

1988

University of Southern Maine Graduate Catalog 1988-89

University of Southern Maine

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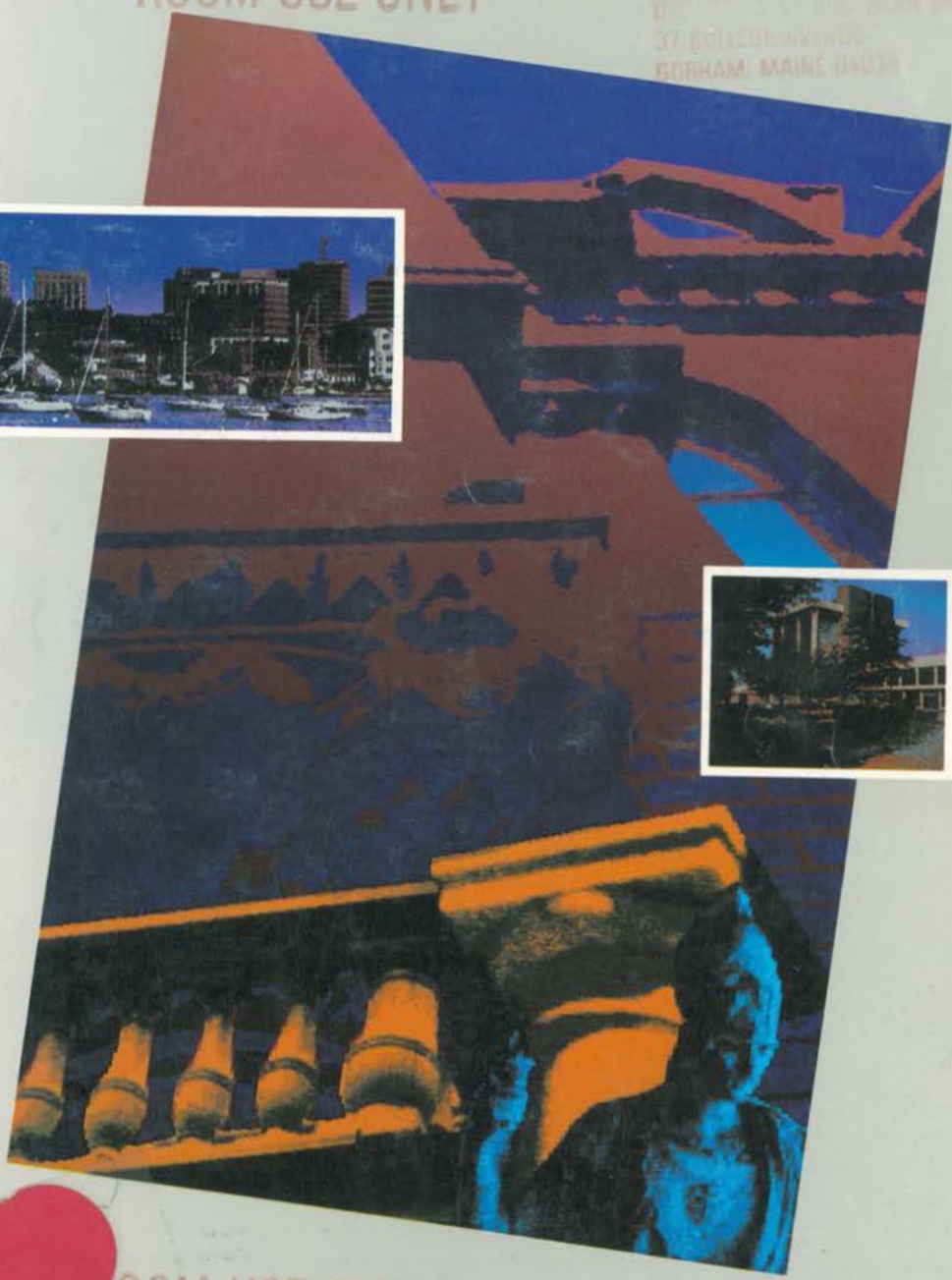
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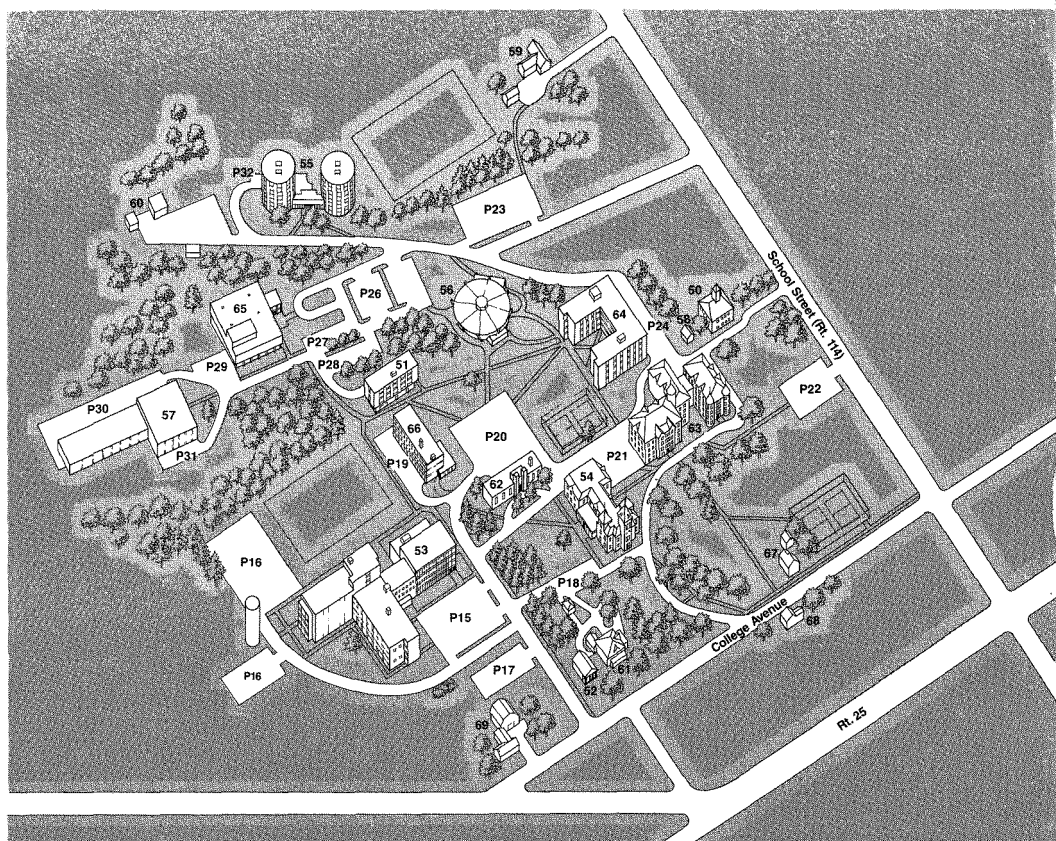
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Gorham Campus



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
- P17. 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

Graduate Catalog
1988-1989

University of Southern Maine

For Gorham mailing address: University of Southern Maine, College Avenue, Gorham, Maine 04038

For Portland mailing address: University of Southern Maine, 96 Falmouth Street, Portland, Maine 04103

The University's main telephone number: (207) 780-4141

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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 shall not discriminate and shall comply with applicable laws prohibiting discrimination on the grounds of race, color, religion, sex, sexual orientation, national origin, or citizenship status, age, handicap, or veterans status in employment, education, and all other areas of the University. The University of Southern Maine does not discriminate on the basis of handicap in admission or access to, or treatment or employment in, its programs and activities, in compliance with Section 504 of the Rehabilitation Act of 1973 and its implementing regulations. In addition, the University of Southern Maine does not discriminate on the basis of sex in its educational programs or activities, in compliance with Title IX of the Education Amendments of 1972 and its implementing regulations. Inquiries about the application of Section 504 or Title IX should be directed to EEO Director, 7 College Avenue, Gorham, Maine 04038. Telephone number: 780-5171. Inquiries about both areas may also be referred to the Office of Civil Rights, U.S. Department of Education, Region I, John W. McCormack Post Office and Courthouse Building, Boston, MA 02109.

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.

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Academic Calendar 1988—1989

Fall Semester

First Day of Classes	Wednesday, September 7 at 8:00 a.m.
Convocation	Tuesday, October 4
	No Classes:
	Portland, 1:00 p.m.-4:00 p.m.
	Gorham, 12:30 p.m.-4:00 p.m.
Veterans' Day Break Begins	After classes on Thursday, November 10
Classes Resume	Monday, November 14 at 8:00 a.m.
Thanksgiving Vacation Begins	At 4:00 p.m. on Wednesday, November 23
Classes Resume	Monday, November 28 at 8:00 a.m.
Last Day of Classes	Thursday, December 15

*Spring Semester**

First Day of Classes	Tuesday, January 17 at 8:00 a.m.
Winter Vacation Begins	After classes on Saturday, February 18
Classes Resume	Monday, February 27 at 8:00 a.m.
Spring Vacation Begins	After classes on Saturday, April 1
Classes Resume	Monday, April 10 at 8:00 a.m.
Last Day of Classes	Saturday, May 6
Commencement	Saturday, May 13

*All Monday classes (day and evening) will meet in place of Friday classes on Friday, January 20.

University of Maine School of Law

Fall Semester

Orientation and Registration	Wednesday, August 24
First Day of Classes (entering class only)	Tuesday, August 25 at 8:00 a.m.
First Day of Classes (upper classes)	Monday, August 29 at 8:00 a.m.
Thanksgiving Vacation Begins	At 5:00 p.m. on Wednesday, November 23
Classes Resume	Monday, November 28 at 8:00 a.m.
Last Day of Classes (first-year class)	Friday, December 2
Last Day of Classes (upper classes)	Wednesday, December 7
Examination Period* (for all classes)	Thursday, December 15-22

Spring Semester

First Day of Classes	Monday, January 9 at 8:00 a.m.
Winter Vacation Begins	Friday, February 24 at 5:00 p.m.
Classes Resume	Monday, March 6 at 8:00 a.m.
All Classes End	Friday, April 21
Examination Period*	Monday, May 1-9
Commencement	Saturday, May 13

*Examinations are regularly scheduled on Saturdays within the examination periods.

The University

The University of Southern Maine, one of seven campuses of the University of Maine System, has been serving the higher educational needs of the region for just over one hundred years, although this institution has had its present name only since 1978. The University traces its antecedents back to two institutions, Gorham State College (established in 1878) and the University of Maine in Portland (established in 1933). Today, the University is the second largest institution of higher education in the state of Maine and enrolls over 9,500 students who pursue degree programs in the College of Arts and Sciences, School of Business, Economics and Management, College of Education, School of Law, School of Nursing, and School of Applied Science. Thirty-eight baccalaureate degree programs as well as graduate and professional studies are available. The University is served by over 285 full-time faculty, most of whom hold terminal degrees in their respective fields and who distinguish themselves by a strong commitment to teaching, scholarly research, and service to the community. As a unit of the University of Maine System, the University of Southern Maine, through its students, faculty, and programs, benefits from its association and cooperation with its sister campuses.

Graduate study is today an integral part of the educational activity of the University of Southern Maine, although graduate programs, with the exception of law, are of relatively recent development. The oldest post-baccalaureate program at the University is the juris doctor, offered by the University of Maine School of Law. The study of law has been available in Maine since the establishment of the then College of Law in 1898. The master's degree in education was the next program to be made available, enrolling students in 1964. The master of business administration degree followed in 1971. Today, all are strong programs serving the preparatory and continuing professional and educational needs of their constituencies.

More recently, in recognition of its responsibility to serve as the second center of graduate study in the University of Maine System, the University of Southern Maine has developed several new programs, some professional in nature, others interdisciplinary in emphasis. The master of science program in nursing, first offered in 1982, is designed to meet the present and emerging health-care needs of the region by providing an opportunity for advanced study and clinical training in a profession that nationally has assumed greater responsibility for the preparation of its members. The master of science program in computer science, begun in 1982, is primarily professional in nature and is directed to individuals pursuing careers in industry.

The graduate program in public policy and management offers students an interdisciplinary preparation for leadership careers in local, state, and regional public, governmental, and private organizations. Through a cooperative arrangement with the University of Maine in Orono, two master of science degree options are possible: the master of science in electrical engineering and the master of engineering in electrical engineering. The master of science in applied immunology, offered in cooperation with Maine Medical Center and the Foundation for Blood Research, prepares its graduates for either continuing study or careers in the rapidly developing field of biotechnology.

Last year the University of Southern Maine introduced three new graduate programs: New England studies and statistics offered by the College of Arts and Sciences, and school psychology offered by the College of Education.

The University affirms that graduate education should provide the subject matter and require study at a level that builds upon the knowledge and intellectual skills acquired through undergraduate experience. It should strengthen and broaden professional competence and stimulate independent research. Indeed, research, basic and applied, is a critical component of all graduate education. To support these objectives, the University is served both by a strong faculty and the resources of associated facilities. The libraries of the University contain over 345,000 volumes to

support graduate and undergraduate programs, and over 2,400 periodical, yearbook, annual subscriptions, and 679,000 microforms provide current information resources. The libraries also make available nearly 400 bibliographic data bases. The resources of other libraries in the region, as well as the nation, may be identified through the OCLC network and borrowed through the interlibrary loan service.

The computing facilities at the University of Southern Maine include access to an IBM 3033 processor with 16 megabytes of main memory, an IBM 4381 processor with 16 megabytes of memory, and an IBM 4341 processor with 12 megabytes of memory. The primary operating system for academic users is VM/CMS which supports interactive program development and production runs. The University also has a DG MV4000 minicomputer, an AT&T 3815 minicomputer, and a VAX IV750 minicomputer running UNIX operating systems. In addition to those computer facilities, there are over 150 IBM compatible and Apple microcomputers available to students in many locations throughout the campus.

In addition to the regular academic semesters, the Summer Session offers a wide range of coursework at the graduate level. For a schedule of summer graduate courses, please consult the Summer Session catalog.

Graduate Affairs

The Office of Graduate Affairs, in association with the Graduate Council and the academic deans, coordinates graduate activities at the University of Southern Maine. The Graduate Council is made up of elected faculty representing the various graduate programs. The Council, through the Associate Provost, provides advice regarding the quality and standards of graduate education, review of existing and proposed programs, and policy and procedures regarding admissions, degree requirements, and related matters. The Associate Provost is responsible for the operation of the Office of Graduate Affairs. All graduate students are invited to visit this Office, located in Payson Smith Hall, on the Portland campus.

Graduate students in particular programs are also advised to maintain close contact with the appropriate director or graduate coordinator in that school, college, or program.

The Portland Area

The University of Southern Maine has two campuses. The Gorham campus is located on a hill overlooking the town of Gorham, a community of approximately 9,000. The campus has many of the desirable features of a small college: attractive rural setting, close proximity to faculty and facilities, and intimate atmosphere. The Portland campus, where most graduate programs are based, is located in Maine's largest city and the center of financial, business, and cultural activities. The University is thus able to offer its students the cultural, social, and recreational amenities of both an urban and rural setting to complement their educational programs.

Portland is approximately 100 miles north of Boston, 300 miles north of New York, and about 300 miles from Montreal. The city is served by Bar Harbor, Delta, United, USAir, Presidential, and Continental airlines, by Greyhound busline, and is contiguous to the Maine Turnpike.

Admissions

The following policies and procedures apply generally; consult the particular degree program for specific information.

General Policy

To be admitted to graduate study, an applicant must have received a baccalaureate degree or the equivalent from an accredited college or university and show promise of ability to pursue advanced study and research in the appropriate program.

Required Submissions

- A. A completed application.
- B. Letter(s) of recommendation.
- C. Official transcript(s) of all previous undergraduate and graduate work.
- D. Official score(s) from standard tests (e.g., Graduate Record Examination, Miller Analogy Test) if required. Scores must be for tests taken within five years of application deadlines.
- E. A nonrefundable \$15 application fee with the application.
- F. Such other materials as may be defined by the school or college.

For additional policies and procedures governing application to a particular school or college at USM, please refer to the program description outlined in this catalog under each of the respective schools or colleges.

Submission of Application

Except for graduate study programs in the College of Education, all documents relating to an application for admission to graduate study are to be sent to the Office of Graduate Affairs, which is located on the Portland campus. All materials relating to graduate study in the College of Education should be sent directly to the Office of Graduate Education, which is located on the Gorham campus. Once all materials are received they will be forwarded to the appropriate graduate unit for review. Final action on the status of the application is taken by the respective graduate program. Notification of final action is made by the Office of Graduate Affairs or the Office of Graduate Education. All papers relating to an application become the property of the University of Southern Maine. Until they are notified their application file is complete, applicants should direct their inquiries to the Office of Graduate Affairs or Office of Graduate Education.

Application Deadlines

Applications for admission and supporting material must be received by the Office of Graduate Affairs or the Office of Graduate Education by deadlines set by the individual graduate programs. Please refer to the appropriate program description for specific information.

Deadline for Enrollment

An applicant admitted for full-time or part-time study must register in that semester for which he or she has been admitted unless other arrangements are made.

Readmission

A student previously registered in a graduate program who has failed to maintain continuous enrollment or who has withdrawn or been withdrawn from the program or a student who has failed to matriculate in accordance with the enrollment deadline and who wishes to resume studies must file an application for readmission to graduate school by the regularly published deadlines for the semester or summer session and register during the usual registration period. The application for readmission is to be accompanied by official transcripts of any work attempted in the interim.

Classification of Admissions

Regular admission is granted a student who has a record of high scholarship and about whom there is no question of ability to carry on graduate study.

In some instances, conditional admission may be granted to a student who does not meet the established requirements or standards provided there is sufficient evidence to show that the student is capable of doing satisfactory graduate work. Prospective students should consult the specific graduate program for further information. Those programs admitting students conditionally determine the conditions to be met to change to a regular status.

Foreign Student Applications

Students whose first language is not English are required to take the Test of English as a Foreign Language (TOEFL) and submit scores as part of the application documents. Transcripts from foreign universities should provide the student's rank in class.

Admissions Credit

Admissions credit is credit earned for graduate coursework completed at the University of Southern Maine after the student has made formal application to a graduate program but prior to matriculation into a graduate program.

Admissions credit must be approved by the appropriate graduate program prior to course registration and is subject to the condition that a grade of B or better is received for the coursework. For the maximum number of admissions credits allowed, please consult the appropriate section of this catalog for the specific graduate program. Not all graduate programs may grant graduate admissions credit.

Transfer Credit

Transfer credit is credit earned for coursework prior to matriculation in a graduate program at the University of Southern Maine. Such credit is normally approved only at the time of admission and request for approval must be included as part of the admissions application. The amount of transfer credit accepted is determined by each graduate program. Additional credit may be approved by the appropriate graduate program in unusual circumstances. Transfer credit will not be approved for: 1) courses that would not have received graduate credit if taken at the University of Southern Maine; 2) correspondence courses; 3) courses that exceed time limits prescribed for a particular degree program; 4) courses in which a grade lower than a B was received; 5) courses that are inappropriate for inclusion in the student's program of study. For specific program policies regarding transfer credit, please consult the appropriate section of this catalog.

Admission of the Handicapped

Physical and mental health are basic considerations in admitting any applicant to the University, but a physical handicap, such as confinement to a wheelchair or visual impairment, is not in itself a necessary barrier to admission. All classroom buildings and two dormitories are equipped with ramps for wheelchair access. The University Library contains a Kurzweil Reading Machine to assist the visually impaired. Most elevator buttons are coded in braille. An applicant reporting a physical handicap will be advised to schedule an interview with the University Coordinator of Handicapped Student Services.

Appeal of Admissions Decision

Applicants may appeal an admissions decision by submitting a written appeal to the dean or director of the appropriate program. The appeal will be reviewed by the appropriate graduate program faculty, and the dean or director will notify the student of action taken on the appeal. Should the student wish to pursue the appeal process further, a written appeal should be submitted to the Associate Provost. The applicant's letter should include all information she or he believes should be taken into account in reviewing the decision. Still further appeal of the admissions decision may be made to the Provost.

Financial Information

The charges listed below were in effect as of July 1988. Tuition rates are established by the University of Maine System Board of Trustees. The University reserves the right to adjust these charges to respond to changing costs, state and/or federal legislative action, and other matters. Such adjustment may be made any time prior to the date of final registration for a given academic term. A student acknowledges this reservation by applying for admission or registering for courses.

There are three types of tuition charged: undergraduate, graduate, and law. Tuition charges are calculated by multiplying the number of credit hours attempted by a rate established by the University. Courses being audited are included in this calculation.

The type of tuition charged is usually determined by a student's degree program and the student is charged the rate assigned that program for all credits. A student admitted to the law or graduate program who registers for undergraduate credit is charged the appropriate law or graduate rate for all courses. A student who has not been admitted into a degree program who registers for law and graduate or undergraduate courses is charged the law rate for all coursework. A student who has not been admitted who registers for graduate and undergraduate courses is charged the graduate rate for all courses.

Tuition

Tuition Charges Per Credit Hour

	<i>Graduate</i>	<i>Law</i>
Maine Resident	\$ 65.00	\$125.00
Non-Maine Resident	\$183.00	\$250.00
New England Regional Program	\$ 81.25	\$156.25

Fees

Application Fee A mandatory \$15.00 fee is charged to an applicant who has not previously matriculated at the University of Southern Maine. This fee is charged only once.

Matriculation Fee A mandatory one-time \$15.00 fee charged to create a student record when a student begins pursuing a degree within the University of Maine System.

Activity Fee This is a mandatory fee charged each semester. Law students are charged \$10.00. Graduate students are not charged this fee.

Recreation Fee A mandatory \$7.50 per semester fee charged students registered for 6 or more credit hours.

Course Fees A mandatory fee is assessed for some courses. These fees cover costs associated with specialized instruction. The applied music fee is an example of this type of charge. Additional information is provided in University course listings.

Materials Fee A mandatory \$10.00 per semester fee charged law students for course-related materials.

Health Service Fee The University provides on-campus health services. Students may use these facilities on a fee-for-service basis. By paying the health service fee, students may reduce or eliminate some service charges. Students planning to register for both fall and spring semester are charged \$42.00; students registering for one semester are charged \$21.00. Additional information is available from Health Services. A student must be registered for three or more credits to qualify for this optional service.

Health Service and Insurance Package This is an optional package that includes the Health Service fee and health insurance. Students planning to register for both fall and spring semester are charged \$162.00; students registering for one semester are charged \$101.00. A student must be registered for three or more credits to be eligible to participate. Additional information is available from Health Services.

Commencement Fee A mandatory \$15.00 fee charged to a student who completes degree requirements. This fee must be paid at least six weeks prior to Commencement. Law students are not charged this fee.

Late Fee A mandatory \$25.00 fee charged students who do not pay University bills when due.

Insufficient Funds Fee A \$5.00 fee charged when a student's check is returned or a bank card is declined for insufficient funds.

Room and Board

Board Students living on the Gorham campus must purchase one of the three following weekly meal plans. Students living in Portland Hall must purchase a meal plan; information is available from Residence Life.

10 Meal Plan	\$695.00 per semester
14 Meal Plan	\$715.00 per semester
19 Meal Plan	\$755.00 per semester

Students living off-campus may purchase any of the residence meal plans, the "60 Meal Deal" for \$195.00, or meal coupons.

Room The University offers housing on the Gorham campus and within walking distance of the Portland campus. Rates vary. Additional information is available from Residence Life. There are additional charges for parking at the Portland facility.

Gorham Residence Halls	
Double Room	\$835.00 per semester
Single Room	\$985.00 per semester

Portland Residence Hall	
A wing	\$1,024.00 per semester
B wing	\$ 974.00 per semester
Yankee Clipper Wing	\$1,099.00 per semester

Telephone Fee Students living in University housing may purchase telephone service. Information about rates and restrictions is available from Residence Life.

Other Expenses

Books and Supplies Students are responsible for the purchase of books and supplies. Payment is made at the time of purchase.

Installment Payment The University offers two optional installment payment plans administered by the Academic Management Service (AMS). The University does not assess any additional fee for either plan. AMS charges a \$45.00 fee to enroll in the ten payment plan and a \$15.00 fee to enroll in the three payment plan.

Deposits

Students admitted to the School of Law must pay a nonrefundable \$150.00 tuition deposit by April 15 or within two weeks of acceptance if admitted after April 1. Checks should be mailed directly to the School of Law. This deposit will be applied to tuition charges if the student registers and remains enrolled; otherwise it is forfeited. With permission of the Law School, payment may be postponed in cases of extreme hardship. Other graduate programs do not require a deposit.

Newly admitted students who are approved for on-campus housing must also pay a \$75.00 room deposit. After a student registers, these deposits are applied to his or her account. These deposits are forfeited if an applicant for September admission withdraws after May 1, or if an applicant for January admission withdraws after January 1. Applicants who provide the Admissions Office with written notification of withdrawal before the previously mentioned dates will have the deposit refunded.

The Department of Residence Life establishes and publicizes dates for room selection each spring. Students who are registered for spring semester and request on-campus housing for fall are required to pay a \$75.00 room deposit. Usually, this deposit is applied to the fall bill. If a student notifies Residence Life that housing is not desired before May 1, this deposit will be refunded. If notification is received after May 1, the deposit is forfeited.

Payment Policies and Procedures

Billing Each semester, the University establishes specific dates for charging students and mailing bills. It is the student's responsibility to maintain accurate home and local addresses at the Registrar's Office. Students registering during some Orientation Sessions, the open registration period, and after classes start are billed at the time of registration.

How To Make Payment The University offers a variety of payment options.

Cash Cash payment may be made at the Student Billing Office or at an off-campus center. Cash should not be mailed.

Checks Checks should be made payable to the University of Southern Maine. The student's name and Social Security number should be shown on the check.

Credit Cards The University accepts both MasterCard and Visa for payment of tuition and mandatory fees. No more than \$1,000.00 can be charged each semester and the minimum allowable transaction is \$25.00. Room and board charges cannot be paid by credit card.

Financial Aid From USM The University offers eligible students grants, scholarships, loans, and employment opportunities. Grants, scholarships, and loans are credited for payment of University charges. Additional information can be obtained from Student Financial Aid.

Each semester, the University establishes deadlines for financial aid application. Students who apply on time may defer paying University charges while the financial aid application is processed.

Installment Payment The University offers payment plans administered by the Academic Management Service (AMS). A student must be registering for at least six credit hours to participate in either AMS plan. Additional information about these plans and enrollment deadlines are available from Student Billing. The ten payment plan is recommended for students planning to attend both semesters. A three payment plan is also available. AMS charges a \$45.00 fee to enroll in the ten payment plan and a \$15.00 fee to enroll in the three payment plan.

Outside Scholarships Students must notify Student Billing of any non-University scholarships, to be used to pay University charges, prior to the date payment is due. Upon receipt of proper documentation, the University may extend the payment due date.

Third Party Payments A student must give Student Billing written authorization from the agency/employer prior to the payment due date. No conditional payment offers will be accepted.

When Payment Is Due Each semester, the University establishes specific dates payment is due and notifies students of these dates on bills and through University publications. Unless other appropriate payment arrangements have been made, charges must be paid prior to the first day of scheduled University classes.

Adding Courses Costs associated with credit hours added after the semester begins must be paid at the time of registration.

Other Charges After the semester starts, additional charges must be paid as they occur.

A late fee is charged if payment is not received by the due date. Students with past due charges are not allowed to re-register. The University also reserves the right to cancel a current semester's registration, preventing a student from receiving grades or credit for courses if outstanding charges are not paid.

Transcripts and other records will be withheld from students who have not paid all bills and loans due the University. This includes bills for damage to University property, unpaid charges, or fines owed due to violation of University motor vehicle regulations and library fines.

Add/Drop

During the first two weeks of classes, academic schedules may be adjusted. A student is not charged for a course dropped during this period. This adjustment period begins with the first day of scheduled University classes and includes weekends and holidays. The date the Registrar receives a Schedule Change Form dropping a course is used to determine when adjustment is appropriate.

Refund Policy

The charges assessed students who withdraw from the University are adjusted in accordance with the schedules shown below. The date the Registrar receives written notification of withdrawal is used when calculating refunds. A semester begins with the first day of scheduled University classes and includes weekends and holidays.

Failure to notify the Registrar promptly will increase financial liability. A student who feels the withdrawal was caused by reasons beyond his or her control (extended illness or military service obligations, for example) may petition for special consideration. Charges will not be reduced for volun-

tary absence from classes. Contact the Registrar for additional information about this procedure.

Tuition and Room Refunds The following schedule applies when a student withdraws from the University. University fees are not refunded after the 100% refund period. Students who vacate University housing, but remain enrolled, will be charged in accordance with the terms and conditions of the Residence Hall contract.

<i>Fall and Spring Semester</i>	<i>Refund Percentage</i>
Withdrawal prior to the end of the first week	100%
Withdrawal prior to the end of the second week	75%
Withdrawal prior to the end of the third week	50%
Withdrawal prior to the end of the fourth week	25%
Withdrawal after the fourth week	0%
<i>Special and Summer Sessions more than three weeks</i>	
Withdrawal prior to the first day of class	100%
Withdrawal prior to the end of the first week	75%
Withdrawal prior to the end of the second week	50%
Withdrawal prior to the end of the third week	25%
Withdrawal after the third week	0%
<i>Special and Summer Sessions that are three weeks or less</i>	
Withdrawal prior to the first day of class	100%
Withdrawal prior to the end of the first week	50%
Withdrawal after the first week	0%

Board Refunds Students who withdraw from the University are charged for meals at an established daily rate. Additional information is available from the Department of Residence Life.

Rules Governing In-State and Out-of-State Tuition

A student is classified as eligible or non-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 once having registered as an out-of-state student is eligible for in-state classification unless he or she has been a resident of the state of Maine for at least a 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" 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 Vice President for Administration.
 2. To the President of the campus.
 3. To the Treasurer of the University, whose decision 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 of 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.

***New England
Regional Program***

In cooperation with the New England Board of Higher Education the University offers certain graduate 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 available programs varies from year to year, candidates should consult the *New England Regional Student Program Graduate Catalogue*. Copies may be obtained from the Office of Graduate Affairs or from the New England Board of Higher Education, 45 Temple Place, Boston, Massachusetts, 02111.

Student Financial Aid

Students admitted to a master's degree program at the University are eligible to apply for financial aid from a variety of sources. The Student Financial Aid Office administers loans and employment programs for financially needy students. Maine lending institutions offer eligible students low interest student loans. Some employers offer assistance in the form of tuition reimbursement, flexible scheduling, or paid educational sabbaticals. Scholarship assistance may also be available from organizations, clubs, or religious groups of which the student or his or her family is a member. The University is also approved by the Veterans Administration for payment of veteran's benefits.

Eligibility for Aid

The University offers financial aid to needy students. Need exists when the student and his or her family lack the funds needed to pay educational costs.

Aid can be granted only to U.S. citizens and certain eligible non-citizens. Non-citizens 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.

Students receiving assistance must 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 are exempt from registration. Students must also submit a statement certifying that they have never defaulted on repaying a student loan and do not owe a repayment of federal grant funds. This statement is provided by the Student Financial Aid Office. Students who have defaulted or owe a repayment are not eligible for assistance.

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 or 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 pay the full cost of an 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, 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.

Application Procedures

New graduate students may apply for financial aid at any time but are encouraged to apply in the early spring. Continuing students are given priority if their FAF (Financial Aid Form) is received by the College Scholarship Service no later than April 1, 1989. Continuing students who miss the deadline may receive less aid than on-time applicants. The FAF is available from the Student Financial Aid Office.

All students must provide a signed copy of their most recent federal income tax return. The information will be used to verify the accuracy of the information on the FAF. Students required to provide parents' information on the FAF must also submit a signed copy of the parents' most recent federal income tax return.

Some students and/or parents do not file income tax returns. In this case, the appropriate person must give the Student Financial Aid Office written certification the information on the FAF is correct and no tax return will be filed.

Students who have attended colleges or universities other than the University of Southern Maine on at least a half-time basis are required to obtain a Financial Aid History form from the Student Financial Aid Office. One form must be sent to the financial aid office of each college the student has attended. The Financial Aid History form verifies the aid the student re-

ceived while attending that institution and is required by federal regulation. Students who have attended other institutions without receiving financial aid must still provide a Financial Aid History form.

How Financial Aid Is Allocated

The University begins reviewing student aid applications in early spring. Once a student is accepted, all necessary financial aid application materials are 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 funds, the amount of aid may be adjusted if the student's financial situation changes. Students (and, when appropriate, 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 USM.

Types of Aid Available

Graduate Assistantships are available in most programs. The assistant is required to pursue graduate studies (at least 6 hours of credit per semester or 9 hours of credit for foreign students) and to assist in supervising undergraduate instruction or conducting research. In compensation, the assistants are paid a yearly stipend plus up to 9 hours of tuition each semester. Assistantships are awarded by the Office of Graduate Affairs on the recommendation of the individual graduate programs. Interested students should first contact the Office of Graduate Affairs.

College Work-Study is a program funded by the University of Southern Maine and the federal government. Eligible students may earn between \$400 and \$4,000 per year. A student's financial need governs the amount that can be earned.

National Direct Student Loans are funded by the federal government, the University, and former borrowers repaying loans. No repayment is required until after the student ceases his or her education. Once repayment begins, the student is charged 5 percent 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.

Nursing Student Loan is a program similar to the National Direct Student Loan program, but charging a 6 percent rate of interest.

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

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

Supplemental Loans for Students is a program sponsored by the federal and state governments. Students may qualify for additional borrowing. Contact your local lending institution for more information.

Indian Scholarships/Tuition Waivers 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, Malecite, or Micmac Tribes. Certification of tribal status is required.

Veterans Educational Benefits Students eligible for educational assistance from the Veterans Administration are encouraged to contact the Veterans Affairs Office 30 days before the start of each semester. The Veterans Affairs Office is located in the Advising and Information Department, Room 110, Payson Smith Hall, on the Portland campus (telephone 207/780-4040).

For additional information, contact the Office of Student 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.

Academic Policies

The following policies apply generally to graduate programs. Consult each degree program for specific policies.

Courses offered for graduate credit are those listed in the graduate catalog or other official publications. The determination of whether or not a particular graduate course fulfills degree requirements, however, is the responsibility of the individual graduate program. Courses numbered 600 are restricted to graduate-level students.

Grading System

Grades at the University, except for the School of Law, 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; B; C; D; F.

Other letter grades are as follows:

P Pass: given only for certain courses open to the pass-fail option.

I Incomplete: a temporary grade given when the student because of extraordinary circumstances has failed to complete course requirements. Incomplete grades must be resolved by the end of the 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 (failure) 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.

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 may assign students invalid grades for a course, or may 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 semester. The Registrar shall notify faculty members involved, and their departmental chairperson, 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 resolution to 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 the sixth 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, audit basis.

