

1990

University of Southern Maine Graduate Catalog 1990-1991

University of Southern Maine

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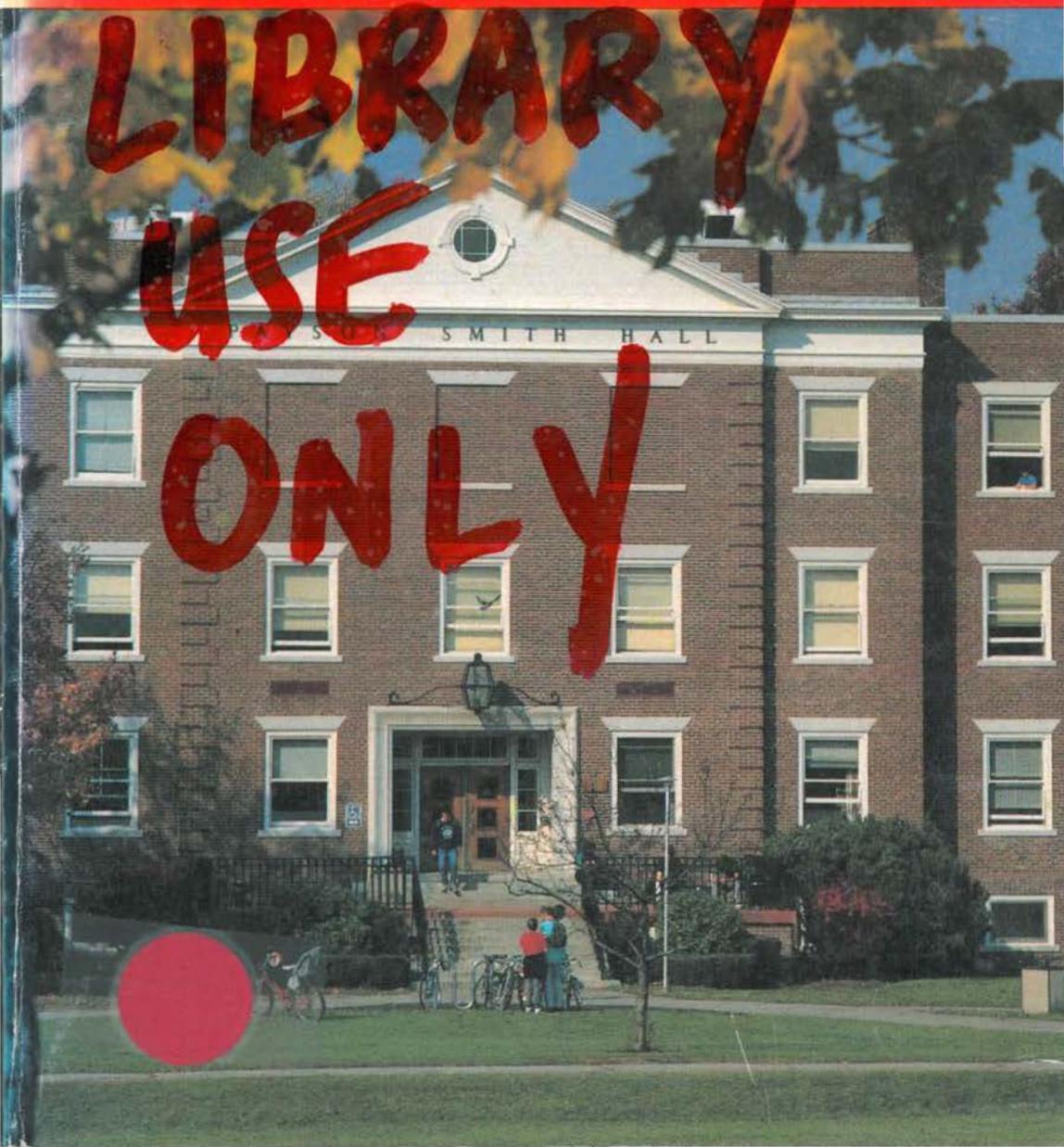
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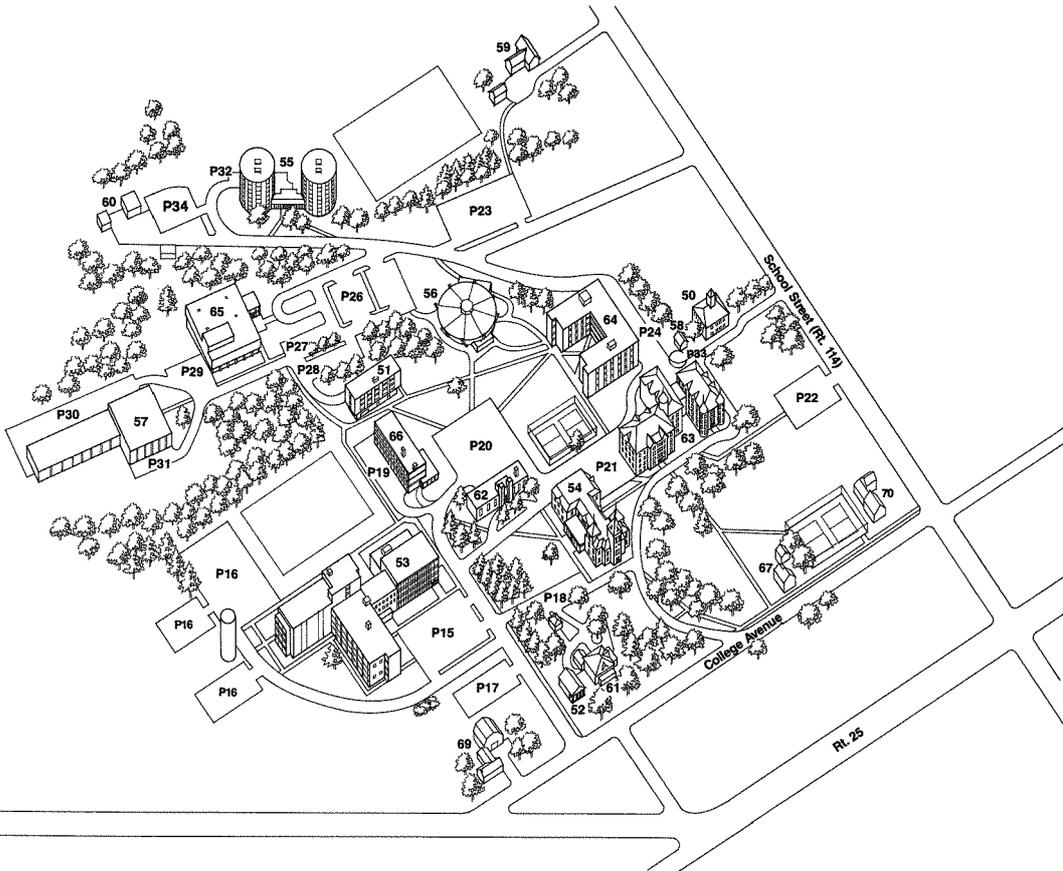
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UNIVERSITY of SOUTHERN MAINE

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Gorham Campus



Gorham Campus

- | | | |
|---------------------------------------|-----------------------|-----------------------|
| 50. Academy Building | 67. 19 College Avenue | P31. Faculty/Staff |
| 51. Anderson Hall | 69. 51 College Avenue | P32. Faculty/Staff |
| 52. Art Gallery | 70. 7 College Avenue | P33. Faculty/Staff |
| 53. Bailey Hall (Library) | | P34. Student Resident |
| 54. Cortnell 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 | | |

Parking

- | |
|-------------------------------------|
| P15. Faculty/Staff |
| P16. Student Commuter |
| P17. Faculty/Staff |
| P18. Visitor |
| P19. Student Commuter |
| P20. Faculty/Staff |
| P21. Faculty/Staff |
| P22. Student Commuter |
| P23. Student Resident |
| P24. Student Resident |
| P26. Student Resident |
| P27. Faculty/Staff/Student Resident |
| P28. Student Resident |
| P29. Faculty/Staff |
| P30. Student Commuter/Faculty Staff |

University of Southern Maine

Graduate Catalog
1990-1991

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.

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

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Academic Calendar 1990—1991

Fall Semester

Classes Begin	Tuesday, September 4
Convocation	Thursday, October 4
	No Classes:
	Portland, 1:00 p.m.-4:00 p.m.
	Gorham, 12:30 p.m.-4:00 p.m.
Veterans' Day — No Classes	Monday, November 12
Thanksgiving Vacation Begins	After all classes on Tuesday, November 20
Classes Resume	Monday, November 26
Last Day of Classes	Friday, December 21

Spring Semester

Classes Begin	Monday, January 14
M.L. King, Jr. Day — No Classes	Monday, January 21
Winter Vacation Begins	After classes on Saturday, February 16
Classes Resume	Monday, February 25
Spring Vacation Begins	After classes on Saturday, March 30
Classes Resume	Monday, April 8
Last Day of Classes	Friday, May 10
Commencement	Saturday, May 11

University of Maine School of Law

Fall Semester

Orientation and Registration (entering class only)	Wednesday, August 22
First Day of Classes (entering class only)	Thursday, August 23
First Day of Classes (upper classes)	Monday, August 27
Labor Day — No Classes	Monday, September 3
Thanksgiving Vacation Begins	At 5:00 p.m. on Wednesday, November 21
Classes Resume	Monday, November 26
Last Day of Classes (first-year class)	Friday, November 30
Last Day of Classes (upper classes)	Wednesday, December 5
Examination Period* (for all classes)	Thursday, December 13-21

Spring Semester

First Day of Classes	Monday, January 7
Spring Vacation Begins	Friday, February 22 at 5:00 p.m.
Classes Resume	Monday, March 4
All Classes End	Friday, April 19
Examination Period*	Monday, April 29-May 7
Commencement	Saturday, May 11

*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 10,000 students who pursue degree programs in the College of Arts and Sciences, School of Business, Economics and Management, Lewiston-Auburn College, College of Education, School of Law, School of Nursing, and School of Applied Science. Thirty-seven 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. 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 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 is primarily professional in nature and is directed to individuals pursuing careers in industry.

