 1970; Rutgers University, M.S.W., 1971
diBenedetto, Lucia A. (1970) Associate Professor of French; Emmanuel College, B.A., 1963; Middlebury College, M.A., 1965; New York University, Ph.D., 1975
Dietrich, Craig (1968) Associate Professor of History; University of Chicago, A.B., 1961; Ph.D., 1970
Dorbacker, Beatrice M. (1974) Associate Professor, School of Nursing; Columbia Univer-
sity, B.S., 1950; M.S., 1957; Boston University, Ed.D., 1973
Dorsey, F. Donald, Jr. (1967) Assistant Professor of Biology; Bowdoin College, A.B., 1950; Syracuse University, M.S., 1960; Simmons College, M.S., 1964
Downey, Loren W. (1974) Director, University College of Education; Drake University, B.A., 1949; University of Oregon, M.S., 1950; University of Arizona, Ed.D., 1966
Downing, Thomas J. (1978) Lifeline Program Director; University of New Hampshire, B.S., 1973

Drew, David (1972) Instructor in Physical Education; Springfield College, B.S., 1967; M.Ed., 1971

Drew, Judith C. (1978) Associate Professor, School of Nursing; Northeastern University, B.S., 1972; Boston University, M.S., 1977

Dubowick, Dorothy B. (1968) Associate Professor, School of Nursing; Colby College, A.B., 1948; University of Maine at PortlandGorham, M.S., 1971
Duclos, Albert J. (1965) Associate Professor of Theatre; University of Maine, B.S., 1963; M.A., 1965

Duclos, Gloria S. (1962) Professor of Classics; Radcliffe College, A.B., 1949; M.A., 1953; Oxford University, B.A., 1951; M.A., 1955
Durgin, Frank A., Jr. (1964) Professor of Economics; Tufts University, B.A., 1949; University of Toulouse, France, License en Droit, 1954; Docteur en Droit, 1956
Duval, Marjorie A. (1962) University Archivist and Reference Librarian; New England Conservatory of Music, B.Mus., 1945; Simmons College, M.S., 1962
Dyer, Jane M. (1982) Instructor, School of Nursing; University of Maine at PortlandGorham, B.S., 1971; University of Utah, M.S., C.N.M., 1978; University of Utah, F.N.A., 1981

Eastman, Joel W. (1970) Professor of History; University of Maine at Orono, B.A., 1962; M.A., 1965; University of Florida, Ph.D., 1973
Elliott, Elizabeth K. (1982) Instructor, School of Nursing; Barnard College, A.B. 1973; Columbia University B.S., 1976; Simmons College, M.S., 1981
Ellis, Edna (1983) Instructor, School of Nursing; University of Southern Maine, B.S., 1972; Boston University, M.S.N., 1973
Emery, Virginia L. (1966) Administrative Assistant to the President; Shaw's Business College, 1938
Erickson, Karen (1984) Assistant Professor of Political Science; Stanford University, B.A., 1958; Harvard University, M.A., 1963; Ph.D., 1976
Estes, Robert A., Sr. (1966) Professor of Mathematics; Bowdoin College, A.B., 1958; University of Kansas, M.A., 1961; University
of Michigan, Ph.D., 1970
Evans, Lynn (1983) Teacher, University Day Care Center; University of Illinois, B.A., 1970
Fahey, Margaret A. (1983) Admissions Counselor; Boston College, A.B., 1975; Tufts University, M.Ed., 1981
Farrar, John N. (1966) Assistant Director of AID/Coordinator Transfer Credit Counseling Services; University of Maine, B.A., 1951; M.Ed., 1958; C.A.S., 1962
Farrell, Dennis P. (1981) Director of Admissions; Boston College, B.A., 1964; Worcester State College, M.Ed., 1973
Faulkner, Howard M. (1970) Associate Professor of Industrial Education; Massachusetts State College of Fitchburg, B.S., 1957; Northeastern University, M.Ed., 1960
Fearon, David S. (1982) Associate Professor, College of Education; Colby College, A.B., 1969; Central Michigan University, M.A., 1966
Ferrari, Jennifer S. (1985) Staff Associate, Student Financial Aid; University of Southern Maine, B.S., 1984
Findlay, Robert W. (1967) Professor of Accounting; Boston University, B.S., 1955; M.B.A., 1964; C.P.A. (Massachusetts and Maine)
Fish, Lincoln T., Jr. (1959) Professor of Mathematics; University of Maine, B.S., 1948; M.A., 1949; Boston University, Ed.D., 1951

Fisher, Irving D. (1967) Associate Professor of Political Science; University of Connecticut, B.A., 1946; Columbia University, M.A., 1953; Ph.D., 1976
Fithian, Bruce (1984) Assistant Professor of Music; Southampton University (England), B.M., 1972; Brandeis University, M.F.A., 1975
Fitzherbert, Casandra B. (1984) Library Special Services Associate; University of Maine at Presque Isle, B.A., 1982
Flanagan, Timothy J. (1982) Associate Professor of Military Science; United States Military Academy at West Point, B.S., 1977
Folsom, Robert E. (1968) Director, Lifeline Adult Fitness Program; Springfield College, B.S., 1953; Boston University, Ed.M., 1962

Folsom, Scott A. (1984) Associate Professor of Military Science; University of Maine at Orono, B.S.
Fortinsky, Richard H. (1984) Research and Advanced Study Associate, Human Service Development Institute, Center for Research and Advanced Study; Pennsylvania State University B.A., 1975; Brown University, M.A., 1977; Ph.D., 1984

Foster, Carolyn N. (1966) Associate Professor of Mathematics; Douglass College, (Rutgers), A.B., 1958; Purdue University, M.S., 1961; Bowdoin College, A.M., 1966
Foster, Cherie Major (1982) Assistant Professor of Education; University of Wyoming,
B.A., 1973; M.A., 1977; Utah State University, Ed.D., 1983
Fournier, Margaret A. (1976) Associate Professor, School of Nursing; Fitchburg State College, B.S.N., 1972; Boston University, M.S.N., 1976

Fournier, Wayne M. (1980) Superintendent of Maintenance; Maine Maritime Academy, B.S., 1968

Frank, Margaret L. (1984) Research Assistant, Human Services Development Institute, Center for Research and Advanced Study; University of Southern Maine, B.A., 1982
Franklin, Patt R. (1970) Associate Professor of Art; Pratt Institute, B.F.A., 1962; Tulane University of Louisiana, M.F.A., 1970
Freeberg, Ernest (1983) Student Activities Assistant; Director of WMPG; Middlebury College, B.A., 1980
Freehling, Dan J. (1982) Law Librarian and Associate Professor, School of Law; Huntington College, B.S., 1972; University of Alabama, J.D., 1975; M.L.S., 1977
Freeman, Ardith (1979) Lecturer in Music; Eastman School of Music, B.M., 1972; M.M., 1974

Fremd, Lynn (1978) Assistant Director, Student Financial Aid; Towson State College, B.A., 1974, M.Ed., 1978

French, Robert J. (1969) Associate Professor of Geography and Director, Museum of Culture Change; Dartmouth College, A.B., 1957; Northeastern University, M.Ed., 1967; Clark University, M.A., 1972
Friedman, James M. (1980) Associate Professor of Law and Legal Studies; Brown University, A.B., 1971; University of Chicago, J.D., 1974
Fullam, David C. (1970) Associate Professor of Sociology; Colby College, B.A., 1960; University of New Hampshire, M.A., 1965; M.A., 1969

Gainey, Louis F., Jr. (1976) Associate Professor of Biology; Florida State University, B.S., 1969; M.S., 1972; Ph.D., 1976
Gallant, Roy A. (1980) Planetarium Director; Adjunct Professor of English; Bowdoin College, B.A., 1948; Columbia University, M.S., 1949