Academic Record Changes

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 a course. At that time, the record becomes permanent and cannot be changed.

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.

Permanent Academic Record

The permanent academic record is maintained by the Office of the Registrar for all students of the University. While the grade report is the unofficial notification to the student, academic dean and advisor of that student's academic achievements for a given semester, the only true and valid documentation of academic work and student status is an official transcript of the academic record, stamped with the Registrar's signature and embossed with the seal of the University. 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. A Placement Transcript is unofficial, but may be reproduced by the Placement Office for prospective employers at no additional cost.

Confidentiality Policy

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

Grade Point Average

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

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

A D+, D, or an F is not an acceptable grade for graduate work. Students receiving such grades will be reviewed for retention in the graduate program.

Add/Drop

During the first week of a semester, students may add courses and select or reverse the pass-fail option. A period of two weeks is permitted to drop courses with no grade notation. The 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, she or he 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 according to any one of the procedures described above will be graded F in that course and must assume all financial obligations associated with the course.*

Enrollment and Auditing

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.

Credit for Undergraduate Work

A graduate student may be able to apply six credit hours of undergraduate work to his/her graduate program according to the determination of the particular program of study. In all cases, the following conditions must be met to apply undergraduate credit to a graduate program:

- A. Coursework must be earned after the student has been granted matriculation status in a graduate program.
- B. Coursework must add breadth or depth to the student's program of study.
- C. Coursework is not of a remedial nature to correct a deficiency.
- D. No equivalent or comparable graduate course exists at the University of Southern Maine.
- E. Coursework receives prior approval of the student's advisor, course instructor and graduate program director.
- F. Coursework is earned in upper-level undergraduate courses (i.e., 300-400 level courses).
- G. Grade of B or better is earned for the coursework.
- H. Coursework meets all existing graduate course requirements except the course number requirement.

Requirements of Graduate Study

Thesis Requirements

The requirement of a thesis is determined by each particular graduate program as well as the specific requirements and format for the thesis.

Oral and Written Comprehensive Examination

The requirement of an oral and/or written comprehensive examination is determined by each graduate program.

Directed Study

A degree student may earn up to nine hours of independent study or directed study. All independent study or directed study must be approved by the appropriate graduate program. Students are encouraged to consult with their faculty advisor regarding regulations governing independent study and workshop credit for particular programs.

Continuous Enrollment and Residency

Continuous enrollment requires that every graduate student must earn at least six credits towards his/her degree program every calendar year from the time of the first registration until completion of all requirements for the graduate degree. Students enrolled for thesis advisement, however, may take fewer than six credits per calendar year. Continuous enrollment fulfills the residency requirement.

Leave of Absence

In extenuating circumstances a student may petition for exception to the continuous enrollment policy; the petition must bear approval of the student's advisor, director of the graduate program, and notification must be sent to the Office of Graduate Affairs.

Time Limit

The time limit for completion of a graduate degree is dated from the date of first matriculation and is usually either five or six years, depending on the requirements of the particular graduate program.

Academic Grade Appeal Policy

The purpose of the academic grade appeal policy is to provide a fair and speedy review of all student appeals for academic grades in graduate/professional programs at the University of Southern Maine that will permit such appeals to be determined in a manner that reflects the interests of both the student and the instructor. The only matters reviewable under this policy are claims of prejudice on the part of an instructor in an academic exercise or activity for which a grade leading to academic credit is awarded, and/or evident and prejudicial error in the administration or grading method used for any paper, examination, performance, or other exercise or activity for which a grade leading to academic credit is awarded; provided that the academic judgment used in determining on the merits of the grade to be awarded to such exercise or activity shall not be reviewable.

An appeal under this policy shall be carried out according to the following procedures:

- 1. The student should present his or her complaint, in writing, to the instructor involved and shall seek to have the matter resolved by the

instructor. In no event shall there be a right of appeal hereunder for a complaint presented to the instructor more than 30 days after a final grade is mailed to the student or made available to the student through a registrar or official performing a similar function.

2. If the student remains aggrieved by the decision of the instructor under step (1), he or she may, within 15 days after the instructor's final decision, appeal, in writing, to the chairperson of the department, or program director, or dean of the college in which the course or other exercise or activity is offered.
3. The chairperson, program director, or dean, after discussion with the student and instructor, may resolve the grievance by agreement or render a decision within 60 days of receipt of the written appeal. The decision may be (a) that the appeal be dismissed or (b) that a grade be changed or the student be allowed an opportunity to retake an examination or other exercise or (c) that another appropriate remedy be administered.

The student or the instructor may, within 30 days of the receipt of the decision of the chairperson, program director, or dean, appeal to the Provost in writing, stating the reason for the appeal and delivering a copy of the writing to the opposing party and the chairperson, program director, or dean. The opposing party may, within 10 days of receipt of the reasons for appeal, reply in writing to the Provost. The Provost shall review the original complaint; the written decision of the chairperson, program director, or dean, and the written reasons for the appeal and reply. The Provost shall, within 60 days of receipt of the appeal and after reviewing the matter, prepare a written decision which shall uphold the decision of the chairperson, program director, or dean, or prescribe any other appropriate remedy. The Provost's decision shall be final and not subject to further review. Copies of the decision of the Provost shall be delivered to the student, the instructor, and the chairperson, program director, or dean.

Registration Policies

Registration

Prior to registering for a course each graduate student is required to consult with his/her advisor, complete a registration form, and obtain the signature of the advisor. The signed registration material must then be taken or sent to the Registrar's Office. College of Education graduate students must submit registration forms to the Office of Graduate Education. Registration is not complete until all fees have been paid at the Business Office.

Advanced Registration

Matriculated graduate students may register for courses during an advance registration period. Advance registration for the spring semester is conducted near the middle of the fall semester and registration for the fall semester is conducted near the middle of the spring semester. Matriculated students are encouraged to register during the advance periods to increase the probability that they will obtain desired courses. No payment of tuition fees is due during advance registration. For information regarding payment of bills, see the Financial Information section.

Registration Status

Full-time registration is for 9 or more degree credits; part-time registration is for 8 degree credits or less.

Student Advisement

Each degree student will be assigned a faculty advisor upon admission to a program. Students are encouraged to maintain regular contact with their faculty advisor throughout their program of study. Counseling and information are available from the Office of Graduate Affairs.

Extramural Course Credit

Courses taken at other institutions may be accepted as part of the graduate program provided they are taken after the student has matriculated and that prior approval is granted by the student's advisor and program director. Extramural credit is not approved for: 1) courses which would not have received graduate credit if taken at the University of Southern Maine; 2) correspondence courses; 3) courses which are inappropriate for inclusion in the student's program of study; 4) programs in which a grade lower than B was received.

Substitutions and Waivers

In certain circumstances a degree student may request a substitution or waiver of graduate education and/or program requirements. The program director should be contacted if a substitution or waiver of a graduate education requirement is requested.

Degree Progress

The definition of satisfactory progress towards completion of a degree is determined by the particular graduate program. However, in any semester in which the cumulative GPA falls below 3.0 (B average) the student will be placed on probation and must bring the cumulative GPA to 3.0 level within the time set by the graduate program or will be withdrawn from the program and must apply for readmission.

Withdrawal

Withdrawal from the University of Southern Maine may be for personal reasons on the part of the student, academic reasons as determined by the program requirements, or by administrative decision.

A. *Student Withdrawal.* To withdraw from the University the student must submit an official Withdrawal Form to the Registrar's Office and complete an exit interview with his or her advisor.

B. *Academic Withdrawal.* If a student has not made satisfactory progress towards fulfilling degree requirements (see above) he or she may be withdrawn from the University by the program director or department chair.

C. *Administrative Withdrawal.* A student may be withdrawn from a particular graduate program for reasons of a professional nature as determined by the program director or department chair. Such withdrawals must have approval of the Associate Provost.

If a student withdraws or is withdrawn from the University during the first two weeks of the semester, there will be no courses or grades recorded. A student withdrawing or being withdrawn after the second week through the sixth week will receive a W grade for each course in which the student was enrolled. A student withdrawing or being withdrawn after the sixth week will receive regular grade designations as determined by the instructor(s). Under unusual circumstances grades of W can be assigned after the sixth week if approved by the instructor and the director of the program, and with final approval of the Office of Graduate Affairs.

Program Transfer

A matriculated graduate student admitted to a particular program of study at the University of Southern Maine may request a program transfer within the University of Southern Maine. Formal application to the transfer program must be submitted in the usual fashion described under Admission. Transfer requests will be reviewed by the appropriate program faculty according to the admissions calendar. Transfer of credit will depend upon the requirements of the individual program.

Graduation

Graduation Requirements

To be eligible for graduation from a graduate degree program a student must:

A. Complete satisfactorily the number of graduate credit hours required in the program with a 3.0 grade average. All courses completed for graduate programs must be passed with a minimum grade of C.

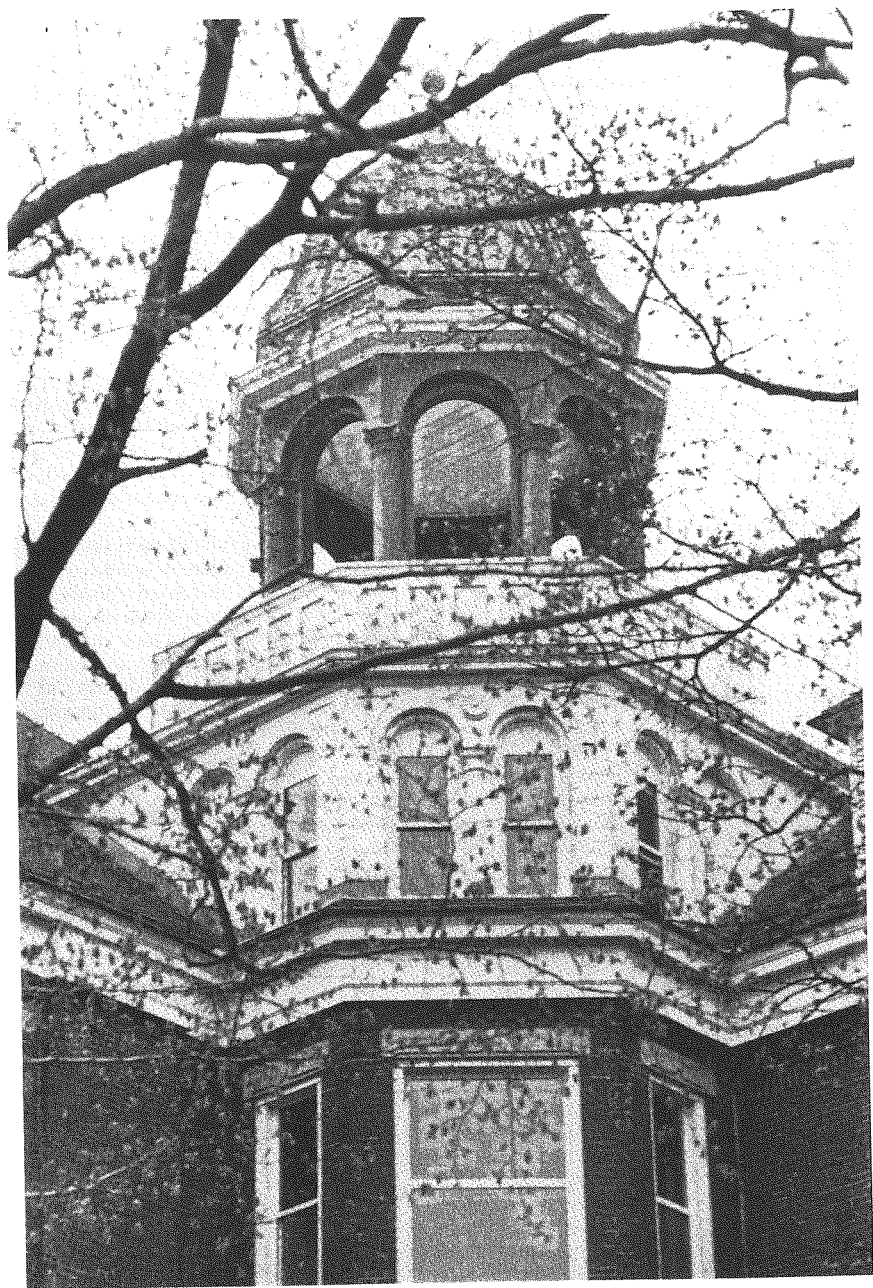
B. Complete satisfactorily all program degree requirements as defined in the particular graduate program (e.g., thesis, comprehensive examination).

C. Submit a completed application for graduation and a Commencement Fee to the Registrar.

Certification for Graduation Each graduate program is responsible for certifying fulfillment of graduation requirements by a student to the Office of Graduate Affairs.

Commencement Ceremony A graduate may participate in a commencement ceremony only if he or she has completed all degree program requirements and has been certified for graduation by the program.

Students may request exception to graduate study policies or appeal a decision based on these policies. Contact the Office of Graduate Affairs for procedures.



School of Applied Science

Dean: Brian C. Hodgkin

Associate Dean: Arthur O. Berry

The School of Applied Science offers the master of science degree in computer science; and through a cooperative arrangement, the master of science and the master of engineering in electrical engineering are extended from the University of Maine. Graduate courses in civil engineering are frequently available. The master of science degree in applied immunology is offered in collaboration with the Maine Medical Center and with the Foundation for Blood Research.

Master of Science in Computer Science

Chair: Charles Welty

Professor: Welty; *Associate Professors:* Gabrovsky, Heath, Schroff; *Assistant Professors:* Briggs, Vijaykumar; *Instructor:* MacLeod

Program Description

The master of science in computer science program is designed to provide the student with a thorough knowledge of the concepts, theory, and practice of computer science as well as develop the student's ability to analyze critically solutions to problems and to make sound professional decisions. Students will be prepared for positions of responsibility and expertise. Graduates may assume positions involving such diverse activities as the design, implementation, and testing of software products; the development of new hardware technology; and the analysis, construction, and management of large-scale computer systems. Graduates will possess a good foundation for further study in computer science.

Admission

Each student applying for full admission must meet the following requirements (conditional admission status may be granted to students who do not fully meet these requirements):

1. A baccalaureate degree from an accredited institution with grade point average of at least 3.0 on a 4.0 scale (B average).

2. The following USM courses or their equivalent with an average grade of 3.0:

COS 160 Introduction to Programming: PASCAL

COS 161 Algorithms in Programming

COS 250 Computer Organization

COS 280 Discrete Structures

COS 285 Data Structures

COS 360 Programming Languages

MAT 152 Calculus A

MAT 153 Calculus B

3. Official scores for the Graduate Record Examination (GRE) and GRE Advanced Computer Science Test.

Admission to the master's program is competitive and based on an evaluation of the application materials by the Computer Science Graduate Admissions Committee.

Applicants meeting the entrance requirements for a master's in computer science will be granted regular admission status. Applicants not meeting the entrance requirements of the program may be granted conditional admission during which time the student must compensate for any specific academic deficiency. The Computer Science Graduate Admissions Committee will designate specific undergraduate computer science and mathematics courses to remedy admissions deficiencies. These courses will carry no credit toward the master's degree and must be successfully completed and must precede the completion of 12 hours of graduate credit. Upon successful completion of the designated preparatory coursework the student may be granted regular admission status.

Application Materials

In addition to the materials described in the Admissions chapter, applicants for this program must submit three letters of recommendation attesting to the candidate's academic and/or professional accomplishments.

Application Deadlines

The application deadline is March 1 for fall semester (September) and October 1 for spring semester (January) admission.

Program Policies

In addition to the general policies described in the Academic Policies chapter, specific policies of this program are as follows.

Transfer Credit A maximum of 9 credit hours of transfer credit may be used toward the degree.

Time Limit All required courses for the M.S. degree must be completed within six years prior to graduation. Otherwise, additional coursework must be taken to fulfill program requirements.

Program Requirements

The master's program requires a minimum of 30 credits. Of these, 24 must be in coursework; the remaining 6 credits must be master's project credit. The required coursework must include an approved sequence of at least 8 courses. Six of these courses must be approved computer science offerings of which at least 4 must be graduate (500-600 level) courses.

Students may receive graduate credit for taking up to two upper-level courses offered by other programs subject to approval in advance by the computer science faculty. To ensure breadth in the field, each student is required to take MAT 380 Probability and Statistics, COS 450 Operating Systems, and COS 480 Introduction to Theory of Computing or their equivalent. One or more of these course requirements will be fulfilled if it is determined that the student has successfully completed equivalent coursework at the undergraduate level. However, graduate credit will not be given for courses taken to fulfill undergraduate requirements. Any other 300- or 400-level courses must be approved in advance by the computer science faculty if they are to be taken to fulfill degree requirements.

The student is required to undertake and complete a master's project. The project may take two different forms. If the student is affiliated with industry and involved in computer science-related activities, a well-defined practicum, approved by the computer science faculty, is one form. The student may also engage in an academic project under the direct supervision of a computer science faculty member. This option involves the solution of a research problem, the construction of a non-trivial software tool, or some other comparable summarizing activity.

The student is required to produce a final document describing the completed project. This document will adhere to a specified format and must be approved by a committee of computer science faculty members.

Graduate Courses

(Restricted to students with full graduate standing in the Computer Science Department or permission of the instructor.)

COS 550 Advanced Operating Systems

Topics include cooperating processes, privacy and protection of system and user processes, hardware aids, basic concepts of networks and distributed processing. System performance analysis may also be covered. Prerequisite: COS 450. Cr 3.

COS 552 Computer Networks and Distributed Processing

Topics include structure of present networks and proposed networks, network protocols, packet switching, workload sharing. Satellite and local networks, network architecture. May include examples such as ARPANET, DECNET, X.25, SNA. Prerequisites: COS 450 and MAT 380 or instructor's permission. Cr 3.

COS 555 Advanced Computer Architecture

This course presents topics from research areas in computer architecture as well as advanced and emerging technologies. Possible topics are parallel machines, content addressable memories, VLSI systems. Cr 3.

COS 558 Database Management

Data structures and access methods most commonly used in database systems. Major topics include: data models with an emphasis on the relational model. Overview of some database management systems. Cr 3.

COS 562 Modeling and Analysis of Computer Systems

Development and analysis of deterministic models of modern computer systems. Queuing models will be used to analyze computer operating systems and computer communication networks. An operational analysis

approach to performance evaluation and bottleneck analysis will be emphasized. Applications to actual systems will be considered. Other topics include: model validation, system measurement, mean value analysis, and computational algorithms. Prerequisite: COS 450 and MAT 380. Cr 3.

COS 565 Software Design and Development

A study of techniques and approaches related to the design and development of large scale software products. Consideration of formal methods for specification, analysis, design, implementation, and testing. A "large" group programming project will be the vehicle for much of the learning in this course. Cr 3.

COS 566 Simulation and Analytical Modelling

The theoretical limitations of analytical modelling will be contrasted with the practical limitations of simulation. The BCMP family of analytical models will be presented along with the computational solutions of these models. The use of simulation will be discussed with regard to a high level language (such as SIMSCRIPT) and will consider such topics as model verification and evaluation of experimental results. Cr 3.

COS 570 Seminar: Advanced Topics in Computer Science

Topics vary from year to year. Will include current research, emerging technologies, case studies.

COS 580 Theory of Computation

The study of computability theory, automata theory, and formal languages. Topics are simi-

lar to those discussed in COS 480 but will be covered in greater depth, with the emphasis on developing the ability to apply these abstract notions to practical situations. Prerequisite: COS 480. Cr 3.

COS 582 Design and Analysis of Algorithms

This course deals with the analysis of algorithms, and the relevance of such analysis to the design of efficient computer algorithms. Examination of such topics as sorting, tree and graph algorithms, pattern matching, algebraic simplification and transformations, NP-hard problems, and approximation algorithms. A balance is struck between the derivation of results of theoretical significance and the practical endeavor of designing efficient algorithms. Cr 3.

COS 585 Combinatorial Optimization

Combinatorial optimization problems include the traveling salesman problem, bin packing, and facility location in networks. These problems, while easy to describe, are often difficult to solve exactly. This course considers various combinatorial optimization problems and optimal and approximate algorithms. Cr 3.

COS 697 Independent Study

An opportunity for graduate students to pursue areas not currently offered in the graduate curriculum. Cr 3.

COS 698 Master's Project

A six-credit project is required of all students. The project must be approved by the computer science faculty in advance. Prerequisite: Full graduate standing and faculty approval. Cr 3 or 6.

Master of Science in Applied Immunology

Director: Neal S. Rote

Professor: Rote; *Assistant Professor:* Ng; *Adjunct Faculty—Professors:* Ault, Bagwell, J. Haddow, Hillman, Lovet, Rand, Ritchie, Charles Yentsch; *Associate Professors:* Beeson, Chandler, Johnson, Knight, Mahoney, Moody, Rhodes, Schroff, Sherbloom, Smith, Clarice Yentsch; *Assistant Professors:* Beauregard, Chlmonczyk, Donnenfeld; *Instructors:* Dostal, P. Haddow, Palomaki, Spiegel.

Program Description

Immunologic techniques have found applications in areas as diverse as cancer research, molecular genetics, marine biology, developmental biology, human reproduction, and organ transplantation. Furthermore, monoclonal antibodies and enzyme-based immunodiagnostic tests to detect such antigens as infectious agents and circulating hormones have revolutionized the diagnostic industry by providing sophisticated, specific, and sensitive assays.

The M.S. program in applied immunology is designed to prepare students for careers in basic research, clinical diagnosis, industrial research, and teaching. The program is truly interdisciplinary, providing graduates with a sound background in cellular, molecular, and medical immunology. Laboratory skills are emphasized. These include, but are not limited to, *in vivo* and *in vitro* cellular and humoral immune function assays, production and characterization of heterologous and monoclonal antibodies, immunodiagnostic techniques, and methods in biochemistry. Intensive electives and externships in advanced immunologic applications and theory, as well as opportunities for thesis projects, are offered with research, clinical, and

industrial laboratories throughout Maine. The student will be provided the opportunity to tailor programs specifically to individual needs and the flexibility to pursue training in his or her own particular area of interest. In addition, coursework includes the refinement of such general skills as are required of all scientists, namely: critical evaluation and presentation of current scientific literature, the reading and writing of technical material, problem solving, experimental design, logic and ethics.

The well-equipped laboratory facilities of the Applied Immunology Program at the University of Southern Maine and the laboratories of program affiliates provide the student with the opportunity to work with all equipment that is commonly found in the modern immunology laboratory.

Admission

The program is directed to the following individuals: graduates in life sciences; biomedical scientists; researchers; and technologists employed or prepared to be employed in public or private research laboratories, industrial laboratories, and health care and educational institutions.

For maximum consideration for admission to the program, a grade point average of 3.0 in undergraduate science and mathematics courses is highly recommended.

It is highly recommended that the applicant have completed courses in the following subjects or their equivalents: organic chemistry; biochemistry; microbiology; genetics; cellular and molecular biology; physiology.

The Applied Immunology Graduate Committee is responsible for evaluating applications and recommending candidates for admission. Interviews by members of this committee may be required of applicants. Applicants who have deficiencies in background courses that the committee considers essential for success in the program may be conditionally admitted, with full admission being dependent upon satisfactory completion of those courses.

Application Materials

In addition to the materials described in the Admissions chapter, applicants for this program must submit:

1. Official scores for the Graduate Record Examination (GRE) and one relevant advanced test are recommended.
2. Three letters of recommendation attesting to the candidate's academic and/or professional accomplishments.

Application Deadline

The application deadline is May 1 for maximum consideration for fall semester (September), but applications will be accepted until August 1.

Program Requirements

Forty credits are required for the master of science degree in applied immunology: 24 credits of required core courses, at least 6 credits of thesis research, and at least 10 credits of electives and externships.

Each student will be assigned an academic committee, which will be responsible for ensuring that the student fulfills all requirements for the program.

All students must complete the following courses:

AIM 610	Cellular Immunology	3 credits
AIM 611	Cellular Immunology Laboratory	3 credits
AIM 620	Molecular Immunology	3 credits
AIM 621	Molecular Immunology Laboratory	3 credits
AIM 630	Medical Immunology	3 credits
AIM 631	Medical Immunology Laboratory	3 credits
AIM 690	Journal Club	3 credits
AIM 530	Biostatistics and Computers	3 credits
AIM 698	Thesis Research	6 credits

Electives will be available in the form of advanced seminars or tutorials in many areas including:

AIM 640	Advanced Biostatistics
AIM 641	Biological Markers in High Risk Pregnancies
AIM 642	Computer Analysis of Biomedical Data
AIM 643	Computer Applications in Immunology
AIM 644	Concepts in Biochemical Epidemiology
AIM 645	Cytochemistry
AIM 646	Development of Immunoassays

AIM 647	Electrophoresis and Immunoblotting
AIM 648	Electron Microscopy
AIM 649	Flow Cytometry
AIM 650	Fluorescent Microscopy
AIM 651	Grant Writing
AIM 652	High Performance Liquid Chromatography
AIM 653	H1A and Erythrocyte Typing
AIM 654	Hybridoma Methodology
AIM 655	Immunochemistry in Oceanography
AIM 656	Immunoelectronmicroscopy
AIM 657	Immunohematology
AIM 658	<i>In vitro</i> Techniques in Cellular Immunology
AIM 659	Lymphocyte Subsets
AIM 660	Protein Phenotyping
AIM 661	Purification of Antigens and Antibodies
AIM 662	Reproductive Immunology
AIM 663	T-Cell Cloning
AIM 664	Chromatography
AIM 665	Tissue Culture Techniques
AIM 666	Laboratory Management

Externships will be available throughout the state of Maine in many laboratories that use immunological techniques in clinical, basic research, and industrial applications. These affiliates include biomedical, biotechnological, marine biological, and educational institutions.

AIM 530 Biostatistics and Computers

This course is intended to expose the student to the concepts of biostatistics. Topics include descriptive statistics, probability distributions, inference, significance testing, and regression. Students will also be trained in integrated software use, including word processing, database management, spread sheets and graphic representation of experimental data. Admission is restricted to AIM graduate students or with permission of the program director. Cr 3.

AIM 610 Cellular Immunology

This course stresses the cellular components of the immune system. Specific topics include characterization of the cells of the immune system, the cellular interactions during immune responses, distinguishing subpopulations of lymphocytes and their functions, the role of phagocytic cells, and the problems of immunization such as antigen dose, route of administration, and characterization of the immune response over time. Cr 3.

AIM 611 Cellular Immunology Laboratory

Cr 3.

AIM 620 Molecular Immunology

This course stresses the molecular components of the immune system. Specific topics include the genetics, synthesis, and structure of antibody molecules, the molecular basis for the generation of antibody diversity, genetic regulation of the immune response, structure and function of the major histocompatibility complex, and the kinetics of antibody-antigen interactions. This course will also consider the practical problems of antibody purification, determination of antibody affinity and avidity, preparation of antibody fragments, determi-

nation of antibody classes and subclasses, and the design of assays using enzyme-conjugated and radioactively labelled reagents. Cr 3.

AIM 621 Molecular Immunology Laboratory

Cr 3.

AIM 630 Medical Immunology

This course stresses the medical relevance and application of immunology, both in the laboratory and in the clinic. Specific topics covered include assay formats and design, assay interpretation, new technology and instrumentation, the role of the immune system in protection, the interactions of the immune system with inflammation, as well as the diagnosis, pathologic mechanisms, and treatments of immunodeficiency, autoimmune, and lymphoproliferative diseases. Cr 3.

AIM 631 Medical Immunology Laboratory

Cr 3.

AIM 690 Immunology Journal Club/Seminar

The Journal Club is intended to keep the participants current in immunology and to instruct them in the techniques of evaluating scientific literature critically and clearly presenting scientific information. The seminar, directed by faculty members responsible for the corresponding core course material and including outside lectures from among the affiliates as well as other academic institutions, will provide the student with an opportunity to discuss practical applications of the core lecture material. Cr 1 per semester

AIM 695 Externship

Cr var.

AIM 698 Thesis

Min. Cr 6.

Engineering Graduate Programs Offered in Cooperation with the University of Maine

Chair, Department of Engineering: Brian C. Hodgkin

Civil Engineering

Although a degree program in civil engineering is not available, graduate courses in civil engineering are offered at USM by extension from the University of Maine. Classes are held in the late afternoon and evening to facilitate attendance by working engineers. Past courses have been in groundwater hydrology, water quality, hydrogeotechnical aspects of hazardous waste disposal, and foundations. The department should be consulted for future offerings.

Electrical Engineering

Program Coordinator: John Vetelino, University of Maine

Program Description

Through a cooperative arrangement, the University of Maine graduate program in electrical engineering has been extended to the University of Southern Maine. Two master's degree options are available: the master of science in electrical engineering (M.S.E.E.) and the master of engineering in electrical engineering (M.E.E.E.). The extended master's in electrical engineering program is designed principally for students on an industrial career path. The program is tailored for working students, and all courses are offered in the late afternoon or evenings. Courses may also be taken by non-degree candidates. Normally only 6 credit hours of graduate study may be transferred into the degree program. A degree is awarded only following formal admission to the program and the completion of a designed course of study.

Admissions

Application for admission as a degree candidate is made to the Graduate School at the University of Maine. Application forms may be obtained from the Office of the Dean of the Graduate School, 2 Winslow Hall, University of Maine, Orono, Maine 04469 (207-581-3218) or from the Office of Graduate Affairs, University of Southern Maine, 96 Falmouth Street, Portland, Maine 04103 (207-780-4386). The completed application should be sent to the Graduate School in Orono with a copy to the Office of Graduate Affairs in Portland. Applicants should have an undergraduate degree in engineering or a related science. Applications should be submitted as early as possible, but at least six weeks before the beginning of the semester in which the student wishes to register.

The general and the engineering Graduate Record Examination should be taken and the scores sent to the Graduate School in Orono. Matriculation into the program is possible before the examinations are taken, but the examinations must be completed within a year of matriculation. For a complete description of Graduate School policies and regulations, the University of Maine graduate catalog should be consulted.

Program Requirements and Options

For a master of science in electrical engineering degree, the student must successfully complete at least 24 credit hours of coursework and at least 6 credit hours of thesis work. Whenever possible, the thesis will be employment-related. For the master of engineering in electrical engineering degree, the student must successfully complete at least 30 credit hours of coursework. For either degree, 6 credit hours of upper-level undergraduate courses may be included.

Students are expected to complete at least three of the following four core courses: Linear Systems Analysis, Electromagnetic Theory, Semi-

conductor Devices I, and Communications Engineering III. Selected courses are listed below. Courses consistent with the student's goals may be taken in other departments such as physics, mathematics, and computer science.

ELE 512 Linear Systems Analysis
 ELE 521 High Voltage Engineering
 ELE 523 Mathematical Methods in Electrical Engineering
 ELE 533 Advanced Robotics
 ELE 535 Computer Vision
 ELE 550 Electromagnetic Theory
 ELE 552 Wave Propagation
 ELE 553 Microwave Circuits and Devices
 ELE 562 Microwave Acoustics
 ELE 563 Design & Fabrication of Surface Wave Devices
 ELE 565 Semiconductor Devices I
 ELE 566 Semiconductor Devices II
 ELE 567 VLSI Devices and Technology
 ELE 571 Advanced Microprocessor-Based Design
 ELE 580 Communications Engineering III
 ELE 598 Selected Advanced Topics in EE
 ELE 699 Graduate Thesis

For further information, contact the Office of the Dean, 106 Science Building, University of Southern Maine, 96 Falmouth Street, Portland, Maine 04103, telephone 780-4427.

Electrical Engineering Graduate Courses

ELE 512 Linear Systems Analysis

Basic concept of a linear system. Methods for analyzing linear systems using transforms, convolution, and state variables. Prerequisite: ELE 314, MAT 295 or equivalent. Lec 3. Cr 3.

ELE 521 High Voltage Engineering

High voltage generation and measurement techniques, field distribution, stress control, electrical breakdown of gases, solids, and liquids. Other topics covered include circuit breakers, surge arresters, lighting phenomena, and system insulation design. Prerequisite: ELE 323 or equivalent; EE seniors with permission. Lec 3. Cr 3.

ELE 523 Mathematical Methods in Electrical Engineering

Application of advanced mathematical methods to problems in electrical engineering. Topics include conformal mapping, calculus of variations, and difference equations. Prerequisite: ELE 512 or permission. Lec. 3. Cr 3

ELE 533 Advanced Robotics

The intelligent robot control system and programming will be introduced. Robot dynamical equations, path planning and trajectory generation, control system, off-line simulations, robot languages, and vision integration in robot applications will be discussed. Prerequisite: ELE 417. Lec 2, Lab 3. Cr 3

ELE 535 Computer Vision

An introduction to computer vision and perception. Image generation, the physics of images and sensors, binary images, image

processing and understanding, computational methods for recovery and representation of visual information, a general review of available vision systems and their applications in automation. Prerequisite: COS 140 or COS 160, and ELE 314 or equivalent. Lec 2, Lab 3. Cr. 3

ELE 550 Electromagnetic Theory

Review of Maxwell's equations and waves in dielectric and lossy media; Image Theory; Induction Theorem and Green's Functions; plane cylindrical and spherical wave functions; radiation and antennas; rectangular, cylindrical and spherical waveguides and cavities; perturbational and variational techniques; G. T. D. and moment methods. Prerequisite: ELE 351 or equivalent. Lec 3. Cr 3.

ELE 552 Wave Propagation

Theory of propagation of electromagnetic waves, sound waves and unbounded media considered. Theoretical techniques presented and their application to wave propagation in the ocean, ionosphere and the earth treated. Prerequisite: ELE 453 or equivalent. Lec. 3 Cr 3.

ELE 553 Microwave Circuits and Devices

Generation, transmission, control, and detection of energy at microwave frequencies. Active and passive microwave devices: klystrons, magnetrons, traveling wave tubes. Solid state devices: microwave semiconductor diodes, tunnel diode amplifiers, Gunn oscillators, IMPATT and Josephson junction devices. Microwave integrated circuits: filters, couplers, circulators and combiners. Prerequisite: ELE 550. Lec 3. Cr 3.

ELE 562 Microwave Acoustics

The theory of acoustic wave propagation in nonpiezoelectric and piezoelectric media. Particular attention will be focused on bulk acoustic waves, surface acoustic waves, plate modes, psuedo surface acoustic waves and Bleustein-Gulyaev waves and how these waves may be utilized in microwave acoustic devices. Prerequisite: ELE 550 or permission. Lec 3. Cr 3.

ELE 563 Design and Fabrication of Surface Wave Devices

The design, fabrication, and measurement systems for surface acoustic wave (SAW) devices. Basic design concepts for SAW devices, i.e. delay lines, filters, resonators, oscillators, convolvers, sensors. Planar fabrication technique for SAW: surface properties of piezoelectric crystals, photolithography, vacuum technologies for thin film deposition. Electronic measurement systems for phase and amplitude characteristics of SAW devices, impulse and frequency response, phase and group velocity, insertion loss, distortions, spurious effects. Prerequisites: ELE 550, ELE 562 or permission. Lec 3, Lab 3. Cr 3.