The graduate program in public policy and management offers an interdisciplinary, problem-focused masters degree that prepares students for professional careers in local and state government and the non-profit sector. Through a cooperative arrangement with the University of Maine, 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.

The University of Southern Maine has recently introduced three 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 bib-

liographic 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 various graduate programs. The Council 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 director 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 are also advised to maintain close contact with the appropriate director or graduate coordinator in that school, college, or program.

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. Official TOEFL scores of 550 or higher, if the applicant is a foreign student.
- F. A nonrefundable \$25 application fee with the application.
- G. 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 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. Applicants are responsible for seeing that all application materials are received by the appropriate office prior to the application deadline.

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.

Immunization Law

Maine State law requires all individuals born after December 31, 1956, who plan to enroll in a degree program or plan to take 12 or more credits, to show proof of immunity against measles, rubella, diphtheria, and tetanus before registering for classes.

Immunization records must be on file with Student Health Services before students will be allowed to register for classes.

Specific information about immunization requirements is sent with admissions packets, and is also available in most departments and at Student Health Services. The Immunization Hotline number is 780-4504.

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. *Only applicants with TOEFL scores of 550 or higher will be considered for admission to a graduate program.* Transcripts from foreign universities should provide the student's rank in class, be translated to English, and be notarized.

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 Academic Support Services for Students with Disabilities.

Academic Support for Students with Disabilities

The Academic Support for Students with Disabilities Office works with students to overcome obstacles they may face and to develop strategies and support services for achieving academic success at the University of Southern Maine.

Any USM student with a physical, hearing, medical, emotional, or learning disability who is taking a credit bearing course is eligible for services. Students may be asked to provide documentation.

Academic services may include: tutors; notetakers; taped readings; test proctoring; extra time on tests; interpreters (when appropriate). Students are advised to contact the office before each semester to plan their programs so that appropriate accommodations can be made. A lift-operated van is available upon request to provide transportation between campuses for students with wheelchairs. The Academic Support for Students with Disabilities Office is located in Room 122 of Payson Smith Hall on the Portland campus. Call 789-4706 (voice) or 780-4395 (T.D.D.) to schedule an appointment.

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 director of Graduate Affairs. 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 and vice president for Academic Affairs.

Financial Information

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

	Graduate	Law
Maine Resident	\$ 90.00	\$164.00
Non-Maine Resident	\$254.00	\$328.00
New England Regional Program	\$135.00	\$246.00

Fees

Application Fee A mandatory \$25.00 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 \$1.00 per credit charge assessed to all students. The maximum charge is \$12.00.

Course Fees A mandatory fee is assessed for some courses. These fees cover costs associated with specialized instruction. Additional information is provided in University course listings.

Health Service Fee The University operates health service facilities on both campuses. During the academic year, students living in University residence halls are entitled to almost all services at no charge. By paying the \$62.00 Health Service Fee, commuter students gain the same benefits for the full academic year; the one semester charge is \$32.00. Detailed information about the scope of services is included in the brochure describing the Student Health Fee and Insurance Package, available from the Health Centers located in Upton Hall, Gorham (780-5411) and the Gym, Portland (780-4211).

Health Service and Insurance Package Students living in University residence halls or commuter students paying the health fee may purchase insurance under a policy issued to the University of Southern Maine. September to August coverage costs \$163.00; January to August coverage is \$109.00. Students who do not live in University residence halls cannot purchase insurance without paying the Health Service Fee. More information about the policy is available from the Health Centers.

Commencement Fee A mandatory \$25.00 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.

Technology Fee A mandatory \$2.00 per credit charge assessed all students.
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 The University offers a variety of meal plans. Information about the meal plans is available from Residence Life, Room 100, Upton Hall, Gorham (telephone 780-5240).

Resident and Commuter Plans (per semester charges)	
19-meal plan with \$15.00 in points	\$937.00
17-meal plan with \$50.00 in points	\$937.00
5-meal plan with \$450.00 in points	\$937.00
13-meal plan with \$90.00 in points	\$897.00
10-meal plan with \$130.00 in points	\$897.00
Commuter Only Plan	
107 points	\$100.00
163 points	\$150.00
220 points	\$200.00
250 points	\$225.00
280 points	\$250.00
310 points	\$275.00
345 points	\$300.00

Room University residence halls are located on the Gorham Campus and at 645 Congress Street in Portland. Information about housing is available from Residence Life, Room 100, Upton Hall, Gorham (telephone 780-5240).

Gorham, Single Room	\$1,135.00 per semester
Gorham, Double Room	\$ 985.00 per semester
Portland, Double or A-Wing	\$1,110.00 per semester
Portland, B-Wing	\$1,057.00 per semester
Portland, YC-Wing	\$1,195.00 per semester
Portland, Suites	\$1,375.00 per semester

All rates are based on full occupancy.

Students living in University housing may obtain limited telephone service for \$60.00 per semester. Contact Residence Life for information about enrollment and restrictions.

A limited number of parking spaces are available for students living in Portland Hall. A \$100.00 rental fee is charged each 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. The University is not obligated to mail a bill.

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.

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.

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. Students who show a pattern of late payment may be required to pay all University charges before registration is accepted. 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

Students may add and/or drop courses during the first week of the semester without incurring a financial obligation. When a student drops a course after the end of the first week, a tuition refund will be calculated in accordance with the schedule shown in the following section. University fees are not refunded after the first week. This schedule adjustment period begins with the first day of scheduled University classes and includes weekends and holidays. The date the Registrar receives written notification that a student is dropping a course is used to determine the amount of refund, if any.

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 voluntary absence from classes. Contact the Student Billing Office 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 associate executive director for Financial Resources, 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 associate executive director for Financial Resources, or other designated official. If the associate executive director for Financial Resources' 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 System, whose decision shall be final.

In the event that the associate executive director for Financial Resources, 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 associate executive director for Financial Resources 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*. This catalog is available for review in the Office of Graduate Affairs and Office of Graduate Education. Copies may be obtained 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

To receive financial assistance, a student must be admitted into a degree program at the University and must be enrolled for at least six credit hours for a semester. Aid can be granted only to U.S. citizens and certain non-citizens. Non-citizens are encouraged to contact the Office of Student Financial Aid for more information.

The deciding factor in the establishment of a student's eligibility for financial aid is that of documented financial "need;" that is, when an applicant has been determined to have insufficient family resources to meet the cost of attending the University of Southern Maine, she/he is eligible for assistance. Since the federal government provides most of the funds the University allocates to its students, family resources are assessed in accordance with a formula approved by the U.S. Department of Education.

Aid applicants must also meet standards of Satisfactory Academic Progress in their chosen course of study. These standards are set by the University in accordance with federal financial aid regulation and are in addition to the requirements established by the dean or director of an academic program. A full explanation of these standards may be found in a separate publication entitled "Financial Aid Policies" available in the Student Financial Aid Office.

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

To apply for financial assistance from the University of Southern Maine, new and continuing graduate students must complete a Financial Aid Form (FAF) and submit it directly to the College Scholarship Service for processing. In addition, each student must provide a signed copy of his/her most recent federal income tax return. Priority consideration is given to students whose FAF's are received by the College Scholarship Service by *March 31*, and whose tax returns are received in the Student Financial Aid Office by *May 1*. Late applications are accepted although the type and amount of aid offered may be reduced subject to funding limitations. Late applicants will receive delayed notification and may not have funds available in time to pay semester bills.

Entering graduate students who have attended colleges or universities other than the University of Southern Maine cannot receive any federal financial aid until the Student Financial Aid Office has received and evaluated a Financial Aid Transcript certified by the students' prior institution. The Financial Aid Transcript(s) are required even if the student received no financial aid from the previous institution(s). To avoid delay, the student may wish to arrange to have a certified Financial Aid Transcript sent by the prior institution's financial aid office at the time of original application.

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.

Perkins 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 Loans are funded by the federal government, the University and loans repaid by former borrowers. Such loans are available to needy nursing students. Interest rate and repayment terms are similar to those of the Perkins Loan. Loans range from \$200 to \$2,500 for first and second year students and from \$200 to \$4,000 for third and fourth year students annually.

Stafford (formerly Guaranteed) Student Loans is a program sponsored by the federal and state governments that allows students to secure low-cost loans. Eligibility for Stafford Loans is based on demonstrated financial need. 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.

Alternative Loans such as MEIA, TERI and ALPS are credit-based loan programs which provide long term financing options for qualified students. Additional information about these programs may be obtained from the Office of Student Financial Aid.

Indian Scholarships/Tuition Waivers are funded by the University. This program provides tuition, mandatory fees and on campus room and/or board charges for eligible students. Such eligibility is extended to members of the Passamaquoddy and Penobscot Tribes and other Indians who have resided in Maine for at least one year and who have at least one parent or grandparent on the census of a north American Indian Tribe or with a band number of the Micmac or Malecite 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 Registrar's Office.

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

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 first week through the eighth week of a semester. If a student has not officially withdrawn by the end of the eighth week of the course, one of the above regular grades, normally F, will be assigned. The W notation may be obtained after the eighth 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 or drop courses and select or reverse the pass-fail option. Adds require the signature of the instructor, but drops should be completed with the Registrar without signature. Drops processed during the first week do not have financial penalty. Drops completed after the first week may result in a partial refund in accordance with the refund schedule in the Financial Information section of this catalog. 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.

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

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.

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 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 or Office of Graduate Education.

Time Limit

The time limit for completion of a graduate degree is dated from the date of first matriculation and is 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

Advance 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. For further information on advance registration, contact program offices.

Open Registration

Students who have not registered during the advance registration period may register during the week prior to the start of classes each semester. For specific information regarding this open registration process, contact the Registrar's Office, (207) 780-5230.