Gavin, William J. (1968) Professor of Philosophy; Fordham University, B.A., 1965; M.A., 1967; Ph.D., 1970
Gayton, William F: (1974) Professor of Psychology; Springfield College, B.S., 1963; University of Maine, M.A., 1965; Ph.D., 1968
Gianopoulos, Christine (1978) Research and Advanced Study Associate, Human Services Development Institute, Center for Research and Advanced Study; University of Pittsburgh, B.A., 1968; Syracuse University, M.P.A., 1970

Giguere, Madeleine D. (1967) Professor of Sociology; College of New Rochelle, B.A., 1947; Fordham University, M.A., 1950; Columbia University, M.Phil., 1973
Ginkel, Elizabeth (1983) Assistant Law Librarian for Technical Services; University of Rochester, B.A., 1978; SUNY at Geneseo, School of Library and Information Science, M.L.S., 1981

Giroux, Gayle G. (1980) Student Financial Aid Staff Associate; Kennebec Valley V.T.I., Associate, 1979
Gish, Nancy K. (1979) Professor of English; Western Michigan University, B.A., 1964; University of Michigan, M.A., 1965; Ph.D., 1973
Gleason, Beth (1983) Conference Specialist, Conference Department; Simmons College, B.A., 1975

Goettel, Robert J. (1981) Director, Center for Research and Advanced Study; State University, Fredonia, New York, B.A., 1955; Columbia University, M.A., 1963; Ed.D., 1970
Gold, Joel I. (1973) Associate Professor of Associate Business Administration; Pace University, B.B.A., 1968; Bernard Baruch College, M.B.A., 1972

Graham, Anita K. (1966) Staff Associate for Purchasing/Loan Programs; University of Southern Maine, B.S., 1984
Grange, Joseph (1970) Professor of Philosophy; St. Joseph's College, B.A., 1961; Fordham University, M.A., 1965; Ph.D., 1970
Greene, Nathanael N. (1980) Acting Coordinator, Saco Center; University of Southern Maine, B.A., 1967; University of Washington, M.L.S., 1970
Greenleaf, Nancy P. (1982) Dean and Associate Professor, School of Nursing; Boston University, B.S., 1964; M.S., 1967; D.N.Sc., 1982
Greenwood, Helen L. (1969) Provost and 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) Professor, School of Law; Duke University, B.A., 1964; University of Maine, LL.B., 1968; Harvard University, LL.M., 1972
Groskin, Debra P. (1982) Special Needs Child Development Specialist, Maine Children's Resource Center; State University of New York, B.S., 1976; Wheelock College; M.S., 1979
Grzelkowski, Slawomir A. (1973) Associate Professor of Sociology; University of Warsaw, Poland, M.A., 1962; Indiana University, Ph.D., 1974
Guay, Merle D. (1969) Professor of Mathematics; Tufts University, B.S., 1958; University of Maine, M.A., 1960; Michigan State

University, Ph.D., 1967
Gutmann, Jean E. (1977) Associate Professor of Associate Business Administration; State University of New York at Albany, B.S., 1971; University of Maine at Orono, M.B.A., 1974
Hackett, George F. (1968) Director of Labor Relations; Central Michigan University, B.A., 1952; University of Michigan, M.A., 1957
Hanisko, SandraLee M. (1983) Assistant Professor of Communication; University of Wis-consin-Milwaukee, B.A., 1976, University of Nebraska-Lincoln, M.A., 1979
Hare, Parnell S. (1963) Associate Professor of Physical Sciences; University of Maine, B.S., 1956; University of New Hampshire, M.S., 1960
Hasson, Maureen E. (1984) Academic Counselor, Intown Center; Westbrook College, B.S., 1976; University of Southern Maine, M.S., 1978

Hatala, Robert J. (1980) Dean, College of Arts and Sciences, Professor of Chemistry; Juniata College, B.S., 1952; Yale University, Ph.D., 1957
Hauk, Coin P. (1983) Director of Police and Safety; Michigan State University, B.A., 1963
Healy, Phyllis F. (1980) Assistant Professor, School of Nursing; Hunter College, B.S.N., 1971; University of California, M.S.N., 1972
Hearns, Joseph F. (1970) Associate Professor of Psychology; Boston College, B.S., 1964; University of Massachusetts, M.S., 1966; Ph.D., 1967
Heath, John R. (1976) Associate Professor of Computer Science; University of Maine at Orono, B.A., 1968; M.A., 1970; University of Minnesota, M.S., 1976; Ph.D., 1982
Heidema, Charlotte F. (1981) Instructor, School of Nursing; University of Colorado, B.S., 1967; M.S., 1969

Helms, Carl H. (1979) Assistant Director Learning Assistance; Pacific Lutheran University, B.S., 1962; Washington State University, M.A., 1964
Henderson, Joyann S. (1978) Assistant Professor, School of Nursing; University of Maine, B.S., 1970; Boston University, M.S., 1978

Hendry, Caroline L. (1974) Program Developer, Instructional Television; Division of Basic Studies; University of Southern Maine, B.A., 1983

Hewitt, Duncan A. (1976) Associate Professor of Art; Colby College, B.A., 1971; University of Pennsylvania, M.F.A., 1975
Hiebert, Maryanne T. (1970) Coordinator of Gorham Student Health Center; Massachusetts General Hospital, R.N., 1955; Simmons College, B.S., 1956; Boston University, M.S., 1985
Higgins, Anita (1972) Bursar
Higgins, George M. (1971) Director, Business

Management Systems; University of Maine in Portland, B.S., 1971
Higgins, Michael (1983) Student Financial Aid Staff Associate/Academic Counselor/Veterans Coordinator; University of Southern Maine, B.A., 1985
Hodgdon, Paula D. (1967) Professor of Physical Education and Coordinator of Women's 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

Hodgkin, Brian C. (1976) Coordinator, Graduate Engineering Program and Associate Professor of Electrical Engineering; University of Maine at Orono, B.S., 1963; M.S., 1964; Johns Hopkins University, Ph.D., 1969
Hodson, D. Bradlee (1973) Associate Professor of Accounting; University of Maine at Orono, B.S., 1968; University of Pennsylvania, M.A., 1969; C.P.A. (Massachusetts)

Holmes, Peter K. (1968) Associate Professor of Biology; Bowdoin College, A.B., 1956; Wesleyan University, M.A., 1958; University of Illinois, Ph.D., 1964
Honey, Irene (1982) Career Development Specialist; Georgetown University, B.S.N., 1969; Syracuse University, M.S., 1971
Hornby, Helaine (1974) Research and Advanced Study Associate, Human Services Development Institute, Center for Research and Advanced Study; Simmons College, B.S., 1968
Houlihan, John J. (1975) Associate Professor of Business Law; Holy Cross College, A.B., 1969; Harvard Law School, J.D., 1972
Howard, Albert A. (1970) Head of Cataloging Services; Brown University, A.B., 1951; University of Kentucky, M.S., in L.S., 1955
Howe, Elaine (1978) Placement Specialist, College of Education
Hughes, Carolyn C. (1968) Head of Serial Services; University of Maine, B.A., 1968; M.L.S., 1974