ELE 565 Semiconductor Devices I

Physical principles underlying device operation. Topics include elementary excitation in semiconductors such as phonons, photons, conduction holes and electrons, carrier trapping and recombination, effect of high doping, contacts. Prerequisite: ELE 463 or equivalent. Lec 3. Cr 3.

ELE 566 Semiconductor Devices II

Application of the principles of ELE 565 to specific devices. Prerequisite: ELE 565. Lec 3. Cr 3.

ELE 567 VLSI Devices and Technology

Fabrication techniques (crystal growth, oxidation, diffusion, ion implantation, microlithography) and their implications on device performance. Physical models for small structures, alternative device structures for VLSI. Prerequisite: ELE 464 or equivalent. Lec 3. Cr 3.

ELE 571 Advanced Microprocessor-Based Design

Techniques for developing the software and hardware for microprocessor-based systems. Computer-aided design using a multistation logic development system. Use of components commonly found in microprocessor-based systems. Prerequisite: ELE 471 or permission. Lec 2, Lab 3. Cr 3.

ELE 580 Communications Engineering III

Probability theory, random processes, optimum receivers, vector channels, matched filters, block orthogonal signaling, time-bandwidth product, channel capacity, and implementation of coded systems. Prerequisite: ELE 383 or equivalent. Lec 3. Cr 3.

ELE 595 Graduate Seminar

Detailed study from current technical literature of some aspect of electrical engineering and preparation of a paper or solution to a pertinent comprehensive problem. Cr 1-3.

ELE 598 Selected Advanced Topics in Electrical Engineering

Advanced topics not regularly covered in other courses. Content can be varied to suit current needs. Course may, with permission, be taken more than once. Prerequisite: permission of instructor. Cr 1-3.

ELE 699 Graduate Thesis

Selected research problems.

Cr Ar.

College of Arts and Sciences

Dean: Dave D. Davis

Master of Arts in New England Studies

Director: Joseph Conforti

Professors: Conforti, Eastman, Grange; *Associate Professor:* Whitmore; *Assistant*

Professors: Cameron, Cassidy; *Adjunct Assistant Professor:* Miller

Program Description

New England has perhaps the richest cultural heritage of any American region. New England also has a special place in the American imagination; mythic New England embodies some of the most familiar American images. New England has even been called the national homeland. Though it is steeped in tradition, New England is nevertheless a region that has experienced dynamic change and progress. National developments such as nineteenth-century industrialization and mass immigration have frequently occurred first and had their greatest impact in New England.

The New England Studies Program is committed to studying the traditional, the mythic, and the modern New England. The program seeks:

- to offer college graduates a challenging interdisciplinary program focusing on the study of the New England region;
- to emphasize the critical role of the arts, humanities, and social sciences in understanding New England and in interpreting its distinctiveness to the public;
- to help meet the needs of institutions in the arts, humanities, education, government, and business for individuals trained in New England studies who can assume leadership roles in addressing important regional issues;
- to create new opportunities for exchanges among scholars, professionals, and graduate students with common interests in the study of New England.

Through courses, lectures, and conferences, the program explores New England's distinctiveness and examines the region's contributions to American culture as a whole.

Admission

Admission to the New England Studies Program is selective. The program seeks applicants who have a bachelor's degree with a record of academic achievement and who are committed to employing interdisciplinary approaches and materials in the study of New England's cultural heritage and distinctiveness. The program welcomes full-time and part-time students; courses are offered in the late afternoon and evening. All applications are reviewed by an admissions committee comprised of the Director of New England Studies and faculty who teach in the program. Interviews may be required at the discretion of the Admissions Committee.

Application Materials

In addition to the materials described in the Admissions chapter, applicants for this program must submit:

1. Official scores for the Miller Analogies Test (MAT) or Graduate Record Examination (GRE).
2. Three letters of recommendation on standard application forms or stationery.

Application Deadline

The application deadline is March 15 for fall semester (September) and October 1 for spring semester (January).

Applications received after these deadlines may be considered on a space-available basis. Early acceptance may be considered at the request of the applicant and at the discretion of the Admissions Committee.

Program Policies

In addition to the general policies described in the Academic Policies chapter, specific policies of this program are as follows:

Admissions Credit Students who have not been officially admitted to the program but who have applied may take courses for admissions credit. Normally, six admissions credits are the maximum allowed. The director of New England Studies must approve all requests for admissions credit.

Transfer Credit A student may transfer up to six credits into the New England Studies program. To be considered for transfer credit, previous coursework must be interdisciplinary and must focus on New England. In addition, only coursework awarded a grade of B or better will be considered for transfer credit. The Admissions Committee will review all requests for transfer credit. Course materials should accompany these requests.

Program Requirements

The New England Studies curriculum is unique; unlike other regional studies and interdisciplinary programs, the curriculum consists of courses that have been created specifically for the New England Studies master's degree and that integrate the arts, humanities, and social sciences. Thirty hours of coursework are required. All students must take NES 601 and 602, the first half of the course on culture, thought, and New England literature, and the New England studies seminar. Students are also required either to write a thesis or complete a New England Studies project for six hours of credit.

Required Courses

NES 601	Culture and Society in New England
NES 602	Approaches to the Study of New England
NES 625	Culture, Thought, and New England Literature to 1860
NES 675	Seminar in New England Studies
NES 690-691	Practicum

or

NES 695-696 Thesis

The two-semester New England Studies project combines independent study and work in an historical society, a museum, a cultural organization, or other private or public institution. In consultation with an advisor the student is free to define the project or the thesis in relation to his or her interest in New England Studies. Both the project and the thesis offer students opportunities to demonstrate intellectual independence and creativity by developing programs of study that address individual interests.

NES 601 Culture and Society in New England

An analysis of the cultural and social development of New England with an emphasis on the ideas, values, and institutions that have shaped the region's identity and distinctiveness. Cr 3.

NES 602 Approaches to the Study of New England

This course will emphasize case studies embodying methodologies and approaches to the study of New England ranging from literary analysis and intellectual history to material culture, environmental studies, cultural geography, and others. Cr 3.

NES 625 Culture, Thought, and New England Literature to 1860

A broad approach to New England letters that focuses on the region's intellectual, cultural, and literary traditions and on the importance of a sense of place in regional literature. Cr 3.

NES 626 Culture, Thought, and New England Literature Since 1860

A continuation of NES 625, this course focuses on the shifting boundaries of New England

culture, thought, and literature from the mid-nineteenth century to the present. Cr 3.

NES 630 Common People and Community Life in New England from 1800 to the Great Depression

An examination of rural and urban communities that emphasizes the everyday life of common people, including farm families, mill workers, and members of New England's major ethnic groups. Cr 3.

NES 632 New England Cultural Artifacts

An analysis of elite, popular, and folk artifacts as expressions of regional style, taste, and culture. This course will draw on architecture, the decorative arts, foodways, landscape studies, literature, and photography to study the material culture of New England. Cr 3.

NES 635 Art and New England Culture

An analysis of New England painting and its relationship to regional culture and distinctiveness. This course will integrate materials from and build on the work of courses on New England culture and literature. Cr 3.

NES 641 Economy and Ecology in New England

An examination of the economic development of New England with an emphasis on the changing physical environment of the region, from conflict with the Indians over land use, through disputes over water power and industrialization, to problems created by the residential and recreational expansion of the post-WWII era. Cr 3.

NES 644 New England Political Culture

A study of the development of New England political institutions and behavior focusing on the ideas, values, and problems that have influenced politics on the local, state, and regional levels. Cr 3.

NES 649 Preservation and Progress:**Architecture and Landscape in New England**

A study of the built environment that will examine how historic preservation has attempted to maintain a continuity of traditional New England values, while progress has created an ever changing landscape. Cr 3.

NES 650 Topics in New England Studies

An in-depth study of a significant aspect of New England from an interdisciplinary perspective. Topics will vary from year to year. Cr 3.

NES 675 Seminar in New England Studies

Research on a selected topic in New England Studies with opportunities to share problems and results. Cr 3.

NES 690/691 Practicum

Completion of a two-semester project that combines independent study and work in a historical society, a museum, a cultural organization, or other public or private institution. In consultation with an advisor, the student defines and develops the project in relation to his or her particular interest in New England Studies. Cr 6.

NES 695/696 Thesis

The product of original research, the thesis should embody an interdisciplinary combination of approaches and/or materials. Cr 6.

Master of Science in Statistics

Director: Bhisham C. Gupta

Professors: Guay, B.C. Gupta; *Assistant Professors:* El-Taha, Flagg, S.N. Gupta, Kenyon, Narag, Viana

Program**Description**

The master of science in statistics program is designed to offer a vigorous curriculum that will prepare graduates for careers in business, industry, and government or for some advanced study in statistics, probability theory, operations research, or any one of its allied fields.

Admission

A student wishing to enroll in a master's program in statistics must meet the following requirements:

1. possess a baccalaureate degree from a regionally accredited institution;
2. have completed the following USM prerequisite courses or their equivalent with an average of 3.0 on a 4.0 scale, or have demonstrated proficiency in the following courses:

COS 160 Structural Problem Solving: PASCAL

MAT 252 Calculus C

MAT 295 Linear Algebra

MAT 381 Probability Theory

MAT 382 Statistical Inference

Applicants who meet the entrance requirements for a master's degree in statistics will be granted regular admission status. Applicants who do not meet the entrance requirements of the program may be granted conditional admission status during which time the student must take courses indicated by the Graduate Admission Committee to fulfill the conditions for regular admission. These courses will carry no credit toward the master's degree and must be successfully completed prior to the completion of 12 hours of graduate coursework, after which the student may be granted regular admission status.

Application**Materials**

In addition to the materials described in the Admissions chapter, applicants for this program must submit three letters of recommendation attesting to the candidate's academic ability and professional accomplishments.

Application**Deadline**

The application deadline is April 15 for fall semester (September) and November 1 for spring semester (January).

Program Policies

In addition to the general policies described in the Academic Policies chapter, specific policies of this program are as follows:

Transfer Credit A maximum of 6 credit hours of transfer credit may be used toward the degree.

Program Requirements

To earn a master of science in statistics degree, a student must complete at least 32 credits of which 26 are in graduate coursework and at least 17 credits are in statistics/operations research/mathematics courses at the 600-level. The required courses are Theory of Probability, Mathematical Statistics, Statistical Packages, and Consulting Techniques. Statistical Packages and Consulting Techniques are one credit courses each, while all other courses carry three credits. Recommended courses are Real Analysis, Functional Analysis, and Abstract Algebra. Students who intend eventually to pursue a Ph.D. in probability or statistics should take at least two of these courses.

No more than two of the following courses may be used to fulfill the graduate coursework requirement.

MAT 561 Stochastic Models in Operations Research

MAT 582 Introduction to Time Series Analysis

MAT 584 Design and Analysis of Experiments

No graduate credit will be given for any of these courses taken to fulfill undergraduate requirements.

Business or computer science-oriented students may take up to two graduate level courses from the School of Business, Economics and Management or the School of Applied Science to meet graduate requirements, subject to the approval of the advisor.

A student who has completed 26 credits in coursework will be considered eligible to proceed to fulfill other requirements of the degree. To fulfill the other requirements, the student must select one of the following options. For each of these options six credits will be given.

Option I PROJECT: The student will be required to undertake and complete a master's project which may be a practical problem in statistics/operations research related to his/her employment. (STA 690)

Option II EXAMINATION: The student must complete two additional 600-level courses in statistics/operations research and successfully pass a final examination on the material that has been covered in the graduate coursework.

Option III THESIS: The student must write a master's thesis. (STA 690)

MAT 561 Stochastic Models in Operations Research

Applications of probabilistic analysis to models involving uncertainty. Queueing theory: exponential models and extensions, work and cost identities. Inventory theory: the economic order quantity model, continuous review model, stationary analysis. Reliability theory: structure function, failure rate function, computing system reliability, repair models. Elements of dynamic programming and markov decision theory. Introduction to simulation analysis. Prerequisites: MAT 366, MAT 381. Cr 3.

MAT 582 Introduction to Time Series Analysis

Objectives and simple descriptive techniques of time series analysis, probability models for time series, estimation in the time domain, forecasting, Box-Jenkins methodology, spectral analysis. Prerequisite: MAT 381. Cr 3.

MAT 584 Design and Analysis of Experiments

Quadratic forms and their distribution, general linear hypothesis, completely randomized and randomized block designs, two-way and

higher-way layouts, latin-square and orthogonal latin-square designs, bib designs, youden square designs, random effects and mixed effect models, nested designs and split-plot designs are some of the specific topics to be covered. Prerequisites: MAT 295 and MAT 380 or MAT 381 or permission of the instructor. Cr 3.

MAT 690 Abstract Algebra

Introduction to the concepts of basic algebraic structures, namely: group, ring, integral domain, field, polynomial ring, module, vector space, linear transformation, etc. Prerequisite: MAT 395. Cr 3.

MAT 691 Real Analysis

Limits, continuity, differentiation and integration of functions of one or more real variables, Lebesgue measure and integration, Lebesgue-Stieltjes integral, general measure and integration theory, the Radon-Nikodym Theorem. Prerequisite: MAT 352. Cr 3.

MAT 692 Functional Analysis

Topological groups and topological vector spaces, metrizable, locally convex spaces,

Hahn-Banach and Krein-Milman theorems, dual spaces, Banach spaces, Hilbert spaces, Banach algebras. Prerequisite: MAT 691. Cr 3.

OPR 661 Operations Research I

Formulation and analysis of mathematical programming models in operations research, linear and nonlinear programming classical optimization, network flow theory, integer programming, dynamic programming. Prerequisites: MAT 252, MAT 295. Cr 3.

OPR 662 Operations Research II

Stochastic modelling in operations research, introduction to queueing, reliability and inventory theory, Markov decision processes, stochastic dynamic programming. Prerequisites: MAT 381, STA 661. Cr 3.

OPR 663 Network Optimization

Theory of, and algorithms for, network optimization, shortest paths, spanning trees, maximum flows and minimum cost circulations, matchings and coverings in graphs, introduction to matroids. Prerequisite: STA 661. Cr 3.

OPR 665 Simulation

Random number generation, simulation languages, design of simulation experiments and statistical analysis of the output of simulations, applications to modelling stochastic systems in computer science and operations research. Prerequisites: MAT 381, STA 661. Cr 3.

STA 601 Statistical Packages

Introduction to the use of some of the commonly used statistical packages. Prerequisite: MAT 382 or permission of instructor. Cr 1.

STA 602 Consulting Techniques

Designed to make students aware of some of the skills of consulting techniques and teach applications of various statistical methods. Prerequisite: MAT 382 or permission of instructor. Cr 1.

STA 641 Theory of Probability

Random events, axioms of probability, conditional probability, Bayes theorem, random variables, some discrete and continuous distributions, moment generating functions, characteristic functions, uniqueness theorem, central limit theorem, laws of large numbers, Markov chains. Prerequisite: MAT 380 or MAT 381 or permission of instructor. Cr 3.

STA 642 Mathematical Statistics

Sampling distributions such as chi-square, t and F order statistics, distribution of largest and smallest elements in a sample, distribution of the sample range, theory of estimation, test of hypotheses, regression and correlation in n variables, some elements of sequential analysis. Prerequisite: MAT 382 or permission of instructor. Cr 3.

STA 651 Multivariate Analysis

Multivariate normal distribution, estimation of the mean vector and the covariance matrix,

distribution of sample correlation coefficient, Hotelling's T statistic, Wishart distribution, testing the general linear hypothesis, MANOVA. Prerequisites: STA 642, MAT 295. Cr 3.

STA 652 Non-parametric Methods

Certain techniques of goodness of fit, order statistics, two treatment comparisons, several treatment comparisons, rank tests in randomized complete blocks. Prerequisite: MAT 382 or permission of instructor. Cr 3.

STA 660 Stochastic Processes

Random walk, discrete and continuous time Markov chains, Poisson processes, renewal theory, examples drawn from the natural and engineering sciences. Prerequisite: MAT 381. Cr 3.

STA 664 Queueing Theory

Queueing models based on the birth and death process, Markovian queues, the method of stages, embedded Markov chain techniques, networks of queues, priority queues, introduction to scheduling problems. Prerequisite: MAT 381. Cr 3.

STA 670 Linear Models

Review of distributions and quadratic forms, simple regression model, general linear hypotheses, multiple regression model, simple application of the regression model, analysis of variance model. Prerequisites: MAT 382, MAT 295 or permission of instructor. Cr 3.

STA 671 Design and Analysis of Experiments

Factorial experiments, fractional replications in factorial experiments, BIB and PBIB designs, response surface methodology. Prerequisites: MAT 584, STA 601 or permission of instructor. Cr 3.

STA 672 Data and Regression Analysis

Certain concepts of data reduction, simple linear regression using matrices, residual analysis, certain techniques to select a best regression equation, multiple regression, analysis of variance and covariance, data analysis and computation using statistical package programs. Prerequisites: MAT 382, STA 601 or permission of instructor. Cr 3.

STA 673 Time Series Analysis

Basic concepts, removing trend/seasonality, fitting ARIMA models to data, parameter estimation, forecasting, introductory spectral theory. Prerequisites: MAT 381, STA 601. Cr 3.

STA 674 Sampling Theory and Surveys

Simple random stratified, systematic, cluster and multi-stage sampling, PPS sampling, optimum sample size, use of auxiliary variables in sample surveys, ratio and regression estimates, double sampling, sources of error in surveys and ways of removing them, methods of collecting data. Prerequisite: MAT 380 or permission of instructor. Cr 3.

STA 675 Statistical Quality Control

Lot acceptance sampling plans by attributes: single, double, sequential, multiple and military standard 105D sampling plans; lot acceptance sampling plans by variables with known and unknown standard deviation and military standard 414, rectifying inspection plans, control charts: X, R, and P-Charts. Prerequisite: MAT 382 or permission of instructor. Cr 3.

STA 681 Topics in Applied Statistics

Variable topics in applied statistics depending upon the needs of the students. Cr 3.

STA 690 Program Option

Option I Project or Option III Thesis.

School of Business, Economics and Management

Dean: Richard J. Clarey

Associate Dean: Robert W. Findlay

Master of Business Administration

Director of Graduate Programs: Bruce H. Andrews

Professors: Durgin, Greene, Miaoulis, Neveu, Potts, Sturner; *Associate Professors:* Andrews, Bay, Boyle, Clarey, Hodson, Houlihan, Jagolinzer, McMahon, Phillips; *Assistant Professors:* Lombardo, Medley, G. Parsons, H. Parsons, Richardson, Voyer

Program Description

Established in 1971, the master of business administration program at the University of Southern Maine is designed to prepare students for executive positions in business, industry, and nonprofit organizations in both the private and public sectors. It emphasizes development of a broad perspective, interpersonal skills, and analytical tools of general management. Students are encouraged to apply regardless of their undergraduate academic specialization. Those applicants whose previous educational background does not include the appropriate coursework (or their equivalents) will be required to complete the designated prerequisites in order to gain the academic background required for the MBA core courses.

The School of Business, Economics and Management has an enrollment of approximately 2,000 students in its undergraduate and graduate programs. Over 90 percent of the MBA students are employed in full-time business, managerial, and professional positions, completing their MBA courses on a part-time basis. The MBA program is tailored for working students with all courses offered in the late afternoon or evenings. Courses are occasionally offered on weekends. The School of Business, Economics and Management, in cooperation with the University of Maine at Augusta, extends its MBA offerings to the Augusta area.

The School of Business, Economics and Management also houses two outreach centers which provide business research, training, and counseling services. Descriptions of the Center for Business and Economic Research and the Small Business Development Center are provided after the MBA course descriptions.

Admission

At the University of Southern Maine, several factors are evaluated in determining a candidate's admissibility to the MBA program. Included in the assessment of a candidate's potential to perform satisfactorily in the MBA program are the undergraduate grade point average (GPA), the rigor of the undergraduate field of study, the reputation of the institution awarding the baccalaureate degree, academic performance in any previous graduate coursework taken, the Graduate Management Admission Test (GMAT) score, three letters of recommendation, and a candidate's record of successful business or professional experience. During the 1987-1988 academic year, the average GMAT score among students given admission into the MBA program was 586.

Admitted students whose educational background is lacking the prerequisites listed under Program Requirements will have to complete satisfactorily each of the prerequisite courses or their equivalents as stipulated in their letter of acceptance.

Application Material

In addition to the materials described in the Admissions chapter, applicants for this program must submit:

1. Official scores from the Graduate Management Admission Test

(GMAT). (Note: Candidates with Ph.D., J.D., L.L.M., LL.D., M.D., D.D.S., D.M.D., or Ed.D. degrees normally are not required to take the GMAT.)

2. Three letters of recommendation.

3. Test of English as a Foreign Language (TOEFL) score of at least 550 for students whose native language is not English.

Application materials may be obtained from the USM Office of Graduate Affairs or the Admissions Office at the University of Maine at Augusta. All applications should be returned to the USM Office of Graduate Affairs.

Application Deadline

The application deadline is August 1 for the fall semester (September); December 1 for the spring semester (January); and May 1 for the summer session (June).

Program Policies

In addition to the general policies described in the Academic Policies chapter, specific policies of this program are as follows.

Transfer Credit A student admitted to the MBA program may apply to have graduate credits transferred from other regionally accredited institutions of higher education. In order to apply, a student must have earned nine hours of graduate credits from the University of Southern Maine and received a grade of B (3.00) or better in the course requested for transfer credit. To be accepted, the course also must be judged applicable to a student's program of study. A maximum of 15 semester hours of transfer credit may be accepted from AACSB-accredited programs. Up to nine semester hours of transfer credit may be accepted from a regionally accredited program. When possible, students should ascertain whether or not transfer credit will be granted by the School of Business, Economics and Management before enrolling in a course at another institution.

Time Limit In order to be counted toward the MBA core and elective requirements, graduate coursework must be completed within six years of the date a student enrolls in his or her first 600-level course. Otherwise, coursework must be repeated.

Admissions Credit Individuals who are in the process of submitting their credentials for possible admission into the MBA program may be allowed to register for 500-level and 600-level MBA courses for one semester only as special students. Special students may be allowed to register for up to nine credits of MBA coursework during this single semester. If a special student is not admitted before the next session (fall, spring, summer), these MBA courses will not apply toward fulfillment of any degree requirements. Applications for special student admission are available through the Director of Graduate Programs in the School of Business, Economics and Management. The application form, evidence of ability to perform graduate work, an undergraduate transcript, and evidence of satisfactory fulfillment of specific course prerequisites must be submitted prior to the start of the course. If special student admission is granted, enrollment is on a space-available basis and requires approval of the Director of Graduate Programs in the School of Business, Economics and Management.

Transient Student Status A student enrolled in a graduate program in business or administration at another university, who is in good standing at that university, may enroll in graduate courses within the School of Business, Economics and Management as a transient student. Enrollment is on a space-available basis and requires evidence of satisfactory fulfillment of specific course prerequisites in addition to approval from the Director of Graduate Programs in the School of Business, Economics and Management.

Grade Policy All 500-level graduate courses must be completed with a minimum grade of C (2.00) in order to carry graduate degree credit. All 600-level graduate courses must be completed with a minimum grade of C- (1.67) in order to carry graduate degree credit. If a student receives a grade of D+ (1.33) or D (1.0) in a required 600-level course, the student must repeat the course. When a student repeats a 600-level course, all grades received in that course are included in the student's grade point average. A

student who receives two grades of D (1.0) or D+ (1.67) or one grade of F (0.0) in 600-level courses will be dismissed from the program by the Program Director.

A student whose grade point average falls below 3.00 will be placed on probation. The student will have 12 semester hours in which to bring the grade point average back to at least a 3.00. Students who fail to do this may be dismissed by the Program Director. Any student may appeal any dismissal decision in writing to the MBA Admissions Committee.

A student who has completed the program of study must have a cumulative grade point average of 3.00 to receive the MBA degree. If a student has completed all requisite courses with a cumulative grade point average below a 3.00, a maximum of six additional credits of 600-level courses may be attempted in order to raise the cumulative grade point average to at least a 3.00.

Readmission A student who is dismissed from the MBA Program may not be readmitted.

Special Policies Students matriculated in other graduate programs at the University of Southern Maine may enroll in MBA-level courses on a space-available basis providing that appropriate course prerequisites or other equivalents, as approved by the Director of Graduate Programs, have been satisfied.

Either a minimum grade of C (2.00) from a regionally accredited institution of higher education or successful completion of an equivalent CLEP exam or departmental exam (if available) is needed to meet a prerequisite requirement. Coursework from non-accredited institutions will be evaluated on an individual basis.

In order to receive graduate credit toward the MBA degree, a student must be registered in a graduate course as a graduate student. If a student has earned another graduate degree prior to admission to the MBA program, no more than nine credits used to fulfill requirements for that degree may be applied toward completion of the MBA degree.

Program Requirements

Prerequisites	Credit Hours
	0-16.5

These 500-level MBA courses are not applicable toward the 39 graduate credits needed for graduation. These courses are required for students whose previous undergraduate education has not included the equivalent content. Grades earned in these courses are included in the student's grade point average. However, any of these 500-level courses in which a student earns less than a C grade (2.0) must be repeated.

MBA 501 Economic Analysis	
A. An intensive survey of microeconomic theory	1.5
B. An intensive survey of macroeconomic theory	1.5
MBA 502 Fundamentals of Accounting	
A. An intensive survey of financial accounting	1.5
B. An intensive survey of management accounting	1.5
MBA 503 Linear Algebra and Calculus for Business	
An introduction to linear algebra and calculus applications	3.0
MBA 504 Probability and Statistics for Business Decision Making	
Probability and statistics as decision-making tools	3.0
MBA 505 Introduction to Computers in Management	
Utilization of computers in organizations	1.5
MBA 506 Intensive Survey of Business Functions	
A. Finance	1.5
B. Production	1.5

MBA Core 30
These courses are required of all MBA students regardless of their previous undergraduate education.

I. Courses to be taken early in program:	
MBA 600 Social Responsibility	3.0
MBA 605 International Business	3.0

MBA 610 Managerial Economics	3.0
MBA 630 Managerial Accounting	3.0
MBA 640 Management Theory	3.0
MBA 642 Managerial Behavior	3.0
II. Courses to be taken later in program:	
MBA 620 Financial Management	3.0
MBA 660 Marketing Management	3.0
MBA 670 Operations Research	3.0
MBA 680 Organizational Strategy and Planning	3.0
MBA Electives	9.0
Students select graduate courses in business, economics, or administration from the following list, although courses outside the School of Business, Economics and Management may be taken with approval of the Graduate Program Director.	
MBA 613 Macroeconomic Analysis and Forecasting	3.0
MBA 627 Investment Management	3.0
MBA 643 Organizational Change and Development	3.0
MBA 651 Industrial Relations and Personnel Management	3.0
MBA 653 Collective Bargaining	3.0
MBA 665 Marketing for Nonprofit, Service, and Public Sector Organizations	3.0
MBA 667 Market Research and Analysis	3.0
MBA 669 Business Logistics	3.0
MBA 675 Production/Operations Management	3.0
MBA 685 Entrepreneurship and Business Formation	3.0
MBA 690 Information Systems Management	3.0
MBA 691 Independent Study	1.0-3.0
MBA 699 Special Topics	1.0-3.0

The minimum number of credits required for the MBA degree (core and electives) is 39.

MBA 501 Economic Analysis

Two independent modules which provide an intensive survey of (A) microeconomic theory and (B) macroeconomic theory. Economic problems such as price and output decisions, resource allocations, inflation, and unemployment are analyzed. Cr 1.5 per module.

MBA 502 Fundamentals of Accounting

Two individual modules which provide an intensive survey of the fundamentals of financial and management accounting. Includes an appreciation and understanding of (A) generally accepted accounting principles and their application in the preparation and analysis of financial statements; and (B) the theory and tools used to evaluate situations in various business and not-for-profit environments. Cr 1.5 per module.

MBA 503 Linear Algebra and Calculus for Business

An introduction to the use and concepts of linear algebra and calculus as mathematical tools in business and management problem solving. Cr 3.

MBA 504 Probability and Statistics for Business Decision Making

An introduction to the concepts and use of probability and statistics as tools for business decision-making. Cr 3.

MBA 505 Introduction to Computers in Management

This course provides an introduction to the use of computer technology within business applications. IBM compatible micro-computers are the primary equipment which is used. Applications include word processing, data management, spreadsheets, graphics, communications, and the use of these in integrated problem solving. In addition, a general background on the role of information systems within organizations, current technology trends, ethical issues and social considerations are discussed. Cr 1.5

MBA 506 Intensive Survey of Business Functions

Two independent modules presenting basic concepts involved in (A) financing, and (B) production of goods and services. Students will enroll in only those modules not covered in previous coursework. Prerequisites: (A) Finance module: MBA 501, MBA 502, MBA 504, MBA 505; (B) Production module: MBA 501, MBA 502, MBA 503, MBA 504, MBA 505. Cr 1.5 per module.

MBA 600 Social Responsibility

Legal problems, including antitrust law, rights and responsibilities of officers and directors,

and legal problems confronting managers of non-profit organizations. This course also covers business ethics and attempts to develop practical solutions to the ethical issues that confront today's managers. Prerequisite: MBA 501. Cr 3.

MBA 605 International Business

A study of the business firm in the international environment using the model of the multinational firm. It focuses on the application of international trade and investment theory to the management operations of the multinational firm through use of computer simulation gaming, case studies, and experiential exercises. Prerequisites: MBA 501, MBA 502, MBA 503, MBA 504, MBA 505. Cr 3.

MBA 610 Managerial Economics

The application of economic analysis to the management of business enterprises. Designed to develop the student's ability to understand some of the important economic concepts and tools relevant to making decisions within a business firm. Particular attention is given to the use of interest and cost gradient tables, annual cost and present worth analysis, rate of return analysis, economic life, replacement economy cost minimization, and the impact of taxes upon a decision. Prerequisites: MBA 501, MBA 502, MBA 503, MBA 504, MBA 505. Cr 3.

MBA 613 Macroeconomic Analysis and Forecasting

The first part of the course examines forecasting techniques that are important to managers. The second part of the course develops the analytical framework of macroeconomic analysis. This framework is applied in examining the major economic problems of inflation, unemployment, cyclical fluctuations, and economic growth. Alternative stabilization policies and instruments will be explored. The recent performance of the U.S. economy is examined. Prerequisites: MBA 501, MBA 504. Cr 3.

MBA 620 Financial Management

An intensive presentation of the traditional and modern approaches to the theory and practice of managerial finance. The management of capital sources and uses within the context of shareholder wealth maximization is presented using lectures, problems, cases, and supplementary readings. Prerequisites: MBA 503, MBA 506 Finance module. Cr 3.

MBA 627 Investment Management

A systematic and in-depth treatment of security analysis and portfolio management. The security analysis segment develops E-I-C methodology augmented by deterministic valuation models. A major empirical analysis is carried out in conjunction with the theoretical developments. The portfolio management segment develops Markowitz efficient sets and the subsequent developments as contained in

Sharpe-Lintner-Mossin theory. Related readings in Fama-Roberts market efficiency tests are assigned as needed. The empirical analysis component of this segment revolves around generating Markowitz efficient portfolios and measuring beta coefficients. Prerequisite: MBA 620. Cr 3.

MBA 630 Managerial Accounting

Development, analysis, and interpretation of accounting data and financial statements for managerial control, coordination, and decision-making; emphasis upon accounting as a tool of management. Topics are developed by utilization of case studies, problems, and reference material. Prerequisites: MBA 501, MBA 502. Cr 3.

MBA 640 Management Theory

This course analyzes the tasks and responsibilities confronting administrators in complex organizations. It focuses on the issues involved and the problems encountered in designing the organizational structure, in establishing the decision-making processes, and in integrating the diverse sub-system in order to achieve the organizational goals. Within a systemic framework a contingency approach is utilized to present theoretical concepts, practical applications, and managerial experiences. Cr 3.

MBA 642 Managerial Behavior

Emphasis on the importance of the influence process, motivational settings, and the structural backgrounds of organizational status and social relations. Analysis through case discussion, readings, and experiential exercises will develop a conceptual framework for improving individual decision-making ability with respect to individual, group, and inter-group problems. Cr 3.

MBA 643 Organizational Change and Development

The design and application of change strategies to improve organizational effectiveness. The planned, systematic and long-range efforts to change "how an organization operates," focus on various aspects of an organization's culture and its human and social processes. Diagnosis of such processes as cultural norms and values; power, competition, and collaboration; expectations and both formal and informal reward systems; social interaction and feedback patterns; conflict resolution; the structure and process of work; people development; and goal setting, planning and evaluation systems. Simulations, case studies, experiential exercises, and applied strategies for changing and improving organizations, using an array of behavioral science approaches. Prerequisite: MBA 642. Cr 3.

MBA 651 Industrial Relations and Personnel Management

A comprehensive investigation of the changing pattern of industrial relations in the United

States. Major emphasis is on the human, social, and economic aspects of employer-employee relationships in both union and non-union settings. Provides an understanding of and appreciation for the crucial importance of the development of sound and flexible personnel policies by top management. Among the areas considered are: the changing nature of the labor force; wages, salaries, and fringe benefits; hours of work; and the impact of technological change on the work force. Prerequisite: MBA 501-A Cr 3

MBA 653 Collective Bargaining

Discusses the major issues and problems in the collective-bargaining process. Provides the business manager with the knowledge of sound collective bargaining attitudes and techniques necessary to achieve a responsible and mature attitude in his relationship with employee representatives. To this end, major focus is on the changing nature of public policy toward collective bargaining, including strikes, lockouts, grievance procedures, arbitration, mediation, and bargaining strategies and techniques. Prerequisite: MBA 651. Cr 3.

MBA 660 Marketing Management

This course is organized to give the graduate student an opportunity to develop and test, through the case method, a number of marketing policies and strategies. Furthermore, the student will read and discuss the current literature in the field of marketing, reviewing current marketing practices and predictions for the balance of the century. Prerequisite: MBA 501. Cr 3.

MBA 665 Marketing for Nonprofit, Service, and Public Sector Organizations

An introduction to the application of marketing concepts to nonprofit, non-business, public sector, and service organizations. The course combines lectures, case studies, readings, and field research experiences in developing an understanding of the marketing management function in nonprofit organizations. Prerequisite: MBA 660 or permission of the instructor. Cr 3.

MBA 667 Market Research and Analysis

A study of the procedure and applications of market research. Such areas as the organization and operation of a research department, survey methods, experimentation, measurement of potential demand, and the analysis of distribution costs are considered. Emphasis on developing the student's ability to apply these and other techniques toward the solution of marketing problems. Prerequisites: MBA 504, MBA 660. Cr 3.