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.

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.

Plagiarism

The development of original thinking and intellectual honesty are regarded as central to a graduate education. Although in the pursuit of these goals students will continually consult existing works, it is expected that they will acknowledge the debt owed to others by citing all sources.

Plagiarism, the use without attribution of language, ideas, or the organization of ideas not one's own, is a fundamental breach of basic academic principles and is prohibited in all courses. Unless group work is assigned, course work is normally completed independently. If books, journals, magazines, or any other sources are reviewed and the ideas or language therein used, they must be cited. Where specific guidelines are not given, students should consult a reference source on proper notation.

Evidence of plagiarism will result in a grade of F for the assignment and may, at the discretion of the instructor, lead to an F in the course. In addition, further sanctions (i.e., censure, probation, suspension, or dismissal) may be imposed through the Student Conduct Code.

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/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 director of Graduate Affairs.

If a student withdraws or is withdrawn from the University during the first week of the semester, there will be no courses or grades recorded. A student withdrawing or being withdrawn after the first week through the eighth week will receive a W grade for each course in which the student was enrolled. A student withdrawing or being withdrawn after the eighth week will receive regular grade designations as determined by the instructor(s). Under unusual circumstances grades of W can be assigned after the eighth 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. **Quality points do not transfer.**

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

Assistant Dean: Richard H. Carter

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 through the Center for Engineering Studies. 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. Graduate courses are also offered in epidemiology.

Master of Science in Computer Science

Chair: Charles Welty

Professors: Heath, Welty; *Assistant Professors:* Briggs, MacLeod, Vijaykumar

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, DEC-NET, 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. Prerequisites: 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 similar 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. Prerequisites: Full graduate standing and faculty approval. Cr 3 or 6.

Master of Science in Applied Immunology

Interim Chair: Ah-Kau Ng

Professor: Thompson; *Associate Professor:* Ng; *Adjunct Faculty—Professors:* Ault, Bagwell, J. Haddow, Lovett, Rand, Ritchie, Charles Yentsch; *Associate Professors:* Chandler, Johnson, Knight, Mahoney, Moody, Smith, Clarice Yentsch; *Assistant Professors:* Beauregard, Goldfarb, Siekman, Vary; *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 University of Southern Maine Department of Applied Medical Science laboratory facilities 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.

Epidemiology Courses

In addition to the Applied Immunology program, the Department of Applied Medical Science offers courses in epidemiology. Please consult the Department for current offerings.

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 three letters of recommendation at testing 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 530	Biostatistics and Computers	3 credits
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	Immunology Journal Club/Seminar	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 Immunocytochemistry
- AIM 646 Development of Immunoassays
- AIM 647 Electrophoresis and Immunoblotting
- AIM 648 Electron Microscopy
- AIM 649 Flow Cytometry
- AIM 650 Fluorescence Microscopy
- AIM 651 Scientific Writing
- AIM 652 High Performance Liquid Chromatography
- AIM 653 HIA and Erythrocyte Typing
- AIM 654 Hybridoma Methodology
- AIM 655 Immunochemistry in Oceanography
- AIM 656 Immunoelectronmicroscopy
- AIM 657 Immunohematology
- 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 distribution, 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, determination 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 Offerings through the University of Maine Center for Engineering Studies

Chair, Department of Engineering: James W. Smith

Civil Engineering

Director, Center of Engineering Studies: John Wuorinen, University of Maine, with an office at the University of Southern Maine

Although a degree program in civil engineering is not available, graduate courses in civil engineering are offered by the University of Maine Center for Engineering Studies at USM. 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

The University of Maine graduate program in electrical engineering is offered in cooperation with the UM Center for Engineering Studies. 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, Semiconductor 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 UM Center for Engineering Studies at the University of Southern Maine, 7 Chamberlain Avenue, Portland, Maine 04103, telephone 780-4601.

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. Prerequisites: 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. Prerequisites: 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 are 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, pseudo 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, Severens; *Associate Professor:* Whitmore;

Assistant Professors: Cameron, Cassidy, Hamilton, Harrington

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.

Time Limit Students must complete all requirements for the degree within six years from the date of first matriculation.

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 I
NES 675	Seminar in New England Studies
NES 690	Project

or

NES 695	Thesis
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The two-semester New England Studies project may be an independent project or it may combine 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.

The curriculum also offers a concentration in New England material culture. Students may devise such a concentration by electing approved courses on archaeology, architecture, material culture, and art and by focusing their project or thesis in one of these areas.

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, myths, 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 I

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, from the Colonial era to the mid-19th century. Cr 3.

NES 626 Culture, Thought, and New England Literature, II

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

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, folk art, and photography, and their 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 Architecture and Landscape in New England

A study of the built, cultivated, and natural environment from colonial settlement to the twentieth century with emphasis on how architecture and landscape have shaped New England experience and are expressive of regional values and institutions. 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 655 New England Historic Archaeology

A study of the theories and methods used by archaeologists with an emphasis on how archaeological data and artifacts help us

understand the social, cultural, and material life of New England's past. Some attention will be paid to comparative regional archaeology. Cr 3.

NES 660 New England Autobiography

An analysis of the origins, development, and variety of autobiographical expression in New England. The course will focus on autobiographies that illuminate broad aspects of regional history, culture, and identity. Cr 3.

NES 665 Banned in Boston: Sex and Gender in New England

The course will explore the relationship between sex and gender and the formation of New England culture and society. Topics include: gender construction and the Salem witch trials; female iconography and the Revolution; the new woman and the Boston marriage; men and the strenuous life; and sex and the design of New England women's colleges. Cr 3.

NES 668 Writers of Northern New England

A study of writing by northern New Englanders and writing about the sub-region by outsiders. The course will emphasize how writers have appropriated the landscape of northern New England to express regional myths, attitudes and values. 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 685 Reading and Research

Open to advanced students with exceptional records in the program, this course offers opportunities for reading and research under the direction of a faculty member. The approval of the faculty member and the director is required. This course may be taken once. Cr 3.

NES 690 Project

Completion of a two-semester project that may be an independent project or that may combine 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 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, Farris, Flagg, S.N. Gupta, Kenyon, Narag, Uddin

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:

MAT 252 Calculus C

MAT 295 Linear Algebra

MAT 381 Introduction to Probability and Statistics

Applicants who meet the entrance requirements for a master's degree in statistics may 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 those who are applying for admission and assistantship and August 1 for those who are applying just for admission 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. Queuing 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. Prerequisite: 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 designings, bib designs, you-deen 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 680 Linear Algebra

Vector spaces, subspaces, Basis, Dimension, Direct Sum, Linear transformation, Representation of linear transformations by matrices, Linear Functionals, Dual of a vector space, transpose of a linear transformation, determinants, Bilinear and Quadratic forms, Symmetric and Skew symmetric bilinear forms, Canonical Forms, Generalized Inverses, Statistical Applications. Prerequisite: MAT 295 or permission of 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, metrizability, 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. Prerequisite: MAT 381 or permission of instructor. 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: OPR 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. Prerequisite: MAT 381 or permission of instructor. Cr 3.

STA 601 Statistical Packages

Introduction to the use of some of the commonly used statistical packages. Prerequisite: MAT 381 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 381 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 381 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 381 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/OPR 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 381, 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: \bar{X} , R , and P -Charts. Prerequisite: MAT 381 or permission of instructor. Cr 3.

STA 676 Frequency Domain Analysis of Time Series

Modelling in the time domain, simple properties of Fourier expansions, spectral representation of a stationary process and that of its autocovariance function, estimation of spectral densities, introduction to multivariate time series, fractional differencing and other special topics. Prerequisite: MAT 582 or STA 673 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 Master's Thesis/Project

Option I Project or Option III Thesis.

STA 699 Independent Studies

School of Business, Economics and Management

Dean: Richard J. Clarey

Associate Dean: Robert W. Findlay

Assistant to the Dean: Sally M. Paterson

Master of Business Administration

Director of Graduate Programs: Bruce H. Andrews

Professors: Durgin, Greene, Jagolinzer, Neveu, Sturner; *Associate Professors:* Andrews, Bay, Boyle, Clarey, Hodson, Houlihan, McMahan, Medley, Phillips; *Assistant Professors:* Artz, Grover, Goldstien, Hillard, Krenzin, Lombardo, G. Parsons, H. Parsons, Richardson, Sanders, Violette, Voyer, West

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 2,300 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 1988-1989 academic year, the average GMAT score among students given admission into the MBA program was 579.

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., LL.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. A grade of B (3.00) or better must be received in each 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 offered special student status for one semester only. To be considered for special student status, the student must have submitted an application, undergraduate transcript(s), and GMAT score(s). 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 from the MBA Office. 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 has demonstrated that he/she is in good standing at that university, and whose qualifications meet the entrance requirements of the USM MBA program, 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 500-level course 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	
A. Probability	1.5
B. Statistics	1.5
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.

MBA 600 Social Responsibility	3.0
MBA 605 International Business	3.0
MBA 610 Managerial Economics	3.0
MBA 620 Financial Management	3.0
MBA 630 Managerial Accounting	3.0
MBA 640 Management Theory	3.0
MBA 642 Managerial Behavior	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 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 (A) probability and (B) statistics as tools for business decision making. Prerequisite: MBA 503.

Cr 3.

MBA 505 Introduction to Management Information Systems and Computer Applications

This course provides an introduction to the principles and concepts of Management Information Systems. A general background concerning the role of Management Information Systems in business organizations is presented. Specific topics include computer hardware and software, information systems lifecycle, end user computing, systems analysis and design, database concepts, information systems development, and decision support systems. Additionally, the student will be introduced to, and is expected to learn, word processing, spreadsheets and graphics, and databases by successfully completing projects using an IBM compatible microcomputer. 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.

Cr 3.