Hunt, H. Draper III (1965) Professor of History; Harvard University, B.A., 1957; Columbia University, M.A., 1960; Ph.D., 1968
Hymoff, Ira H. (1972) Director of Counseling and Career Development; Colby College, B.A., 1965; University of Maine at Orono, Ph.D., 1970
Irish, Joel W. (1971) Associate Professor of Mathematics; Colby College, B.A., 1967; University of New Hampshire, M.S., 1969; Ph.D., 1975
Jackson, William (1978) Academic Counselor, Intown Center; University of Connecticut, B.A., 1975; University of Southern Maine, M.S., 1982
Jagolinzer, Philip (1966) Associate Professor
of Accounting; Clark University, A.B., 1958; University of Rhode Island, M.S., 1960; University of Arizona, Ph.D., 1978; C.P.A. (Maine, Maryland)
Jaques, John F.(1946) Professor of English; Bowdoin College, A.B., 1943; Columbia University, A.M., 1946; Ph.D., 1971
Jensen, Helena M. (1967) Associate Professor, School of Nursing; University of Maine, B.S., 1943; Pennsylvania State University, M.Ed., 1951
Johnson, Shelia A. (1968) Head of Reference Services; Boston College, B.S., 1967; University of Maine, M.L.S., 1975
Jordan, Percival L. (1980) Lifeline Exercise Specialist; ACSM Exercise Technician Certification, 1980 (Dallas, Texas); Advanced Physical Fitness Specialist, 1979; ALS Certification, 1980
Kading, Charles S. (1978) Associate Professor of Theatre; California State University, B.A., 1973; University of Washington, M.A., 1975; California State University-Fullerton, M.F.A., 1982

Kandoian, Ellen Arpen (1981) Associate Professor of Law; Yale College, B.A., 1971; Columbia University, M.A., 1972; Yale Law School, J.D., 1975; Boston University, L.L.M., 1981

Karpeles, Kathy (1980) Counseling Psychologist; SUNY at Brockport, B.A., 1971; University of Southern California, Ed.D., 1977
Kecskemethy, Stephen (1978) Artist in Residence, Music; Eastman School of Music, B.M., and Performer's Certificate, 1966

Kellogg, Edward (1985) Reference Librarian; Gettysburg College, B.A., 1979; Southern Connecticut State University, M.L.S., 1980
Kennedy, Harris W. (1985) Reference Librarian; Gordon College, B.A., 1963; Boston University M.A., 1966; Columbia University, M.L.S., 1971
Keysor, John F. (1974) Dean of Educational Services; University of Wisconsin, B.S., 1962; M.S., 1966
Kievitt, Karen A. (1983) Staff Associate, Media Relations; Seton Hall University, B.S., 1975
Kilbreth, Elizabeth H. (1984) Research and Advanced Study Associate, Human Services Development Institute, Center for Research and Advanced Study; Radcliffe College, B.A., 1973; Johns Hopkins University, M.H.S., 1979

Kirk, Albert S. III (1977) Associate Professor of Manufacturing/Construction; Florida College, A.A., 1961; University of Tampa, B.S., 1963; Northern Illinois University, M.S., 1967; Murray State University, SCT, 1980
Kivatisky, Russell J. (1974) Assistant Professor of Communication; State University of New

York, Brockport, B.S., 1970; M.A., 1971; Bowling Green State University, Ph.D., 1974 Knowlton, Gayle K. (1981) Assistant to the Dean, School of Law; Eastern Nazarene College, A.B., 1964
Knowlton, Suzanne L. (1968) Acting University Librarian; University of Kansas, B.A., 1960; University of Denver, M.A., 1963
Kratzer, Richard O. (1971) Professor of Mathematics; Fort Hays Kansas State College, B.A., 1957; Kansas State College of Pittsburg, M.A., 1964; New York University, Ph.D., 1971
Kreisler, Joseph D. (1972) Associate 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; Micnigan State University, Ph.D., 1962
Laffin, Catherine A. (1962) Coordinator of Administrative Services
Lamb, Charles H. (1977) Director, Residence Life; State University of New York at Geneseo, B.S., 1972; State University of New York at Albany, M.S., 1973
Lamontagne, Carol (1984) Staff Associate, Professional Development Center, College of Education
Lang, Isa (1983) Reference Librarian, School of Law; Stern College for Women, B.A., 1972; University of Pennsylvania Law School, J.D., 1975; Drexel University, M.L.S., 1978

Lang, Michael (1983) Associate Professor, School of Law; Harvard University, A.B., 1972; University of Pennsylvania, J.D., 1975
Lantz, Ronald (1978) Artist in Residence, Music; Indiana University, B.M., 1967; Julliard School of Music, Graduate Studies, 1968
LaPerle, Lisa (1985) Teacher, Child CareServices; University of Maine at Farmington, B.S., 1977

LaPlante, Josephine M. (1985) Assistant Professor of Public Policy and Management; Syracuse University, B.A., 1973; M.A., 1983; Ph.D., 1984
Lapointe, Norman J. (1967) Program Director, Maine Children's Resource Center and Assistant Professor of Education; University of Maine, B.S., 1956; University of Massachusetts, M.A., 1960
Law, Eleanor (1980) Volunteer Assistant to the Executive Director for Human Resources; Simmons, B.A., 1950
Lazar, Bonnie (1975) Associate Professor of Social Welfare; State University of New York at Buffalo, B.A., 1970; Boston University, M.S.S.S., 1972

Leh-Douglas, Sharon (1983) Academic Counselor; Lake Erie College, B.A., 1969;

University of New Hampshire, M.Ed., 1974; CAS, 1979
Lehane, Stephen (1984) Director, Child Care Services; St. Amselm's College, B.A., 1965; University of New Hampshire, M.A.T., 1967; Columbia University, Ed.D., 1973
Lehman, Peter M. (1974) Associate Dean for Information and Development, College of Arts and Sciences, Associate Professor of Sociology; Oberlin College, A.B., 1968; Meadville Theological School, University of Chicago, M.A., 1970; University of Massachusetts, Ph.D., 1978
Leino, Ruth M. (1976) Head Start/Preschool Handicapped Child Coordinator, Maine Children's Resource Center; University of Maine at Portland-Gorham, B.S., 1976
Lemelin, Robert (1977) Director, Learning Assistance Systems; Southern Connecticut State College, B.S., 1959; University of Maryland, M.A., 1963; Ph.D., 1967
Lepelley, Edith (1965) Associate Professor of French; Lycee de Jeunes Filles de Chartres, Baccalaureate, 1950; University of Rennes (France), License est Lettres, 1956
Levere, Ronald W. (1976) Acting Director, Educational Media Center; State University of New York, B.S., 1965; University of Connecticut, M.A., 1976
Levine, Frank M. Coordinator, Organized Camping Resources; Center for Research and Advanced Study; Cambridge College, A.A., 1976
Lewis, Virginia M. (1953) Graduate Education Specialist, College of Education; Maine School of Commerce, 1940
Libby, Marcia H. (1982) Admissions Coordinator, Lifeline Program; Bryant College, A.A., 1970; Springfield College, Fitness Specialist Certification, 1981
Libby, Philip C. (1961) Coordinator of Property Management
Lieberman, Alice A. (1982) Assistant Professor of Social Welfare; University of Texas at Austin, B.A., 1974; University of Texas at Arlington, M.S.W., 1976; Washington University, St. Louis, Missouri, Ph.D., 1978
Locke, Phyllis R. (1968) Serials Reference Librarian; University of Toronto, B.A., 1951; University of Maine, M.L.S., 1968
Lockridge, Rebecca B. (1984) Assistant Professor of Communication; Indiana University, A.B., 1960; Connecticut State College, Certificate 1962; Ohio State University, M.A., 1983

Lohmeyer, James (1980) Assistant Professor of Associate Business Administration; University of Maine at Orono, B.A., 1972; Carne-gie-Mellon University, M.B.A., 1974
Loper, Merle W. (1971) Professor, School of Law; Northwestern University, B.A., 1962; University of Chicago, J.D., 1965; Harvard University, LL.M., 1971