MBA 669 Business Logistics

Explores in-depth the need for and means of centralization of decision-making to accomplish effective senior executive control of the chain of logistic activities from point of com-

pletion of manufacturing or other form of utility-creating process to delivery at the point of use or consumption. Interdisciplinary relationships with cybernetics, econometrics, operations research, computer-facilitated information analysis, purchasing (materials management) and the consumer relations aspect of marketing (physical distribution) reviewed in their role as logistics sub-systems or building blocks. Prerequisites: MBA 660, MBA 670. Cr 3.

MBA 670 Operations Research

A survey of commonly used models and analytical techniques in sophisticated quantitative-management-decision-making. Mathematical models are developed and applied, with the computer's aid, in a wide range of real-world business situations. Topics include: queuing theory, decision analysis, inventory theory, simulation, Markov analysis, classical optimization, mathematical programming, forecasting, and network analysis. Prerequisite: MBA 610. Cr 3.

MBA 675 Production Operations Management

An in-depth examination of the topics and problems associated with the management of production operations and the delivery of services. Emphasis is placed upon the design of model-based planning and control systems. Computer-based quantitative tools and techniques are heavily utilized. Prerequisites: MBA 506 Production module, MBA 670. Cr 3.

MBA 680 Organizational Strategy and Planning

Administrative practice at the higher levels of business management, with major emphasis on long-range executive planning of profit, sales, production, social goals, and objectives, and of strategies and policies to achieve these objectives. Coordinates all executive activities viewed as tools for use in developing administrative competence in the formulation of business policies at the decision-making level. Prerequisites: 21 credits of 600-level MBA courses. Cr 3.

MBA 685 Entrepreneurship and Business Formation

The entrepreneur's role in a technological society, with emphasis on the techniques and problems implicit in the launching of new enterprises or in their evaluation by investors. This course is designed for aspiring entrepreneurs and for the professionals or institutions with whom they interface when starting a business. Students are expected to have basic communication skills, a background (educational or experiential) in accounting and marketing, and a grasp of economics and the principles of management. Attention will be paid to emerging opportunities in Maine. Materials are discussed by the instructor or invited experts in a seminar format that

requires student participation and assignments calling for research, report writing, and presentation. Cr 3.

MBA 690 Information Systems Management

Frameworks and practical approaches for effectively managing information systems technology within business organizations. Students completing this course will be able to analyze complex information systems activities, evaluate their effectiveness, identify underlying causes of problems, and make reasonable recommendations for improving the situation. This course covers the major topics of: planning, organization, new technology, project management, management control, organizational culture and leadership as they relate to effective information systems. The content of this course is developed

through a series of "real world" case studies and in-class discussion emphasizing a practical managerial perspective. Prerequisite: MBA 505, or permission of instructor. Cr 3.

MBA 691 Independent Study

Selected topics in the areas of Business and/or Administration may be studied and researched on an independent basis. Prerequisites: permission of the instructor and the director of Graduate Programs. Cr 1-3.

MBA 699 Special Topics

Enables students to take a variety of topics under the same course number. The specific title of each offering and the credit earned will be listed on the student's transcript. Prerequisites: Graduate status and permission of the instructor. Cr 3.

Center for Business and Economic Research

Director: Richard J. Clarey

Research Associates: B. Andrews, D. B. Hodson, C. Veazie; *Research Coordinator:* A. Persons

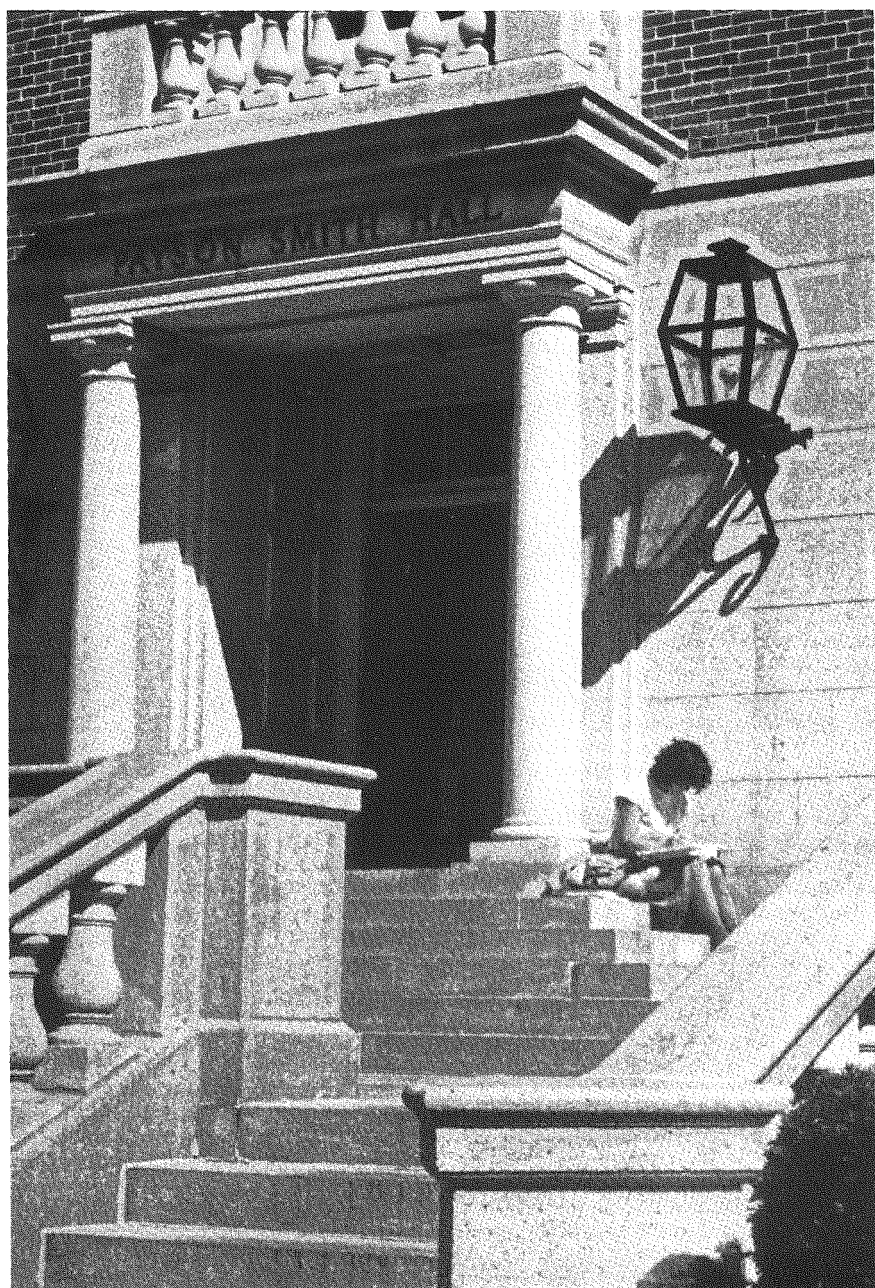
The Center for Business and Economic Research (formally the New Enterprise Institute) was formed in 1974 as a business development and research project. It is the oldest University public service operation devoted to assisting small businesses in the state. Supported by both public and private sources, the Center for Business and Economic Research (CBER) operates a Technical Assistance Center that provides technical and other types of assistance to jurisdictions and organizations in the state. CBER also engages in applied research activities directed to support local, regional, and state economic development strategies, with recent emphasis on the development and testing of new ways to assist businesses and people. Persons interested in additional information may contact the Center for Business and Economic Research, University of Southern Maine, 96 Falmouth Street, Portland, ME 04103, (207) 780-4187.

Small Business Development Center

Director: Robert H. Hird

The Small Business Development Center (SBDC) was established in 1977 to help strengthen the economy of Maine by providing assistance to small business through the development and implementation of counseling, training, and information services. Their services are available through a statewide network of seven SBDC subcenters. One-on-one counseling for small business owners/managers is offered covering a wide range of topics from organization and planning to marketing and management. Training programs are designed to increase the practical business knowledge and skills of business owners/managers. A comprehensive business reference library is staffed with a full-time information specialist to provide business information services. Management assistance is also provided in the areas of computerized loan packaging and government procurement. The SBDC is a partnership of the U.S. Small Business Administration, the State Economic and Community Development Office, the University of Southern Maine, and local sponsoring organizations.

Persons interested in additional information may contact the Small Business Development Center, University of Southern Maine, 96 Falmouth Street, Portland, ME 04103, (207) 780-4420.



College of Education

Dean: Dorothy D. Moore

Assistant Dean: Irene L. Honey

Director of Professional Development Center: George C. Lyons

Office of Graduate Education, Bailey Hall 408, Gorham, Maine 04038, Telephone: (207) 780-5306;

Professional Development Center, Bailey Hall 305, Gorham, Maine 04038, Telephone: (207) 780-5326.

Education today takes place in a dynamic and demanding arena with many external pressures—financial constraints, public concern about the quality of life and learning in schools, changes in family lifestyles, demands for services to meet the needs of various populations. For professionals in schools and human service agencies, this context calls for a unique combination of initiative and responsiveness as well as careful reflection on purposes and strategies. Such a setting highlights the importance of the professional as a lifelong learner.

Since the introduction of graduate courses in 1964, the College of Education has been engaged in developing programs of study that respond to the needs of educators and other human service professionals. Benefiting from the expertise and advice of professionals across the state, these ongoing efforts to present state-of-the-art knowledge skills have produced programs for a broad range of practitioners. Most recent developments include: 1) a revised program for elementary and secondary school teachers; 2) expanded programs of study in adult education and counselor education; and 3) a new program in the field of exceptionality offered jointly with the University of Maine at Farmington.

Continuing efforts to strengthen graduate offerings are guided by five priorities which reflect commitments of the College of Education :

Principles of Adult Learning: building on prior learning and experience to enable professionals to shape a program of study that contributes to their long-range career plans.

Community Building: encouraging teamwork and collaboration in problem solving.

Skill Development: integrating selected conceptual, technical, and interpersonal skills.

A Process in Inquiry: emphasizing the importance of asking the right questions and drawing on a variety of disciplines and perspectives to strengthen skills in analysis and decision making.

Linkage with the Field: using case studies, field projects, and practicum experiences to illustrate the interplay between theory and practice, action and reflection; providing outreach to local systems through the Professional Development Center which offers courses, workshops, and conferences, as well as technical assistance for program planning.

These priorities provide the grounding for planning and development activities in the College of Education. They help to create a rich and dynamic environment for professionals committed to lifelong learning and quality service in schools, agencies, and other educational settings.

Graduate Education Programs

The College of Education offers the following programs:

Department of Professional Education: Graduate Division

Educational Administration Program: with an option for a concentration in special education administration.

Exceptionality Program: concentrations in emotional disturbance, learning disabilities, mental retardation, hearing impairment, secondary special education, gifted and talented education.

Instructional Leadership Program: concentrations in elementary or secondary school teaching.

Literacy Education Program: concentrations in elementary or secondary adult reading.

The USM Mobile Graduate Program is offering a master of science in education degree to northern Maine students in two programs, educational administration and instructional leadership. This degree program will be available from 1985 through 1990 at the University of Maine at Presque Isle (UMPI). For further information please contact the Mobile Graduate Program office at UMPI. Call 764-0311, ext. 315.

Department of Human Development

Adult Education Program: concentrations in training and development; educational gerontology; community education; adult public school education and counseling.

Counselor Education Program: concentrations in elementary and secondary school counseling; community agency and rehabilitation counseling.

School Psychology: a new program that prepares the student to be licensed as a psychological examiner and to be certified as a school psychological examiner.

The Adult Education Program offers a master of science in adult education: all other programs lead to a master of science in education.

Admission

The approval of candidates seeking admission to graduate education is on a selective basis. Graduate programs seek candidates whose baccalaureate degree program, scholastic achievement, interest, motivation, and personal recommendations are indicative of success in graduate education studies.

To be eligible for admission to a graduate education program, an applicant must meet the following requirements:

1. Hold a baccalaureate degree from an accredited institution.
2. Have earned a cumulative grade point average of 2.5 (on a 4.0 scale) in a baccalaureate degree program.
3. Have earned a score of 40 points or above on the Miller Analogies Test, or 900 or above on the Graduate Record Examination.
4. Test of English as a Foreign Language (TOEFL) score of at least 550 for students whose native language is not English.

Applicants who fail to meet eligibility requirements for #2 or #3 are urged to enclose an additional document entitled "Special Consideration," in which they give evidence of ability to complete graduate studies successfully. Without such a document, applications which fail to meet eligibility requirements are automatically rejected.

Application Materials

Candidates for admission must file a complete application with the Office of Graduate Education.

A completed application contains the following items:

1. One completed copy of the application form.
2. Official transcripts of all previous college or university work.
3. Three letters of recommendation. These should be from persons in a position to judge the applicant's academic preparation and ability to pursue graduate work. The writers should return their recommendations directly to the Office of Graduate Education, 408 Bailey Hall, Gorham, Maine 04038.
4. Official scores on the Miller Analogies Test or the Graduate Record Examination.
5. An application fee of \$15.00 (nonrefundable).
6. The Department of Human Resource Development and the Literacy Education and Exceptionality programs have special admission requirements. Please consult the following pages for details.

Application Deadline

The application deadline is March 1 for summer (May) or fall semester (September) and October 1 for spring semester (January).

Candidates are urged to contact the Office of Graduate Education to determine if all materials have been received. This should be done by early September for January 1 admission and by early February for May 1 or September 1 admission.

With the exception of candidates applying to the Counselor Education Program, or the Adult Education Program, interviews are optional. The Office of Graduate Education strongly encourages candidates to visit the campus and discuss their interest in graduate study.

All eligible applications are reviewed by a graduate education program committee which holds final responsibility for admission decisions. Applicants are notified by mail of admissions decision by the Office of Graduate Education.

Admissions Appeals

Applicants may appeal an admissions decision by submitting a written appeal to the Office of Graduate Education.

The appeal will be reviewed by the appropriate program faculty and the dean will notify the student of action taken on the appeal.

Information that will be considered in an admission appeal may include, but will not be limited to, the following:

1. Grades earned in graduate coursework from an accredited institution.
2. Evidence of professional achievements that substantiate potential for success with graduate education studies.
3. Extenuating circumstances (e.g., non-native English speaking individuals).

The quality of the organization of information will also be considered in the review of appeals.

Should the applicant wish to pursue the appeal process further, a written appeal should be submitted to the Associate Provost.

Program Policies

In addition to the general policies described in the Academic Policies chapter, specific policies for education programs are as follows:

Admission Credit A maximum of six credit hours may be approved for admissions credit. Exceptions to the maximum must be approved by the appropriate program faculty.

Transfer Credit Up to a total of six credit hours may be approved as transfer credit, provided these credits were earned no more than three years prior to matriculation. Additional credit may be approved by the appropriate graduate program in unusual circumstances.

Undergraduate Credits Graduate credit will not be given for courses taken to fulfill undergraduate requirements. Any other 300 - 400 level courses must be approved in advance by appropriate College of Education graduate faculty if those credits are to be applied to fulfill graduate degree program requirements.

Course Waivers Should a student wish to waive course requirements or request course substitutions, he or she must contact the appropriate department chairperson to work out program changes, if appropriate. No more than 6 hours of academic credit may be waived or substituted.

Comprehensive Examination All program degree students must take a comprehensive examination which will assess the student's breadth and depth of knowledge of the program field. The examination cannot be taken prior to the semester in which the student completes a program of study.

Degree students will have an opportunity to receive an examination briefing at least two weeks prior to the examination date, and the criteria to be used in evaluating the examination will be available in written form. In addition, students have the right to receive an explanation of the examination results.

Comprehensive examinations will be graded as pass with honors, pass, or fail. A student may take the examination no more than twice; two failures will result in the student being withdrawn from the program. The examination will be given once each semester during the academic year. Degree students must register for the examination at least six weeks prior to an examination date.

Information on examination dates and comprehensive examination registration forms are available from the Office of Graduate Education.

The Department of Human Resource Development has special comprehensive examination requirements. Please consult with the Department for details.

Master's Thesis A degree student may earn up to six credit hours for completing a master's thesis. Students are encouraged to consult with their faculty advisor regarding thesis requirements.

Department of Professional Education

Professor: O'Donnell; *Associate Professors:* Amoroso, Cohen, Curry, Kulawiec, Miller, Silvernail, Smith; *Assistant Professors:* Broyles, Goldsberry, Rees

Educational Administration Program

The master of science in education degree in educational administration focuses on the preparation of leaders for educational settings as elementary and secondary principals, assistant principals, program coordinators, department chairs, and team and unit leaders. The program of study is designed to develop general leadership perspectives and specific technical skills, drawing on the humanities as well as the social and administrative sciences. Courses include those proficiencies required for certification of elementary or secondary principals in Maine.

Completion of the degree program in educational administration should provide for the development of perspectives and skills that will enable each graduate to:

1. assume a school-wide and district-wide, as opposed to a classroom, perspective on matters related to schools and schooling;
2. develop concepts of effective teaching, effective school administration, and effective schools;
3. understand the norms, values, and ethics of school administration;
4. understand and utilize research findings and relevant research techniques and procedures;
5. influence and enable people as individuals, role holders, and members of groups and organizations;
6. identify, grasp, and use theories, models, conceptual constructs basic to leadership;
7. be proficient in skills of communication and group facilitation;
8. work for the provision of equal opportunity for all clients;
9. develop and use a technical core of skills related to school administration;
10. reflect on their own beliefs and practices as school administrators and educational leaders.

Program of Study

Every student admitted to graduate study in educational administration progresses through a cycle of courses and experiences that (1) provide an introduction to the field of school administration and promote socialization into the profession; (2) develop understandings about the foundations and conceptual frameworks that underpin the study of leadership and administration; (3) develop a technical core of skills and functions for school administration; and, (4) allow for the application of knowledge and skills in school settings. The program requires thirty-nine (39) credits for completion. Each student progresses through the following blocks of courses:

Entry Block (6 credits)

EDU 670 Introduction to Administration
EDU 600 Research Methods and Techniques

Foundations/Functions Block (24 credits)

<i>Foundations (9 credits)</i>	<i>Functions (15 credits)</i>
HRD 626 Group Process and Procedures	EDU 630 Analysis of Teaching

EDU 671 Organizational
Behavior
EDU 672 Political Basis
for Decision
Making

EDU 604 Curriculum
Development
EDU 678 School Law
EDU 679 Evaluation
and Supervision
EUD 680 Staff Development
or
EDU 674 Strategies for
School Improvement

Applications Block (9 credits)

EDUX 677 Seminar in School Management
EDU 685 Internship
EDUX 698 Practicum

Entry Block

The entry block includes an introductory course and a course in research. The introductory course is designed to introduce students to the profession of educational administration and to develop a familiarity with notions about the cultural and organizational dimensions of leadership in general and school leadership in particular.

The research course provides an understanding of the type of thinking and problem solving that is reflected in educational scholarship and introduces students to research methodologies, the educational literature, and the skills necessary to locate and use research resources.

Foundation/Functions Block

This block combines work in the foundations of educational administration and the functions and skills directly related to the jobs of educational administrators. The *foundations* portion focuses on groups, organizations, and politics, and helps students gain familiarity with the contributions of the behavioral sciences and humanities to leadership development.

The *functions* portion of the block is designed to develop a technical core of skills, behaviors, and methods of analysis that effective practicing administrators use on the job. Coursework in the models of teaching, curriculum development, school law, evaluation and supervision, and school improvement/staff development provide degree candidates with many of the skills they will need in entry level positions and beyond.

Application Block

Comprised of three courses taken in sequence, the application block is designed to provide “real life” experiences in school administration within a context that supports reflection and considered action. The Seminar in School Management engages degree candidates in a series of interactions with practicing administrators and uses a case study approach. The Internship provides the opportunity for candidates to work closely with a field supervisor, or mentor, in a specific job situation. The Internship encourages reflective practice and provides the arena for testing skills and perspectives learned throughout the program. As part of the Internship experience, the candidate defines a problem that she or he wants to address in the final experience of the program, the Practicum. The Practicum engages the student in action research and provides the opportunity to apply the learnings of the administrative program to a specific problem, found in a specific setting.

Exceptionality Program

The master of science in education degree in the exceptionality program provides intermediate and advanced level training for individuals who wish to work in the area of special education. Cross categorical preparation is offered at two levels: elementary education and secondary education. In addition, there are specialty programs in hearing impairment and gifted child education. There is also a course sequence in special education administration offered for those individuals matriculated into the educational administration program. The master of science in education in the

exceptionality program requires 39 credits of coursework.

Graduates of the program will develop a range of intermediate and advanced skills related to exceptional children and youth. Specifically, graduates will be able to demonstrate and/or describe:

1. educational and behavioral characteristics, needs, and services available for exceptional children and youth, including appropriate state and federal laws, regulations, and guidelines;
2. techniques for assessing academic, behavioral, social and pre-vocational and vocational strengths and weaknesses of exceptional students;
3. methods, materials, and procedures for organizing, conducting, and evaluating individualized educational programs based on assessed strengths and weaknesses;
4. techniques and approaches for managing disruptive and inappropriate student behavior and fostering pro-social behavior;
5. processes of consultation and program planning with parents, teachers, and other professionals, including interpersonal skills and techniques associated with effective consultation;
6. principles and techniques for the organization and administration of special education programs as well as the supervision of teachers, aides, and other professionals who deliver services to exceptional individuals.

Special Program Requirements

Each student entering the program must have had previous experience in education or human services. The student is responsible for bringing the appropriate information (transcripts, course descriptions, documentation of experience, etc.) to the attention of the admissions committee. The admissions committee is responsible for evaluating this information and determining equivalency where justified. This determination must be made at the time of the acceptance.

Admission requirements include:

1. Three letters of recommendation, one of which must be by a supervisor in education or human services.
2. At least a 2.5 undergraduate grade point average.
3. A written essay.
4. Graduate Record Examination or Miller Analogies Test Score.
5. An interview may also be required at the prerogative of the admissions committee.

Program of Study

A. Elementary Special Education

The purpose of this concentration is to prepare individuals to work in the area of elementary special education.

Core (12 credits)

- EXE 601 Educational Programming for Exceptional Children
- EXE 653 Assessment in Special Education
- EDU 600 Research Methods and Techniques
- EXE 611 Nature and Needs of Exceptional Learners

Skills (12 credits)

- EXE 613 Curriculum and Instruction for Children with Learning and Behavior Problems
- EXE 687 Technology in Special Education
- EXE 615 Classroom and Behavior Management for Exceptional Learners
- EXE 617 Assessment for Instruction
- EXE 644 Language Development and Language Intervention
- EDU 621 Reading Remediation
- EXE 646 Audiology/Aural Habilitation

Management of Special Education (6 credits)

- EXE 669 Technical Assistance Systems
- EXE 684 Administration in Special Education

- EXE 682 Special Education Law: Conflict and Resolution
- EXE 692 Transitional Planning and Programming for Exceptional Students

Advanced Research and Issues (6 credits)

- EXE 685 Advanced Seminar in Special Education
- EXE 699 Directed Study (Research)

Electives (3 credits, selected with the advice of the advisor and may include courses such as the following)

- EXE 641 Foundations of Hearing Impairment
- HRD 620 Fundamentals of Counseling Skills
- HRD 604 Life Span Development I
- HRD 605 Life Span Development II
- EDU 510 Developing the Composition Process

B. Hearing Impairment

The purpose of this concentration is to prepare individuals to work with students who are hearing impaired.

Core (15 credits)

- EXE 601 Educational Programming for Exceptional Children
- EXE 653 Assessment in Special Education
- EXE 600 Research Methods and Techniques
- EXE 699 Directed Study
- EDU 620 Foundations of Reading

Specialization (21 credits)

- EXE 640 Communication and Deafness
- EXE 641 Foundations of Hearing Impairment
- EXE 642 Oral/Aural Development and Instruction
- EXE 644 Language Development and Language Intervention
- EXE 646 Audiology/Aural Habilitation
- EXE 648 Curriculum for Hearing Impaired
- EXE 654 Practicum—Hearing Impairment

Related Elective (3 credits)

It is strongly recommended that students take EXE 640 and EXE 641 before other courses in this specialization. One elective may be chosen from outside the specialization after consultation and approval with an advisor.

C. Secondary Special Education

The purpose of this concentration is to prepare individuals to work with secondary level students with handicaps.

Core (12 credits)

- EXE 601 Educational Programming for Exceptional Children
- EXE 653 Assessment in Special Education
- EDU 600 Research Methods and Techniques
- EXE 699 Directed Study

Specialization (21 credits)

- EXE 690 Disability, Deviance, and Development
- EXE 692 Transitional Planning and Programming for Secondary Students
- EXE 693 Prevocational and Vocational Assessment
- EXE 694 Vocational Education for Special Needs Students
- EXE 695 Curriculum and Instruction—Secondary Level Special Needs
- EXE 696 Secondary Practicum (6 credits)

Related Electives (6 credits)

- EXE 621 Reading Remediation
- HRD 620 Fundamentals of Counseling Skills

- EXE 612 Classroom and Behavior Management for Exceptional Learners
- EXE 611 Nature and Needs of Exceptional Learners
- EXE 669 Technical Assistance Systems
- EXE 682 Special Education Law: Conflict and Resolution

D. Education of the Gifted/Talented

The purpose of this concentration is to prepare individuals to work in the area of gifted child education.

Core (12 credits)

- EXE 601 Educational Programming for Exceptional Children
- EXE 653 Assessment in Special Education
- EDU 600 Research Methods and Techniques
- EXE 699 Directed Study or EDU 699 Independent Study

Specialization (12 credits)

- EXE 659 Education of the Gifted/Talented
- EXE 660 Curriculum and Methods for Teaching Gifted
- EXE 662 Creativity and the Gifted/Talented
- EXE 663 Management in Education of the Gifted

Electives (15 credits)

- EXE 550 Teaching Gifted Students in the Regular Classroom
 - EXE 661 Advanced Curriculum and Methods for Teaching Gifted
 - EXE 664 Gifted Students in Special Populations
 - EXE 665 Institute for Program Planners in Education of the Gifted/Talented
 - EXE 666 Models in Education of the Gifted
 - EXE 667 Social/Emotional Needs of the Gifted
 - EXE 668 Seminar in Education of Gifted/Talented
 - EXE 669 Technical Assistance System
- Other electives to be selected in consultation with the advisor.

E. Special Education Administration (open only to students matriculated in the Educational Administration Program.)

The purpose of this concentration is to prepare individuals to work in the area of special education administration.

Entry Block (6 credits)

- EDU 670 Introduction to Administration
- EDU 600 Research Methods and Techniques

Foundations Block (9 credits)

- HRD 626 Group Process and Procedures
- EDU 671 Organizational Behavior
- EDU 672 Political Basis for Decision Making

Function Courses (15 credits)

- EXE 682 Special Education Law: Conflict and Resolution
- EXE 601 Educational Programming for Exceptional Children
- EXE 689 Planning and Evaluation for Special Education Administrators
- EXE 679 Evaluation and Supervision
- EXE 684 Administration in Special Education

Applications Block (9 credits)

- EXE 685 Advanced Seminar
- EXE 688 Practicum
- EXE 699 Directed Study

Instructional Leadership Program

The master of science in education degree in the instructional leadership program (ILP) is designed to prepare educators for the demands of working with others to promote educational excellence. The 42-credit program

consists of three major components: the core (21 credits), the concentration (15 credits), and the practicum (6 credits). Five themes are seen as strands that help shape each component of the program. They are: 1) an emphasis on developing one's platform and articulation of the relationship between each learner's philosophy or beliefs and his or her practices; 2) a focus on problem finding, the disposition to scrutinize aims, as well as means, or discover to create ways to enhance or refine existing goals or practices; 3) valuing of and practical experience with collaborative action, purposeful and cooperative, working in group situation; 4) deliberate consideration and skillful use of interpersonal and professional communication; and 5) a valuing of and practical experience with action research, the disciplined examination of actual practice, its impact for consistency with stated aims, professional knowledge, and overall educational merit. These strands intertwine to weave a program clearly focused on the importance of informed and reflective practice as the essence of educational leadership.

The teaching mission of the Instructional Leadership Program (ILP) is to model an educational program that:

1. develops knowledge and skills useful for the reflective practice of designing, implementing, and evaluating environments conducive to learning;
2. relates theory and research pertaining to education and to leadership directly to the practices of teaching and other forms of instructional leadership both by reason and by example;
3. establishes clear and ambitious expectations for learners and deliberately and visibly evaluates its success in attaining these expectations;
4. develops functional leadership behaviors in each participant in the program; and
5. uses careful systems of inquiry to examine the needs and progress of each learner so that adaptations supportive of both the mission and the learner can be made.

In addition to their teaching mission, the faculty of the Instructional Leadership Program are committed to model educational leadership both through teaching excellence and through continuing their own scholarly efforts including ongoing research and service to the schools of Maine, to the University of Southern Maine, and to the broader academic community. The faculty view this commitment to active scholarship as consistent with and vital for the program's emphasis upon excellence in teaching.

Admission

Consideration for admission to the Instructional Leadership Program will be given to applicants who hold a baccalaureate degree and who present evidence of probable success in graduate work.

Evidence in support of admission will include:

1. results of the Miller Analogies test or the Graduate Record Examination;
2. three letters of recommendation addressing the applicant's potential for success in the program and as an instructional leader;
3. transcripts of all previous work; and
4. GPA of 3.0 or better on all previous undergraduate and graduate work.

Applicants not meeting the GPA requirement may be granted conditional admission status during which time students must successfully complete designated courses with a grade of B or better. Upon successful completion of the designated courses students may be granted regular admission status.

The admission process may require a formal interview. Candidates to be interviewed will be selected on the basis of the information above. During the interview, issues related to the following topics will be covered: potential for leadership, commitment to the education of children and youth, and skills and experiences in working with others. A spontaneous writing sample on an instructional leadership topic may be required and if so, would be administered as part of the interview process.

Program of Study Core

The seven courses (21 credits) of the ILP core are designed to provide learners with a solid foundation in curriculum, contextual considerations,

and the dynamics of leadership in educational settings. Taking these courses in the sequence listed is recommended. The core courses are:

- EDU 600 Research Methods and Techniques
- EDU 603 Analysis of Teaching
- EDU 604 Curriculum Development
- EDU 605 Curriculum Inquiry*
- EDU 611 Contexts for Teaching and Learning
- EDUX 601 Naturalistic Inquiring and Qualitative Methods
- EDUX 614 Educational Leadership

*EDU 605 will be waived for students who successfully complete the interdisciplinary curriculum course and 15 other credits in the New England Studies concentration.

Concentration

A concentration is an organized block of at least fifteen (15) credits that has both demonstrable thematic consistency and relates to the broader theme of educational leadership. Students may either select one of the three established concentrations including: teacher/leader emphasis; organizational leadership or New England Studies; or students may petition program faculty to accept a self designed program concentration.

Available program concentrations require the following:

Teacher/Leader Emphasis Concentration

- EDU 610 Critical Issues in Teaching and Learning
- EDU 679 Evaluation and Supervision of School Personnel
- EDU 680 Staff Development
- Plus 2 EDU or HRD graduate level electives approved by advisor

Organizational Leadership Concentration

- EDU 671 Organizational Behavior
- EDU 679 Evaluation and Supervision of School Improvement
- Plus EDU or HRD graduate level electives approved by advisor

New England Studies Concentration

- NES 601 Culture and Society in New England
- NES 602 Approaches to the Study of New England
- 3 credit interdisciplinary seminar
- Plus 3 courses from the New England Studies graduate program selected with advisor's approval.

The use of other courses for the concentration may be petitioned.

Practicum

The EDU 612 Practicum/Seminar and its major project, the Practicum Report, constitute the culminating project of the program. The Practicum Report documents the student's attempt to synthesize and apply major learnings from the program through the identification of a problem pertaining to educational leadership in a field setting, the review of pertinent literature and other germane resources, an examination of site-specific factors that influence the problem or its resolution, the formulation of a leadership strategy to address the selected problem, the application of at least the first steps of the strategy, and the documentation and critical assessment of the applied leadership steps. The written Practicum Report will be verbally defended.

Literacy Education Program

The master of science in education degree in literacy education provides students with a sound theoretical and empirical knowledge base relating to literacy acquisition. The purpose of the program is to enable students to become informed decision makers who are capable of designing and implementing appropriate up-to-date instruction in reading and writing at all levels. Participants will acquire the knowledge and skills necessary to become effective advocates for improving literacy instruction in their schools. The program is designed for classroom teachers, literacy specialists,

and other educators whose primary responsibility is helping students to become competent language users.

Program of Study

Required Core Courses (24 credit hours)

- EDU 600 Research Methods and Techniques
- EDU 620 Foundations of Reading Instruction
- EDU 621 Reading Remediation
- EDU 510 Developing the Composition Process
- EDU 511 Children's Literature

or

- EDU 513 Adolescent Literature
- EDU 514 Teaching Reading in the Content Areas
- EDU 529 Clinical Experiences
- EDU 634 Seminar in Reading Research

Electives

- EDU 524 Supervised Practicum in Reading Disabilities
- EDU 622 Language and Literacy for Young Children
- EDU 630 Organizing for Elementary Literacy Instruction
- EDU 633 Special Applications of Reading Methods

Special Programs

Teachers for Elementary Schools Program (TESP) is a special one-year, full-time sequence of coursework and internship for graduates of liberal arts programs seeking certification as elementary school teachers. Admission to this program is competitive, limited to 15 students per year. Application must be completed by April 15, 1989, for consideration for September 1989 matriculation.

Successful applicants will carry a full load of graduate-level education courses during the fall semester, but will spend two days a week in schools observing, helping, and visiting classrooms to experience different grade levels, class structures, and school cultures. During the spring semester, candidates will be engaged in full-time teaching internships in a cooperating school district. Each intern will have two grade placements during this time.

Coursework is drawn from USM's graduate programs in instructional leadership, literacy education, and exceptionality. It focuses on educational issues, theory, and practice. A total of 30 credits will be earned during the program. Up to 15 of these credits may be applied toward a master's degree at the time of matriculation into a program, with advisor's approval. For further information, contact the Graduate Education Office.

Teachers for Secondary Schools Program (TSSP) is an intensive, one-year experience for the preparation of secondary school teachers. Educational theory and application are interwoven by alternating academic class time and school-based activities throughout the year. The program commitment begins with a weekend of discovery and group support in Maine's outdoors. Participants complete five professional education courses, one hundred hours of guided observations, and a six-hundred-hour internship in an area high school for a total of 27 graduate credits. These schools and the University work in partnership to provide the setting for the study of the complex role of teaching. The internship is scheduled from mid-November to early April to match school grading periods. Interns return to campus until May for continued study, personal inquiry, and reflection.

Those who complete the program will be certified to teach grades 7-12 in Maine and will have partially fulfilled requirements for a master of science in education degree in the Instructional Leadership program.