MBA 610 Managerial Economics

A study of business decision making in the economic environment. Pricing and large-scale, long-term output decisions are approached via the specific demand and cost functions of a firm in the context of its competitive environment. Topics include mathematical optimization, applied multiple regression, time series analysis, economic theory of consumers and the firm, decision analysis, and game theory. 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 analytic 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 623 International Finance

This course deals heavily in the theory of foreign exchange movements utilizing standard macroeconomic principles, and application of theory in how to hedge foreign exchange exposure through use of forward, future, and option instruments; how to forecast foreign exchange rates; and how to measure foreign exchange exposure. Further topics include: the issues of fixed vs. floating exchange rates; the gold standard; the Eurocurrency market; import/export financing; international capital budgeting, the cost of capital and capital structure; transfer pricing; international taxation; international cash management techniques; and the third world debt crisis. Prerequisite: 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 Personnel and Human Resource Management

This course offers an applications-oriented overview of the fundamental issues involved in the practice of personnel and human resource management. Human resource productivity and quality of work life are the principal foci of this course. Strategies to enhance productivity and quality of work life comprise the content of the course. Topics covered include: human resource planning, staffing, performance appraisal, compensation and reward system design, training and development, employee rights, employee-management relations, and the international dimension of personnel and human resource management. 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. Cr 3.

MBA 660 Marketing Management

This course focuses on the major decisions that marketing executives face in their efforts to harmonize the objectives and resources of

the organization with the needs and opportunities in the marketplace. Emphasis will be placed on the planning, analysis, implementation, and control of marketing programs designed to reflect changing environmental and competitive conditions. A marketing simulation game will provide the focal point of activity in the course and selected case studies and current readings will be discussed. Prerequisites: MBA 501, MBA 502, MBA 505. 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 666 Consumer Behavior

This course examines three aspects of consumer behavior: 1) cultural, sociological, and psychological influences on consumer motivation, 2) consumer acquisition of product information and formation of attitudes, and 3) the process consumers use to make consumption decisions. Implications for marketing strategy and segmentation will be discussed and students will apply marketing research techniques to analyze consumer behavior. Prerequisite: MBA 660 or permission of 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 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: MBA 600, MBA 605, MBA 610, MBA 620, MBA 640, MBA 642, MBA 660. 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 Economic Research

Director: Richard J. Clarey

Research Associates: B. Andrews, R. McMahon, D.B. Hodson;

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 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

Director of Center for Applied Research and Evaluation: David L. Silvernail

Office of Graduate Education, 118 Bailey Hall, Gorham, Maine 04038, Telephone: (207) 780-5306;

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

Center for Applied Research and Evaluation, 118 Bailey Hall, Gorham, Maine 04038, Telephone: (207) 780-5306.

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 and skills have produced programs for a broad range of practitioners. Most recent developments include: 1) an extended teacher preparation program; 2) a program in school psychology; and 3) a joint USM/UM doctoral program in educational administration.

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.

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.

Field Study and Services: 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 basis 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 Degrees

The College of Education offers the following degrees:
Master of Science in Education with concentrations in:
Educational Administration
Instructional Leadership
Industrial Education

Literacy Education
Counselor Education
Master of Science in Exceptionality
Master of Science in Adult Education
Master of Science in School Psychology

Graduate Education Programs

Within the College of Education, the Department of Professional Education, and the Department of Human Resource Development offer the following graduate programs:

Department of Professional Education: Graduate Division

Educational Administration Program: a focus on the school principalship with an optional concentration in special education administration.

Exceptionality Program: concentrations in elementary special education, secondary special education, gifted and talented education.

Instructional Leadership Program: prepares educators for leadership activities and permits a variety of concentrations, including preservice teacher preparation programs which meet state certification requirements.

Literacy Education Program: a focus on instruction in reading and writing at all levels.

Industrial Education Program: develops professional competency in education and technology.

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 1991 at the University of Maine at Presque Isle (UMPI). For further information please contact the Mobile Graduate Program office at UMPI, 764-0311, ext. 315.

Department of Human Resource Development

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

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

School Psychology: prepares the student to be licensed as a psychological examiner.

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 must enclose a letter of special consideration in which they give evidence of ability to complete graduate studies successfully. Without such a letter, applications which fail to meet eligibility requirements may be automatically rejected.

Special admission requirements are listed for educational administration, exceptionality, instructional leadership, counselor education, adult education, and school psychology.

Interviews are required for all candidates applying for literacy education, counselor education, adult education, and school psychology.

Please consult the following pages for details.

Application Materials

Candidates for admission must file a complete application with the Office of Graduate Education prior to the deadlines defined below.

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 and professional work. Recommendations should be returned directly to the Office of Graduate Education, 118 Bailey Hall, Gorham, Maine 04038.
4. Official scores on the Miller Analogies Test or the Graduate Record Examination, taken within five years of application.
5. An application fee of \$25.00 (nonrefundable).

Application Deadline

The application deadline is March 1 for summer (May) or fall (September) admission and October 1 for spring (January) admission, for most programs. There is one deadline for the school psychology program: April 1, for fall admission.

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 spring admission and by early February for summer/fall admission.

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

Admissions Appeals

Applicants may appeal an admissions decision by submitting a written appeal to the director of the appropriate program within 30 days of notification of rejection.

The appeal will be reviewed by the appropriate program faculty and the director 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 dean of the College of Education. Further appeals may be made to the director of Graduate Affairs and the provost.

Graduate Assistantships

A limited number of assistantships are available for graduate education students. Assistants must carry a minimum of 6 credit hours per semester. Duties may involve teaching, research, advising, office administration, and supervision of student teachers.

Application for assistantships are available from the Office of Graduate Education, 118 Bailey Hall. The application deadline is April 1, 1991.

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 by the appropriate department chair for admissions credit. These are in addition to transfer credits. In exceptional cases, students may petition to have additional credits accepted, upon admission to a program.

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 program chair 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 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. No more than 6 hours of academic credit may be waived or substituted.

Comprehensive Examination/Portfolio/Practicum/Project All degree students must complete a comprehensive examination/portfolio/practicum/project which will assess the student's breadth and depth of knowledge of the program field. Please consult each program of study for the specific information regarding comprehensives, portfolios, practica, or projects.

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.

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

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

Chair: Richard E. Barnes

Professors: Cohen, O'Donnell; *Associate Professors:* Amoroso, Barnes, Curry, Goldsberry, Kulawiec, Lyons, Miller, Nannay, Silvernail, Smith, Wood, Zaner; *Assistant Professors:* Bazinet, Broyles, Capelluti, Rees

Educational Administration Program

The master of science in education degree in educational administration focuses on the preparation of leaders for educational settings as building principals. 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 knowledge area requirements for certification of K-12 principals in Maine.

Completion of the educational administration program 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 empower 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.

Special Admission Requirements

Admission to the educational administration program is on a selective basis. Only those candidates who offer the prospect of successful study and practice in the field of educational administration are admitted. Several factors are considered: the applicant's overall undergraduate performance and the reputation of the institution awarding the degree, scores on the Miller Analogies Test or Graduate Record Examination, professional experience (with preference given to those candidates with three or more years of teaching and evidence of successful leadership experience in school settings), the candidate's personal statement, recommendations from persons able to comment from direct knowledge on the applicant's potential for success as a building administrator, and other related academic or professional experiences. Interviews may be required as part of the application process.

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 of 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-six (36) 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 (21 credits)

- Foundations (6 credits)*
- EDU 671 Organizational Behavior
 - EDU 672 Political Basis for Decision Making

- Functions (15 credits)*
- EDU 603 Analysis of Teaching
 - EDU 604 Curriculum Development
 - EDU 678 School Law
 - EDU 679 Evaluation and Supervision
 - EDU 680 Staff Development

Application Block (9 credits)

- EDU 677 Seminar in School Management
- EDU 685 Internship in Educational Administration
- EDU 698 Applied Research Project in Educational Administration

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 and Applied Research Project

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 case studies and simulations designed to provide students with information on daily management practices and issues facing the principal. 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 student will design and implement a thorough and thoughtful investigation of an educational problem of professional importance in an organizational setting.

The Applied Research Project in Educational Administration provides a culmination of the internship experience by engaging the student in an action research project. This project, written up in the Project Report, documents the student's attempt to synthesize and apply major learnings from the program through the identification of a problem pertaining to educational administration in organizational setting. 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 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 steps are to be included in the report. The written Project Report will be verbally defended.

Note: The Special Education Administration concentration is described below under the Exceptionality Program.

Exceptionality Program

The master of science in exceptionality degree 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 is a specialty program in 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 exceptionality degree requires 39 credits of coursework.

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

1. educational and behavioral characteristics, needs, and services available for children and youth who are exceptional, including appropriate state and federal laws, regulations, and guidelines;

2. methods of assessing academic, behavioral, social, pre-vocational, and vocational strengths and weaknesses of students who are exceptional;
3. methods, materials, and procedures for organizing, conducting, and evaluating individualized educational programs based on assessed strengths and weaknesses;
4. methods of 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 of organizing and administering special education programs as well as the supervision of teachers, aides, and other professionals who deliver services to individuals who are exceptional.

Special Admission 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 from a supervisor in education or human services.
2. Transcripts of all previous work.
3. Graduate Record Examination or Miller Analogies Test Scores.
4. 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 (15 credits)

- EDU 600 Research Methods and Techniques
- EXE 611 Nature and Needs of Learners Who Are Exceptional
- EXE 653 Assessment in Special Education
- EXE 685 Advanced Seminar in Special Education
- EXE 699 Directed Study

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 Learners Who Are Exceptional
- EXE 617 Assessment for Instruction
- 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 Students Who Are Exceptional

Electives (6 credits, selected with the consent of the advisor)

B. Secondary Special Education

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

Core (15 credits)

- EDU 600 Research Methods and Techniques
- EXE 611 Nature and Needs of Learners Who Are Exceptional
- EXE 653 Assessment in Special Education
- EXE 685 Advanced Seminar in Special Education
- 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 Students with Special Needs
- EXE 695 Curriculum and Instruction—Secondary
- EXE 696 Secondary Practicum

Electives (3 credits, selected with the consent of the advisor)

C. 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)

- EDU 600 Research Methods and Techniques
- EXE 611 Nature and Needs of Learners Who Are Exceptional
- EXE 653 Assessment in Special Education
- 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 the Gifted
- EXE 662 Creativity and the Gifted/Talented
- EXE 663 Management in Education of the Gifted

Electives (15 credits, selected with the consent of the advisor)

- EXE 550 Teaching Gifted Students in the Regular Classroom
- EXE 661 Advanced Curriculum and Methods for Teaching the 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 may be selected in consultation with the advisor.