Louden, Robert B. (1982) Assistant Professor of Philosophy; University of California at Santa Cruz, B.A., 1975; University of Chicago, M.A., 1976; Ph.D., 1981
Lumbert, Lanier D. (1978) Head of Circulation Services, University of Maine at Orono, B.A., 197l; University of Denver, M.A., 1974 Lyons, Charles M. (1973) Interim Director, Health Professions Education/Associate Professor of Education; St. Francis Xavier University, B.A., 1966; University of Hartford, M.Ed., 1970; Boston University, Ed.D., 1978 Lyons, George C. (1984) Director, Professional Development Center, College of Education; St. Francis Xavier University, B.A., 1955; University of Maine, Portland, M.Ed., 1968
MacDonald, Stephen A. (1970) Associate Professor of Mathematics; Gorham State College, B.S., 1963; University of Maine, M.A., 1964; Case Western Reserve University, Ph.D., 1972
MacDonald, Thomas (1984) Assistant to the Dean, School of Nursing; University of Southern Maine, B.A., 1973; M.S., 1979; B.A. (computer science), 1981

MacPherson, Kathleen I. (1974) Acting Assistant Dean for Graduate Affairs and Associate Professor, School of Nursing; Boston University, B.S., 1963; M.A., 1965; M.S., 1974
Maiman, Richard J. (1971) Professor of Political Science; Lake Forest College, B.A., 1967; Brown University, Ph.D., 1972
Mainville, Waldeck E., Jr. (1965) Professor of Mathematics; University of Maine, B.S., 1960; Bowdoin College, A.M., 1964; Bowling Green State University, Sp.Ed., 1965; Michigan State University, Ph.D., 1972
Martin, Joyce (1980) Professional Staff Developer, Professional Development Center, College of Education; Simmons College, B.A., 1965; New York University, M.A., 1973 Martin, Laurie L. (1980) Senior Computer Programmer; University of Maine at Orono, B.A., 1980

Martin, Peter J. (1980) Associate Professor of Music; Northern Illinois University, B.A., 1971; Wichita State University, M.M.E., 1973; Northwestern University, Bh.D., 1983 Martin, Thomas A. (1965) Assistant Professor of Physical Education and Recreation, Director of Intramurals; University of Maine, B.S., 1963; M.Ed., 1969

Mason, Edith C. (1974) Professional Nurse, Student Health Center; Maine Medical Center, R.N., 1954
Massaro, John L. (1983) Associate Professor of Political Science; Assumption College, B.A., 1963; Niagara University, M.A., 1964; Southern Illinois University, Ph.D., 1973
Masure, Lorraine D. (1973) Director, Sanford Center, University of Southern Maine; Nasson College, B.A., 1970; University of South-
ern Maine, M.S., 1976
Mazurkiewicz, Michael, Jr. (1969) Associate Professor of Biology; Rutgers University, B.S., 1961; M.S., 1964; University of Connecticut, Ph.D., 1970
McCrillis, George (1980) Exercise Instructor, Lifeline Adult Fitness Program
McCullough, William T. (1978) Assistant Professor, Therapeutic Recreation; Southern Connecticut State College, B.S., 1971; M.S., 1977
McDonald, Thomas P. (1983) Research and Advanced Study Associate, Human Services Development Institute, Center for Research and Advanced Study; Bucknell University, B.S., 1971; University of Pennsylvania, M.S.W., 1973; University of Wisconsin-Madison, Ph.D., 1977
McDonnell, Polina C. (1976) Research Assistant, Human Services Development Institute, Center for Research and Advanced Study; University of Maine at PortlandGorham, B.A., 1972
McGough, Barbara (1984) Field Coordinator, Hearing Impairment, College of Education; Seton Hall University, B.S., 1963
McGrath, Francis C. III (1985) Assistant Professor of English; Dartmouth College, B.A., 1964; University of Texas at Austin, Ph.D., 1973
McGuire, Catherine A. (1984) Research Assistant, Human Services Development Institute, Center for Research and Advanced Study; University of Southern Maine, B.A., 1983
McKeil, Richard L. (1966) Professor of Associate Business and Economics; University of Maine, B.A., 1959; M.A., 1965
McMahon, Robert C. (1969) Associate Professor of Economics; University of Washington, B.A., 1959; M.A., 1964 Lehigh University, Ph.D., 1970
McMullen, Faith (1979) Teacher, University Day Care Center; University of Maine at Orono, B.S., 1968
Medley, Joseph E. (1983) Assistant Professor of Economics; State University of New YorkAlbany, B.A., 1973; University of Massachusetts, Amherst, M.A., 1976; Ph.D., 1981
Medici, Angelo (1983) Instructor in Math; Boston College, B.S., B.A., 1950; Bridgewater State College, M.Ed., 1961; Clarkson College, M.S., 1969
Meehan, Deborah F. (1979) Director, Bath Center; Colgate University, B.A., 1974
Meyer, Linda (1980) Associate Professor, Therapeutic Recreation Programs; Bridgewater State College, B.S., 1969; University of Connecticut, M.A., 1973; Ph.D., 1976
Miaoulis, George (1983) Professor of Marketing; New York University, B.S., 1965; M.B.A., 1969; Ph.D., 1974

Milbury, Allen W. (1963) Associate Professor
of Education; University of New Hampshire, B.S., 1960; Indiana University, M.S., 1963; Ed.D., 1969
Milligan, Patricia M. (1975) Cataloger, School of Law Library; Ohio State University, B.A., 1971
Monsen, S. 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 D. (1968) Acting Dean and Associate Professor, College of Education; University of Maine, B.S., 1966; M.Ed., 1968; Ed.D., 1978
Moore, Edward T. (1980) Library Circulation Associate, University Library; St. Anselm College, B.A., 1974
Moore, Jo-Anna J. (1983) Assistant Professor of Art Education; Syracuse University, B.F.A., 1965; Massachusetts College of Art, M.S., 1980

Moore, Michael G. (1967) Associate Professor of Art; Syracuse University, B.F.A., 1963; University of Washington, M.F.A., 1967
Moore, Ramona L. (1972) Serials Law Librarian, School of Law
Moore, William H. (1971) Associate Professor of Industrial Education and Technology; Gorham State College, B.S., 1969; University of Maine at Portland-Gorham, M.Ed., 1970; University of Tennessee, D.Ed., 1979
Morrill, David (1970) Associate Professor of Education; Moorehead State College, B.S., 1967; Texas A \& M University, M.Ed., 1968; Ed.D., 1970
Morrill, Robert R. (1979) Senior Counselor, Small Business Development Center, Center for Research and Advanced Study; University of Arizona
Mosher, Martha (1984) Assistant Manager, Gorham Bookcellar
Mortensen, William G. (1965) Director of Public Service; University of Maine, B.S., 1961; M.S., 1966
Murphy, Julie (1984) Assistant Professor, Philosophy Department; Northern Illinois University B.A., 1977; DePaul University, M.A., 1980; Ph.D., 1982
Najarian, Haig H. (1966) Professor of Biology; University of Massachusetts, B.S., 1948; Boston University, M.A., 1949; University of Michigan, Ph.D., 1953
Nannay, Robert W. (1972) Associate Professor of Industrial Education and Technology; Trenton State College, B.A., 1964; M.A., 1967; University of Maryland, Ed.D., 1970
Nason, Carol (1984) Child Development Specialist; University of Maine at Orono B.S., 1978: M.S., 1982
Nealand, Sallie C. (1980) Acting Associate Dean for Undergraduate Affairs and Assistant Professor, School of Nursing; Mt. Holyoke College, A.B., 1961; University of Dela-
ware, B.S.N., 1973; University of Pennsylvania, M.S.N., 1979
Nelson, Gordon E., Jr. (1981) Superintendent of Services; Brown University, B.A., 1975
Neuberger, Harold T. (1957) Professor of Science Education; Iowa-Wesleyan College, B.S., 1952; University of New Mexico, M.S., 1953; Boston University, E.D., 1964
Neveu, Raymond P. (1982) Professor of Finance; Providence College, A.B., 1959; Boston College, M.A., 1961; University of Pittsburgh, Ph.D., 1968
Newell, Alma H. (1969) Assistant to the Director, MaineChildren's Resource Center Norbert, Mary (1984) Resident Director/ Counselor, Residence Life; Boston College, B.A., 1981