The program seeks college graduates with distinguished records of academic achievements, work experience, public service, and interest in young people. Participants will be limited in number through a highly selective screening and interview process to ensure close support and supervision. Applications received after April 29, 1989, will be considered only on a space available basis. For further information, contact the Graduate Education Office.

EDU 501 Introduction to Computer

Application

This course is designed to orient the pre-service and in-service teacher to terminology, operation, evaluation, and applications of microcomputers, hardware and software, as related to our educational system. Additionally, the course will deal with other more traditional electronic media related to modern learning processes.

Cr 3.

EDU 510 Developing the Composition

Process

A course in language arts emphasizing the development of writing proficiencies. Writing growth and its relationship to reading and oral language development is examined. A thorough study of current research and theory relating to the composition process leads to the development of instructional programs that will foster students' growth as writers. Appropriate for elementary teachers; most secondary teachers can be accommodated.

Cr 3.

EDU 511 Children's Literature

Designed for teachers who wish to develop a deeper understanding of the literature written for children ages 4-12, and who want to become competent and creative catalysts in bringing children to books. Attention is given to standards of selection, curriculum implications, and methods for using books to individualize reading instruction. Students are expected to read widely in juvenile collections in order to establish a basis for selecting appropriate literary fare.

Cr 3.

EDU 513 Adolescent Literature

This course is designed for the middle or secondary teacher who wishes to develop a deeper understanding of literature for adolescents and who needs to learn how to help young people read widely. Attention will be given to the dynamics of adolescence, individualizing reading, standards of selection, and creative methods of introducing books.

Cr 3.

EDU 514 Teaching Reading in Content Areas

This course explores techniques and processes that can be applied by content teachers to improve reading ability. Emphasis is on competencies that students use in content areas and strategies for teaching them how to apply them—a process of integrating the teaching of reading/study skills while teaching a subject matter. The course has practical application for all classroom teachers in grades 4 through 12.

Cr 3.

EDU 524 Supervised Practicum in Reading Disabilities

Clinical experiences given in conjunction with the Reading Clinic or the University Reading Academy. Working under supervision, students use selected assessment instruments with adults/children who have learning and

reading difficulties. Testing sessions will be unique and geared to specific diagnostic needs perceived by instructors.

Cr 1-15.

EDU 529 Clinical Experiences

Clinical experiences requiring the utilization of diagnostic and prescriptive methods for planning and implementing reading programs for students at different stages of reading progress. Tutoring experiences are augmented and related to the professional literature and research through frequent opportunities to explain and defend observations in seminars. Extensive reading from basic texts, current references, and periodicals are stressed. Emphasis is on the appropriate application of research-validated teaching and diagnostic techniques in supervised settings. Prerequisites: EDU 620 and EDU 621 or equivalents.

Cr 6.

EDU 600 Research Methods and Techniques

A study of concepts, principles, and techniques of educational research with emphasis on scientific inquiry and problem solving, designed for both the producer and consumer of educational research. Individual research proposals and reports are completed. Prerequisite: open to matriculated students only.

Cr 3.

EDUX 601 Naturalistic Inquiry/ Qualitative Methods

This course introduces students to an approach to educational research that studies schools as natural settings. Depending largely on qualitative methods, students will learn the assumptions underlying field research and will develop the ability to read qualitative/naturalist studies critically and to do small site-based research projects. Prerequisite: EDU 600.

Cr 3.

EDU 602 Philosophy and the Teacher

During this course, several educational philosophies will be examined and the individual will analyze the function of the teacher within those frameworks. There will be an investigation of problems in education and schooling from the perspective of the philosophies studied so as to promote understanding of educational thought and practice.

Cr 3.

EDU 603 Analysis of Teaching

This course provides opportunity to view teaching from the perspective of selected conceptual frameworks and research findings in the theory and practice of teaching. Analysis of individual teaching behavior is an important aspect of this course.

Cr 3.

EDU 604 Curriculum Development

This basic curriculum course will provide students with an understanding of what curriculum and curriculum development are. Using collaborative approach, teachers and administrators will plan the design of a curriculum consistent with personal ideals and applicable in a given context. Students will analyze the curriculum in terms of knowledge, skills,

learning processes, and affective dimensions. Special emphasis will be given to the processes of curriculum implementation and curriculum evaluation. Cr 3.

EDU 605 Curriculum Inquiry

This advanced curriculum course will allow students in the course to take a personal inquiry perspective that will focus on curriculum renewal by looking at the realities of present classroom conditions but pushing for new concepts and processes that will envision meaning for all students. This emphasis will require access to teaching/learning settings for analysis. This course will provide an opportunity to relate broad curriculum issues to specific areas of the disciplines, to stages of human development, and to the theoretical bases of learning. Prerequisite: EDU 604 or equivalent course. Cr 3.

EDU 610 Seminar I: Critical Issues in Teaching and Learning

As the initial course of the Instructional Leadership Program, this seminar provides grounding and direction for a spiral of learning to continue throughout the program. It draws on direct and observed experience of participants, as well as on the literature of theory, research, and practice, to explore critical issues in teaching and learning. It aims to provide students with a process of inquiry useful for identifying, classifying, and analyzing instructional problems and, thus, contributing the skill in making decisions about curriculum and pedagogy. Cr 3.

EDU 611 Seminar II: Contexts for Teaching and Learning

This second seminar of the Instructional Leadership program builds on the work done in Seminar I. This course will continue to develop each student's inquiry processes—ways to identify, classify, and analyze problems and to create alternatives for them. This course develops another aspect of inquiry—the analysis, understanding and creation of teaching and learning settings (contexts). These contexts then constitute the focus of this course. Cr 3.

EDU 612 Practicum/Seminar

For experienced teachers in the Instructional Leadership program, a 6-credit field-based project and concurrent seminar requiring a culminating activity in which the student utilizes the major learnings from the program in identifying and applying problem-solving strategies to a specific area of concern in a field setting. A written practicum report will be verbally defended. Cr 6.

EDU 613 Practicum/Seminar/TSSP

For students in the Teachers for Secondary Schools Program, a 15-credit internship in a classroom offers a training sequence for guided practice to independent teaching. Opportunity is afforded the student to have

direct experience with different teaching models and strategies under the supervision of experienced classroom teachers and University staff. Prior field observations and a concurrent seminar that integrate theory and practice are required. Cr 3.

EDUX 614 Leadership

This course is designed primarily for students in the Instructional Leadership Program. It examines the concept of leadership from a variety of perspectives and promotes the application of leadership principles to teaching and administrative roles in educational settings. This course should be taken at or near the end of the Instructional Leadership program. Cr 3.

EDUX 615 Cohort Seminar

The seminar offers students in the Instructional Leadership Program a structured setting for the exploration and issues related to the preparation or activities of educational leaders. Participants will help focus the seminar on topics of current interest and personal concern. Prerequisite: permission of instructor. Cr 1.

EDU 620 Foundations of Reading Instruction

The characteristics of the developmental reading program are examined. Topics are evolved from the development literacy and include: reading correlates, early literacy, initial reading, opportunities for independent reading, wide reading, and include vocabulary development, comprehension, study skills, and reading in the content areas. Methods for diagnosing and prescribing for reading are related through case studies of students residing at different stages of reading progress. Cr 3.

EDU 621 Reading Remediation

Conceptualizes reading diagnosis as a process of becoming informed about a learner. Heavy emphasis on developing diagnostic insights and corrective strategies for disabled readers of all ages. Updates traditional approaches and elaborates on current trends from research and practice. Stresses case studies and in-class practice to help teachers implement diagnostic corrective procedures in the classroom. Prerequisite: EDU 620 or equivalent. Cr 3.

EDU 622 Language and Literacy for Young Children

The focus of the course is the development of language (both oral and written) in children three and eight years of age. Content includes the characteristics of language learners, the conditions that promote emergent literacy, and organization and management of literacy instruction in the primary grades. Cr 3.

EDU 630 Organizing for Upper Elementary Literacy Instruction

The course identifies and explores the components of effective literacy programs at the

upper elementary and middle school levels. Emphasis is on the design and implementation of literature-based instruction and management of self-selected reading. Prerequisite: EDU 620. Cr 3.

EDU 633 Special Applications of Reading Methods

Independent study, opportunities to apply course experiences in field-based situations are encouraged. Considerable latitude is possible in pursuing options of professional interest with approval of advisor. Examples of activities include: writing project (meeting standards of professional journals), intensive clinical experiences, educational consultation and research. Independent options must be approved in writing by the Program Coordinator. Cr 3.

EDU 634 Seminar in Reading Research

The course provides an overview of basic principles of assessment, comparison of research methodologies (quantitative and qualitative), and current research trends in reading theory and practice. Students will review and analyze contemporary research. Prerequisite: EDU 620 or permission of the instructor. Cr 3.

EDU 670 Introduction to Administration

Required first course for all master's degree candidates in educational administration. The course introduces theories of administration and provides each student with diagnostic data to conduct a needs assessment as the basis for planning a personalized program of study. Prerequisite: admission to educational administration graduate program. Cr 3.

EDU 671 Organizational Behavior

A systems approach to understanding and predicting human behavior within organizations. The course emphasizes analytical means to 1) reveal forces which affect decision-making and leadership behavior; and 2) identify implications for managerial functions. Basic concepts such as authority, influence, motivation, communication, conflict, pattern maintenance and tension management are discussed and applied. Cr 3.

EDU 672 Political Bases of Decision Making

Educational leaders must be influential beyond the school system as well as within it. Distribution of power and influence across interrelated social systems is seldom equal leading to competition for bases of influence. This course examines the ramifications of this social circumstance for education with emphasis on administrative decision making. Cr 3.

EDU 674 Strategies for School Improvement

This course is designed primarily for students in Administration and Instructional Leadership and examines the theory and practice of school improvement. Schools are analyzed as unique social settings and the roles of teachers, administrators, and other role groups are

explored as a basis for understanding the process of school improvement. Different approaches to school improvement are studied and current research in the area is read and discussed. Students in the class complete a final project that applies course learning to their own school setting. Cr 3.

EDU 676 Systems Approach to Educational Planning

Students participate in simulated and real experiences involving programming, planning, evaluating, managing, budgeting forecasting, and decision making. Topics for discussion and skill development will include flow charting, PERTing, needs assessment, curriculum analysis and evaluation, expenditure analysis and accounting, the Delphi Technique, Kepner-Tregoe method, Cost Benefit Analysis and Discrepancy Evaluation. Cr 3.

EDU 678 School Law

The purpose of this course is to acquaint students with general principles of school law as found in the interpretation of constitutional and statutory provisions by the higher courts. Laws governing pupils, teaching personnel and boards of education will be stressed with particular emphasis on Maine school law. Cr 3.

EDU 679 Evaluation and Supervision of School Personnel

The course considers the underlying concepts and principles of evaluating school personnel. Readings, lectures, discussions, and simulated activities focus on a variety of evaluation models and strategies which facilitate the appraisal of administrators, teachers, and supporting staff. Attention is directed to how personnel evaluation affects program evaluation. Prerequisite: admission to educational administration graduate program or hold a master's degree. Cr 3.

EDU 680 Staff Development

This course is designed for students in Administration and Instructional Leadership and examines the theory and practice of staff development in schools and other human service settings. Building on current research on adult development, organizational analysis, and school improvement, students will develop an understanding about the structure and process of staff development planning, programming, implementation, and evaluation. A final project applying class learnings to a work setting will be required. Cr 3.

EDU 685 Seminar in Administration

A culminating course in the administration sequence for students nearing the completion of their program. The seminar will include, but not be limited to, the following components: an evaluation phase including student-faculty examination of both oral and written presentations by the participants; a field assignment in which participants will have a practical encounter with administrative practices, stra-

tegies, and policies currently in use in the public schools; and a placement phase in which participants will develop up-to-date vitae and letters of application. Cr 3.

EDU 699 Independent Study

This course provides an opportunity for students to pursue a topic of interest on an independent basis. The specific content and evaluation procedures are arranged with an instructor. Permission of department chair is required on forms obtained in the Graduate Education office. Cr var.

EXE 550 Teaching Gifted Students in the Regular Classroom

This course is for teachers who serve gifted/talented students within the structure of the regular classroom. Topics will include adapting the "required" curriculum to meet the needs of students, teaching/facilitating independent/small group activities, using learning centers, task cards, student contracts, working successfully with parents, resource teachers, administrators, and considering current issues in gifted child education specific to the regular classroom environment. Cr 3.

EXE 601 Educational Programming for Exceptional Children

An in-depth examination of learning, behavior patterns of exceptional students, and service delivery models. The course will include study of the learner's role in school, home, and community. Cr 3.

EXE 606 Practicum in Exceptionality/Seminar

A field-based course designed to offer experience in teaching exceptional children. This course emphasizes assessment, teaching methods, and development of educational programs. Students are required to attend seminars which will integrate and synthesize research relating to teaching exceptional children. Cr 6.

EXE 610 Emotional Disturbance—Theory and Practice

Historical background, treatment alternatives, and provisions for educational service are discussed, along with an exploration of etiological considerations, and legislative mandates. Theoretical approaches and conceptual issues for working with such children are reviewed, and psycho-educational procedures explored. Cr 3.

EXEX 611 Nature and Needs of Exceptional Learners

This course focuses on the unique characteristics and educational and social/emotional needs of children and youth who display a range of learning and behavioral difficulties including learning disabilities, mild forms of developmental delay, and mild to moderate forms of behavioral and adjustment problems. Cr 3.

EXE 612 Advanced Methods—Emotional Disturbance

An ecological approach to understanding and working with the emotionally disturbed child. Exposure to a variety of interventions from developmental theory to behaviorism through a case study approach aimed at assisting both the classroom teacher and special education teacher in developing educational and behavioral strategies. Cr 3.

EXEX 613 Curriculum and Instruction for Children with Learning and Behavior Problems

In this course students will undertake a systematic exploration of effective instructional practices for mildly handicapped children. Topics will include direct instruction, cooperative learning, cognitive approaches to learning problems, as well as a review of exemplary curricular approaches. Students are expected to conduct a variety of classroom application projects and make an in-depth study of several specific approaches. Cr 3.

EXEX 615 Classroom and Behavior Management for Exceptional Learners

This course examines a variety of strategies for promoting positive behavior. Topics include preventing misbehavior through classroom organization strategies, responding to misbehavior in constructive ways, and designing strategies to help children develop appropriate social skills. Students are expected to conduct several classroom application projects. Cr 3.

EXEX 617 Assessment for Instruction

In this course, students examine a variety of informal procedures for use in the assessment of the instructional needs of exceptional learners. Students will learn how to develop and conduct interviews, observations, and continuous and periodic assessments of instruction. Recordkeeping procedures will also be examined. Students are expected to develop several in-depth projects. Cr 3.

EXE 620 Learning Disabilities—Theory and Practice

An examination of the nature and characteristics of children with learning disabilities. The course will include the study of specific learning disabilities encountered in children, historical perspectives and future trends; and the roles of educators, parents, and auxiliary personnel in diagnosis, prevention, and remediation. Cr 3.

EXE 622 Advanced Methods—Learning Disabilities

This course will focus on diagnostic techniques and remedial strategies in working with children with learning disabilities. Assessment techniques, curricular strategies, and prescriptive approaches will be studied with a focus on prevention and remediation of learning disabilities. Cr 3.

EXE 624 Advanced Assessment and Practicum

An intensive study of assessment practices and techniques, and the interrelationship to teaching exceptional students. Students in the program will focus on specific special education students and undertake an in-depth analysis of strengths, weaknesses, and remedial strategies.

Cr 3.

EXE 630 Mental Retardation—Theory and Practice

An advanced study of mental retardation. This course will focus on the psychological and sociological aspects of mental retardation as they impact on the educational and community services needed by these individuals. Cr 3.

EXE 632 Advanced Methods—Mental Retardation

This course will examine techniques, methods, and materials used in teaching students who are mentally retarded. An examination of the research literature concerning appropriate methodologies will be made.

Cr 3.

EXE 640 Communication and Deafness

The course will describe the full range of communication modes currently used with hearing impaired children in the United States, and the presuppositions behind the various approaches, including: oral/aural, American Sign Language, Manual English, Cued Speech, fingerspelling, etc. The relationship between communication and language and the role of vision and residual hearing in language acquisition will be studied. Factors associated with the selection of a particular mode of communication over the other modes will be examined.

Cr 3.

EXE 641 Foundation Of Hearing Impairment

This course will provide an historical overview tracing past and present trends in the education of hearing impaired children. Students will be introduced to the various philosophical approaches to the education of this population. Sociological implications and psychological characteristics of deaf and hearing impaired people will be examined. Students will learn about their role and responsibilities as teachers in the education/counseling of parents with hearing impaired children.

Cr 3.

EXE 642 Oral/Aural Development and Instruction

This course will cover the basic methods of and models for developing speech and auditory skills in hearing impaired students. Information concerning the sequence of phonological development in hearing as well as hearing impaired individuals will be covered. Interpretation of assessment data including both articulation-based and process phonology models will be presented especially as related to development of individualized speech and auditory goals. Integration of speech training in classroom contexts will be emphasized. Cr 3.

EXE 644 Language Development and Language Intervention

This course examines issues related to (a) the nature of language, (b) language acquisition, (c) the assessment of language, and (d) language development at home and in the classroom. Language intervention and classroom instruction will focus on children with hearing impairments, but theoretical bases and approaches may be applicable to all children.

Cr 3.

EXE 646 Audiology/Aural Habilitation

This course will offer an overview of audiology and aural habilitation for teachers of hearing impaired children. The anatomy, physiology, and pathologies of the ear will be explained. Students will be taught the physics of sound and principles of pure tone audiometry. Auditory training equipment, including hearing aids and other assistive devices will be introduced. Students will explore the implications of hearing loss on speech acquisition and development.

Cr 3.

EXE 648 Curriculum for the Hearing Impaired

This course is designed to prepare teachers of the hearing impaired to develop, design, adapt, and implement developmental curriculum approaches and materials in classrooms for the hearing impaired. The course will cover the relationship of cognitive and conceptual development to curriculum procedures and choice of materials. Selection and adaptation of materials (especially in content areas) will be covered as well as adaptation for mainstreamed students. Techniques for integrating language and speech instruction in curriculum areas will also be covered.

Cr 3.

EXE 653 Assessment in Special Education

Numerous tests in the areas of intelligence, achievement, perceptual motor skills, adaptive behavior, and behavior will be examined. Students will work with children in their area of specialization. The course emphasizes assessment, teaching, and development of educational programs and strategies.

Cr 3.

EXE 654 Practicum—Hearing Impairment

This course is designed for students interested in teaching hearing impaired students in a variety of mainstreamed and specialized settings. Field experience includes student observation and practice teaching in selected areas of specialization, i.e., preschool, elementary, or high school. Students participate in one or two practica depending upon the student's career goals.

Cr 3.

EXE 656 Summer Institute

These institutes are designed to provide in-depth coverage of specialized areas in the education of the hearing impaired. Topics to be covered include: Parents of Hearing Impaired Children; Language and Curriculum

Development; Speech, Speech Reading and Auditory Training; Mainstreaming Hearing Impaired Children in Regular Educational Settings; Multiple Handicapped Hearing Impaired; Classroom Organization and Behavior Management Techniques for Teachers of the Hearing Impaired; and Reading Instructions for the Hearing Impaired. Cr 3.

EXE 659 Education of Gifted and Talented

This course is for individuals responsible for initiating, mainstreaming, and/or extending services for gifted/talented students. Topics for study will include (1) identification procedures, (2) curriculum development and implementation, (3) administration and classroom management, (4) staff development and community involvement, and (5) evaluation of student growth and program effectiveness. Cr 3.

EXE 660 Curriculum and Method for Teaching the Gifted

This course is for individuals responsible for (1) developing or modifying learning experiences for gifted/talented students at the elementary or secondary school level, (2) implementing differentiated learning experiences within the regular classroom or through a special grouping arrangement, and/or (3) creating/selecting instructional materials to support the implementation of differentiated learning experiences. Cr 3.

EXE 661 Advanced Curriculum and Methods for Teaching Gifted

This course is for teachers, consultants, coordinators, and directors who work in programs for gifted/talented who are responsible for developing and implementing a curricular scope and sequence plan for the program, articulating services between grade levels and among content/skill areas within a district, coordinating the use of instructional materials within a program, and assisting others in utilizing, adapting, and creating learning activities for gifted/talented students. Cr 3.

EXE 662 Creativity and the Gifted/Talented

This course is for individuals responsible for (1) identifying creative potential within students, (2) planning and implementing learning experiences for nurturing creative thinking, (3) selecting or developing instructional materials for enhancing creativity, (4) establishing learning environments conducive to creativity, and/or (5) evaluating program effectiveness and student growth in creativity training. Cr 3.

EXE 663 Management in Education of Gifted

This course is for individuals responsible for coordinating services for gifted and talented students within a district. Topics for study will include program administration, program evaluation, personal interaction skills, and group dynamics. Cr 3.

EXE 664 Gifted Students in Special Populations

This course is for individuals responsible for identifying and serving gifted students from special populations. These populations include underachievers, females, culturally diverse and/or economically deprived, rurally isolated, bilingual, artistic, creative, impaired, and highly gifted. Cr 3.

EXE 665 Institute for Program Planners

This course is for individuals and teams of individuals responsible for planning district-wide programs for gifted and talented students. Participants will develop a procedural written plan of action for guiding the development and the implementation of programs. Planning areas will include (1) identification, (2) curriculum, (3) administration, (4) staff development, and (5) evaluation. Cr 3.

EXE 666 Models in Education of the Gifted

This course is for individuals responsible for choosing, adapting, or designing a model to serve gifted/talented students. Selected models prominent in the field will be reviewed and critiqued. Prerequisite: EXE 659 or EXE 660 or permission of instructor. Cr 3.

EXE 668 Seminar in Education of Gifted/Talented

This course is for students who have completed at least four courses in education of gifted/talented students. The seminar will focus on a critical issue related to the field. Participants will collect and critically analyze information relating to the issue. Prerequisite: completion of 4 courses in Gifted Child Education. Cr 1.

EXE 669 Technical Assistance Systems

This course is for administrators, consultants, program coordinators, teachers, and other individuals responsible for initiating, maintaining, or extending educational programs. Topics for study include assessing resources and needs, relating with client systems, diagnosing relationships and situations, acquiring resources, choosing and supporting solutions, and stabilizing innovations. Prerequisite: completion of 3 core courses and advisor's permission. Cr 3.

EXE 681 Curriculum and Methods for the Secondary Level Learners

This course will include curriculum and instructional planning for secondary level learners who are handicapped. Service delivery models and specific instructional techniques suitable for secondary learners will be included. Cr 3.

EXE 682 Special Education: Law, Conflict, and Resolution

Laws relating to the education of exceptional students and recent judicial decisions will be discussed. Methods of conflict resolution, in-

cluding mediation, will be presented. Prerequisite: EXE 601 or permission of instructor. Cr 3.

EXE 683 Topical Seminar

An advanced course that covers selected topics in exceptionality. Several current issues will be examined in-depth each semester. Individual and group presentations will be required. Cr 3.

EXE 684 Administration in Special Education

A field-based course designed to offer experience in administering special education programs. The course emphasizes the organization and administration of special education programs. Prerequisite: EXE 601 or permission of instructor. Cr 3.

EXE 685 Advanced Seminar in Special Education

An advanced course that will integrate and synthesize research and practices across disciplines in exceptionality. Individual and group presentations will be required as well as a major paper. Prerequisite: completion of 3 core courses or advisor's permission. Cr 3.

EXE 687 Technology in Special Education

This course introduces students to the use of technology in the education and rehabilitation of individuals with special needs. A range of technological systems will be examined from "low tech" devices such as simple switches to computers, adaptive devices, and software appropriate for handicapped individuals. A variety of equipment, materials, hardware, and software will be available for demonstration and student use. Methods and techniques for evaluation and determination of appropriate and inappropriate use of technology will be stressed. Cr 3.

EXEX 688 Practicum

This course is designed to provide experiences in practical and applied aspects of special education administration. Students will be expected to focus on one or two major projects developed in conjunction with the course instructor. Prerequisite: completion of 4 courses in special education administration. Cr Var.

EXE 690 Disability, Deviance, and Development

This course examines the growth and development of disabled adolescents from a social context. Society's historical treatment of disabled people and the effect social attitudes have on development will be addressed. Developmental theory presented through classwork and readings will be supplemented by research and interviews with adolescents and their teachers and families. Cr 3.

EXE 692 Transitional Planning and Programming for Secondary Students

The purpose of this course is to introduce participants to the concept of transition from

school to work and community living for disabled secondary students. Students will develop skills in interdisciplinary team planning and an awareness of community resources necessary to aid exceptional students in achieving career goals and a satisfactory adjustment to adult life. Prerequisite: EXE 601 or permission of instructor. Cr 3.

EXEX 693 Pre-vocational and Vocational Assessment

This class will cover the fundamentals of pre-vocational and vocational assessment tools, including definitions, purposes, and components. Types of assessment tools to be covered are psychometric testing, work sampling, situational assessment, job analysis, and behavioral observations. Participants will learn to interpret results and assess the implications for secondary level curriculum. Prerequisite: EXE 653 or permission of instructor. Cr 3.

EXEX 694 Vocational Education for Special Needs Students

This course will provide an in-depth study of appropriate vocations for disabled secondary school students. The skills to be taught are job analysis, job development, and job search and placement. Students will examine regional job opportunities and identify potential training sites, work sites, and employer needs. Cr 3.

EXE 695 Curriculum and Instruction—Secondary

This course is designed for teachers of secondary students with mild to moderate learning handicaps. Participants will examine the major service delivery components: 1) curriculum development, 2) instructional strategies, and 3) case management. Service delivery models, development of IEPs, and specific instructional techniques for secondary learners will be included. Cr 3.

EXE 696 Secondary Practicum

The secondary practicum is a field-based course designed to provide experience in service delivery to secondary special education students. Participants will devote a minimum of 200 hours at an approved practicum site. The field experience includes student observation, teaching, job coaching, and other transition oriented experiences. Prerequisite: completion of 12 credits in specialization. Cr Var.

EXE 699 Independent Study/Directed Study

This course is an opportunity to gain, apply, and integrate knowledge and skill in exceptionality by planning and conducting a project. The project must be intellectually sound, have direct applicability to the student, and produce a high quality product. Specific content and methods of evaluation will be determined in conjunction with faculty supervisor. Prerequisite: completion of 3 courses or advisor's permission. Cr var.

HTY 534 Maine History and Travel

This course provides an opportunity to pursue independent study in Maine history (especially southern Maine) since 1820. Given largely on Fridays and Saturdays in the summer. There will be discussions, oral reports and field trips to a variety of sites located in easy range of USM. Cr 3.

MAC 528 Computer Programming I

Programming techniques employing BASIC and FORTRAN languages. Applications will be primarily from elementary school mathematics topics and statistics. Cr 3.

MAC 529 Computer Programming II

A continuation of CSE 528. Topics will include sorts, searches, and high resolution graphics. Applications will be primarily from elementary school mathematics. Cr 3.

MAC 532 PASCAL For Teachers

A study of problem-solving techniques and applications using PASCAL language. The course is primarily for teachers who have a strong, serious interest in teaching computer. Microcomputers will be used. Prerequisite: permission of the instructor. Cr 3.

MAC 549 Computer Programming - LOGO

An introduction to the LOGO language for microcomputers. Emphasis will be given to writing computer programs for use in elementary classrooms beginning with turtle graphics. Cr 3.

MME 502 Number Systems

An intuitive approach to the number systems with the aid of manipulative materials. Topics included: sets and relations; systems of whole numbers; integers; rationals and reals; numeration systems; elementary number theory; and related topics. Cr 3.

MME 504 Informal Geometry

An investigation of geometric concepts with the aid of manipulative materials. Topics included: congruence; measurement; parallelism and similarity. Concepts to be presented at first intuitively, then as part of an axiomatic system. Prerequisite: MME 502. Cr 3.

MME 509 Topics in the History of Mathematics

The history of certain topics in arithmetic, geometry, number theory and algebra. Cr 3.

MME 514 Analysis I

The first of a two-semester sequence designed to give a thorough background in elementary analysis. Topics included: field properties, analytical geometry, continuity and intuitive differentiation. Prerequisite: permission of instructor. Cr 3.

MME 549 Selected Topics in Mathematics

A course designed to provide enrichment topics for the elementary teacher. The course

includes such topics as Awareness Geometry, Transformation Geometry, Analysis of Shapes, Number Theory and Measurement. The course is activity based and involves activities which may be implemented into the classroom. Cr 3.

MME 512 Newer Practices in Elementary Mathematics

Provides specific aid in teaching modern mathematics throughout the elementary grades. Includes study and use of new devices, materials and textbooks, as well as classroom procedures. Cr 3.

MME 513 Laboratory and Field Experiences in Mathematics Education

Supervised practicum where students will be designing and developing sequences of mathematics concepts and learning activity packages. Prerequisite: MME 512. Cr 3.

MME 539 Metric Education

An introductory course designed to acquaint elementary and middle school teachers with the functional techniques and strategies for teaching the rudiments of the metric system. The primary focus will be on the metric measurements for length, area, volume (capacity), mass (weight) and temperature. Cr 3.

MUH 520 Topics in Music History, 530 Topics in Music Theory

These courses investigate some specific area from the broad academic disciplines of music history and music theory (the topic for a given semester's course is determined by the needs and background of students expected to enroll). Such work not only assists students in acquiring in-depth knowledge and understanding of the specific subject involved, but also provides a model for procedure in such a study for future self-instruction by the serious advanced student. Topic courses may be taken more than once, assuming that each time a student enrolls a different topic is under investigation. Cr 3.

MUE 520 Problems in Administration and Supervision

A study of the origin and history of music supervision and of the forces affecting present public school music education. Course includes practical and philosophic concepts to provide a basis for evaluation of the supervisory process. Cr 3.

MUE 521 Current Trends in Music Education

The course will focus on a spiral curriculum model of music education. The model is based on the elements of music. Course content will integrate activities and materials from many current approaches in elementary music education. Cr 3.

MUE 522 Vocal Workshop

The methodology of choral conducting: rehearsal procedures, score study, and analysis.
Cr 3.

MUE 523 Instrumental Conducting Workshop

The course will focus on stylistic study of scores from contrasting periods, advanced

baton and left-hand techniques, and non-verbal communication procedures. Literature, rehearsal procedure, and tone and intonation development for all levels of band organizations will be covered.
Cr 3.

Department of Human Resource Development

Professors: Callender, Southworth, Sutton; *Associate Professors:* Brady, Moore;
Assistant Professors: Atkinson, Davis, Painter, Stevens, Van Zandt, Vess

The Department of Human Resource Development was created in 1981 as a result of the reorganization of the College of Education. The Department consists of graduate programs in counselor education, adult education, and school psychology. The Department also has the responsibility for teaching all courses related to human development and the family for the College of Education.

The purpose of the Department of Human Resource Development is to improve the individual practices of human services professionals, and enhance community, organizational, and agency practices through education, research, and public service.

Three graduate programs are offered by the Department: adult education with concentrations in training and development, educational gerontology, community education, adult public school education and counseling; counselor education with concentrations in elementary guidance, secondary guidance, community agency and rehabilitation counseling; and school psychology.

Coursework is offered on the Gorham campus as well as several off-campus sites. Summer institutes and other professional development activities are offered on a regular basis. The Department has been active in coordinating with other graduate programs within the University of Southern Maine, as well as with other graduate programs within the University system. Faculty are actively involved with organizations and individuals in the local and regional community. The Department also offers undergraduate courses in human development and family studies, and an undergraduate early childhood intern program.

The rehabilitation counseling concentration holds accreditation from the Council on Rehabilitation Education (CORE). Graduates of this concentration are eligible to sit for the Certified Rehabilitation Counseling examination. The school counseling concentration holds accreditation from the Council for the Accreditation of Counseling and Related Education Programs (CACREP). Graduates of this concentration are eligible to sit for the National Certification examination.

Admissions

Consideration for admission to the Department of Human Resource Development graduate program will be given to applicants who hold a baccalaureate degree and who present evidence of probable success in graduate work.

Evidence in support of admission shall include:

1. Transcripts of all previous work.
2. Results of the Miller Analogies Test or the Graduate Record Examination (must be taken within five years of the application deadline date).
3. Three letters of recommendation addressing your potential for success in the program and as a counselor or adult educator.
4. A personal narrative: The narrative, preferably typed, will be evaluated in terms of clarity of expression, grammatical construction, and other facets of English composition, as well as the quality of responses. The narrative should address the following subjects:

- A. Relevant educational and experiential background.
- B. Reasons for desiring to be in the helping professions.
- C. Intention of pursuing a career in counseling or adult education.
- D. Reasons for seeking admission to the program.
- E. A statement of personal philosophy.
- F. Information about special status, e.g., veteran, handicapped, minority, etc. (optional)
- G. A statement of personal strengths and weaknesses.

The admissions process requires a formal interview. Candidates to be interviewed will be selected on the basis of the information above. During the interview, issues related to the following topics will be covered: self-awareness; awareness of others; awareness of social issues; awareness of others as persons; communication skills; and commitment to the field.

A spontaneous writing sample is required and will be administered as part of the interview process.

In the final phase of the process, the Department faculty will discuss the results and select the final candidates. All data collected during the admission process will be used to make a final decision regarding acceptance into either the counselor education or adult education programs. A procedure is available for those wishing to appeal a decision of the Department faculty. Further information may be obtained by contacting the Department.

Applications are considered twice each year. Application deadlines are March 1 and October 1 and an application must be complete as of that date to be considered. **Students must take the responsibility to ensure that all admissions materials are submitted prior to the deadline.** All materials sent in support of an application become the property of the Graduate Education Office and will not be returned to the student.

Candidates approved for admission during the fall will matriculate on January 1 and candidates approved for admission during the spring may choose to matriculate on May 1 or September 1. Candidates approved for admission must register for at least one course in the semester in which they have been matriculated. Exceptions to this policy must be approved by the Department chairperson.

The Department of Human Resource Development will not admit applicants on a conditional basis.

Adult Education Program

The master of science in adult education, started in 1972, is the only graduate program of its kind in northern New England. Originally established to meet the region's need for trained public school administrators of adult education, the program today prepares educators for a variety of human resource development roles in all types of organizational and community settings. Today's students are also educators in non-school settings — hospitals, recreation agencies, business, human service organizations. Most seek professional competence and recognition for a position currently held. Usually, the student already is a professional with credentials in a specified field such as nursing, social work, counseling, criminal justice, or education and now practices that profession through an adult educator role. These vary as a trainer, teacher, staff development specialist, program designer, or organizational change agent. Others are contemplating career change or entry and see adult education as a versatile field with strong growth potential.