D. 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 611 Nature and Needs of Learners Who Are Exceptional
- EDU 683 School Finance
- EDU 679 Evaluation and Supervision of School Personnel
- EXE 684 Administration in Special Education

Applications Block (9 credits)

- EXE 685 Advanced Seminar in Special Education
- EXE 688 Practicum
- EXE 699 Directed Study

Portfolio

All students in the exceptionality program, including those concentrating in special education administration, must complete a professional portfolio. The purpose of the portfolio is to provide an opportunity for students to reflect upon the knowledge they have gained in the program. It is expected that the portfolio responses will demonstrate the integration of knowledge, an understanding of the principles of one's specialty area, the application of knowledge to practice, an understanding of research methodology, and the ability to communicate well. Students are encouraged to discuss the portfolio process in more detail with their advisors.

Instructional Leadership Program

The master of science in education degree in instructional leadership is designed to prepare educators for the demands of working with others to promote educational excellence. The 39-credit program consists of three major components: the core (15-18 credits), the concentration (15-18 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 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 Requirements

Consideration for admission to the instructional leadership program will be given to applicants who hold a baccalaureate degree and who present evidence of potential for 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 15-18 credit instructional leadership core is 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 include:

- EDU 610 Critical Issues in Teaching and Learning
- EDU 600 Research Methods and Techniques
- EDU 604 Curriculum Development
- EDU 603 Analysis of Teaching
- EDU 601 Naturalistic Inquiry and Qualitative Methods

A sixth course will be required for students selecting a 15 credit concentration.

Concentration

A concentration is an organized block of 15-18 credits that has both demonstrable thematic consistency and relates to the broader theme of educational leadership. Students may either select one of the four established concentrations, or petition program faculty to accept a self-designed program concentration.

Established program concentrations are:

Teacher/Leader Emphasis Concentration (15 credits)

- EDU 611 Contexts for 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 (15 credits)

- EDU 671 Organizational Behavior
- EDU 679 Evaluation and Supervision of School Personnel
- EDU 680 Staff Development
- Plus 2 EDU or HRD graduate level electives approved by advisor

New England Studies Concentration (18 credits)

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

Music Education Concentration (18 credits)

- MUE 525 Philosophy of Music Education
- MUE 526 Selected Topics in General Music or
- MUE 528 Nonperformance Classes in Music at the Secondary Level
- MUS 520 Advanced Form and Analysis
- MUE 527 Curriculum Development in Music
- MUS 530 Twentieth Century Music
- MUE 529 Early Childhood Music or
- MUE 524 Advanced Methods

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 (comprehensive examination) 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, a 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.

Teacher Preparation Programs

The task of preparing teachers to meet the needs of learners in the 21st century is a complex and demanding one. The College of Education is in the process of implementing an extended teacher preparation program based on the premise that teachers best develop through building on related experiences over time. The full-time, one-year, post-baccalaureate phase will augment the coursework and pre-professional experiences students have developed in their undergraduate programs.

Students will be admitted to the College of Education at the post-baccalaureate level only. Admission to the teacher preparation program will be highly selective and based on excellence in the completion of a bachelor's degree in an academic discipline, experiences in education, self-knowledge and maturity, and commitment to teaching as a career. The application process will center on the candidate's presentation of a portfolio demonstrating knowledge of self, the learner and the learning process, academic competencies, and pre-professional education experiences.

The post-baccalaureate year will be a cohesive, integrated program of site-based, seminar, and coursework experiences focusing on the acquisition and application of learning principles and practices. A pilot program will begin in 1990-1991. Upon completion of USM's extended teacher preparation program graduates will be certified to teach within the state of Maine. Coursework pursued at the graduate level may be applicable to graduate degrees offered by the College of Education.

For more information about this program, admissions requirements, and guidelines for portfolio development, please contact the Office of Graduate Education.

During 1990-1991 the College of Education will also continue to offer the following programs:

Teachers for Elementary Schools Program (TESP)

TESP is a special academic 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 March 1, 1991, for consideration for matriculation the following September.

Successful applicants will carry a full load of graduate-level education courses during the fall semester, but will spend one day 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 exceptionalty. It focuses on educational issues theory, and practice. Those who complete the program will be certified to teach grades K-8 in Maine, provided they have met the state's subject area distribution requirements, and will have partially fulfilled requirements for a master of science in education degree.

Teachers for Secondary Schools Program(TSSP)

TSSP is an intensive, academic 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. 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 December 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.

The program seeks college graduates with distinguished records of academic achievement, work experience, public service, and interest in young people, and who have met the state's content area requirements for teaching mathematics, science, social studies, English, or foreign languages. Participants will be limited in number through a highly selective screening and interview process to ensure close support and supervision. Applications received after March 1, 1991, will be considered only on a space available basis.

For further information on the TESP and TSSP Programs please contact the Office of Graduate Education.

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. The master of science in education in literacy education requires 33 hours of coursework.

A comprehensive examination is required for completion of the literacy education program.

Program of Study

Required Core Courses (27 credit hours)

- EDU 600 Research Methods and Techniques
- EDU 620 Foundations of Literacy Instruction
- EDU 621 Literacy Problems: Assessment and Instruction
- EDU 510 Development of the Composition Process
- EDU 511 Children's Literature **or**
- EDU 513 Adolescent Literature
- EDU 514 Teaching Reading in the Content Areas
- EDU 529 Reading and Writing Workshop
- EDU 634 Seminar in Literacy Research

Electives (6 credits, selected with the consent of the advisor)

- EDU 524 Supervised Practicum in Literacy
- EDU 622 Language and Literacy for Young Children
- EDU 630 Organizing for Literacy Instruction
- EDU 633 Special Applications in Literacy

Industrial Education Program

The primary purpose of the master of science in education degree in industrial education is to develop the professional and personal competencies of industrial arts/technology education and vocational/occupational (trade and industry) teachers so they may successfully progress in their chosen field. Program experiences are designed to assist students in becoming change agents committed to improving the quality of education and life for the citizens of today and tomorrow.

The industrial education graduate program at the University of Southern Maine is concerned with the development of professional competencies in education and technology. Specifically, upon graduation, the students will be able to:

1. Exhibit an acceptable degree of professional competence and proficiency essential for meeting educational, social and technological challenges.
2. Explain how industrial/technology education affects the development of learners in a contemporary technological culture.
3. Analyze and evaluate recent issues and innovations in industry and technology and initiate curriculum revision accordingly.
4. Interpret and initiate scholarly research in industrial/technology education and utilize the results of research for professional development.
5. Explain the historical development, cultural impact, and projected future implications of technology on society.

Program of Study

The industrial education program requires a minimum of 36 credit hours of study. The program of study includes the following:

Core Courses (21 credit hours)

- EDU 600 Research Methods and Techniques
- ITEX 650 Technology: Its Evolution and Social Impact
- ITEX 651 Curriculum Trends in Industrial/Technology Education
- ITEX 652 Computer Applications in Industrial/Technology Education
- ITEX 653A Contemporary Problems/Technical Developments
- ITEX 653B in Selected Technologies (Directed Study)
- ITEX 654 Measurement and Evaluation in Industrial/Technology Education

Electives (9 credit hours)

Students will take a minimum of 9 graduate credit hours in coursework selected from professional education programs with the consent of their advisors.

Capstone Experience (6 credit hours)

Students will complete a minimum of 6 credit hours through ITEX 655 Practicum/Seminar or through a Master's Thesis.

Admission Requirements

The requirements stated in the Academic Policies chapter and those identified under the College of Education section will apply to all industrial education graduate students. A candidate's undergraduate background should be in the field of industrial education. Those seeking admission with a degree in another discipline will be considered on an individual basis by the Department of Technology graduate faculty.

Students will be admitted to the industrial/technology education program as a cohort group for the three year cycle of coursework. For informa-

tion about the next program cycle, please contact the Coordinator of Technology Education, Department of Technology, USM, Gorham, Maine 04038, telephone 780-5440.

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 Development of the Composition Process

This course in language arts emphasizes 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 of 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 Literacy

This clinical experience is 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 1-6.

EDU 529 Reading and Writing Workshop

This course requires 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: Completion of core courses and instructor permission. Cr 6.

EDU 600 Research Methods and Techniques

This course studies the concepts, principles, and techniques of educational research with an 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.

EDU 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 an 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 a collaborative approach, teachers and administrators will plan the design of a curriculum consistent with personal ideals and 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 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. Cr 3.

EDU 606 Learning and Learners

This course explores learning theories, the developmental characteristics of learners, and learning in the context of teaching. Critical issues in learning are explored while reflection on and analysis of the student's own learning base is utilized. The course is designed for anyone involved in the learning process. Cr 3.

EDU 610 Critical Issues in Teaching and Learning

This course 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 the skill in making decisions about curriculum and pedagogy. Cr 3.

EDU 611 Contexts for Teaching and Learning

This course will 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 constitute the focus of this course. Cr 3.

EDU 612 Practicum/Seminar

For experienced teachers in the instructional leadership program, the practicum/seminar is

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 614 Educational Leadership

This course examines theoretical and practical issues surrounding educational leadership, with particular emphasis on teacher leadership. The course is intended for practicing teachers who (1) have assumed or are interested in assuming leadership roles in their schools or (2) are interested in applying leadership theory to classroom teaching. The course engages class members in close reading of primary texts, experiential or collaborative activities, and the preparation of "exhibitions of mastery" for each topic under study. Prerequisite: matriculation or permission of instructor. Cr 3.