Normandeau, Jeanne G. (1968) Associate Professor, School of Nursing; Boston College, B.S., 1964; M.S. 1967

Novak, Irwin D. (1971) Associate Professor of Geology; Hunter College, A.B., 1966; University of Florida, M.S., 1968; Cornell University, Ph.D., 1971
O'Brien, Alyce S. (1982) Executive Director for University Relations; Wilmington College, B.A., 1965; Ohio University, M.A., 1967
O'Donnell, Michael P. (1970) Professor of Education; University of Maine, B.S., 1958; M.S., 1961; Syracuse University, Ed.D., 1968 Olson, Lynn D. (1984) Research Assistant, Small Business Development Center, Center for Research and Advanced Study; University of Maine at Presque Isle, B.A., 1981
O'Mahoney-Damon, Patricia M. (1977) Associate Professor of Biology; Long Island University, B.S., 1971; State University of New York at Buffalo, M.A., 1974; Ph.D., 1977
Osier, Donald T. (1982) Counselor, Bath Center; Bates College, B.S., 1973; Michigan State University, M.A., 1976
Otter, Marlene (1983) Assistant Professor of Biology; University of Michigan, B.A., 1972; University of Wisconsin, Ph.D., 1975; Indiana University School of Medicine, Ph.D., 1979
Padula, Alfred L. (1972) Associate 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
Palmacci, Viola (1966) Coordinator, Portland Student Health Center/Family Nurse Practitioner; Maine Eye and Ear Infirmary, R.N., 1944; University of Southern Maine, F.N.P., 1972

Palmer-Wright, Margaret (1983) Assistant to the Dean, School of Business, Economics and Management; Shippensburg State College, B.S., 1970; Goddard College, B.A., 1980

Papa, Joseph D. (1980) Director of Facilities Management; University of Rhode Island,

BSEE, 1973
Paradise, Noel E. (1967) Professor of Psychology; University of Maryland, A.B., 1948; University of Michigan, Ph.D., 1960
Parchman, Thomas (1984) Instructor of Music; Southern Methodist University, B.M., 1976; Northwestern University, M.M., 1978
Parent, Suzanne P. (1975) Acquisitions and Accounts Law Librarian; University of Maine at Portland-Gorham, B.A.. 1975
Parker, Helen F.M. (1974) Assistant Director, Student Financial Aid; University of Maine at Portland-Gorham, B.A., 1973
Parker, Kevin S. (1984) Associate Professor of Military Science; Norwich University, B.S., 1978
Parsons, Gregory L. (1983) Assistant Professor of Business Administration; University of Minnesota, B.S., 1974 Purdue University Ph.D., 1980
Parsons, Henry L. (1983) Assistant Professor of Production/Operations Management; Michigan State University, B.S., 1960; University of Oregon, M.S., 1968; Ph.D., 1974 Partridge, Susan E. (1985) Research and Advanced Study Associate, Human Services Development Institute, Center for Research and Advanced Study; University of Michigan, B.A., 1971; M.S.W., 1974; M.A., 1976; Ph.D., 1980
Passerman, Toni L. (1984) Academic Counselor, Sanford Center; University of New Hampshire, B.S., 1981; University of Southern Maine, M.S., 1984
Peake-Godin, Helen (1980) Assistant Professor, School of Nursing; Spalding College, B.S., 1969; Emory University, M.N., 1979

Pendleton, James W. (1967) Associate Professor of Physical Science; Keene State College, B.Ed., 1959; Oregon State University, M.S., 1963
Per ry, Caryn (1983) Instructor in Nursing; University of Maine at Portland-Gorham, B.S., 1978; University of Virginia, M.S., 1983
Phillips, William A. (1980) Associate Professor of Economics; Florida State University, B.S., 1961; M.S., 1975; Ph.D., 1979

Podgajny, Marjorie T. (1982) Lifeline Exercise Specialist; Pennsylvania State University, B.S., 1974; M.Ed., 1977; University of Pittsburgh, M.Ed., 1981
Pollock, Shirley (1985) Teacher, Child Care Services; University of Southern Maine, B.S., 1979
Pollock, Stephen G. (1979) Associate Professor of Geology; Bucknell University, A.B., 1968; University of Maine, M.S., 1972; Rutgers University, Ph.D., 1975
Potter, Judy R. (1972) Professor, School of Law and Director, Clinical Practice Program; Cornell University, B.A., 1960; University of Michigan Law School, J.D., 1967

Potts, Andrew J. (1985) Professor of Accounting; George Washington University, A.B., 1960; M.B.A., 1962; Ed.D., 1977; C.P.A., (Virginia, District of Columbia); C.C.A., (District of Columbia)
Power, Thomas A. (1966) Associate Professor of Theatre; University of Maine, B.S., 1964; M.A., 1968

Powers, Kathleen (1977) Research Assistant, Human Service Development Institute, Center for Research and Advanced Study; University of Maine, B.A., 1969
Pranger, Eugene B. (1973) Assistant Director for Management and Finance, Center for Research and Advanced Study; Indiana University, B.S., 1971
Purcell, Caryn (1984) Teacher/Facilitator, Child Care Services; College of William and Mary, B.A., 1982
Purdy, Warren (1980) Associate Professor of Associate Business Administration; Director, Small Business Development Center, Center for Research and Advanced Study; Bethany College, B.A., 1970; Fordham University, M.B.A., 1974

Quinn, Cynthia (1976) Manager, USM Bookstores; University of Maine, B.S., 1975
Rakovan, Lawrence F. (1967) Associate Professor of Art; Wayne State University, B.S., 1967; Rhode Island School of Design, M.A., 1969
Rand, Steven (1972) Acting Registrar; University of Maine at Presque Isle, B.S., 1970
Rees, Toni (1984) Assistant Professor of Hearing Impairment; Teaching Certificate, Norwich College of Education, England, 1967; Southampton University, M.A., 1971; Gallaudet College, Ph.D. , 1983
Reitman, Eloise V. (1982) Coordinator, Displaced Homemakers Project, Bath Center; University of Pittsburgh, B.A, 1970; University of Southern Maine, M.S., 1977
Reno, Stephen J. (1980) Associate Provost; St. John's College, A.B., 1965; University of California (Santa Barbara), M.A., 1968; Ph.D., 1975
Reuter, John E. (1969) Associate Professor of English; University of New Hampshire, A.B., 1958; University of Rochester, M.A., 1963; Ph.D., 1968
Ricci, John S. (1981) Professor of Chemistry; American International College, A.B., 1962; Columbia University, M.A., 1963; SUNY (Stony Brook), Ph.D., 1969
Rich, Barbara (1974) Associate Professor of 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

Rieser, Alison (1980) Director, Marine Law Institute, Center for Research and Advanced Study and Lecturer, School of Law; Cornell

University, B.S., 1973; George Washington University, J.D., 1976
Roberts, James W. (1967) Associate Professor of Political Science; San Diego State College, B.A., 1954; University of North Carolina, Ph.D., 1973
Roche, Mildred A. (1982) Instructor, School of Nursing; Boston College, B.S.N., 1960; Catholic University, M.S.N., 1966; F.N.A., 1972
Rodgers, Marianne W. (1981) Instructor, School of Nursing; University of Maine, B.S.N., 1967; Boston University, M.S., 1981