Program Requirements

Required Courses		Credits
HRD 600	Adult Education and Human Resources Development	3
EDU 600	Research Methods and Techniques	3
HRD 605	Life Span Development II	3
	or	
HRD 631	The Adult Learner	
HRD 649	Seminar in Adult Education and Human Resource Development	
		<u>3</u>
		12
Middle Core (minimum of 4 courses required)		
HRD 605	Life Span Development II	3
HRD 620	Fundamentals of Counseling Skills	3

HRD 631	The Adult Learner	3
HRD 632	Program Development in Adult Education and Human Resource Development	3
HRD 633	Managing Adult Education and Human Resource Development	3
HRD 667	Action Research and Evaluation Methodologies in Human Resource Development	3
		<u>12</u>

(A course such as 605 or 631 can be used only once to meet a program requirement.)

Self-Designed Courses

HRD 687	Internship in Adult Education and Human Resource Development
HRD 698	Directed Study in Adult Education and Human Resource Development
HRD 699	Independent Study in Adult Education and Human Resource Development

Three credits of HRD 687 or HRD 698 are required. A maximum of nine credits in self-designed coursework may be counted toward this degree. 3
27

Electives or Concentrations	9
Total Program Credit Hours	<u>36</u>

Concentrations (3 courses, 9 credit-hour certificate)

1. Training and Development

HRD 635	Training and Staff Development
HRD 640	Human Resource Development in Organizational Settings
EDU 671	Organizational Behavior
EDU 674	Organizational Change and Innovation

2. Educational Gerontology

HRD 650	Social and Public Policy in Aging
HRD 651	Older Person as Learner
HRD 652	Coordinating Educational Programs for the Older Adult in the Community
HRD 653	Aging, Work, and Retirement
HRD 654	Gerontology and the Helping Professions

3. Community Education

HRD 637	Community Education
HRD 641	Human Resource Development in Community Settings (with HRD 631 and HRD 632)

4. Adult Public School Education

EDU 631	Foundations of Adult and Secondary Reading (with HRD 632 and HRD 633)
HRD 634	Methods and Materials in Adult Education

5. Counseling

HRD 620	Fundamentals of Counseling Skills
HRD 621	Fundamentals of Counseling Theories
HRD 626	Group Process and Procedures
HRD 628	Introduction to Marriage and Family Counseling
HRD 690	Individual Counseling Practicum

If a concentration is not desired, students may select a number of elective courses from the Department offerings or from other graduate offerings at the University of Southern Maine. Advisor approval is required.

Minimum number of credit hours required for the degree: 36

Special Note: Students in the Adult Education Program are required to complete three credits (300 on-site hours) of HRD 687 (Internship in Adult Education and Human Resource Development) or HRD 698 (Directed Study in Adult Education and Human Resource Development). HRD 687 is designed to provide professional experience in the student's selected area of concern. HRD 698 is designed to provide the opportunity to pursue a field-based project independently, planning and exploring an area of interest within the field of adult education. Students also have the option of pursuing an independent study project as a program elective. HRD 699 (Independent Study in Adult Education and Human Resource Development) provides students with the opportunity to pursue a library-based project independently, planning and exploring a topic of interest within the field of adult education.

Counselor Education Program

Over the past 20 years, the program has provided the state of Maine with several hundred qualified counselors in school, rehabilitation and community agency settings. In addition, the program has provided courses and other services to several thousand professionals throughout the state. Through its faculty, alumni, and students, this program continues to provide leadership in the counseling profession throughout the Northeast.

The master's program in counselor education provides its graduates with the counseling knowledge and skills used in elementary and secondary school as well as agency and rehabilitation settings. Students study human development and behavior, individual counseling theory, group theory and dynamics, research methodology, and psychological measurement and evaluation, in addition to courses in individual specialty areas—elementary school counseling, secondary school counseling, community agency, and rehabilitation counseling.

A basic belief of the counselor education program is that every human being changes and grows, a process which continues throughout one's life development. From time to time, individuals need help in this struggle for positive growth. Counseling and guidance services provide highly professional helpers who can facilitate growth and development effectively. In addition to teaching counseling skills, the counselor education program promotes personal growth in students by encouraging them to develop attitudes, values, and beliefs which will enhance and facilitate the helping process. Recognizing emotional biases is the first step in realizing change. The program facilitates the conceptualization of a professional role flexible enough to grow as new developments in the field occur.

The Counselor Education Program is designed to foster the following:

- A. An understanding of theories and techniques related to individual and group counseling.
- B. Knowledge of psychological measurement and evaluation and its applications.
- C. An understanding of the means used for obtaining and applying information from appropriate research sources.
- D. An understanding of the history, philosophy, and practice of the specialty area.
- E. An awareness of individual strengths, weaknesses, and biases especially in relation to clients, colleagues, and family.
- F. Knowledge of human development and behavior.
- G. An integration of the academic and applied knowledge through a combination of practicum and internship experiences.

Program Requirements

Required Core Courses for All Specialties	Credit Hours
HRD 604 Life Span Development I*	3
HRD 605 Life Span Development II	3
HRD 620 Fundamentals of Counseling Skills	3
HRD 621 Fundamentals of Counseling Theories	3
HRD 626 Group Process and Procedures	3
HRD 665 Psychological Measurement and Evaluation	3
HRD 690 Individual Counseling Practicum	3
EDU 600 Research Methods and Techniques	3
*Elective for Rehabilitation counseling students	24

<i>Elementary School Counseling Specialty</i>	
Required Core Courses	24
Required within the Specialty	
HRD 607 Introduction to School Guidance Services	3
HRD 622 Counseling Young Children	3
HRD 603 Consultation	3
HRD 627 Group Counseling	3
HRD 608 Career Development	3
HRD 686 Internship	6
	<u>21</u>
Electives	3
Total Program Credit Hours	<u>48</u>

<i>Secondary School Counseling Specialty</i>	
Required Core Courses	24
Required within the Specialty	
HRD 607 Introduction to School Guidance Services	3
HRD 608 Career Development	3
HRD 603 Consultation	3
HRD 627 Group Counseling	3
HRD 686 Internship	6
	<u>18</u>
Electives	6
Total Program Credit Hours	<u>48</u>

<i>Rehabilitation Counseling Specialty</i>	
Required Core Courses (excluding HRD 604)	21
Required within the Specialty	
HRD 610 Intro to Rehabilitation Services	3
HRD 611 Medical Aspects of Disability	3
HRD 612 Psychological Aspects of Disability	3
HRD 615 Vocational Aspects of Disability	3
HRD 641 HRD in Community Settings	3
HRD 686 Internship	6
HRD 692 Advanced Individual Practicum	3
	<u>24</u>
Electives	3
Total Program Credit Hours	<u>48</u>

<i>Community Agency Counseling Specialty</i>	
Required Core Courses	24
Required within the Specialty	
HRD 641 Human Resource Development in Community Settings	3
HRD 686 Internship	6
HRD 627 Group Counseling	3
	<u>12</u>
Electives	12
Total Program Credit Hours	<u>48</u>

Electives

Graduate students in the Counselor Education Program may select electives in the fields of concentration of rehabilitation, community agency, elementary, or secondary guidance. A changing variety of electives are offered each semester.

- HRD 501 Strategies and Techniques in Classroom Management
- HRD 502 Family: Implications for Educators
- HRD 504 Sex Role Issues in Human Services
- HRD 609 Seminar in School Counseling
- HRD 613 Legal Issues in Counseling
- HRD 614 Use of Vocational Education in Rehabilitation Counseling
- HRD 618 Perspectives on Chemical Dependency
- HRD 619 Seminar in Rehabilitation
- HRD 625 Counseling the Elderly

HRD 628 Introduction to Marriage and Family Counseling
 HRD 629 Human Sexuality for Counselors
 HRD 666 Individual Assessment: A Holistic Approach
 HRD 667 Action Research and Evaluation Methodologies
 HRD 691 Group Practicum
 HRD 692 Advanced Individual Practicum

Special Note: Students in the Counselor Education Program are required to complete six credits (600 on-site hours) of HRD 686 (Internship in Counselor Education). HRD 686 is designed to provide students with opportunity to integrate formal coursework with on-the-job experience in selected helping institutions. Students also have the option of pursuing a directed study or independent study project. HRD 698 (Directed Study in Human Resource Development) provides students the opportunity to pursue a field-based project independently, planning and exploring an area of interest within the field of counselor education. Students also have the option of pursuing an independent study project as a program elective. HRD 699 (Independent Study in Counselor Education and Human Resource Development) provides students with the opportunity to pursue a library-based project independently, planning and exploring a topic of interest within the field of counselor education.

School Psychology Program

The master of science program in school psychology, a 60-credit hour degree, offers the student a comprehensive program of studies that integrates general psychological content, methodology, and research with psycho-educational principles and practitioner skills. It is oriented toward acquisition of those skills necessary for effective functioning as a school psychology practitioner, as well as meeting Maine state certification requirements. Through practicum training students are introduced to children's cognitive, social, and emotional behavior; instructional models and teaching style; and to the differential effects of teacher-student interactions and classroom climate. During the final portion of their coursework, students intern for 1,200 clock hours under the supervision of a licensed school psychologist. Individuals graduating from this program are prepared to be licensed as a Psychological Examiner by the Maine Board of Examiners of Psychologists and to be certified by the Maine Department of Educational and Cultural Services as a School Psychological Examiner.

Program Requirements*

<i>Psychological Foundations</i>	<i>Credit Hours</i>
HRD 604 Life Span Development I	3
HRD 671 Physical Bases of Behavior	3
HRD 674 Child and Adolescent Psychopathology	3
HRD 676 Cognitive-Affective Bases of Behavior	3
	<u>12</u>
<i>Educational Foundations</i>	
EXE 601 Educational Programming for Exceptional Children	3
Elective within Exceptionality or Reading	3
	<u>6</u>
<i>Assessment</i>	
HRD 677 Cognitive and Psychoeducational Assessment	6
HRD 678 Personality Assessment	3
	<u>9</u>
<i>Intervention</i>	
HRD 603 Consultation	3
HRD 622 Counseling Young Children	3
HRD 626 Group Process & Procedures	3
HRD 615 Classroom & Behavior Management for Exceptional Children	3
	<u>12</u>
<i>Research</i>	
EDU 600 Research Methods & Techniques in Professional Education	3

Professional School Psychology

HRD 670 Seminar in School Psychology	3
EXE 682 Special Education: Law, Conflict and Resolution	3
HRD 688 Internship in School Psychology: Assessment & Intervention	<u>12</u>
	18

Required Credit Hours	57
Elective Hours	3
Total Program Credit Hours	<u>60</u>

*Prerequisite: A course in tests and measurement
Comprehensive examination required

HRD 500 Human Interaction Skills

This introductory course in selected communication skills is appropriate for persons considering careers in the helping professions, individuals in positions with personal responsibility, or for those otherwise concerned with developing effective communication. Literature from the human relations field will be the source of basic interaction skill; these skills will be practiced by students using video vignettes, simulations, and communication decoding activities. Application of the skills to various human interaction settings will be addressed. This course may not be taken in lieu of HRD 620 for students matriculated in the Counselor Education master's program. Cr 3.

HRD 501 Strategies and Techniques in Classroom Management

This course will consist of a variety of strategies, techniques, and philosophical issues related to adult-child relationships. The focus of the course provides both a theoretical base and practical experience for dealing with classroom and school-related issues. Cr 3.

HRD 502 The Family: Implication for Educators

This course is designed to review selected topics in the area of family life that are relevant to educators. The course will provide a multidisciplinary overview of major theories of family behavior, precursors to marital and family life, and the variability of family life across the life span. Consideration will be given to such issues as parenting styles, sibling relationships, effects of divorce, single-parent families, blended families, family violence, and substance use, abuse, and dependence within the family. Cr 3.

HRD 504 Sex Role Issues in Human Services

This course examines the impact of sex roles and sex role stereotypes on the development, understanding, and treatment of psychological problems. Biases in psychological theories and attitudes of professionals have often reflected the sexism of society at large, and these explanations of human motivation and behavior may not sufficiently describe mental health problems today. Thus, the course focuses on the role of human services profes-

sionals in promoting and understanding these concepts. Cr 3.

HRD 530 Death, Dying and Bereavement

This course examines the phenomenon of death in modern society. Issues such as the meaning of death, the dying process, survivorship, suicide and how death affects individuals of various ages are treated. Special attention is paid to the role of the professional in death education. Cr 3.

HRD 600 Adult Education and Human Resource Development

This is the mandatory first course in the master's program. The course introduces the student to adult education, continuing education, and human resource development, including its history, philosophy, and trends in the United States and worldwide. The course also introduces the student to the graduate program and to the network of current students and program graduates. Particular attention is given to career and educational planning, including the assessment of prior experience, the beginning of a professional portfolio, the development of a career plan to be sought through the program, and the development of an educational plan for the completion of the program. Cr 3.

HRD 603 Consultation

This course is designed to introduce students to consultation skills that can be utilized for evaluating organizational structure and individual client management. A variety of theoretical approaches to the role of the consultant will be offered, including focus on behavioral observation, organizational development, relating to staff people as a consultant and communicating the results of a consultation. Prerequisite: HRD 686, HRD 690, or permission of the supervising professor. Cr 3.

HRD 604 Life Span Development I

Examines the processes underlying growth, development and behavioral changes of humans from conception through adolescence. The interaction of biological, cognitive, and psychological development during these earlier stages of the life span. Cr 3.

HRD 605 Life Span Development II

Examines the processes underlying growth, development, and behavioral changes of

humans from young adulthood through old age to death. The interaction of biological, cognitive, and psychosocial development in adulthood. Cr 3.

HRD 607 Introduction to School Guidance Services

This is an introductory course for those intending to enter the field of school guidance and counseling. It is designed to consider the theoretical basis for guidance practices in elementary and secondary schools (K-12). This includes working collaboratively with the home, school, and community to meet the personal, educational, and career concerns of students. Historical and social contexts along with philosophical issues and emerging directions of guidance will also be discussed. Cr 3.

HRD 608 Career Development

This course will focus on the process of career development. Work will be addressed as an activity which has a primary impact on our lives. Career development will be examined as a process which continues throughout the life span. Different theories of vocational choice will be examined and various methods of assessing vocational interests and aptitudes will be explored. Special populations such as: disabled, displaced homemakers, and elderly will be discussed. The overall emphasis of the course will be to explore with participants career development strategies used in school and community settings. Cr 3.

HRD 609 Seminar in School Counseling

The seminar will afford students and practicing counselors an opportunity for intensive study of current problems and issues in the field of guidance. This course is restricted to those nearing the completion of a master's program in school counseling. Prerequisite: permission of the instructor. Cr 3.

HRD 610 Introduction to Rehabilitation Services

This course includes basic concepts in rehabilitation/habilitation, evolution or rehabilitation, related legislation, exposure to rehabilitation agencies and facilities in Maine, and an overview of the rehabilitation process. Consultants are used to present rehabilitation from the perspective of the client, counselor, and agency. Cr 3.

HRD 611 Medical Aspects of Disability

This course focuses on disabilities common in the rehabilitation field—their causes, diagnostic methodology, prognosis, and treatment, as well as employment and “maximum potential” implications. Prerequisite: permission of the instructor. Cr 3.

HRD 612 Psychological Aspects of Disability

This course provides students with an understanding of the psychological elements related to the disability experience. The course considers adjustment to disability from an indi-

vidual's perspective, with attention given to the impact of society and culture on this process. Cr 3.

HRD 613 Legal Issues in Counseling

This course provides the framework to understand the rights and resources available to all individuals with emphasis on the handicapped. The course covers the pertinent federal and state legislation detailing the rights, responsibility and enforcement available under the law. Negotiation and mediation skills are also discussed. Cr 3.

HRDX 614 Use of Vocational Education in Rehabilitation Counseling

This course is designed to enhance the effective use of vocational evaluation in rehabilitation planning, with emphasis on the role of the rehabilitation counselor. Client selection, formulation of referral questions, critique of evaluation results, and use of the evaluation report for planning are topics to be discussed. The class will also examine fundamentals of evaluation tools and techniques such as psychometric tests, work samples, job analyses, situational assessments, and behavioral observations. Both hands-on field experiences and classroom review of selected evaluation procedures will be used. Cr 3.

HRD 615 Vocational Aspects of Disability/ Placement in Rehabilitation

This course involves the practical application of job selection, analysis, modification, and development for the counselor of handicapped persons. The role, function and technique of the rehabilitation counselor in job placement of severely disabled persons will be examined. Employer and/or industry site visits may be arranged. Cr 3.

HRD 617 Crisis Intervention

This course is designed to introduce participants to the theory and practice of crisis intervention. A theoretical examination of the emotional crisis will be undertaken. Research regarding the common elements of emotional crisis and their evolution and resolution will be studied. Various types of emotional crises will be reviewed with specific strategies for effective counselor intervention. Particular focus will be placed on the practical application of crisis theory to various crisis situations. Prerequisite: HRD 620 or permission of the instructor. Cr 3.

HRD 618 Perspectives on Chemical Dependency

This course will focus on the overall dynamics of chemical dependency and will serve as an introduction to understanding the various stages, processes, and effects of such addictions. Specific topics will include social and psychological dynamics of chemical dependence and co-dependency, including family, peers and co-workers. The roles which professional educators, human service workers, and other social helpers play in prevention, early intervention, and the various approaches to reco-

very and aftercare will be considered in depth. Prerequisite: none. Cr 3.

HRD 619 Seminar in Rehabilitation

This course is designed for advanced students in rehabilitation and for practicing rehabilitation counselors. The seminar provides an overview of rehabilitation practice, with an emphasis on problematical issues. Topics may include casework management, vocational evaluation, administrative issues, and utilization of community resources. Prerequisite: permission of the instructor. Cr 3.

HRD 620 Fundamentals of Counseling Skills

This course emphasizes the development of fundamental counseling skills such as attending behavior, listening, reflection of feeling, paraphrasing, and questioning. The course examines the process and content of the counseling interview as well as verbal and non-verbal factors which influence the interactions within the counseling relationship. Primary focus will be to help the student develop greater self-knowledge and skills in interpersonal communication within the counseling relationship. Prerequisite: open to matriculated graduate students only. Cr 3.

HRD 621 Fundamentals of Counseling Theories

A seminar for those who are or will be engaged in psychological counseling in an educational or mental health type setting. Selected theories and techniques are closely examined. The research literature which has a bearing on the effectiveness or noneffectiveness of counseling is reviewed. Cr 3.

HRD 622 Counseling Young Children

This course is designed to review theories, techniques, and strategies used in counseling young children. Attention will be given to the examination of the counselor's role, the goals of counseling and developing relationships with children. In addition, students will be given the opportunity to explore the uses and techniques of non-verbal languages of counseling including play, dramatics, movement, art and music, and how they relate to child growth and development. Prerequisite: successful completion of HRD 620 or permission of the instructor. Cr 3.

HRD 623 Cognitive Therapy

This is an advanced course dealing with both theoretical and practical aspects of cognitive behavioral psychology and psychotherapy. Particular emphasis will be placed on the relationship between mood states and various patterns of thinking and behavior that precede them. Part of the didactic process will be live interviews to illustrate various cognitive strategies and techniques. The role of various cognitive distortions or thinking errors will be illustrated as well as the active problem solving nature of cognitive therapy. Prerequisite: HRD 690 or permission of the instructor. Cr 3.

HRD 624 Counseling the Adult Learner

This course is designed for counselors, teachers, administrators, and others in the helping professions who work with adults seeking personal/educational growth. The course will examine the process and content of the counseling interview, explore the problems/needs of adult learners and provide opportunity for application of counseling skills to problem areas. Cr 3.

HRD 625 Counseling the Elderly

This course will cover such topics as: "the aging network," the aging process, needs of the elderly with special emphasis on needs of elderly women, individual counseling with the elderly, group work, consulting with service providers, independent living and support systems, and advocacy, death, dying, and grieving and how those problems might be addressed through counseling. Cr 3.

HRD 626 Group Process and Procedures

The course focuses on the understanding of basic principles of group development and the recognition of the dynamics of group interaction. It also focuses on the improvement of personal interaction processes and their application to other group settings. Open to matriculated graduate students only. Cr 3.

HRD 627 Group Counseling

This course is an extension of basic knowledge and practice in the fundamentals of group dynamics. Emphasis will be on the development of concepts, attitudes, and skills necessary to understand and lead counseling groups in a variety of settings and on the development of a deeper sense of how each participant intervenes in a group. Prerequisite: HRD 626 or equivalent. Cr 3.

HRD 628 Introduction to Marriage and Family Counseling

This course is an introduction to the structure and dynamics of the family, as well as methods of family intervention and counseling. The relevance of understanding and skill in the area of rehabilitation counselors and school counselors is emphasized. Methods of instruction include lecture, group discussion, role playing, and audio/video programs. Prerequisite: HRD 690 or permission of the instructor. Cr 3.

HRD 629 Human Sexuality for Counselors

The aim of this course is to provide information about human sexuality, to heighten an individual's awareness of his/her own sexuality and of sexual issues, and to integrate this knowledge to improve the overall effectiveness of counseling skills. The course is designed to explore a wide spectrum of sexual behaviors and to examine the relationship between sexuality, self-esteem, sex roles and life styles. Emphasis is placed on developing an aware-

ness of personal values associated with human sexuality. Prerequisite: HRD 620 or its equivalent. Cr 3.

HRD 631 The Adult Learner

This course examines the social, psychological, economic, and cultural situation of the variety of adults served by adult education programs today. The aim of the course is to develop an andragogy, a theory of learning, which is applicable to adults in diverse circumstances and with diverse goals, needs, and styles of learning. Attention is given to stages of adult growth, the development of learning goals, learning environments, and to a variety of theories on learning. Cr 3.

HRD 632 Program Development in Adult Education and Human Resource Development

This course presents the models, techniques, and practices of constructing curricula and developing programs for adult learners as individuals, groups, and community organizations. The course covers both educational and training programs and emphasizes practice, skill acquisition, and competence in curriculum development for adults with diverse needs and in diverse learning environments. Prerequisite: HRD 631 or permission of the instructor. Cr 3.

HRD 633 Managing Adult Education and Human Resource Development

This course examines the administrative and leadership skills necessary for the development and management of units such as adult education centers, continuing education offices, and training and staff development departments in profit and non-profit organizations. Particular attention is given to the development of mission statements, the use of advisory boards, community needs assessment approaches, developing goals and objectives, program development, personnel management, and the development of a management style. Cr 3.

HRD 634 Materials and Methods in Adult Education

This course acquaints the student with current instructional packages available for adult education and human resource development programming. Special attention is given to adult basic education materials, High School Equivalency Diploma programs, and English as a second language programs. However, each student is enabled to identify, access, use, and evaluate the types of materials most useful in the specialty field. Cr 3.

HRD 635 Training and Staff Development

This course acquaints the student with the organization, staffing, functions, methods and techniques of training and staff development units in modern work organizations. Attention is given to the development of in-service training programs for key levels of staff such as

supervisors, managers, front-line workers, and support staff. Special emphasis is given to the systematic relationship of the training office to other human resource development functions in contributing toward an effective organization and a supportive climate in which to work. Cr 3.

HRD 636 Continuing Education for the Professions

This course enables the student to develop pertinent, quality continuing education programs for professionals in such fields as education, nursing, medicine, social work, law, psychology, allied health, and other helping professions. After a shared process of studying the social, historical, and political forces which shape professions, students examine in depth and current context, needs, constraints, methodologies, credentialing systems, and instructional packages pertaining to a particular profession of interest to them. Students gain a broad understanding of professional education in general and a specific competence in at least one professional field. Cr 3.

HRD 637 Community Education

Community Education is concerned with major issues and trends affecting the lives of citizens of a community. It measures well-being by the extent to which people have the opportunity to learn all they need to survive and flourish. It is a philosophy, a movement, an approach to school organization and mode of community development. Community education is examined in such forms for relevance to improved practice of educators and other community human resource developers. The course begins with societal trends bearing upon the quality of community life as context for analysis of community and community change; then, moves to community education process, program, and skills of delivery as studied in specific community settings. Cr 3.

HRD 640 Human Resource Development in Organizational Settings

Personnel directors, trainers, personnel counselors, career counselors, job designers, employment forecasters, collective bargaining, performance evaluators, and unit managers are among the many organizational members who "develop" the human resources of a work organization. This course examines the theories of human development explicitly or implicitly held by holders of such positions, how divergent or compatible these views are, and the probable effects on employees. The course particularly centers on approaches and tools managers use to develop the human resources of an organization in a conceptually consistent, effective, and humane way. A companion course is Human Resource Development in Community Settings, which looks at the interface between community organizations and their clients, this course focuses on the inter-

section between organizations and their employees. Prerequisite: none. Cr 3.

HRD 641 Human Resource Development in Community Settings

Schools, hospitals, employment agencies, welfare offices, home health agencies, rehabilitation centers, and social services agencies are among the various community-based organizations whose work is helping people. The course examines the needs of people in urban and rural communities, the views of human need and development held by helping organizations, and problems organizations pragmatically encounter in helping people, and the consequences of these problems for citizen/client groups. Attention is given to inter-professional, and inter-organizational approaches to improving community programs drawing from literature in similar fields. A companion course to Human Resource Development in Organizational Settings, which looks at the interface between organizations and their employees, this course focuses on the interface between organizations and clients, the citizens of a community. Prerequisite: none. Cr 3.

HRD 645 Summer Institute in Educational Gerontology

Each summer the Department offers an Institute in Educational Gerontology that supplements and extends the content, on a rotating basis, of each of the five courses in its regular concentrations (HRD 650, 651, 652, 653, and 654). This institute can be taken in combination with the regular courses for credit toward the concentration certificate. Cr 3.

HRD 649 Seminar in Adult Education and Human Resource Development

This seminar addresses current issues, problems and topics in adult education and human resource development. Participants are to select, develop and present topics of interest to them as well as benefit from presentations prepared by the instructor. Usually taken toward the end of the program, this seminar is an opportunity to apply knowledge and skill to problems of current interest in the field of adult education. Cr 3.

HRD 650 Social and Public Policy in Aging

This course examines the development of American social and public policy in aging from an historical perspective culminating in an analysis of the consequences of a "greying society." An organizing principle of the course will be to review policies as they affect an older person's ability to achieve access to full rights, benefits, opportunities, and protections of society. The process of social and policy development will be examined with particular attention to policies about age discrimination, health care, income maintenance, employment, education, and housing. Cr 3.

HRD 651 The Older Person as an Adult Learner

This course examines the capabilities, interests, limitations, and needs of older persons as learners. After seeking to establish current fact from fiction, the course attempts to look at the realistic prospects for adult education later in life as the length of life is extended. Particular attention is given to the conditions under which older persons can best benefit from the contributions to adult education opportunities. Program development possibilities are examined in a number of settings and situations. Cr 3.

HRD 652 Coordinating Educational Programs for Older Adults in the Community

Designed for practitioners who already have a knowledge base in the field of adult education, this course will address the competencies needed to design and plan educational programs in a variety of community settings. Students will develop skills in program design and planning, needs assessment and mobilizing, and coordinating the informal and traditional resources and new ones in the community. A variety of educational programs related to older adults will be presented and discussed. Cr 3.

HRD 653 Aging, Work and Retirement

This course examines major social gerontological theories and trends as they relate to work and retirement. The meaning of work, characteristics of older workers, job modification, retirement planning, and life after work will be explored. Strategies that facilitate adult development and learning will be examined. Cr 3.

HRD 654 Gerontology and the Helping Professions

This course presents three interrelated conceptual frameworks: concepts, research findings, and practices of applied social gerontology; concepts, research findings, and strategies of helping professions; and concepts, research findings, and strategies of the complex organizations which deliver their services to, or on behalf of, older people. The purpose is to enable learners to integrate this knowledge for application in service to society, in general, and older people, in particular. It is intended for graduate learners in the range of helping professions who serve people in whole or in part. Cr 3.

HRDX 664 Culture, Tradition, and the Life Cycle

This course focuses on the role of cultural and traditional influences in growth, development, and behavior from childhood through adolescence, youth, adulthood, and elderhood. Drawing from anthropology, folklore, psychology, and sociology, traditional values and customs are examined in relation to life course transitions and developmental tasks. The

course surveys the theoretical issues and cross-cultural research and takes a close look at the traditions of the most prominent ethnic groups in northern New England and how they can influence attitudes toward growth potential. Particularly suited for counselors, educators, and other professionals working in a minority or ethnic setting. Cr 3.

HRD 665 Psychological Measurement and Evaluation

This course focuses on group tests and related measurement techniques. The course content will include a review of the history of testing, current issues, fundamental statistics for understanding and evaluating tests, a review of selected aptitude, intelligence, achievement, interest and personality tests. In addition, other standardized and non-standardized evaluation measures will be reviewed. Cr 3.

HRD 666 Individual Assessment: A Holistic Approach

The design of this course is to explore the principles, purposes, and application of individual assessment. The course content includes instrument selection and evaluation, data interpretation, and intervention strategies in the following areas: academic skills, intellectual functioning, psychomotor performance, medical and family history, and social development. A case study format is used. Emphasis is placed on a holistic approach to data collection, interpretation and intervention. This is a basic orientation course for educators and others involved in planning specialized programs for individuals. It is not intended to produce skills in test administration. Prerequisites: HRD 665 and EDU 600 or equivalents. Cr 3.

HRD 667 Action Research and Evaluation Methodologies

This course will provide an overview of the role of research and evaluation within organizations and community settings. Techniques in survey development and evaluation strategies will be emphasized. A number of methodologies will be presented, such as: the nominal group, the Delphi technique, assessment centers, performance appraisal, interviews and observation. Cr 3.

HRD 670 Seminar in School Psychology

This course examines professional issues and concerns confronting the school psychology practitioner, including certification and licensure requirement, confidentiality and other ethical issues, role and responsibility, and relationship to general and special education. Prerequisite: permission of instructor. Cr 3.

HRD 671 Physical Bases of Behavior

This is an examination of neural, endocrine, and response systems as related to attention, motivation, emotion, memory, and psycholo-

gical disorders. Consideration is given to neurological problems of school-aged children. Cr 3.

HRD 674 Child and Adolescent Psychopathology

This is an overview of normal and abnormal personality development and functioning. Emphasis is on symptom patterns, etiology, and treatment of developmental and behavioral disorders from early childhood through adolescence. Cr 3.

HRD 676 Cognitive-Affective Bases of Behavior

This is an introduction to concepts and principles of conditioning and reinforcement, perception and attention, memory, information processing, and problem solution. Includes neural bases of learning and cognition as well as consideration of the acquisition and loss of habit patterns. Cr 3.

HRD 677 Cognitive and Psycho-educational Assessment

This is an examination of the historical and theoretical bases of individual differences and intellectual and psycho-educational testing. Supervised practice in administration, scoring, interpretation, and reporting assessment results. Prerequisite: open to school psychology majors only. Prerequisite: permission of instructor. Cr 3.

HRD 678 Personality Assessment

This course examines projective and non-projective techniques of evaluating personality characteristics and behavioral patterns of school-aged children. Includes integration of instrument results into a comprehensive diagnostic and descriptive personality profile. Prerequisites: HRD 677 and permission of instructor. Cr 3.

HRDX 680 Institute in Group Counseling

The course is an extension of basic knowledge and practice in the fundamentals of group dynamics and leadership. Emphasis is on the development of concepts, attitudes, and skills necessary to understand and use counseling groups within a variety of settings. Course time will be spent as a group participant, as well as in didactic instruction. Prerequisites: HRD 626 or equivalent and permission of the instructor. Cr 3.

HRD 686 Internship in Counselor Education

This course provides an opportunity for the student to integrate formal coursework with on-the-job experience in selected helping institutions. The course may be taken for 3 to 12 credit hours and is a post-practicum (HRD 690) experience. Prerequisite: approval of the supervising professor. Cr var.

HRD 687 Internship in Adult Education

Designed to provide professional experience

in the student's selected area of concern. A plan for the internship is presented for approval to the student's adviser. On approval, the intern completes his/her planned program under the supervision and evaluation of a responsible person for the internship assignment. Cr 1-6.

HRD 688 Internship in School Psychology: Assessment and Intervention

Full-time field experience in school psychology under qualified supervisors in selecting settings; taken at the end of the program. Prerequisite: permission of program faculty. Cr 3.

HRD 690 Individual Counseling Practicum

This course is an intensive supervised experience in applying professional knowledge and skills to the practice of counseling with individuals. Role playing, video tapes, audio tapes and demonstrations are used in helping each student develop an integrated counseling style. Prerequisite: approval of the supervising professor. Cr 3.

HRD 691 Group Counseling Practicum

This course is designed to be an intensive supervised experience in applying professional knowledge and skills to the practice of counseling with groups. Role playing, video tapes, audio tapes and demonstrations are used in helping each student develop an integrated leadership style in working with groups. Available only to students who have completed a practicum in individual counseling. Prerequisite: approval of the supervisory professor. Cr 3.

HRD 692 Advanced Individual Practicum

This is the advanced course in counseling practicum. In addition to building on the skills developed in HRD 690 (Practicum), emphasis will be placed on the structural analysis of

typical client problems and the use of appropriate strategies of intervention. Other emphases will include the staffing of actual cases and a knowledge of community resources available to the counseling clientele. Cr 3.

HRD 696 Counselor Supervision

The course is designed to assist human services workers who are responsible for the supervision of counselors in various settings. Both clinical and program/administrative supervision will be addressed. Competencies will focus on the knowledge base, intervention techniques, and human skills needed to provide quality supervision. Cr 3.

HRD 698 Directed Study in Human Resource Development

This course provides students the opportunity to pursue a project independently planning and exploring an area of interest within the field of human resource development. The project must be field based, intellectually sound and reflect a high caliber of performance. Specific content and methods of evaluation are determined in conjunction with the faculty supervisor. An approved proposal is a necessary prerequisite to registration. Cr 1-3.

HRD 699 Independent Study in Human Resource Development

This course provides students the opportunity to pursue a project independently, planning and exploring a topic of interest within the field of human resource development. The project must be library based, intellectually sound and reflect a high caliber of performance. Specific content and methods of evaluation will be determined in collaboration with the instructor. An approved proposal is a necessary prerequisite to register. Cr 3.

School of Law

Dean: L. Kinvin Wroth; *Associate Dean:* David P. Cluchey

Professors: Carson, Cluchey, Delogu, Friedman, Gregory, Kandoian, Lang, Loper, Potter, Rogoff, Ward, Wroth, Zarr; *Associate Professors:* Brett, Mullane; *Visiting Associate Professors:* Khoury, Lawless, Soifer; *Visiting Assistant Professor:* Sheppard; *Lecturers:* Adelberg, Cleveland, Flanagan, Frank, Goldberg, Grafam, Hirshon, Howard, Hulbert, Lennet, Maiman, MacMahon, Rummel, Rowe; *Adjunct Professors:* Coffin, Godfrey, Petrucci, Rieser, Wernick.