EDU 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 Literacy Instruction

In this course the development of literacy is traced, and conditions which foster its growth are examined. Topics are related to major stages of literacy development and include: preschool influences on literacy; initial reading, the development of fluency, vocabulary development, comprehension, study skills, and refinement of reading. Informal diagnostic techniques are demonstrated and practiced. The invariant nature of literacy acquisition among students of all ages is stressed. Cr 3.

EDU 621 Literacy Problems: Assessment and Instruction

This course 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 through 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 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 in Literacy

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 1-6.

EDU 634 Seminar in Literacy 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

This is the 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. Cr 3.

EDU 671 Organizational Behavior

A systems approach to understanding and predicting human behavior within organizations is studied. 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 Basis 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 677 Seminar in School Management

Almost everything you need to know to survive and succeed during your first year as a principal would be an appropriate description for the seminar. The course, through the use of case studies, simulations, readings and interactions with practicing administrators will focus on students: (1) learning the nuts and bolts needed for daily management, (2) examining current issues facing the principalship and (3) learning strategies for managing and understanding oneself within the principal's role. Prerequisite: Instructor's permission. 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. 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 683 School Finance

This course will trace the historical background and development of the present Maine School Finance Administration. A detailed examination of the interest and the underlying concepts and relationships of the Act will be studied. Local budget and expenditure practices will be reviewed. Emphasis will be placed on helping the student develop a clear conceptual understanding of the overall system by which state aid is provided to Maine school systems. Cr 3.

EDU 685 Internship in the Principalship

A one-semester, field-based, 120-hour internship in a school setting designed jointly by the student, the internship supervisor and a school-based field supervisor. It is designed to encourage application of formal coursework to the management issues that face school leaders in the workplace. Field experience will be supplemented with class work in areas of school finance, school support services, student personnel administration and the development of a proposal for a long-term practicum project in school leadership. Prerequisite: EDU 677 or permission of the instructor. Cr 3.

EDU 689 Peer and Clinical Supervision

This course focuses upon skills and techniques for observing classroom teaching and providing constructive and collaborative consultation for the improvement of teaching. Self-evaluation, and approaches for promoting it, are emphasized. Cr 3.

EDU 698 Applied Research Project in Educational Administration

The applied research project in educational administration is designed to follow the internship segment of the applications block. The semester-long activity focuses on the student's leadership role in designing, implementing and assessing a project that addresses an important educational problem in an organizational setting. Each student will be required to produce a written report on the practicum project, which is formulated during the student's internship, and to defend it verbally at the conclusion of the practicum. Prerequisites: EDU 685 and permission of instructor. 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 supervising instructor and the 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 Children Who Are Exceptional

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.

EXE 611 Nature and Needs of Learners Who Are Exceptional

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

This course features 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.

EXE 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 to several specific approaches. Cr 3.

EXE 615 Classroom and Behavior Management for Learners Who Are Exceptional

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.

EXE 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. Prerequisite: EXE 653. Cr 3.

EXE 620 Learning Disabilities—Theory and Practice

This course examines 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 is featured. 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 Foundations 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 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 Methods 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 the 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 the 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 devel-

opment 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 667 Social/Emotional Needs of the Gifted

This course is designed for classroom teachers, program coordinators, parents, and other individuals who interact with gifted and talented students. Topics for examination will include (1) factors affecting social and emotional development, (2) achievement and underachievement, (3) curriculum and the affective domain and, (4) resources/strategies for responding to the needs of the gifted/talented. Cr 3.

EXE 668 Seminar in Education of the 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: 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, including mediation, will be presented. Prerequisite: EXE 601 or permission of instructor. Cr 3.

EXE 683 Topical Seminar

This is 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

This is 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.

EXE 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.

EXE 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.

EXE 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 Directed Study

This course is an opportunity to gain, apply, and integrate knowledge and skill in exceptionalty 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.

Selected Arts and Sciences Courses

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.

MUE 524 Advanced Vocal/Instrumental Methods

This course is a study of performance and conducting techniques in both choral and instrumental literature. Course content will provide in-depth study of selected literature with specific application to public school settings. Prerequisite: Acceptance into the instructional leadership program or permission of the instructor. Cr 3.

MUE 525 Philosophy of Music Education

This course will be a study of the philosophical bases and theories that have particular application to music education. Relationship of philosophical understanding to contemporary practices will be examined. Cr 3.

MUE 526 Selected Topics in General Music

This course will be an investigation and advanced study of various topics as announced. Possible topics include: creativity,

teaching the gifted, survey of prominent curriculum trends. Prerequisite: Acceptance in the instructional leadership program or permission of the instructor. Cr 3.

MUE 527 Curriculum Development in Music

This course will be a study of the dimensions, substance, and organization of music curriculums. The process of developing and implementing curricula which addresses the scope and sequence of the spiral curriculum model appropriate for all levels and specializations of music education will be examined. Prerequisite: Acceptance into the instructional leadership program or permission of the instructor. Cr 3.

MUE 528 Topics in Music Education: Nonperformance Classes in Music at the Secondary Level

This course will be an investigation and critical examination of existing curriculum models. The formulation of objectives, teaching strategies and model curricula (listening, composition, humanities) for courses appropriate to the nonperforming music student will be highlighted. Prerequisite: Acceptance in the instructional leadership program or permission of instructor. Cr 3.

MUE 529 Topics in Music Education: Early Childhood Music

This course will be a comparison of various approaches and existing programs with an emphasis on the development of curriculum, materials, and methods appropriate for preschool and primary age children. Prerequisite: Acceptance in the instructional leadership program or permission of the instructor. Cr 3.

MUS 520 Advanced Form and Analysis

This course will be an in-depth study of the parameters of musical compositions with an emphasis on both aural and analysis skills. Course procedures will provide a model for musical analysis in the public school setting. Prerequisite: Acceptance into instructional leadership program (music) or permission of the instructor. Cr 3.

MUS 530 Twentieth Century Music

This course will be an investigation of changing styles in form and content by selected composers of the 20th century. Prerequisite: Acceptance into instructional leadership program or permission of the instructor. Cr 3.

Department of Human Resource Development

Chair: Willard D. Callender, Jr.

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

The purpose of the Department of Human Resource Development is to improve the individual practices of human services professionals, and to 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 school counseling, community agency and rehabilitation counseling; 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.

Coursework is offered on the Gorham campus as well as at 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.

Admission Requirements

Consideration for admission to the Department of Human Resource Development 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, adult educator, or school psychological examiner.
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, adult education or school psychology.
 - 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 above information. 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 the counselor education, adult education or school psychology 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. With the exception of school psychology, application deadlines are March 1 and October 1 and an application must be complete as of that date to be considered. Applications to the school psychology program will only be considered once each year and must be complete by the April 1 deadline. **Students must take the responsibility to ensure that all admissions materials are submitted prior to the deadlines.** 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 while 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.

All HRD students must successfully complete a comprehensive examination/portfolio. Please refer to the HRD student handbook for details.

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 (12 credits)		Credits
HRD 600	Adult Education and Human Resources Development	3
EDU 600	Research Methods and Techniques	3
HRD 661	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 (12 hours required)		
HRD 661	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	3
		<u>3</u>
		12

(A course such as 661 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 Human Resource Development

HRD 699 Independent Study in Human Resource Development

Three credits of either 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

Total Program Credit Hours

9
36

Concentrations (3 courses, 9 credit-hours)

1. Training and Development

HRD 635 Training and Staff Development

HRD 640 Human Resource Development in Organizational Settings

EDU 671 Organizational Behavior

HRD 644 Organization Development

2. Educational Gerontology

HRD 650 Social and Public Policy in Aging

HRD 651 Older Person as Learner

HRD 652 Coordinating Educational Programs for Older Adults 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 (HRD 631 and HRD 632 are required from the Middle core for this concentration)

4. Adult Public School Education

EDU 620 Foundations of Literacy Instruction

HRD 634 Methods and Materials in Adult Education (HRD 632 and HRD 633 are required from the Middle core for this concentration)

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 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 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 of science in education degree in counselor education provides its graduates with the counseling knowledge and skills used in 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—school counseling, community agency counseling, 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.

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), a specialized accrediting body recognized by the Council on Post-Secondary Accreditation (COPA). Graduates of this concentration are eligible to sit for the National Certification examination.

Program

Requirements

	<i>Credit Hours</i>
Required Core Courses for All Specialties	
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	<u>3</u>
	18
Required Human Development Courses	
<i>School Counseling</i>	
HRD 662 Theories of Human Development	2
HRD 663 Child & Adolescent Development	2
HRD 664 Tradition, Culture & the Life Cycle	2
<i>Rehabilitation Counseling</i>	
HRD 661 Life Span Development II	3

<i>Community Agency Counseling</i>	
HRD 660 Life Span Development I	3
HRD 661 Life Span Development II	3
<i>School Counseling Specialty</i>	
Required Core Courses	24
Required within the Specialty	
HRD 603 Consultation	3
HRD 607 Introduction to School Guidance Services	3
HRD 608 Career Development	3
HRD 622 Counseling Young Children	3
HRD 627 Group Counseling	3
HRD 686 Internship in Counselor Education	6
	<u>21</u>
Electives	3
Total Program Credit Hours	48
<i>Rehabilitation Counseling Specialty</i>	
Required Core Courses	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/ Placement in Rehabilitation	3
HRD 641 HRD in Community Settings	3
HRD 686 Internship in Counselor Education	6
HRD 692 Advanced Individual Practicum	3
	<u>24</u>
Electives	3
Total Program Credit Hours	48
<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 in Counselor Education	6
HRD 692 Advanced Individual Practicum	3
	<u>12</u>
Electives	12
Total Program Credit Hours	48
<i>Substance Abuse Sub-specialty</i>	
Courses Required within the Core	24
Required within the Specialization	
HRD 616 Physiological Aspects of Substance Abuse	3
HRD 617 Crisis Intervention	3
HRD 618 Perspectives in Chemical Dependency	3
HRD 627 Group Counseling	3
HRD 628 Introduction to Marriage & Family Counseling	3
HRD 641 Human Resource Development in Community Settings	3
HRD 686 Internship	6
	<u>24</u>
Total Program Credit Hours	48

Electives

Graduate students in the Counselor Education Program may select electives in the fields of rehabilitation, community agency, school counseling, or substance abuse. A changing variety of electives are offered each semester.