Rogers, Paul C. (1965) Professor of Mathematics; College of the Holy Cross, B.N.S., 1945; Boston University, M.A., 1948
Rogoff, Martin A. (1972) Director, Honors Program and Professor, School of Law; Cornell University, B.A., 1962; University of California, Berkeley, M.A., 1963; Yale Law School, LL.B., 1966
Rolfe, Frederick B. (1966) Associate Professor of French; Bowdoin College, A.B., 1946; Middlebury College, A.M., 1948
Rootes, Minor R. (1966) Professor of Theatre; University of California, Santa Barbara, A.B., 1954; San Francisco State College, M.A., 1961; University of Connecticut, M.F.A., 1983

Rosen, Kenneth F. (1965) Professor of English; Pennsylvania State University, B.A., 1962; University of Iowa, M.F.A., 1964
Ross, Paul (1978) Artist in Residence, Music; Juilliard School of Music, B.M., and Performers Degree, 1960
Rost, Mary Ann (1972) Director, Department of Continuing Education for Nursing and Health Professions and Adjunct Faculty, School of Nursing; Boston College, B.S., 1964; University of Massachusetts, M.S., 1972
Russell, Kevin P. (1980) Director, Department of Conferences; University of Idaho, B.S., 1973

Russell, Marilyn (1984) Research Assistant, Human Services Development Institute, Center for Research and Advanced Study; University of Southern Maine, B.A., 1981
Russell, Robert J. (1979) Associate Professor of Music; Wake Forest University, B.A., 1971; University of North Carolina, M.M., 1975; University of Colorado, D.M.A., 1979
Rutherford, Lou C. (1969) East Texas State University, B.S., 1962; M.S.L.S., 1965
Rutherford, Phillip R. (1966) Professor of English; East Texas University, B.A., 1962; M.A., 1964; Ph.D., 1966

Ryan, Jeffrey W. (1983) Admissions Counselor; University of Southern Maine, B.S., 1983
Ryan, Judith S. (1979) Coordinator, Student Activities and New Student Programs; University of South Florida, B.F.A., 1975; Uni-
versity of Southern Maine, M.A., 1982
Salmon, Edward I. (1966) Manager of Engineering and Technical Assistance; University of Maine, B.S., 1956
Salvo, Gerard R. (1979) Employment Services Specialist; University of Southern Maine, B.A., 1977
Sanborn, Jane O. (1961) Associate Professor of Psychology; Wilson College, A.B., 1942; University of California, Los Angeles, Ed.D., 1961
Sandberg, Michael C. (1978) Child Development Specialist, Maine Children's Resource Center, and Instructor in Education; Brandeis University, B.A., 1968; Wheelock College, M.S., 1977
Sanders, Jerry (1984) Teacher, Child Care Services; University of Southern Maine, B.A., 1980; M.S., 1984

Sanders, John J. (1982) Assistant Professor of Accounting; Plymouth State College, B.S., 1972; University of Southern Maine, M.B.A., 1977
Santry, Robert T. (1979) Assistant Manager Portland Bookstore; University of Southern Maine, B.A., 1979
Sayers, Frances (1981) Assistant Professor of Communication; Auburn University, B.G.S., 1974; M.A., 1977; Florida State University, Ph.D., 1980
Schiferl, Ellen (1980) Associate Professor of Art; Grinnell College, B.A., 1971; University of Minnesota, M.A., 1974; Ph.D., 1980
Schleh, Eugene, P.A. (1965) Professor of History; Union College, B.A., 1961; Yale University, M.A., 1962; Ph.D., 1968
Schroff, Roger (1982) Associate Professor of Computer Science; Kansas University, B.A., 1966; M.A., 1978; M.S., 1979; Ph.D., 1980 Schwanauer, Francis (1962) Professor of Philosophy; Technical University of Stuttgart, Dr.Phil., 1959
Schwanauer, Johanna (1963) Lecturer in German; Wellesley College, B.A., 1957
Schwinck, Lotte (1969) Associate Professor of Biology; University of Tubingen, Dr. rer. nat., 1956
Seibel, Robert F. (1981) Associate Professor, School of Law; Bowdoin College, A.B., 1968; Northeastern University, J.D., 1971
Selkin, Michael (1970) Associate Professor of English; Columbia College, A.B., 1961; Cornell University, M.A., 1963; Columbia University, Ph.D., 1975
Seretta, William J. (1985) Program Specialist, Department of Community Programs; American International College, B.A., 1969; M.Ed., 1972

Shedd, Mark R. (1983) Director and Professor, Public Policy and Management Program; University of Maine, A.B., 1950; Ed.M., 1954; Harvard University, Ed.D., 1960

Shedletsky, Leonard (1979) Associate Professor of Communication; Brooklyn College, B.A., 1965; San Francisco State College, M.A., 1968; University of Illinois, Ph.D., 1974
Sheppard, Lucille T. (1972) Administrative Staff Associate, Department of Communitv Programs
Shoobs, Dorothy S. (1973) Associate Professor, School of Nursing; New York University, B.S., 1953; M.A., 1960; Ph.D., 1973

Silkman, Richard Harris (1983) Associate Professor of Public Policy and Management; B.S., Purdue University, 1972; M.A., Yale University, 1975; M. Phil, 1975; Ph.D., 1980
Silvernail, David L. (1977) Director of Academic Testing, Assessment, Student Tracking (Title III), and Associate Professor of Education; Indiana University, A.B., 1969; M.S., 1975; Ed.D., 1977
Silvernail, Susan M. (1977) Director of Summer Session; Ball State University, B.S., 1975; University of Southern Maine, M.S., 1980
Simonds, Stephen P. (1971) Director of Human Services Development Institute, Center for Research and Advanced Study; University of New Hampshire, A.B., 1948; University of Chicago, M.A., 1953
Sinclair, Gail M. (1978) Professional Nurse, Student Health Center; Maine Medical Center, R.N., 1963
Slavick, William H. (1970) Professor of English; University of Notre Dame, B.A., 1949; M.A., 1951; Ph.D., 1971

Small, William U. (1967) Academic Counselor; Bowdoin College, A.B., 1949; Columbia University, M.B.A., 1951
Smith, Alan G. (1967) Professor of Chemistry; Mount Allison University (New Brunswick), B.S., 1949; University of New Brunswick, M.S., 1951; University of Maine, Ph.D., 1966
Smith, Charles F. (1969) Associate Professor of Education; Westfield State College, B.S., 1960; University of Massachusetts, M.S., 1963; Ed.D., 1969
Sottery, Theodore W. (1956) Professor of Chemistry; Dartmouth, B.N.S., 1949; University of Maine, M.S., 1956; Ph.D., 1966
Southworth, Robert S. (1963) Professor of Education Psychology; Boston University, B.A., 1951; Ed.M., 1958; Ed.D., 1965

Soychak, Anthony G. (1965) Assistant Professor of Mathematics; University of Maine, B.S., 1959; Bowdoin College, M.A., 1963