The University of Maine School of Law is a small school that offers high quality legal education to a carefully selected student body. The Law 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, as the only law school in the state, 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 offers a three-year, full-time program leading to the juris doctor degree. It has no evening division. The weekly class schedule consists of about 14 hours distributed throughout both morning and afternoon, Monday through Friday, and occasionally on Saturday morning. The Law School has recently established a limited part-time program on an experimental basis.

The School's faculty consists of 16 full-time instructors who have received their formal legal training at leading national law schools. Most faculty members also have experience gained in judicial clerkships, private practice, or government service. The faculty is drawn from many specialties and represents a diversity of backgrounds and interests. There is a highly favorable student-faculty ratio of under 15 to 1. Faculty members are engaged in a wide variety of professional activities which assures freshness and relevance in their classroom teaching. Some members of the faculty are active scholars, publishing frequently in legal periodicals. Many serve as advisors to various legislative and professional committees or as members of governmental commissions. Faculty members also participate in public interest litigation and play active roles in policy formation.

The Donald L. Garbrecht Law Library, named for the law librarian who served the school from 1963 to 1979, contains approximately 250,000 volumes, a sound working collection of legal and collateral materials. The law library supports law school curricular needs, as well as in-depth student and faculty legal research and writing.

The School averages 75-80 students per class, of whom over 50 percent are women; the number of students in the School is about 210, making it one of the smallest in the country. The student body is remarkably varied in age, professional and academic experience, and background. Students are drawn from a large number of colleges and universities throughout the nation. The academic quality of entering students has been improving steadily. Classes entering in recent years had a median score on the Law School Admission Test of approximately 37 and a median undergraduate average of B plus.

Admission to the Law School is based primarily on criteria that measure the applicant's promise of law school and professional success. The applicant's entire record is reviewed. Many factors are considered: the applicant's overall college and graduate performance; Law School Admission Test (LSAT) and other test scores; extracurricular activities; work experience; and cultural, physical, or social conditions which the applicant has experienced. The Law School seeks to assure a diverse and representative stu-

dent body as a part of, and consistent with, its public, educational, and professional responsibilities. Only those applicants who offer the prospect of success in the study and practice of law are admitted. To be considered for admission as a candidate for the J.D. degree, an applicant is required to hold a bachelor's degree from a college or university accredited by one of the regional associations of colleges. Beginning students are admitted to commence their studies only at the opening of the fall semester in September.

For more information on the Law School, contact the Office of the Assistant Dean, University of Maine School of Law, 246 Deering Avenue, Portland, Maine 04102 (207) 780-4345.

The 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, issues affecting coastal zone management including analysis of the adequacy of federal and state coastal resource laws and regulations to effectively manage coastal development pressures.

The Institute is a component of the University of Maine School of Law. Its policy research and educational projects are supported by grants and contracts from government agencies and private foundations. The Institute's quarterly research publication, *Territorial Sea*, is partially supported by subscribers.

School of Nursing

Dean: Nancy P. Greenleaf

Associate Dean: Kathleen MacPherson

Master of Science in Nursing

Professor: MacPherson; *Associate Professors:* Dorbacker, Greenleaf, Healy, Peake-Godin, Thompson, Paltrow; *Assistant Professors:* Johnson, Skoner

Program Description

Nursing is both an art and a science. Nursing roles focus on the prevention of illness and the promotion, maintenance, and restoration of health.

The M.S. program in nursing is designed to prepare students for careers in community health nursing practice in a variety of settings and locations. The curriculum is based on theory and research in nursing and related disciplines. It provides the foundation for doctoral study in nursing and for continued professional development.

The graduate program faculty consists of full-time instructors who have received their graduate education at leading universities. Faculty members also have experience gained as practicing nurses in a variety of specialties and settings. Research interests of the faculty include refugee health care, eating disorders, health behaviors, nursing history, older women and poverty, women's reproductive health, and the frail elderly. The graduate faculty are active scholars who contribute to the development of new nursing knowledge by presenting papers at local and national conferences and by contributing articles to nursing journals.

Students will be prepared to provide leadership in community health nursing and to initiate collaborative and consultative relationships with others for the purposes of improving nursing and health care and influencing health policy. Research is an integral part of the program and students will acquire skills in identifying researchable problems, participating in research studies, and promoting the use of research findings in nursing practice.

Four components of the program are:

1. Core
2. Research
3. Clinical: Community Health Nursing
4. Role:
 - a. Nursing Education
 - b. Nursing Management

The master's degree program in nursing prepares nurses for roles of leadership in advanced community health nursing by enabling the graduate to:

1. critically analyze and use theoretical and empirical knowledge from nursing, the physical sciences, the social sciences, and the humanities in advanced nursing practice;
2. demonstrate competence at an advanced level of clinical nursing practice in a variety of settings in a multicultural, diverse society;
3. synthesize and apply ethical understanding in advanced nursing practice;
4. demonstrate and utilize principles of leadership, management and teaching to influence nursing practice;
5. identify researchable nursing problems and participate in research studies to improve nursing practice;
6. collaborate with health care providers and consumers to improve the delivery of health care and to influence health policy;
7. identify and demonstrate the need for life-long learning.

The University of Southern Maine master's degree program in nursing is a participant in the New England Regional Student Program. For further information contact the Office of Graduate Affairs, University of Southern Maine, 96 Falmouth St., Portland, Maine 04103, (207) 780-4386.

Admission

Admission to the master of science degree program in nursing is on a competitive basis. The graduate program in nursing seeks candidates whose baccalaureate degree program, scholastic achievement, professional experience, interest, motivation, and references are predictive of successful graduate study.

Each student applying for full admission must meet the following requirements:

1. A baccalaureate degree with a major in nursing from a National League for Nursing accredited program.
2. A minimum undergraduate cumulative grade point average of 3.0 on a 4.0 scale, or a B average.
3. A course in introductory statistics completed within the last five years. (A course in applied statistics is recommended.)
4. One year of clinical nursing practice.
5. A recent course in total health assessment.

A personal interview with graduate faculty of the School of Nursing may be scheduled following a preliminary review of all required admission materials. Individual consideration will be given to each applicant based upon the total profile presented.

Application Material

In addition to the materials described in the Admissions chapter, applicants for this program must submit:

1. A score of 55 points or above on the Miller Analogy Test or combined aptitude scores of 1,000 (V.Q.)/1500 (V.Q.A.) or above on the Graduate Record Examination.
2. Three letters of reference reflecting professional practice and academic achievement.
3. Evidence (photocopy) of current licensure as a registered professional nurse in Maine.
4. Evidence (photocopy) or professional liability insurance.

Application Deadline

Applications will be accepted anytime up to August 1 for fall semester (September). The Admissions Committee will review completed applications on a continuous basis.

Program Policies

In addition to the general policies described in the Academic Policies chapter, specific policies of this program are as follows.

Admission Credit Admission credit must be approved by the graduate faculty prior to registration and is subject to the condition that a grade of B or better was received for the coursework. A maximum of six credit hours may be approved for admission credit. Exceptions to the maximum must be approved by the program faculty.

Special Student Status Up to a total of six hours of graduate credit can be earned in the master's program in nursing before matriculation. Grades of B or above can be used toward a degree.

Transfer Credit Transfer credit may be approved only at the time of admission and request for approval must be included as part of the admission application. Up to a total of nine credit hours may be approved as transfer credit provided these credits were earned no more than five years prior to matriculation. Additional credit may be approved in unusual circumstances. Transfer credit will not be approved for courses taken for credit toward a graduate degree program offered by any other college in the University of Southern Maine.

Program Grade Policies Students must achieve a B- grade for all required courses. If they earn below a B-, they may retake the course one time. Students may only count 3 credits of C in an elective toward graduation.

Continuous Enrollment Continuous enrollment requires that every graduate student must earn at least six credits toward her or his degree every calendar year from the time of the first registration until completion of all requirements for the graduate degree.

Students working on their thesis or project must enroll each semester until the thesis or project has been completed, but may take less than six credits per calendar year.

Time Limit All requirements for the degree must be completed within six years from the date of first matriculation.

Professional Liability Insurance and Licensure Students are required to maintain current professional liability insurance and registered professional nursing licensure.

New England Regional Student Program

The University of Southern Maine master's degree program in nursing is a participant in the New England Regional Student Program. For further information contact the Office of Graduate Affairs, University of Southern Maine, 96 Falmouth St., Portland, Maine 04103 (207) 780-4386.

Program Requirements

The graduate program in nursing is four academic semesters in length for students taking an average of eleven (11) credits per semester. Both full-time and part-time study are available. A total of 41 credit hours, including a thesis or project are required for completion of the master's degree program in nursing. Students must complete the program within six years. The four components of the program include a core, a research component, a clinical component, and a role component.

Core

NUR 603	Nursing Theory and its Relationship to Practice	3
NUR 605	Nursing Role and Leadership	3
NUR 606	Health Policy, Ethics, and Change	3
		<u>9</u>

Research

NUR 604	Nursing Research	3
NUR 690	Thesis/Project Seminar	1
NUR 692	Thesis	5
or		5
NUR 693	Research Project	2
Elective (approved by advisor)		3
		<u>9</u>

Clinical

NUR 651	Advanced Community Health: Theory & Practice I	5
NUR 652	Advanced Community Health: Theory & Practice II	5
		<u>10</u>

Role

Students will choose one of the following functional areas. Courses in the Core and Clinical components must be completed prior to enrollment in courses in the Role component.

Nursing Management

NUR 619	Concepts in Nursing Management	2
NUR 620	Practicum in Nursing Management	5
		<u>7</u>

or

Nursing Education

NUR 631	Concepts in Nursing Education	2
NUR 634	Practicum in Nursing Education	5
		<u>7</u>

Electives: (one elective must be taken outside of SON)		6
		<u>6</u>

Course Sequencing Model for Full-Time Students

First Year

Fall

NUR 603	Nursing Theory and Knowledge Development	3
NUR 605	Nursing Role and Leadership	3
NUR 606	Health Policy, Ethics, and Change	3
		<u>9</u>

Spring

NUR 604	Nursing Research	3
NUR 651	Advanced Community Health: Theory and Practice I	5
Elective		3
		<u>11</u>

Second Year

Fall

NUR 652	Advanced Community Health: Theory and Practice II	5
NUR 690	Thesis/Project Seminar	1
NUR 632	Concepts in Nursing Education	2
	or	
NUR 619	Concepts in Nursing Management	2
Elective		3
		<u>11</u>

Spring

NUR 634	Practicum in Nursing Education	5
	or	
NUR 620	Practicum in Nursing Management	5
NUR 692	Thesis	5
	or	
NUR 693	Research Project	2
Elective for Research Project		3
		<u>10</u>

Course Sequencing Model for Part-Time Students Taking Eight Semesters to Complete Programs

First Year

Fall

NUR 603	Nursing Theory and Knowledge Development	3
NUR 605	Nursing Roles and Leadership	3
		<u>6</u>

Spring

Elective		3
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Second Year

Fall

NUR 606	Health Policy, Ethics, and Change	3
Elective		3
		<u>6</u>

Spring

NUR 651	Advanced Community Health: Theory and Practice I	5
NUR 604	Nursing Research	3
		<u>8</u>

Third Year

Fall

NUR 652	Advanced Community Health: Theory and Practice II	5
NUR 690	Thesis/Project Seminar	1
		<u>6</u>

Spring

NUR 692	Thesis (3 out of 5 required credits)	3
	or	
Project Elective		3
		<u>3</u>

Fourth Year			
Fall			
NUR 619	Concepts in Nursing Management	2	
	or		
NUR 632	Concepts in Nursing Education	2	
NUR 693	Project	2	
NUR 692	Thesis (2 remaining credits)	2	
		4	
Spring			
NUR 620	Practicum in Nursing Management	5	
	or		
NUR 634	Practicum in Nursing Education	5	
		5	

NUR 510 Historical Perspectives in the Nursing Profession

Surveys historic events in nursing and relates selected aspects to current concerns of the profession. Cr 3.

NUR 520 Ethical Issues in Health Care

Analysis of selected contemporary ethical issues confronting health care professionals. Examination of major ethical theories and principles and related decision-making models. Particular attention is paid to the ethical concerns of the nurse. Cr 3.

NUR 540 Nutrition: The Older Adult

A course addressing nutritional needs of the elderly and how these needs can be met; the effects of aging, economics, and social factors on food intake; an overview of disease and disability conditions which respond to diet modifications. Cr 3.

NUR 560 Dimensions of Aging

This course offers the opportunity to explore differences between the true effects of aging and the various processes that affect persons as they grow older; management of specific health problems of the elderly, and resources available for elder care. Emphasis will be placed on nursing role and responsibility in meeting the unique needs of the elderly. Graduate standing or permission of the instructor is required. Cr 3.

NUR 603 Nursing Theory and Knowledge Development

This course explores contemporary issues in theory development and the social production of knowledge for nursing. Students will examine the social and historical context of knowledge development in nursing with an emphasis on the relationship between theory, research, and conduct in a practice discipline. Cr 3.

NUR 604 Nursing Research

The research process in nursing will be explored with emphasis on the nature of inquiry in a practice discipline. An overview of conventional and alternative paradigm approaches to research will be provided. Students will critically examine contemporary questions of ethics and social responsibility in research. Prerequisite: NUR 603. Cr 3.

NUR 605 Nursing Role and Leadership

This course will examine the historical, social, and political context of nursing's emerging leadership roles. Leadership and change strategies will be evaluated in their application to advanced role and practice. Obstacles to effective leadership change such as powerlessness, oppression, and sex role stereotyping will be emphasized. Cr 3.

NUR 606 Health Policy, Ethics, and Change

Sociopolitical and ethical frameworks will be used to analyze public policies related to health care delivery and nursing practice. Change theories and their implications in policy development will be applied. Special attention will be given to the role of the master's prepared nurse in influencing and operationalizing policy. Cr 3.

NUR 619 Concepts in Nursing Management

This course introduces students to major concepts in nursing management in health care organizations. Emphasis is on synthesis of organizational and nursing theory in the management process. Prerequisites: NUR 603, 604, 605, 606, 651, 652. Cr 2.

NUR 620 Practicum in Nursing Management

This course provides for synthesis and application of knowledge through guided experience in health care organizations. Focus is on organizational analysis, role development, and problem solving in nursing management. Two credits for seminar, 3 credits for practicum. Prerequisite: NUR 619. Cr 5.

NUR 632 Concepts in Nursing Education

This course introduces students to a variety of concepts basic to professional nursing education. Included are: philosophy of education, education models, curriculum development, teaching strategies and issues in nursing education. Prerequisites: NUR 603, 604, 605, 606, 651, 652. Cr 2.

NUR 634 Practicum in Nursing Education

This course provides for synthesis and application of knowledge gained in the educational component. Guided experience is arranged in appropriate educational programs and concurrent seminars focus on functions common to educational roles. Role interpretation and evaluation are an integral part of the practice.

cum. Two credits for seminar; 3 credits for practicum. Prerequisite: NUR 632. Cr 5.

NUR 651 Advanced Community Health: Theory and Practice I

This course focuses on community as client. Concepts from epidemiology, public health and nursing are used to assess and analyze the needs of groups and communities. The impact of policy and health trends on the delivery of community health nursing programs are analyzed. Students will conduct a comprehensive community assessment. 2.5 credits for lectures, 2.5 credits from practicum. Prerequisites: NUR 603, 604, 605, 606. Cr 5.

NUR 652 Advanced Community Health: Theory and Practice II

The focus of this course is on community health nursing program planning, implementation, and evaluation. Students will develop and deliver a program in the community based on a comprehensive assessment completed in NUR 651. Two credits for seminar; three credits for practicum. Prerequisite: NUR 651. Cr 5.

NUR 690 Thesis/Project Seminar

A research seminar in which the student reviews the research process and develops a plan for the thesis or project. The focus is primarily on assisting the student to refine a research proposal. Prerequisites: NUR 604, 651. Cr 1.

NUR 692 Thesis

Completion of thesis under the guidance of a faculty thesis committee. Prerequisite: NUR 690. Cr 5.

NUR 693 Research Project

Completion of project under the guidance of a faculty member. Prerequisite: NUR 690. Cr 5.

NUR 695 Directed Study

A student will select a faculty member to guide readings related to a chosen topic. A research paper may be required. Credit allocation up to 3 credits is negotiated with faculty. Cr var.

Public Policy and Management Program

Director: Richard E. Barringer

Assistant Director: Elizabeth P. Levenson

Professors: Clary, Delogu, Maiman; *Assistant Professors:* Coburn, Hamilton, LaPlante, Louden; *Adjunct Professors:* Bowdich, Goettel, Honey, Silkman

The Public Policy and Management Program is designed to offer students the opportunity to prepare for leadership careers in public policy analysis, development, and management. The program seeks:

- to help meet the needs of public, private and nonprofit organizations for professionals with the skills, knowledge, and commitment to deal creatively with the vital issues of public policy and management;
- to emphasize the critical role of elected and appointed officials as leaders and entrepreneurs in directing and revitalizing established organizations and in designing and implementing new programs;
- to provide opportunities for creative exchanges between policy makers in the public and private sectors at all levels and participants in the program;
- to create a center of teaching, research, and public service activities which can assist institutions in Maine and elsewhere.

Program Description

The University's program focuses on regional, state, and local policy in the broad context of national, political, and economic change. It emphasizes policy concerns in such areas as economic development, energy, environment, growth management, intergovernmental relations, and social policy development. These broad areas encompass major public policy issues today and will continue to do so in the foreseeable future.

The problems confronting us are by nature multi-dimensional; hence the need for broad, interdisciplinary perspectives and skills in addressing them. The resolution of problems is by nature practical, requiring decisions and action, hence the importance of ability to apply theoretical knowledge effectively to policy and management activities. Interdisciplinary studies and practical experiences in the application of knowledge are major features of the Public Policy and Management Program.

The curriculum and learning environments of the program maintain a healthy and dynamic tension between the realities of clinical work and the rigors of academic pursuits. Both students and faculty seek stimulating and productive balances:

- among the disciplines of economics, political science, philosophy, and law;
- between the theoretical studies of the classroom and practical applications;
- between the generic skills of analysis, research, and management, and more specialized knowledge of a particular substantive policy field.

Thus, the program seeks to graduate those who understand the social, economic, political, and organizational contexts in which policy is developed and implemented; who comprehend the use and limitations of various quantitative tools; who know the principles of human and financial resource management; who can articulate ideas clearly, both orally and in writing; and who are competent to manage effectively in one of the broad substantive areas of concentration provided in the program.

Where will such graduates be employed? A master of arts in public policy and management prepares individuals for careers in government, nonprofit organizations, and the private sector. The program educates future leaders. Over time some graduates will become local and state policy leaders in such fields as planning, social services, court administration, education, business regulation, and legislation. They will work as agency directors, town and city managers, and policy analysts. Others will work in management and

consulting firms, regional planning offices, institutions of basic and higher education, and some will be elected officials. They will teach, write, administer, and advise.

Job opportunities for graduates are not limited to nonprofit organizations and government. Some students will find work in major corporations in the areas of strategic planning, personnel management, government relations, and corporate philanthropy.

Although the program is based in Maine and will use the region as its laboratory for analyzing public policy problems, the knowledge and skills that students develop will be applicable in localities and settings throughout the nation.

The master's program in public policy and management requires 45 credit hours of academic coursework. An internship for those students with little or no public sector work experiences is highly recommended. Students may receive course credit or waiver for prior graduate study or professional experience.

The core courses include both policy analysis and public management approached from an interdisciplinary perspective. It is through a concentration and associated field work that students learn to apply the disciplinary knowledge and skills attained in the core courses to the substance of a particular policy field.

To be successful, the most knowledgeable and decisive leader must have the ability to transmit information effectively. Therefore, the program pays significant attention throughout to honing students' communication skills. It emphasizes skills in writing memoranda, preparing technical analysis, presenting oral advocacy and formal testimony, developing nontechnical communications for the media and public consumption, as well as giving verbal instructions and motivational sessions.

Research Capacity

A major University reorganization, effective October 1, 1987, resulted in the transference of the Human Services Development Institute (HSDI) to the Public Policy and Management Program. HSDI is a nationally recognized research unit consisting of 30 individuals with specialization in human service policy and administration. The expectation is that the further coordination of the activities of both the research unit and the graduate program will lead to expanded opportunities and programs in each area. The new Public Policy and Management structure provides the foundation for the creation of a Center for Policy Research, focusing on issues of human service, growth management, and environmental and public finance policies.

Community Leadership Institute

The Community Leadership Institute, sponsored by the Public Policy and Management Program in cooperation with the Department of Community Programs, is a four-month course of study designed for current and potential volunteer leaders of nonprofit boards, committees and commissions, as well as appointed and elected government officials. It exists to help meet the volunteer leadership needs of the burgeoning and complex southern Maine region by providing current and future leaders an opportunity to explore and develop first-hand experience in a broad range of areas basic to volunteer management/leadership.

The curriculum is developed in cooperation with the Institute's Community Advisory Committee and delivered in partnership with distinguished community leaders who share responsibility for teaching. Based on the assumption that all participants are or will be involved in leading a broad range of community efforts, the curriculum helps participants to:

1. develop a solid base of knowledge about southern Maine, including history, people and politics, policy issues, and future challenges;
2. enhance skills and understanding in specific areas such as planning, boardmanship, legal responsibilities, media relations, budgeting, resource development, and conflict management;
3. achieve ongoing personal growth, particularly in relation to greater insights regarding individual strengths and goals and how they best complement community needs;

4. understand group dynamics and process, with a specific focus on motivating, guiding, and leading colleagues toward effective, meaningful task completion; and
5. have ample opportunity to associate with colleagues and role models, including classmates, faculty, mentors, and advisory committee members.

The next session of the Institute will begin in January 1989. Those interested in participating should contact the Public Policy and Management Program (780-4380) for further information and application materials.

Joint Degrees Program: Law and Public Policy

The joint degrees program offers students an opportunity to earn both a law degree and a master's degree in public policy and management within a slightly abbreviated time frame. Because the Law School and the PPM program each accepts 9 of the other's credits, the total credit requirement for joint degrees is reduced by 18. Interested students should contact either school/program for more detailed information.

Admission

Leadership ability, an eager interest in public service, an appreciation of its responsibilities and its rewards, a regard for the broad range of public issues, and a sense of how the candidate's own area of interest relates to other fields are the attributes sought in applicants.

During the admissions process, the faculty review the applicant's entire record to assess evidence of commitment, willingness to work hard, ability to handle difficult analytical material, and ability to think creatively. To this end many factors are considered: prior academic performance, results of standardized tests, community activities, work experience, recommendations, writing samples.

Between 25 and 30 students will be admitted each year to begin in the fall. They may choose either full- or part-time study. All required courses are offered beginning at 4:00 p.m., enabling mid-career professionals an opportunity to combine work and graduate studies. Most students should be able to complete the degree in three years while continuing professional responsibilities.

Application Material

In addition to the materials described in the Admissions chapter, applicants for this program must submit:

1. Official scores for the Graduate Record Examination (GRE) and
2. Three letters of recommendation from persons able to comment from direct knowledge of the applicant's ability to pursue graduate study and on the applicant's commitment to and promise of success in public service.

Application Deadline

The application deadline is April 1 for fall semester (September). Applications received after April 1 may be considered on a space available basis. The program will approve a limited number of early admissions prior to April 1 for outstanding applicants whose materials are complete.

Program Policies

In addition to the general policies described in the Academic Policies chapter, specific policies of this program are as follows:

Time Limit

All students must complete requirements for the degree within six years.

First Semester Students

These students are expected to begin with the two introductory core courses, Foundations of Public Policy and Foundations of Public Management. In addition, Applied Statistics for Management and Policy should be taken as early in the program as possible.

Full-Time Students

These students will be able to complete the program in two years. They should take as many core courses as possible in the first year, remaining sensitive to the possible need to fit in an occasional concentration course and/or elective scheduled only in alternate years. Concentration selection

must be complete prior to the end of the first year. In the second year, full-time students should first make certain all core and concentration requirements are fulfilled; they are then free to exercise concentration and elective options for the remaining credits.

Part-Time Students

Students planning to graduate in May of the third year should plan to take 15 or 18 credits the first and second years (two courses in fall, two in the spring, and one or two in a summer session), for a total of 33 credits the first two years, and 12 credits the third year. It is suggested that the three-year part-time student take all core courses in the first year and a combination of core, concentration, and elective courses in the second and third years. Again, sensitivity to alternate year course sequencing is advised. Concentrations for part-time students must be chosen prior to the completion of the first 15 credits, or the first year, whichever is later.

Special Students

Public service professionals, advanced undergraduates, and community residents may request instructor permission to enroll in PPM courses as a special student.

Program Requirements

Forty-five credit hours are required in the program, including 30 credits in the core curriculum, 12 credits in a selected concentration, and a 3 credit elective.

Core

At the center of the curriculum is a core of study common to both policy analysis and public management. These 30 credit hours are required for all students and define a body of knowledge and skills considered basic preparation for successful performance as a leader in any field of public policy and management.

Policy analysis, public management, and government finance provide the basic foundation for the core curriculum. They are enhanced by the study of public policy from the disciplinary perspectives of economics, political science, law and philosophy, and build on the knowledge of the techniques of statistics and research design. The core includes:

- PPM 620 Foundations of Public Policy
- PPM 621 Applied Policy Analysis
- PPM 630 Foundations of Public Management
- PPM 640 Government Finance I
- PPM 611 Economic Analysis
- PPM 612 Political Analysis
- PPM 613 Law and Public Policy
- PPM 614 Ethics and Public Policy
- PPM 601 Applied Statistics for Management and Policy
- PPM 602 Research Design

Concentrations

In addition to the core, students must choose 12 credit hours in a concentration in one of the following areas (all PPM prefix courses are 3 credits; for LAW and MBA courses, see listings in other sections of the catalog).

Policy Analysis

PPM 622 Advanced Policy Analysis (required)

At least one course from the following:

- PPM 603 Advanced Research Methods
- PPM 604 Evaluation Methods
- PPM 641 Government Finance II
- PPM 642 Topics in Finance

The remainder of the twelve credits from:

- PPM 660 Land Use, Environmental Law and Policy
- PPM 661 Pollution Control Policy

PPM 665 Growth Management in Southern Maine
PPM 670 Issues in Health Policy
PPM 629 Workshop in Policy Analysis

Public Management

PPM 631 Organizational Dynamics (required)

Nine credits from the following:

PPM 604 Evaluation Methods
PPM 632 Human Resource Management
PPM 633 Strategic Planning in the Public Sector
PPM 634 Managing the American City
PPM 639 Community Leadership Laboratory
PPM 641 Government Finance II
MBA 643 Organizational Change and Development
MBA 665 Marketing for Nonprofit, Service and
Public Sector Organizations

Government Finance

PPM 641 Government Finance II (required)
PPM 642 Topics in Finance (required)

Six credits from the following:

PPM 603 Advanced Research Methods
PPM 622 Advanced Policy Analysis
PPM 604 Evaluation Methods
LAW 616 State and Local Government
PPM 649 Applied Research in Finance
PPM 665 Growth Management in Southern Maine

Environmental Policy

PPM 660 Land Use, Environmental Law and Policy (required)
PPM 661 Pollution Control Policy (required)

Six credits from the following:

PPM 662 Energy Policy Analysis
LAW 617 Hazardous Waste Policy
LAW 633 Natural Resources Law
LAW 637 Environmental Law
LAW 658 Ocean Law
LAW 677 Water Law
LAW 687 Coastal Zone Law
LAW 684 Alternatives to Court

Growth Management

Choose one:

PPM 665 Growth Management in Southern Maine
PPM 660 Land Use, Environmental Law and Policy

Nine credits from the following:

PPM 622 Advanced Policy Analysis
PPM 631 Organizational Dynamics
PPM 633 Strategic Planning in the Public Sector
PPM 634 Managing the American City
PPM 642 Topics in Finance
PPM 660 Land Use, Environmental Law and Policy
PPM 661 Pollution Control Policy
PPM 665 Growth Management in Southern Maine
PPM 633 Natural Resources Law
PPM 637 Environmental Law

Health Policy

PPM 670 Issues in Health Policy (required)
PPM 679 Research Seminar: Topics in Health Policy and
Management (required)

Six credits from the following:

PPM 671 Health Planning and Regulation
LAW 616 State and Local Government
HRD 650 Social and Public Policy in Aging
NUR 606 Health Policy, Ethics and Change

Self-designed proposals must be submitted to the Academic Standing Committee prior to completing more than three credits in the proposed concentration.

Elective Option

In addition to the flexibility offered through a broad range of concentrations, students may choose three credits in electives from among all PPM courses or from other offerings throughout the University, rounding out a total program that meets each individual's personal and professional needs.

Internships

Internships can be arranged for those interested in expanding public sector experience.

Course Sequencing

Core Courses

Fall

Foundations of Public Policy
Foundations of Public Mgmt.
Law and Public Policy
Economic Analysis
Applied Statistics for Policy and Management

Spring

Applied Policy Analysis
Political Analysis
Ethics and Public Policy
Government Finance I
Research Design

Summer: Applied Statistics for Management and Policy Research Methods

Concentration Courses

Fall

Evaluation Methods
Advanced Research Methods
Managing the American City
Strategic Planning
Government Finance II
Pollution Control Policy (1989)
Issues in Health Policy
Energy Policy Analysis (1988)

Spring

Organizational Dynamics
Advanced Policy Analysis
Human Resource Management
Community Leadership Lab
Topics in Finance
Land-Use, Env. Law & Policy
Health Planning and Reg.
Growth Mgmt. in Southern Maine

TBA

Workshop in Policy Analysis
Applied Research in Finance
Research Seminar: Topics in Health Policy and Mgmt.

Cross-Listed Courses

Fall

Organizational Change & Development (MBA)
Natural Resources Law (LAW)
Maine Coastal Law (LAW)
Social and Public Policy in Aging (HRD)
Health Policy, Ethics and Change (NUR)
Other Cross-Listed Courses TBA

Spring

Market for Nonprofits (MBA)

PPM 601 Applied Statistics for Management and Policy

Introduces students to a variety of analytical approaches to studying management and policy questions. The course concentrates on the acquisition of skills that will enable the student to choose and apply statistical methodology appropriately, and to evaluate critically work done by others. Topics include tabular and visual displays of data; data analysis including central tendency, dispersion, measures of association and linear regression; and the use of a statistics software package.

Cr 3.

PPM 602 Research Design

Focuses on social research as it applies to policy and organizational analysis. Emphasis is on the employment of the scientific method. Basic dimensions of social science inquiry are covered: philosophy of science, research ethics, processes of theory construction, hypothesis testing, validity and reliability issues of measurement, and methods of data collection. Includes survey of applied social research techniques. Course materials are specifically designed to illustrate the particular research problems faced by policy analysts and public/nonprofit managers. Prerequisite: PPM 601 Quantitative Methods or equivalent graduate level course in statistics.

Cr 3.

PPM 603 Advanced Research Methods

Begins where Statistics leaves off and extends the student's understanding of quantitative policy analyses in the area of multivariate statistics, time series analyses, and forecasting. Students will be expected to perform secondary analyses of existing data bases and to review and evaluate critically published work in this field. In addition, all students will complete a semester-long project involving the collection and statistical analysis of original data relating to a public policy issue or concern.

Cr 3.

PPM 604 Evaluation Methods

Introduces students to the methods and techniques used to assess effectiveness and monitor the performance of programs, whether provided directly by government agency or under contract. Specific attention is given to problem formulation, determination of evaluation or assessment plan, conducting the research, and presenting results for the intended audiences. Information gathering through surveys and interviews as well as statistical analysis of data are emphasized. Evaluating research done by others and the RFP process of obtaining evaluators is covered. Prerequisites: PPM 601 and 602.

Cr 3.

PPM 611 Economic Analysis

Introduces students to fundamental economic concepts and illustrates their application in a wide range of public policy problems. The central theme is the usefulness and limitations

of economic analysis in the public policy formation and evaluation process. Particular attention is paid to the theory of consumer behavior, markets and market processes, the nature and causes of market failure and strategies, and models for government intervention. Application exercises and case materials are drawn from a variety of substantive policy areas such as the agricultural price support system and government transfer programs. Previous background in economics, especially microeconomic theory, is most helpful.

Cr 3.

PPM 612 Political Analysis

Examines the ways key political variables influence the formulation and implementation of public policy. The course views politics as a collective process for distributing public and private goods. Attention is given to the impact of forces and constituencies outside as well as inside government, including public opinion, elections, parties, interest groups, and leadership styles. Differences among political institutions, and the effects of these differences on policy outcomes, are also explored. Course materials involve national politics and students analyze the linkages between politics and policies through individual studies of state and local decision making.

Cr 3.

PPM 613 Law and Public Policy

Introduces the student to legal analysis and emphasizes the role of the law in the choices faced by public policy makers. Students will examine materials ranging from constitutional provisions to statutes, regulations, and case decisions. The course will consider social values and custom; how these factors limit and shape the law and then directly or indirectly shape the options of policy makers. The course provides an introduction to the fundamentals of legal research and insight into judicial and administrative processes. There is some exposure to substantive law particularly in the areas of jurisprudence, constitutional law, procedure, and administrative law.

Cr 3.

PPM 614 Ethics, Bureaucracy, and Public Policy

Draws on traditional readings in ethical and political theory as well as on select policy science and contemporary case study materials in an attempt to focus on some major moral problems that arise in the public policy and management profession. The chief aim of the course is to improve students' abilities to recognize and respond critically to ethical issues that they are likely to encounter in their own professional work. Specific course topics may vary from year to year, but generally are selected from the following: the role of policy experts in a democratic society; the problem of "dirty hands," deception in public office, "What makes right acts right?," and liberty and its limits.

Cr 3.

PPM 620 Foundations of Public Policy

Introduces students to a number of issues that help shape the process and substance of public policy making in the United States, presented from a variety of disciplinary perspectives.

Cr 3.

PPM 621 Applied Policy Analysis

Designed as an integrative course that will reinforce other analysis courses and introduces students formally to the application of policy analysis to public sector problems and issues. The course will be case-based, with substantive material introduced to provide more detail and food for discussion for the cases. Prerequisite: PPM 620.

Cr 3.

PPM 622 Advanced Policy Analysis

Designed for students and practitioners who have a specific interest in furthering their understanding of and enhancing their abilities to apply policy analytic concepts and methods. The course consists of a series of modules on topics integral to the application and understanding of policy analysis in the public sector. These modules include Decision Analysis, Benefit-Cost Analysis, and Public Finance. Prerequisites: PPM 601, PPM 661 and PPM 621 or permission of instructor.

Cr 3.

PPM 629 Workshop in Policy Analysis

Provides an intensive, one-semester, client-directed experience in which students work in teams under the direction of faculty on problems and issues of current concern.

Cr 3.