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. A Department application must be completed at least one semester prior to taking HRD 690 and HRD 686.

Students may pursue 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 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 examiner, 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 programs, students participate in a 1,500 clock hours internship in the public schools, working under the supervision of a licensed school psychologist. Individuals graduating from this program are eligible to sit for the examination leading to licensure 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 663 Child and Adolescent Development	2
HRD 664 Culture, Tradition, and the Life Cycle	2
HRD 671 Physical Bases of Behavior	3
HRD 674 Abnormal Psychology	3
HRD 676 Cognitive-Affective Bases of Behavior	3
	<u>13</u>
 <i>Educational Foundations</i>	
EXE 601 Educational Programming for Exceptional Children	3
Elective within Graduate Professional Education	3
	<u>6</u>
 <i>Assessment</i>	
HRD 677 Cognitive and Psychoeducational Assessment	6
HRD 678 Personality and Behavioral Assessment	6
	<u>12</u>
 <i>Intervention</i>	
HRD 603 Consultation	3
HRD 622 Counseling Young Children	3
HRD 626 Group Process & Procedures	3
EXE 615 Classroom & Behavior Management for Children Who Are Exceptional	3
	<u>12</u>
 <i>Research</i>	
EDU 600 Research Methods & Techniques	3

<i>Professional School Psychology</i>	
HRD 670 Seminar in School Psychology	3
EXE 682 Special Education Law: Conflict and Resolution	3
HRD 688 Internship in School Psychology: Assessment & Intervention	8
	<hr/> 14
Required Credit Hours	57
Elective Hours	3
Total Program Credit Hours	<hr/> 61

*A course in test and measurement must be taken prior to graduation (no credit toward degree).

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: Implications 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 professionals 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. Prerequisites: HRD 686 and HRD 690, or permission of the supervising professor. 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 ele-

mentary 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. 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 individual'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.

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 recovery and aftercare will be considered in depth. 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.

HRDX 623 Expressive Therapy

This course is designed to review theories, techniques, and practices used in expressive therapy with children. Emphasis will be placed on the relationship between creativity and child development. Students will explore the importance of creative process as it relates to developing therapeutic relationships with children. Art therapy, music therapy, dance therapy, play therapy, and other expressive modalities will be reviewed theoretically as well as experientially. Prerequisites: HRD 622 and HRD 690 or permission. Cr 3.

HRD 624 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 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 awareness 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 organiza-

tions. 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 638 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 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 intersection between organizations and their employees. 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. Cr 3.

HRD 644 Organization Development

This course introduces the student to the theory, concepts, practices, skills, and tools of organizational development. A variety of intervention strategies and techniques are explored. Emphasis is placed on the facilitator role in successful organizational interventions. 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 a 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.

HRD 660 Life Span Development I

This course examines the process 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 is described. Cr 3.

HRD 661 Life Span Development II

This course 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 is described. Cr 3.

HRD 662 Theories of Human Development

This course is designed to provide an understanding of the nature and needs of individuals at all developmental levels. It will examine major theoretical perspectives on life-span development and the philosophical and historical bases of these approaches. This examination will include an overview of cognitive developmental theories, personality theories, learning theories, the ethological perspective, humanistic theories, and theories of adult development. Cr 2.

HRD 663 Child and Adolescent Development

This course is designed to provide an understanding of the nature and needs of individuals at all developmental levels. It will examine the processes underlying growth, development and behavioral changes from conception through adolescence. The interaction of biological and environmental factors will be considered in studying physical cognitive, social and emotional development during these early stages of the life span. Prerequisite: HRD 662 or permission of the instructor. Cr 2.

HRD 664 Culture, Tradition and the Life Cycle

This course is designed to provide an understanding of the nature and needs of individuals at all developmental levels. It focuses on the social and cultural foundations, changes, and trends that impact on life span human development. Drawing from the social science disciplines, cultural traditions are examined in relation to changing roles, mores and lifestyles. The course considers specific ethnic groups of northern New England to see how traditions might influence attitudes toward growth potential. Prerequisite: HRD 662 or permission of instructor. Cr 2.

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.

HRDx 668 Family Systems

This course examines the application of general systems theory to family development and family interactions and provides an overview of the major theories of family therapy. Additionally, it reviews the multi-generational impact of the family on the emotional health and psychopathology of the individual. Cr 3.

HRD 670 Seminar in School Psychology

This course examines professional issues and concerns confronting the school psychology practitioner; including certification and licensure requirements, 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 neurological, sensory, and muscular disorders. Consideration is given to health problems of school-aged children. Cr 3.

HRD 674 Abnormal Psychology

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 adulthood. Cr 3.

HRD 676 Cognitive-Affective Bases of Behavior

This is an introduction to concepts and principles underlying learning, behaving and communicating. This course integrates the social/affective and linguistic aspects of behavior with learning and problem solving. Cr 3.

HRD 677 Cognitive and Psychoeducational 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 with permission of instructor. Cr 6.

HRD 678 Personality and Behavioral Assessment

This course examines projective and non-projective techniques of evaluating personality characteristics and behavioral patterns of school-aged children. The course includes integration of evaluation results into a comprehensive diagnostic and descriptive personality profile. Prerequisites: HRD 677 and permission of instructor. Cr 6.

HRD 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 1 to 12 credit hours and is a post-practicum (HRD 690) experience. Prerequisite: approval of the supervising professor. Cr 1-12.

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 1-9.

HRD 688 Internship in School Psychology

The 1,500-clock hour internship is a full-time, supervised experience within a public school system. The internship provides the student with specific skills and competencies in the role and function of the school psychological examiner. Prerequisite: permission of instructor. Cr 8.

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 supervising professor. Cr 3.

HRD 692 Advanced Individual Practicum

This is the advanced course in counseling 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. Prerequisite: HRD 690. 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 1-6.

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 1-6.

School of Law

Dean: Donald N. Zillman; *Associate Dean:* David P. Cluchey

Professors: Cluchey, Delogu, Friedman, Gregory, Kandoian, Lang, Loper, Potter, Rogoff, Ward, Wroth, Zarr; *Associate Professors:* Khoury, Mullane, Rieser, Wells; *Visiting Professors:* Gao, O'Malley; *Visiting Associate Professor:* Plimpton; *Adjunct Professors:* Godfrey, Petrucci, Wernick; *Lecturers:* Checkoway, Eichenberg, Frank, Hirshon, Howard, Leahy, Maiman, Priest, Thompson

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 Law School has a limited part-time program to accommodate those whose physical handicap, extreme financial hardship, or other similar exigent circumstances prevents them from engaging in full-time study.

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 nearly 50 percent are women; the number of students in the School is about 260, 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 between 35 and 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 student 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

Interim Dean: Kathleen MacPherson

Interim Associate Dean: Julia Tiffany

Chair: Martha Skoner

Master of Science in Nursing

Professor: MacPherson; *Associate Professors:* Greenleaf, Healy, Peake-Godin, Thompson; *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 and adult 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, bladder control problems in women, health behaviors, nursing history, older women and poverty, women's reproductive health, and health care of the 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 or adult 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 or Adult Health Nursing
4. Role:
 - a. Nursing Education
 - b. Nursing Management
 - c. Advanced Clinical Role

The master's degree program in nursing prepares nurses for roles of leadership in advanced community health nursing or advanced adult 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.

Application Deadline

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

R.N. to Master of Science Degree Option for Registered Nurses

The R.N. to master of science option at the University of Southern Maine School of Nursing has been created specifically for registered nurses whose career goals will be enhanced through graduate study. The design facilitates and supports educational mobility and strengthens the leadership abilities of nurses who already have a foundation of professional experience. As soon as the required undergraduate courses have been completed, students in this program proceed directly into the master's program, bypassing the baccalaureate degree.

The option was designed so that an R.N. could easily complete the required junior and senior undergraduate nursing courses in one full-time year from May to May. Part-time study is also possible. The R.N. is offered both courses in new areas of content and assessment of prior learning in areas of previously attained knowledge and skill.

The R.N. to master's option is built upon prerequisites to the nursing major that include courses in the physical and behavioral sciences, humanities, fine arts, and core courses required of all undergraduate students at USM.

Credits-by-Examination

Credits-by-examination may be earned in both undergraduate nursing and non-nursing courses. Non-nursing undergraduate courses open to credit by examination include English composition, general psychology and sociology, growth and development, general biology, human anatomy and physiology, pathophysiology, and human nutrition. Prior learning assessment examinations can earn up to 34 credits for non-nursing required courses. Call Kathie Blinick, director of Prior Learning Assessment, 780-4067, for an appointment or information.

Courses within the B.S. program that must be taken are

*NUR 302	Pharmacology	3 credits
NUR 304	Transition Course	5 credits
*NUR 309	Health Assessment	3 credits
*NUR 314	Assessment Test for Nursing	19 credits
*NUR 324	Cultural Diversity in Health	3 credits
*NUR 352	Concepts in Mental Health	3 credits
NUR 456	Concepts in Community Health	3 credits
NUR 455	Nursing IV Lab	4 credits

*Courses available for credit-by-examination. Up to 31 credits can be earned by passing prior learning assessment examinations.