Spaulding, Forrest (1983) Television Technical Operations Specialist
Spear, Joanne (1977) Director, Department of Community Programs; University of Maine, B.S., 1974; M.S., 1977
Stebbins, Barbara D. (1984) Head of Media Services; Bethany College, B.A., 1971; Uni-
versity of Hawaii, M.Ed., 1983
Stebbins, Richard G. (1983) Associate Professor of Chemistry; Wesleyan University, B.A., 1965; Texas A \& M University, Ph.D., 1970
Steele, William P. (1967) Associate Professor of Theatre; University of Maine, B.S.Ed., 1964; M.A., 1967
Steinman, Richard (1966) Professor of Social Welfare; University of Missouri, B.A., 1949; Columbia University, M.S., 1952; Brandeis University, Ph.D., 1968
Stone, Deborah, (1983) Instructor, School of Nursing; University of New Hampshire, B.S.N., 1977; Boston University School of Nursing, M.S.N., 1983
Stout, Elizabeth (1979) Administrative Manager, Small Business Development Center, Center for Research and Advanced Study
Stump, Walter R. (1968) Professor of Theatre; San Diego State College, B.A., 1959; M.A., 1960; Indiana University, Ph.D., 1974 Sturgeon, Richard H. (1962) Director, Advising and Information Department; University of Maine, B.S., 1960; M.Ed., 1966
Sturner, William (1978) Professor of Management; Fordham College, B.S.S., 1957; University of Wisconsin, M.A., 1960; Fordham University, Ph.D., 1966; Certificate, Gestalt Institute of Cleveland, 1978
Sullivan, James V. (1959) Coordinator and Professor, Therapeutic Recreation Programs and Director of Employee Health and Recreation; University of Maine, B.S.Ed., 1951; University of Delaware, M.Ed., 1954; Boston University, Ed.D., 1971
Sutton, John M., Jr. (1978) Associate Professor of Education; Boston College, A.B., 1961; University of Maine, M.S., 1972; Ed.D., 1976 Swanson, Mark T. (1983) Assistant Professor of Geology; Northeastern University, B.S., 1975; Lehigh University, M.S., 1979; State University of New York at Albany, Ph.D., 1982
Sytsma, Donald (1972) Associate Professor of Psychology; Arizona State University, B.A., 1965; University of Waterloo, Ph.D., 1971
Talbot, Franklin (1963) Reference Librarian; University of Maine, B.A., 1946; Columbia University, M.S., 1949
Theriault, Anne M. (1969) Director, University of Southern Maine Alumni Association; University of Maine in Portland, A.B.A., 1967
Tibbetts, Kathie (1979) Assistant Law Librarian for Public Service, School of Law; University of New Hampshire, B.A., 1975
Tiffany, Julia (Jill) (1981) Assistant Professor, School of Nursing; University of Washington, Seattle, B.S., 1962; Rutgers, The State University, M.S., 1967
Tisdale, Janice (1984) Research Assistant Small Business Development Center, Center
for Research and Advanced Study; Bates College, B.S., 1971; University of Minnesota, M.A., 1972

Tizon, Judy (1972) Associate Professor of Anthropology; University of Illinois, B.A., 1965; University of California, M.A., 1969; Ph.D., 1975
Tryon, Phyllis A. (1965) Associate Professor, School of Nursing; Boston University, B.S., 1958; Yale University, M.S.M. and C.N.M., 1962
Tucker, Frances M. (1970) Registrar, School of Law
Tukey, Geraldine M. (1970) Associate Professor, School of Nursing; Mercy College of Detroit, B.S., 1957; Boston University, M.A., 1964
Turlo, Kathleen E. (1980) Instructor, College of Education; University of Maine, B.S., 1974; M.S., 1980
Ubans, Juris K. (1968) Professor of Art; Director, Art Gallery; Syracuse University, B.F.A., 1966; Pennsylvania State University, M.F.A., 1968

Ubans, Mara (1970) Associate Professor of German; Indiana University, A.B., 1960; University of Southern California, M.A., 1962; Ph.D., 1975
Veazie, Carl E. (1977) Senior Economist, Center for Research and Advanced Study; Whitman College, B.A., 1943; Columbia University, M.B.A., 1948
Ventresco, Fiorello B. (1966) Associate Professor of History; Boston University, A.B., 1959; University of Michigan, M.A., 1961
Vezina, Kathryn L. (1984) Instructor in Nursing; New Hampshire Technical Institute, A.S.N., 1977; University of California/ San Francisco, B.S., 1982; M.S., 1983
Walkling, Robert A. (1969) Associate Professor of Physics; Swarthmore College, B.A., 1953; Harvard University, M.S., 1954; Ph.D., 1962
Ward, Jean F. (1977) Academic Counselor; University of Southern Maine, B. A., 1977
Ward, Thomas M. (1976) Professor, School of Law; University of Pennsylvania, B.A., 1965; Notre Dame Law School, LL.B., 1968; University of Illinois Law School, LL.M., 1970
Warren, Beth I. (1978) Executive Director for Human Resources; Wheaton College, B.A., 1959; Simmons College School of Social Work, M.S.W., 1963
Waxler, Lawrence I. (1976) Coordinator of Contracts and Grants, Center for Research and Advanced Study; University of Maine at Portland-Gorham, B.S., 1975
Webster, Maureen MacDonald (1983) Assoc̣iate Professor of Public Policy and Management; Dip. Com. Hons., Scottish College of Commerce, 1951; B. Com. Hons., University of London (England), 1952; A.M., Syracuse University; Ph.D., 1971

Welty, Charles (1979) Associate Professor of Computer Science; University of California at Berkeley, B.S., 1967; M.S., 1968; University of Massachusetts, M.A., 1977; Ph.D., 1979
Wescott, Madeline H. (1956) Staff Associate for Payroll
Westfall, James R. (1983) Assistant Professor of Associate Business Administration; Dartmouth College, A.B., 1967; Amos Tuck School of Business Administration, M.B.A., 1968
Whitmore, Allan R. (1969) Associate Professor of History; University of Maine, B.A., 1962; Northwestern University, M.A., 1964; Ph.D., 1970
Whitney, Sarah F. (1973) Director, Nursing Resource Laboratory, School of Nursing; Catherine Spaulding College, B.S.N., 1960; Catholic University of America, M.S.N., C.N.M., 1964

Willard, Nancy L. (1969) Assistant Professor of Physical Education and Recreation; Russell Sage College, B.S., 1958; State University College, Plattsburg, N.Y., M.S., 1967
Willison, Gary S. (1984) Lieutenant Colonel, U.S. Army, Professor of Military Science, ROTC; Indiana University of Pennsylvania, B.A., 1966; M.Ed., 1973

Wise, William B. (1966) Executive Assistant to the President; University of Maine, B.S., 1961; University of Maine at Orono, M.Ed., 1971
Wood, Duane R. (1981) Dean, School of Business, Economics and Management and Professor of Management; Rose Polytechnic Institute, B.S., 1964; Butler University, M.B.A., 1968; State of Indiana, P.E., 1969; Indiana University, D.B.A., 1974
Wood, Margo (1980) Assistant Professor of Education; Vassar College, B.A., 1961; University of Southern Maine, M.S., 1979
Woodbury, Robert L. (1979) President; Amherst College, B.A., 1960; Yale University, M.A., 1962; Ph.D., 1966
Woshinsky, Oliver H. (1971) Associate Professor of Political Science; Oberlin College, B.A., 1961; Yale University, M.A., 1967; M. Phil., 1968; Ph.D., 1971
Wright, James L. (1977) Vocational Education In-Service Staff Developer and Assistant Professor of Vocational Education; Boston University, B.S., 1950; Bridgewater State College, M.Ed., 1956; University of Maine at Orono, Ed.D., 1973
Wroth, L. Kinvin (1964) Dean and Professor, School of Law; Yale, B.A., 1954; Harvard, J.D., 1960

Yesner, David R. (1977) Associate Professor of Anthropology; Cornell University, B.A., 1971; University of Connecticut, M.A., 1974; Ph.D., 1977
Zaner, John A. (1974) Associate Professor of

Industrial Education; Millersville State College, B.S., 1969; M.Ed., 1972; Pennsylvania State University, Ed.D., 1977
Zarr, Melvyn (1973) Professor, School of Law; Clark University, A.B., 1958; Harvard

University, LL.B., 1963
Zimmerman, Jean T. (1983) Coordinator of Student Intramurals and Recreation; Gettysburg College, B.A., 1974; University of New Hampshire, M.S., 1978