PPM 630 Foundations of Public Management

Provides an overview of public management at the federal level and in state and local government. Emphasis is given to the differences between public and private management and the politics of bureaucracy. Basic managerial dimensions are examined: administrative ethics, planning organizational design, human resource management, budgeting and performance assessment, policy analysis, and program management. The case approach is employed to examine the day-to-day problems faced by public managers.

Cr 3.

PPM 631 Organizational Dynamics

Examines the basic processes that determine how organizations set goals, structure themselves, measure performance, adapt to their environment, manage change and internal conflict, and make decisions. Emphasis is given to techniques of analysis that can be used to understand and manage these various organizational functions. Prerequisite: PPM 630.

Cr 3.

PPM 632 Human Resource Management

Introduces basic conceptual frameworks, techniques of analysis and contemporary issues in human resource management in the public and nonprofit sectors. Topics include: motivation, satisfaction and the worker; fairness and representation in the workplace; systems approaches to work analysis; labor and

productivity measurement; analyzing work and identifying productivity measurement; analyzing work and identifying competence; recruitment, screening and selection; performance appraisal; strategies of human productivity improvement; programmatic alternatives for human resource management and integrating human resource management into the organization.

Cr 3.

PPM 633 Strategic Planning in the Public Sector

Examines how public organizations can utilize strategic planning in responding to environmental change and the future. Approaches to and techniques of strategic planning are covered, including goal-setting, environmental scanning, resource audits, and the formulation of strategy and its implementation. Examples are drawn from Maine state and local government and the nonprofit sector.

Cr 3.

PPM 634 Managing the American City

Explores essential themes which will provide the students with a theoretical as well as a practical understanding of the fundamental issues involved in managing our complex and diverse urban environments. Special emphasis will be placed on examining emerging management issues that have sparked a new demand for excellence and innovation in city governments. While the city of Portland will serve as a useful reference point, the course will also explore the difficult management issues involved in our larger central cities.

Cr 3.

PPM 639 Community Leadership Laboratory

A small number of PPM graduate students may receive permission to participate in the Community Leadership Institute for graduate credit, working with a PPM faculty member to build on the practical hands-on experiences on the Institute.

Cr 3.

PPM 640 Government Finance I

Focuses on the government finance function as it occurs prior to the start of the fiscal year during the formulation of taxing and spending policies. Topics include taxation theory; assessment of revenue availability and alternate resources; budget planning, development and analysis. Students use the Lotus 1-2-3 spreadsheet for budgeting and evaluating expenditures. During the semester, all students participate in a study or project for a public sector client.

Cr 3.

PPM 641 Government Finance II

Examines the government finance function as it operates during the fiscal year and in the longer range setting. Topics studied include using financial information, internal resource analysis and management, fiscal forecasting, debt management and analysis, and monitoring financial condition. During the second half of the course, students act as consultants to a

municipality and conduct a financial condition analysis. Prerequisites: PPM 640, 601, or equivalents. Cr 3.

PPM 642 Topics in Finance

Examines topics of current interest to municipal finance officers and others involved in finance policy analysis. The course consists of three modules that currently include economic and fiscal base analysis, fiscal impact analysis, and capital budgeting and planning. Students make extensive use of computer-based software for analysis and modelling using current data from local governments. Prerequisites: PPM 601 and 640 or equivalents, knowledge of use of Lotus 1-2-3 spreadsheet. Cr 3.

PPM 649 Applied Research in Finance

Provides an intensive, one-semester, client-directed experience in which students work individually or in groups investigating an important finance issue or exploring a municipal financial concern. Prerequisite: PPM 641. Cr 3.

PPM 660 Land-Use, Environmental Law and Policy

Examines the origins of legal power to address land-use and environmental issues; the types of problems that are being encountered in the society; and some of the regulatory responses to these problems that have been fashioned at state and local governmental levels. A number of land-use and environmental problems that have arisen in Maine will be examined as examples of things happening nationally. The course will emphasize an interdisciplinary approach to these problems. Cr 3.

PPM 661 Pollution Control Policy

Examines public policies for control of air, water, and land pollution in the United States. The status of scientific knowledge, technical uncertainty, and available technology for control of industrial and municipal effluents will be assessed in terms of their implications for policy making and implementation. Cr 3.

PPM 662 Energy Policy Analysis

Develops a conceptual framework for analysis of energy technologies and alternative national energy policy choices in terms of their respective economic, environmental, and national security costs and benefits. Issues associated with implementation of U.S. energy policy are examined in the context of major social goals, with treatment of conflicts and trade-offs between energy development and other social values. State and local energy policy formation will be reviewed in the context of national policy. Cr 3.

PPM 665 Growth Management

Presents current, state-of-the-art information on growth management and land use from a national as well as a state perspective and provides a forum in which participants from a

variety of professions can discuss and analyze this region's development problems. One major outcome will be the production of a summary of coursework and discussions, including policy recommendations, that can be useful to the southern Maine community. Cr 3.

PPM 670 Issues in Health Policy

Introduces students to the organization and financing of the American health care system and analyzes the critical policy problems and choices in the system. Students will discuss trends in the organization and financing of health care and the effects of these on the fundamental policy problems of cost, access to care, and quality of care. Cr 3.

PPM 671 Health Planning and Regulation

Introduces students to the major concepts of planning and regulation and to discrete issues, skills, and methods in the field. In addition to covering the practical methods and techniques for planning and regulating hospitals, long-term care, and other services, the course will give students an understanding of the strengths and weaknesses of both planning and regulation and the so-called competition alternatives. Prerequisite: PPM 670. Cr 3.

PPM 679 Research Seminar: Topics in Health Policy and Management

Designed for PPM students concentrating in health policy and other students with a background in health care policy who wish to pursue directed research on issues in this area in greater depth. The seminar will examine a broad range of current topics in health policy. Students will participate in planning the seminar and are required to write a major research paper and give several presentations on their research. Cr 3.

PPM 695 Independent Study

Cr 3.

PPM 696 Internship

Cr Var.

LAW 616 State and Local Government

Emphasizes understanding the relationship among federal, state, and local governments. The character of institutions and fiscal policies will be examined as well as the actual mechanics of how they work. Not offered: 1988-89. Cr 3.

LAW 617 Hazardous Waste Regulation

Examines in detail the environmental laws and regulations governing the management of hazardous and solid waste, the operating of underground storage tanks, and the cleanup of dangerous waste sites. The structure of the course is intended to maximize student involvement and stress advocacy skills. Students will participate in mock congressional hearings, EPA rule makings, and judicial proceedings regarding contract, legal, and policy issues. Through their participation in these mock proceedings, students will be exposed to principles of administrative law as well. Not offered: 1988-1989. Cr 2.

LAW 633 Natural Resources

Examines the federal and state frameworks affecting the use of public lands and waters, forestry resources, fish and wildlife resources, and energy and mineral resources. Problems of multiple use and sustainability will be considered, as will issues of federalism, public and private rights, and the philosophical and economic implications of various institutional approaches to resource allocation. Cr 3.

LAW 637 Environmental Law

Provides a survey of major federal and state environmental control laws and cases interpreting these laws. Concepts of standing, burden of proof, strict liability, nuisance, and tax policy are examined as they relate to environmental problems. Cr 3.

LAW 658 Ocean Law

Provides an introduction to the basic principles of ocean law, including international law of the sea and maritime boundary delimitations. Emphasis is on the role of U.S. law and policy in shaping international norms. Federalism in U.S. ocean legislation is also examined. Legal texts explored in the 1982 Law of the Sea Treaty, Fishery Conservation and Management Act, and the Outer Continental Shelf Lands Act, the Coastal Zone Management Act, and the Marine Protection Research and Sanctuaries Act. Class exercises include a maritime boundary simulated negotiation. Cr 3.

LAW 675 Medical-Legal Process

Designed to explore a range of difficult medical, moral, and legal questions that surround such issues as death, right to life, right to treatment, dealing with the incompetent, suicide, patient rights. Public policy questions dealing with health care delivery systems, organ transplants, medical malpractice are also examined. Cr 2.

LAW 677 Water Law

Focuses upon the various ways in which water use rights are allocated to private users, public use rights in waters, pollution control problems, the distinctions between navigable and non-navigable waters, the relationship between surface waters and ground waters, problems arising from unregulated well drilling activities, and the distinctions between Western (prior appropriation doctrine) water law and Eastern (riparian doctrine) water law. Not offered: 1988-1989. Cr 2.

LAW 684 Alternatives To Court

Undertakes a critical examination of the alternatives to court movement in the United States. Students will survey the range of formal and informal dispute resolution mechanisms now available, as well as their twentieth century antecedents; sample anthropological literature describing dispute resolution models in small-scale societies and social states; study the philosophical underpinnings of the alternatives to court movement; examine the growing literature in which the advantages and disadvantages of dispute resolution alternatives are debated and discussed; and observe and perhaps participate in a variety of local court alternatives. Not offered: 1988-1989. Cr 2.

LAW 687 Coastal Zone Law

Examines common law principles and legislation affecting public and private rights in the shoreline. Topics explored include the public trust doctrine; littoral rights, the navigational servitude, public use of the beach, land use controls to protect public values in the shoreline; and the taking issue. Course materials were prepared by the instructor. Cr 3.

Summer Session

Director: Rosa M. Redonnett

During the summer the University offers over 300 credit and noncredit courses, and a number of institutes and programs for graduate and undergraduate students. The Stonecoast Writer's 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. In addition to the 3,000 students who enroll in academic courses, over 8,000 people attend summer conferences held in University facilities. Cultural events such as musical theatre productions, 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.

Division of Public Service

Director: William G. Mortensen

The Division of Public Service is responsible for the development, coordination, and support of all noncredit programming at the University. The Division's mission is to broaden educational access and learning opportunities in southern Maine through programs that respond to practical community needs. The Division offers Continuing Education Units (CEUs) for many courses offered in the various departments. CEUs are a nationally accepted measurement of participation in certain noncredit courses.

Department of Continuing Education for Business

Director: Donald J. Clark

The Department of Continuing Education for Business assists southern Maine employers by offering a variety of seminars, courses, and programs to meet identified needs. Through its program advisory groups, the Department involves business representatives in the planning, implementation, and evaluation of its offerings. These individuals represent nearly all sectors of the regional economy as well as small, medium, and large firms. The instructional staff consists of faculty and staff from the University and individuals from business. The expertise represented by this extensive resource 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.

Department of Continuing Education for Nursing and Health Professions

Director: Mary Ann Rost

The Department provides continuing education offerings for health professionals such as nurses, pharmacists, physical therapists, dietitians, and others at locations throughout Maine. Programs are offered in a variety of formats including workshops, seminars, and evening courses. All programs are awarded Continuing Education Units (CEUs) and are approved by professional associations such as the Maine State Nurses Association, Maine Commission of Pharmacy, and others.

Department of Community Programs

Director: Joanne K. Spear

The Department offers a wide range of programs including professional development in selected areas, personal enrichment and career and skill enhancement. Certificate programs are available to prepare people for roles as legal assistants, personal computer coordinators and community leaders.

Department of Conferences

Director: Kathleen S. LeBel

The Department assists University and community organizations in planning conferences and in using University facilities.

Lifeline Adult Fitness Programs

Director: Robert E. Folsom

Lifeline is a comprehensive approach to total fitness through various programs of prevention, intervention, and rehabilitation. 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.

Further information about these programs may be obtained by contacting the Division of Public Service, University of Southern Maine, 68 High Street, Portland, ME 04101, (207) 874-6515.

Departments offering noncredit programs through the USM schools and colleges for practicing professionals include: *The Professional Development Center* of the College of Education; the *Center for Real Estate Education* of the School of Business, Economics and Management; and the *Continuing Legal Education* unit of the University of Maine School of Law.

Convocation

Convocation Scholar: James W. Roberts

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," "Changing Roles of Women and Men," "The Age of the Computer," "Peace and War in the Nuclear Age," "The Aging of America," "The Arts in Our Lives," and "The Constitution: Roots, Rights, Responsibilities." For its 1988-1989 Convocation, the University community will focus on the culture and political system of the Soviet Union. And, in the two subsequent academic years, the same will be done in regard to Latin America and the Far East.

Associate Professor of Political Science James W. Roberts will serve as the Convocation Scholar during the 1988-89 Convocation. He has written about the upcoming examination of the Soviet Union, "The Soviet Union of today is undergoing an intense self-examination. For many of its citizens, this is a disturbing time, as settled ways are challenged by the promise of a still uncertain future. For ourselves, as onlookers and students, it is an exciting time to be watching; we shall surely come to a fuller knowledge of our sister super power—and we may even learn something more of ourselves in the process."

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.

Administration of the University of Southern Maine

Administrative Organization as of June 1, 1988

President: Patricia R. Plante, 228 Deering Avenue, Portland tel: 780-4480
Provost and Vice President for Academic Affairs: Helen L. Greenwood, 228 Deering Avenue, Portland tel: 780-4485
Vice President for Administration: Samuel G. Andrews, 11 Granite Street, Portland tel: 780-4484
Vice President for Student Affairs: Larry G. Benedict, 110 Payson Smith, Portland tel: 780-4035
Vice President for Development and External Affairs: Stephen T. Honey, 622 Law Building, Portland tel: 780-4382

Administrative Offices Serving Students

Admissions

David G. Behrs, Director

Advising and Academic Information

Richard H. Sturgeon, Director

Applied Science, School of

Brian C. Hodgkin, Dean

Arts & Sciences, College of

Dave D. Davis, Dean

Athletics

Richard A. Costello, Director

Business, Economics and Management, School of

Richard J. Clarey, Dean

Business Office

William B. Bullock, Business Manager

Child Care Services

Stephen F. Lehane, Director

Counseling & Career Development

Ira Hymoff, Director

Education, College of

Dorothy D. Moore, Dean

Educational Media Service

Ronald W. Levere, Director

Financial Aid, Student

Helen F. M. Parker, 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

Off-Campus Instruction and Academic Support, Division of

John W. Bay, Director

Police and Safety

Coin P. Hauk, Director

Public Policy and Management

Richard E. Barringer, Director

Public Service, Division of

William G. Mortensen, Director

Registrar's Office

John F. Keysor, Registrar

Residence Life

Joseph M. Austin, Director

Summer Session

Rosa M. Redonnett, Director

Testing and Assessment, Office of

David L. Silvernail, Director

Graduate Faculty

- Amoroso, Henry C., Jr.** (1982) Associate Professor of Education; St. Michael's College, B.A., 1966; Goucher College, M.Ed., 1967; University of Wisconsin, Ph.D., 1978
- Andrews, Bruce H.** (1974) Director of the Graduate Program in the School of Business, Economics, and Management and Associate Professor of Business Administration; University of Connecticut, B.A., 1967; Polytechnic Institute of New York, M.S., 1969; Ph.D., 1980
- Atkinson, Robert** (1987) Assistant Professor, Department of Human Resource Development, College of Education, Long Island University, B.A., 1967; State University of New York, M.A., 1969; University of New Hampshire, M.A., 1981; University of Pennsylvania, Ph.D., 1985
- Beirne, Piers** (1982) Lecturer, School of Law and Professor of Criminology; Essex University (England), B.A., 1971; Durham University (England), Ph.D., 1975
- Boyle, Conrad L.** (1982) Associate 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 of Adult Education; St. Mary's Seminary and University, A.B., 1971; the University of Connecticut, M.S.W., 1977; St. Mary's Seminary and University, M.Div., 1980; the University of Connecticut, Ph.D., 1982
- Brett, Tybe A.** (1983) Associate Professor of Law, School of Law; Barnard College, B.A., 1977; Columbia University, J.D., 1979
- Briggs, David A.** (1984) Assistant Professor of Computer Science; Swarthmore College, B.A., 1975; University of Massachusetts at Amherst, M.S., 1984
- Broyles, India L.** (1986) Assistant Professor of Education; Georgia College, B.S., 1968; M.Ed. 1975; University of Georgia, Ed.D., 1983
- Callender, Willard D.** (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, Ardis** (1988) Assistant Professor of New England Studies; Miami University, B.A., 1970; Stetson University, M.A., 1973; Boston College, Ph.D., 1987
- Carson, Loftus C., II** (1980) Professor, School 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
- Clarey, Richard J.** (1979) Dean, School of Business, Economics and Management and Associate Professor of Management and Director, Center for Business and Economic Research; Bowdoin College, B.A., 1961; Dartmouth College, M.B.A., 1963; Cornell University, Ph.D., 1968
- Clary, Bruce B.** (1987) Professor of Public Policy and Management; University of California, B.A., 1968; University of Southern California, M.A., 1970; Ph.D., 1974
- 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
- Coburn, Andrew E.** (1981) Assistant Professor of Public Policy and Management; Acting Director, Human Services Development Institute; Brown University, A.B., 1972; Harvard University, Ed.M., 1975; Brandeis University, Ph.D., 1981
- Cohen, Libby G.** (1980) Associate Professor of Special Education; University of Connecticut, B.A., 1967; Russell Sage College, M.S., 1971; Boston University, D.Ed. 1977
- Conforti, Joseph A.** (1987) Director of New England Studies and Professor of History; Springfield College, B.S., 1967; Brown University, A.M., 1972; Ph.D., 1975
- Conway, Jeremiah P.** (1978) Director, Honors Program and 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, M.A., 1964; University of North Carolina, Ph.D., 1971
- Curry, James A.** (1985) Associate Professor of Education; Whitworth College, B.A., 1969; University of Georgia, M.Ed., 1973; Ed.D., 1985
- Davis, Carol Lynn** (1982) Associate Professor of Education; University of Maine, B.A., 1968; M.S., 1977; Ph.D., 1983
- Deady, John E.** (1981) 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 Public Policy, School of Law; University of Utah, B.S., 1960; University of Wisconsin, M.S., 1963; J.D., 1966
- Dorbacker, Beatrice M.** (1974) Associate Professor, School of Nursing; Columbia University, B.S., 1950; M.A., 1957; Boston University, Ed.D., 1973
- Downey, Loren W.** (1974) Director, University College of Education, and Professor of Education; Drake University, B.A., 1949; University of Oregon, M.S., 1950; University of Arizona, Ed.D., 1966
- Eastman, Joel W.** (1970) Professor of History; University of Maine, B.A., 1962; M.A., 1965; University of Florida, Ph.D., 1973
- ElTaha, Muhammad A.** (1987) Assistant Professor of Mathematics; Haigazian College (Lebanon), B.S., 1978; American University of Beirut, M.S., 1980; North Carolina State University, Ph.D., 1986
- Flagg, Robert C.** (1987) Assistant Professor of Mathematics, University of Maine, M.A., 1979; SUNY, Buffalo, M.A., 1982; Ph.D., 1984

- Foster, Cherie** (1982) Assistant Professor, College of Education; University of Wyoming, B.A., 1973; M.A., 1977; Utah State University, Ed.D., 1983
- Fried, David J.** (1988) Visiting Associate Professor of Law, Cornell University, B.A., 1971; Harvard University, J.D., 1976
- Friedman, James** (1980) Professor, School of Law; Brown University, A.B., 1971; University of Chicago, J.D., 1974
- Gabrovsky, Peter N.** (1985) Associate Professor of Computer Science; Sofia University (Bulgaria), B.S., 1965; Warsaw University (Poland), M.S., 1968; Syracuse University, Ph.D., 1976
- Goettel, Robert J.** (1981) Special Assistant to the President and Adjunct Professor of Public Policy and Management; State University, Fredonia, New York, B.A., 1955; Columbia University, M.A., 1963; Ed.D., 1970
- Goldsberry, Lee** (1987) Assistant Professor of Education; Purdue University, B.A., 1969; Governors State University, M.A., 1975; University of Illinois, Ed.D., 1980
- Grange, Joseph** (1970) Professor of Philosophy; St. Joseph's College, B.A., 1961; Fordham University, M.A., 1965; Ph.D., 1970
- Greene, Charles N.** (1986) Professor of Organizational Behavior and Management; The Ohio State University, B.S., 1959; M.B.A., 1961; Ph.D., 1969
- Greenleaf, Nancy P.** (1981) Dean and Associate Professor of Nursing; Boston University, B.S., 1964; M.S., 1967; D.N.Sc., 1982
- Gregory, David D.** (1972) Professor, School of Law; Duke University, B.A., 1964; University of Maine, LL.B., 1968; Harvard University, LL.M., 1972
- Guay, Merle D.** (1969) Professor of Mathematics; Tufts University, B.S., 1958; University of Maine, M.A., 1960; Michigan State University, Ph.D., 1967
- Gupta, Bhisham C.** (1985) Director of Graduate Program in Statistics and Professor of Applied Mathematics, Punjab University (India), M.A., 1964; University of Windsor (Canada), M.S., 1969; Ph.D., 1972
- Gupta, Sat** (1986) Assistant Professor of Mathematics, University of Delhi (India), B.A., 1970; M.S., 1972; Ph.D., 1977; Colorado State University, Ph.D., 1987
- Hamilton, Michael S.** (1985) Assistant Professor of Political Science; Colorado State University, B.A., 1974; M.A., 1977; Ph.D., 1984
- Healy, Phyllis E.** (1987) Associate Professor of Nursing; Hunter College, B.S., 1971; University of California, M.S., 1972
- Heath, John R.** (1976) Associate Professor of Computer Science; University of Maine, B.A., 1968; M.A., 1970; University of Minnesota, M.S., 1976; Ph.D., 1982
- Hodgkin, Brian C.** (1976) Associate Professor of Electrical Engineering; University of Maine, B.S., 1964; Johns Hopkins University, Ph.D., 1969
- Hodson, D. Bradley** (1973) Associate Professor of Accounting; University of Maine, B.S., 1968; University of Pennsylvania, M.A., 1969; C.P.A. (Massachusetts)
- Houlihan, John J.** (1975) Associate Professor of Business Law; Holy Cross College, A.B., 1969; Harvard Law School, J.D., 1972
- Hunt, H. Draper, III** (1965) Professor of History; Harvard University, B.A., 1957; Columbia University, M.A., 1960; Ph.D., 1968
- Johnson, Rosemary** (1987) Assistant Professor of Nursing; McGill University, B.S.N., 1972; University of Rochester, M.S.N., 1976; University of Colorado, Ph.D., 1987
- Kandoian, Ellen Arpen** (1981) Professor, School of Law; Yale College, B.A., 1971; Columbia University, M.A., 1972; Yale Law School, J.D., 1975; Boston University, LL.M., 1981
- Kenyon, James** (1987) Assistant Professor of Mathematics; Bates College, B.S., 1974; University of Connecticut, M.S., 1976; Ph.D., 1987
- Khoury, Colleen** (1985) Visiting Associate Professor of Law; Colby College, B.A., 1964; Illinois Institute of Technology/Chicago-Kent College of Law, J.D., 1975
- Kulawiec, Edwin P.** (1987) Associate Professor of Education; Bethany College, B.S., 1950; Seton Hall University, M.A., 1956; Indiana University, M.A.T., 1961; University of Wisconsin-Madison, Ph.D., 1970
- Lang, Michael B.** (1983) Professor, School of Law; Harvard University, A.B., 1972; University of Pennsylvania, J.D., 1975
- Lombardo, Gary A.** (1987) Assistant Professor of Business Administration; New Hampshire College, B.S., 1976; University of Southern California, M.S., 1980; University of Oregon, Ph.D., 1986
- 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
- Lyons, Charles M.** (1973) Associate Professor of Education; St. Francis Xavier University, B.A., 1966; University of Hartford, M.Ed., 1970; Boston University, Ed.D., 1978
- MacLeod, Bruce** (1986) Instructor of Computer Science; Bowdoin College, A.B., 1979; Rensselaer Polytechnic Institute, M.S., 1981; University of Massachusetts, M.S., 1985
- MacPherson, Kathleen I.** (1974) Associate Dean and Professor, School of Nursing; Boston University, B.S., 1963; M.A., 1965; M.S., 1974; Brandeis University, Ph.D., 1986
- Maiman, Richard J.** (1971) Lecturer, School of Law and Professor of Political Science; Lake Forest College, B.A., 1967; Brown University, Ph.D., 1972

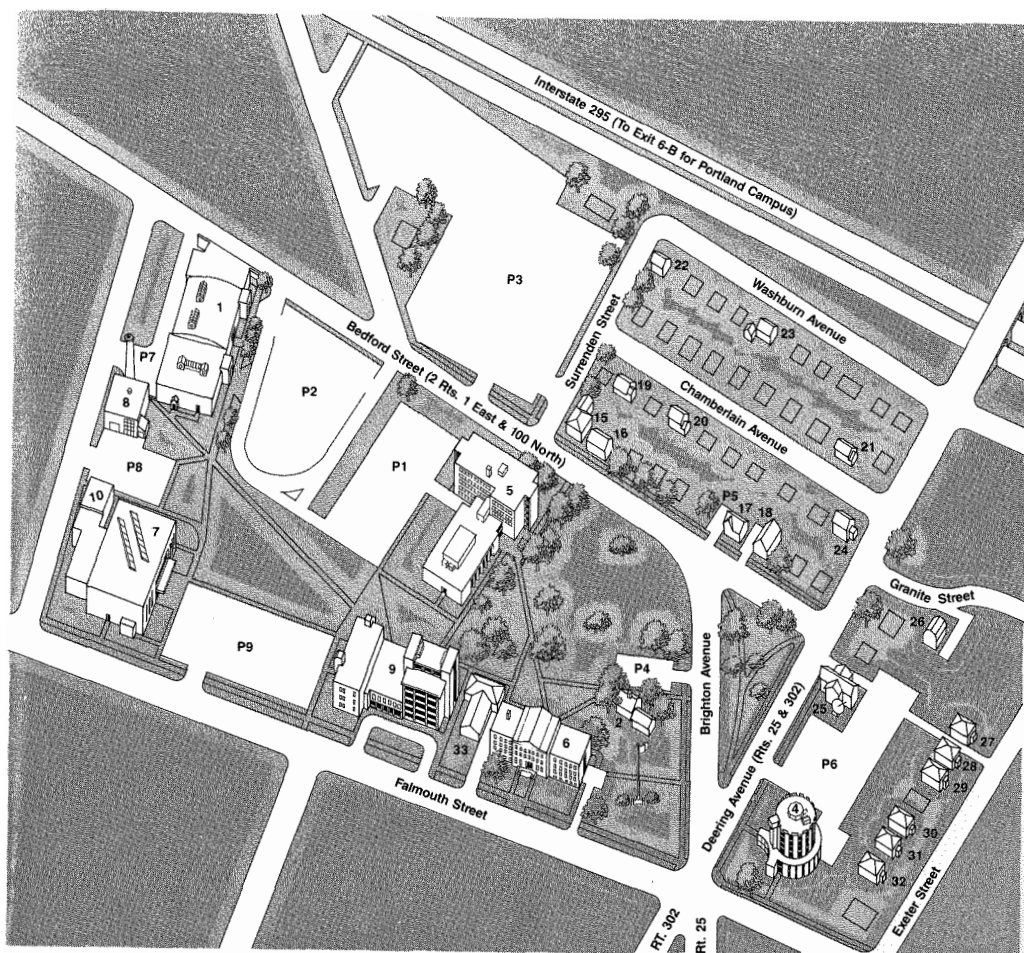
- Maskarinetz, Josephine M.** (1985) Assistant Professor of Public Policy and Management; Syracuse University B.A., 1973; M.A., 1983; Ph.D., 1984
- McMahon, Robert C.** (1969) Associate Professor of Economics; University of Washington, B.A., 1959; M.A., 1964; Lehigh University, Ph.D., 1970
- Medley, Joseph** (1983) Assistant Professor of Economics; State University of New York at Albany, B.A., 1973; University of Massachusetts at Amherst, M.A., 1976; Ph.D., 1981
- Miaoulis, George** (1983) Professor of Marketing; New York University, B.S., 1965; M.B.A., 1969; Ph.D., 1974
- Miller, Lynne** (1987) Associate Professor of Educational Administration/Instructional Leadership; University of Pennsylvania, B.A., 1976; Harvard University, M.A.T., 1970; University of Massachusetts, Ed.D., 1975
- Moore, Dorothy D.** (1968) Dean and Associate Professor of Education; University of Maine, B.S., 1966; M.Ed., 1968; Ed.D., 1978
- Mullane, Michael W.** (1987) Associate Professor of Law, School of Law, University of Notre Dame, B.A., 1964, J.D., 1972
- Narang, Kamal** (1987) Assistant Professor of Mathematics, University of Allabad (India), B.S., 1968; M.S., 1970; Indian Institute of Technology, M.S., 1973; The Ohio State University, Ph.D., 1985
- Neweu, Raymond P.** (1982) Professor of Finance; Providence College, A.B., 1959, Boston College, M.A., 1961, University of Pittsburgh, Ph.D., 1968
- Ng, Ah-Kau** (1988) Assistant Professor of Applied Immunology; National Chung-Hsing University (Taiwan), B.S., 1969; State University of New York/Plattsburgh, M.A., 1972; Temple University School of Medicine, Ph.D., 1975
- O'Donnell, Michael P.** (1970) Professor of Education; University of Maine, B.S., 1958; M.S., 1961; Syracuse University, Ed.D., 1968
- Painter, Linda C.** (1987) Assistant Professor, Human Resource Development Department, College of Education; West Georgia College, A.B., 1972; M.Ed., 1974; University of Georgia, Ph.D., 1984
- Paltrow, Merle** (1987) Associate Professor of Nursing; University of Oregon, B.S., 1966; Lewis and Clark College, M.Ed., 1975; Columbia University, Ed.D., 1983
- 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
- Peake-Godin, Helen** (1980) Associate Professor of Nursing; Spaulding College, B.S., 1969; Emory University, M.N., 1979
- Phillips, William A.** (1980) Associate Professor of Economics; Florida State University, B.S., 1961; M.S., 1975; Ph.D., 1979
- 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)
- Rees, Toni H.** (1984) Assistant Professor of Hearing Impairment; Norwich College of Education (England), Teaching Certificate, 1967; Southampton University (England), M.A., 1971; Gallaudet College, Ph.D., 1983
- Richardson, Linda L.** (1986) Assistant Professor of Finance; Connecticut College, B.A., 1970; Montana State University, M.S., 1974
- Rogoff, Martin A.** (1972) Professor, School of Law; Cornell University, B.A., 1962; University of California, Berkeley, M.A., 1963; Yale Law School, LL.B., 1966
- Rote, Neal S.** (1987) Director and Professor, Applied Immunology Program; Temple University, B.A., 1969; Temple University School of Medicine, Ph.D., 1974
- Schroff, Roger** (1982) Associate Professor of Computer Science; University of Kansas, B.A., 1966; M.A., 1978; M.S., 1979; Ph.D., 1980
- Silkman, Richard H.** (1983) Adjunct Professor of Public Policy and Management; Purdue University, B.S., 1972; Yale University, M.A., 1975; Ph.D., 1980
- Silvernail, David L.** (1977) Associate Professor of Education; Indiana University, A.B., 1969; M.S., 1975; Ed.D., 1977
- Skoner, Martha** (1987) Assistant Professor of Nursing; University of Pittsburgh, B.S.N. Ed., 1959; M.N. Ed., 1963; Ph.D., 1974
- Slavick, William H.** (1970) Professor of English; University of Notre Dame, B.A., 1949; M.A., 1951; Ph.D., 1971
- Smith, Charles E.** (1969) Associate Professor of Education; Westfield State College, B.S., 1960; University of Massachusetts, M.S., 1963; Ed.D., 1969
- Smith, James W.** (1986) Associate Professor of Applied Science; Pennsylvania State University, B.S., 1961; M.S., 1963; Ph.D., 1967
- Soifer, Naira B.** (1984) Visiting Associate Professor of Law; Bryn Mawr College, B.A., 1974; Boston College Law School, J.D., 1980; Georgetown University Law Center, LL.M., 1983
- Southworth, Robert S.** (1963) Professor of Educational Psychology; Boston University, B.A., 1951; Ed.M., 1958, Ed.D., 1965
- Spruill, Jo-Anna** (1985) Assistant Professor of Education; Smith College, B.A., 1961; Boston University, M.Ed., 1973

- Stevens, Reid D.** (1985) Assistant Professor of Education; Suffolk University, B.S., 1971; University of Maine, M.Ed., 1973; University of Georgia, Ph.D., 1981
- Sturner, William** (1978) Professor of Management; Fordham College, B.S.S., 1957; University of Wisconsin, M.A., 1960; Fordham University, Ph.D., 1966
- Sutton, John M., Jr.** (1978) Professor, Department of Human Resource Development, College of Education; Boston College, A.B., 1961; University of Maine, M.S., 1972; Ed.D., 1976
- Thompson, Janice A.** (1984) Associate Professor of Nursing; University of Iowa, B.S.N., 1975; University of Utah, Ph.D., 1983
- VanZandt, C.E.** (1987) Assistant Professor of Education; Michigan State University, B.A., 1969; M.A., 1970; University of Maine, Ed.D., 1976
- Vess, Susan M.** (1988) Assistant Professor of School Psychology; Loretto Heigh College, B.A., 1970; University of Illinois, A.M., 1972; Ph.D., 1977
- Viana, Marlow A.G.** (1987) Assistant Professor of Mathematics; Universidade Federal, Rio de Janeiro, B.S., 1971; M.S., 1973; Stanford University, M.S., 1975; Ph.D., 1978
- Vijaykumar, Rukmini** (1988) Assistant Professor of Computer Science; Indian Institute of Technology, India, M.S., 1976, M.T., 1978; University of Massachusetts, Ph.D., 1988
- Voyer, John J.** (1987) Assistant Professor of Business Administration; Harvard University, A.B., 1973; Clark University, M.B.A., 1981; University of Massachusetts, Ph.D. 1986
- 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
- Welty, Charles** (1979) Professor of Computer Science; University of California (Berkeley), B.S., 1967; M.S., 1968; University of Massachusetts, M.A., 1977; Ph.D., 1979
- Whitmore, Allan R.** (1969) Associate Professor of History; University of Maine, B.A., 1962; Northwestern University, M.A., 1964; Ph.D., 1970
- Wood, Margo** (1980) Associate Professor of Education; Vassar College, B.A., 1961; University of Southern Maine, M.S., 1979; Boston University, Ed.D., 1986
- Wroth, L. Kinvin** (1964) Dean and Professor, School of Law; Yale, B.A., 1954; Harvard, J.D., 1960
- Zarr, Melvyn** (1973) Professor, School of Law; Clark University, A.B., 1958; Harvard University, LL.B., 1963

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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
15. 94 Bedford Street
16. 118 Bedford Street
17. 120 Bedford Street
18. 7 Chamberlain Avenue
19. 15 Chamberlain Avenue
20. 38 Chamberlain Avenue
21. 3 Washburn Avenue
22. 25 Washburn Avenue
23. 209 Deering Avenue

25. 228 Deering Avenue
26. 11 Granite Street
27. 39 Exeter Street
28. 45 Exeter Street
29. 47 Exeter Street
30. 55/57 Exeter Street
31. 59/61 Exeter Street
32. 65 Exeter Street
33. West Hall

Parking

- P1. 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

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