## Index

Academic Calendar
Academic Dismissal
Academic Policies
Academic Record
Academic Suspension
Accounting Courses
Add-Drop Procedure
Administration of the University
Admission with Conditions
Admissions
Adult Candidates
Advanced Placement
Advising and Information Dept. (AID)
Advising and Orientation Fee
Alumni Association
Anthropology, Dept. of Geography and
Application Fee
Applied Science, School of
Army Reserve Officers Training Corp.
Art, Dept. of
Arts and Sciences, College of
Associate Business Administration, Dept. of
Associate Degree Programs
Astronomy Courses
Athletic Coaching, Certificate Program
Athletics, Intercollegiate
Intramural
Attendance Policy
Auditing Courses
Baccalaureate Degree Programs
Basic Studies, Division of
Bath Center
Biological Sciences, Dept. of
Board of Trustees, University of Maine
Business Administration, Associate Degree
Business Administration, Baccalaureate Degree
Business Administration, Dept. of
Business and Industry, Continuing Education
Business, Economics and Management, School of

Career Counseling and Placement
Center for Research and Advanced Study
Certificate Programs
Challenge Examination Policy
Chancellor's Office, University of Maine
Change of Major ..... 36
Chemistry, Dept. of ..... 70
Child Care Services ..... 28Classics, Dept. of ForeignLanguages and92
29 Class Membership ..... 3234 CollegeLevel Examination32188Commencement Fee
Program (CLEP) ..... 14
College of Arts and Sciences Courses ..... 58
College of Education ..... 165
9 Community Programs, Dept. of ..... 240
12 Communication, Dept. of ..... 74
14 Computer Science, Dept. of ..... 194
Conferences, Dept. of ..... 239
25 Confidentiality Policy ..... 36
16 Continuing Education for Business and Industry ..... 239
Continuing Education for Nursing and Health Professions ..... 240
Continuing Education Units (CEUs) ..... 239
Convocation ..... 50
COR Courses ..... 43
Core Curriculum and Requirements ..... 38
Course Numbering ..... 29
177 Courses to Satisfy Core Requirements ..... 40
105 Coursework at Other Institutions ..... 34
Criminology Program ..... 78
169 Counseling Services ..... 26
28 Culture Change, Museum of ..... 992836
34
Dean's List ..... 32
Degrees ..... 7
Deposits ..... 17
7 Developmental Disabilities ..... 227 Option ..... 231228
66 66 Double Major ..... 36
Dormitories ..... 28
Dropping Courses ..... 192
177, 230 Earth Science Courses ..... 106Early Admission Program11
Economics Courses ..... 191
183 Economics, Dept. of ..... 81
177 Education, College of ..... 165
Educational Media Services ..... 26
239 Elementary Education Program ..... 168
Emeriti ..... 246
177
Engineering, Dept. of ..... 212
English, Dept. of ..... 82
26 Examination Policy ..... 36
Exchange Study Opportunities ..... 27
237241
217
Faculty and Staff ..... 246
Fees ..... 16
2 Financial Aid ..... 21

Food Services
Foreign Languages and Classics, Dept. of
Fraternities
French Courses

Geography-Anthropology, Dept. of
Geology Courses
Geosciences, Dept. of
German Courses
Gerontology Option
Grade Point Averages
Grade Report
Grading System
Graduate Programs
Graduation Requirements
Graduation with Distinction
Greek Courses
Group Contract Programs
Handicapped Student Services
Health Services
Health Services Fee
History, Dept. of
Hotel, Motel, Restaurant
Management Option
Human Resource Development, Dept. of
Human Services Development Institute
Human Services Program
Independent Study
Industrial Arts Program
Industrial Technology Program
Installment Program
Instructional Television
Insurance
Interdepartmental Major Programs
International Students
Intown Center
Italian Courses
Language Laboratory
Late Fee
Latin Courses
Law, School of
Leave of Absence
Legal Assistants, Certificate Program
Liberal Arts, Associate Degree
Liberal Studies Major
Library
Lifeline Program
Loans
Map, Gorham Campus
Map, Portland Campus
Marine Law Institute
Mathematics, Dept. of

## 28

Matriculation Fee ..... 16
Media Services ..... 26

27
27 Meteorology Courses ..... 106231
95 Minimum Grade Policy
Minors, see specific departmentsMuseum of Culture Change99
Music, Dept. of ..... 123 ..... 10710497
231313430236343595New England Regional Program15
New Enterprise Institute ..... 238
Nursing and Health Professions, Continuing Education for ..... 240
Nursing, School of ..... 213
Oceanography Courses ..... 106
Pass-Fail Option ..... 33
Payment of Bills ..... 17
Phi Kappa Phi ..... 28
Philosophy, Dept. of ..... 133
Physical Education Courses ..... 173
Physical Science Courses ..... 109
Physics, Dept. of ..... 138
Political Science, Dept. of ..... 140
Post-Baccalaureate Study, Second Degree ..... 35
Prior Learning Assessment ..... 14
Professional Education, Dept. of ..... 168
Proficiency Requirements ..... 29
Programs of Study ..... 7
Public Service, Division of ..... 238
Psychology, Dept. of ..... 145
200
201
18
227
Re-enrollment ..... 361654
11
92897931795
23635
24153 Scholastic Aptitude Test54 School of Applied Science
11
Readmission ..... 34 ..... 34
Refunds ..... 18
Registered Nurse Challenge Exam
Policy ..... 217
Registration ..... 30
Repeat Course Policy ..... 33
Reserve Officers Training Corps ..... 234
Residence Halls ..... 28
Residence Requirements ..... 35
Room and Board Charges ..... 16
Saco Center ..... 228
Sanford Center ..... 229
Schedule Changes ..... 33
Scholarships ..... 22
11School of Business, Economics andManagement177
School of Law ..... 236
School of Nursing ..... 213
Selected Studies Program ..... 229
CIII Self-Designed Major ..... 54
238 Social Science Self-Designed Major ..... 57

| Social Work, Dept. of | 148 | Transcripts | 34 |
| :--- | ---: | :--- | ---: |
| Sociology, Dept. of | 152 | Transfer Students | 12 |
| Sororities | 27 | Trustees, University of Maine | 2 |
| Spanish Courses | 97 | Tuition and Fees | 16 |
| Special Students | 12 | Tuition, Residency Status | 20 |
| Student Activities | 27 |  | 34 |
| Student Activity Fee | 16 | Variable Credit | 27 |
| Summer Session | 237 | Veterans Services | 205 |
| Suspension, Academic | 32 | Vocational Technology Program |  |
|  |  |  | 35 |
| Technology, Dept of | 199 | Withdrawal | 46 |
| Testing and Assessment, Office of | 25 | Women's Studies Program | 22 |
| Theatre, Dept. of | 158 | Work-Study Program |  |
| Therapeutic Recreation Programs | 221 |  |  |

## Portland Campus



## Portland Campus

1. Campus Center (Bookstore, Dining Center)
2. Alumni House
3. Law School/Center for Research and Advanced Study
4. Luther Bonney Hall (Library)
5. Payson Smith Hall
6. Portland Gymnasium
7. Central Heating Plant
8. Science Building
9. Child Care
10. 92 Bedford Street
11. 94 Bedford Street
12. 118 Bedford Street
13. 120 Bedford Street
14. 7 Chamberlain Avenue
15. 15 Chamberlain Avenue
16. 38 Chamberlain Avenue
17. 3 Washbum Avenue
18. 25 Washburn Avenue
19. 209 Deering Avenue
20. 228 Deering Avenue
21. 11 Granite Street
22. 39 Exeter Street
23. 45 Exeter Street
24. 47 Exeter Street
25. 55/57 Exeter Street
26. 59/61 Exeter Street
27. 65 Exeter Street
28. West Hall

## Parking

Pl. Faculty/Staff/Student Commuter
P2. Student Commuter
P3. Student Commuter/Resident
P4. Faculty/Staff
P5. Faculty/Staff
P6. Faculty/Staff/Visitor
P7. Faculty/Staff/Student Commuter
P8. Faculty/Staff
P9. Student Commuter

University of:Southern Maine
a unit of the University of Maine