Sequencing of Courses

Some courses and credits-by-examination have prerequisites which must be completed prior to enrollment or taking the challenge exam. Some prerequisites may transfer into USM from another accredited institution, others may be taken at USM.

Upon completion of the undergraduate courses the R.N. to master of science student enrolls in graduate courses. All graduate courses are required and earn a total of 36 or 38 credits.

Admission Requirements

Admission to the R.N. to master of science option for registered nurses is on a competitive basis. Each student applying for full admission must meet the following requirements:

1. An associate degree in nursing or a diploma from a National League for Nursing accredited program.
2. Evidence (photocopy) of current licensure as a registered professional nurse in Maine.
3. Three letters of reference reflecting professional practice and academic achievement.
4. At least one year of clinical practice.
5. A score of 55 points or above on the Miller Analogy Test.
6. Transcripts from a diploma school or an associate degree program. A grade B average is required.

Grade Policies

Students must achieve a minimum of a B- grade in designated prerequisite courses, in the undergraduate nursing courses and in the graduate courses. If a student earns below a B- she/he may retake a course one time. 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 in order to graduate.

Joint Degrees Program in Nursing and Public Policy Option

The Joint Degrees Program in Nursing and Public Policy Option is available starting in September 1990. For more information about the program, please contact the chair of the Graduate Nursing Department (780-4130). Information on admissions procedures is available from the Office of Graduate Affairs.

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 is credit earned for graduate coursework completed at the University of Southern Maine prior to matriculation in the graduate program. This credit must be approved by the graduate faculty prior to admission 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 minimum of a B- grade for all required courses. If they earn below a B-, they may retake the course one time. In any semester in which the cumulative GPA falls below 3.0 (B average) the student will be placed on probation. A 3.0 GPA is necessary for graduation. 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 registered professional nursing licensure. Current professional liability insurance is required in clinical courses.

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 M.S. program in nursing is four academic semesters in length for students taking an average of nine (9) or ten (10) credits per semester. Both full-time and part-time study are available. A total of 38 credit hours with a thesis or 36 credit hours without a thesis are required for completion of the master's degree program in nursing. 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 Knowledge Development	3
NUR 605	Nursing Role and Leadership	3
NUR 606	Health Policy, Ethics, and Change	3
		<hr style="width: 100%; border: 0.5px solid black;"/>
		9

Research

NUR 604	Nursing Research	4
NUR 692	Thesis	5
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		9

or

NUR 604	Nursing Research	4
	Research Elective	3
		<hr style="width: 100%; border: 0.5px solid black;"/>
		7

Clinical			
NUR 651	Advanced Community Health: Theory & Practice I	5	
NUR 652	Advanced Community Health: Theory & Practice II	5	
or			
NUR 661	Advanced Adult Health: Theory and Practice I	5	
NUR 662	Advanced Adult Health: Theory and Practice II	5	
			<u>10</u>

Role

Students will choose one of the following role preparation 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 632	Concepts in Nursing Education	2	
NUR 634	Practicum in Nursing Education	5	

or

NUR 611	Concepts in Advanced Clinical Role	2	
NUR 612	Practicum in Clinical Specialization	5	
			<u>7</u>

Electives: (one elective must be a nursing elective) 3

Course Sequencing Model for Full-Time Students Choosing the Thesis Option

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	4	
NUR 651	Advanced Community Health: Theory and Practice I	5	
or			
NUR 661	Advanced Adult Health: Theory and Practice I	5	
			<u>9</u>

Second Year

Fall

NUR 652	Advanced Community Health: Theory and Practice II	5	
or			
NUR 662	Advanced Adult Health: Theory and Practice II	5	
NUR 632	Concepts in Nursing Education	2	
or			
NUR 619	Concepts in Nursing Management	2	
or			
NUR 611	Concepts in Advanced Clinical Role	2	
NUR 692	Thesis (3 out of 5 required credits)	3	
			<u>10</u>

Spring

NUR 634	Practicum in Nursing Education	5	
or			
NUR 620	Practicum in Nursing Management	5	
or			
NUR 612	Practicum in Clinical Specialization	5	
NUR 692	Thesis (2 remaining credits)	2	
Elective		3	
			<u>10</u>

Course Sequencing Model for Part-Time Students Choosing the Thesis Option, Taking Eight Semesters to Complete Program

First Year			
Fall			
NUR	603	Nursing Theory and Knowledge Development	3
NUR	605	Nursing Roles and Leadership	<u>3</u>
			6
Spring			
NUR	604	Nursing Research	4
Second Year			
Fall			
NUR	606	Health Policy, Ethics, and Change	3
	Elective		<u>3</u>
			6
Spring			
NUR	651	Advanced Community Health: Theory and Practice I	5
		or	
NUR	661	Advanced Adult Health: Theory and Practice I	5
Third Year			
Fall			
NUR	652	Advanced Community Health: Theory and Practice II	5
		or	
NUR	662	Advanced Adult Health: Theory and Practice II	5
Spring			
NUR	692	Thesis (3 out of 5 required credits)	3
Fourth Year			
Fall			
NUR	619	Concepts in Nursing Management	2
		or	
NUR	632	Concepts in Nursing Education	2
		or	
NUR	611	Concepts in Advanced Clinical Role	2
NUR	692	Thesis (2 remaining credits)	<u>2</u>
			4
Spring			
NUR	620	Practicum in Nursing Management	5
		or	
NUR	634	Practicum in Nursing Education	5
		or	
NUR	612	Practicum in Clinical Specialization	5

Course Sequencing Model for Full-Time Students NOT Choosing the Thesis Option

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	<u>3</u>
			9
Spring			
NUR	604	Nursing Research	4
NUR	651	Advanced Community Health: Theory and Practice I	5
		or	
NUR	661	Advanced Adult Health: Theory and Practice I	<u>5</u>
			9
Second Year			
Fall			
NUR	652	Advanced Community Health: Theory and Practice II	5
		or	

NUR 662	Advanced Adult Health: Theory and Practice II	5
NUR 632	Concepts in Nursing Education	2
	or	
NUR 619	Concepts in Nursing Management	2
	or	
NUR 611	Concepts in Advanced Clinical Role	2
	Research Elective*	<u>3</u>
		10
Spring		
NUR 634	Practicum in Nursing Education	5
	or	
NUR 620	Practicum in Nursing Management	5
	or	
NUR 612	Practicum in Clinical Specialization	5
	Elective*	<u>3</u>
		8

*One Elective must be a Nursing Elective

Course Sequencing Model for Part-Time Students NOT Choosing the Thesis Option Taking Eight Semesters to Complete Program

First Year

Fall		
NUR 603	Nursing Theory and Knowledge Development	3
NUR 605	Nursing Roles and Leadership	<u>3</u>
		6

Spring		
NUR 604	Nursing Research	4

Second Year

Fall		
NUR 606	Health Policy, Ethics, and Change	3
Spring		
NUR 651	Advanced Community Health: Theory and Practice I	5
	or	
NUR 661	Advanced Adult Health: Theory and Practice I	5

Third Year

Fall		
NUR 652	Advanced Community Health: Theory and Practice II	5
	or	
NUR 662	Advanced Adult Health: Theory and Practice II	5
Spring		
	Research*	3

Fourth Year

Fall		
NUR 619	Concepts in Nursing Management	2
	or	
NUR 632	Concepts in Nursing Education	2
	or	
NUR 611	Concepts in Advanced Clinical Role	2
	Elective*	<u>3</u>
		5

Spring		
NUR 620	Practicum in Nursing Management	5
	or	
NUR 634	Practicum in Nursing Education	5
	or	
NUR 612	Practicum in Clinical Specialization	5

*One Elective must be a Nursing Elective

Nursing Electives

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 570 Advanced Assessment and Pathophysiological Processes

This course focuses on selected aspects of advanced assessment and pathophysiological processes. Course content includes an overview of pathophysiological concepts. Case studies are used to facilitate analysis and synthesis of these concepts. Concurrent assessment laboratory and clinical rounds complement classroom teaching. Cr 3.

NUR 580 Strategic Communication for the Health Professional

This course assists the student in developing advanced skills in communicating with

patients. Communication is approached as a strategic mode of intervention for the health care professional. Students will: (1) critically analyze current theoretical and empirical communication literature; and (2) further develop their interpersonal competency through various methodologies including role playing, videotaping, and interview rounds. Cr 3.

NUR 696 Research Topics

Courses on different types of research methods such as survey, historical, and field research, offered on a rotating basis. Students taking one of these courses will have the opportunity to examine a particular research method in depth and to use this method in the conduct of a research exercise. The course meets the requirement of a research elective. Cr 3.

Nursing Courses

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. A research laboratory is included. Prerequisite: NUR 603. Cr 4.

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 611 Concepts in Advanced Clinical Role

This course provides the opportunity for the student to explore and analyze the roles, responsibilities, and functions of the clinical nurse specialist; and critically evaluate the position of the clinical specialist in the organizational frameworks of diverse settings. Emphasis is on role implementation and developing a repertoire of skills to facilitate the process. Cr 2.

NUR 612 Practicum in Clinical Specialization

This course builds on knowledge acquired in the clinical concentration. Guided experience allows students to choose additional clinical study to enhance the nurse specialist role. This is accomplished by sharpening skills in selected nursing interventions, approaches or functions integral to the specialist role, or by selecting a specialty area of clinical interest. Prerequisite: NUR 611 Cr 5.

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, 661, 662. 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, 661, 662. 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 practicum. 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 for 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 661 Advanced Adult Health: Theory and Practice I

This course provides the theoretical and research foundations for advanced practice in adult health nursing. Concepts related to adult development, clinical decision making, and selected psychobiological health problems are discussed and analyzed. The clinical practicum provides the opportunity for students to apply these concepts of advanced practice to selected groups of clients. 2.5 credits for lecture; 2.5 credits for practicum. Prerequisites: NUR 603, 604, 605, 606. Cr 5.

NUR 662 Advanced Adult Health: Theory and Practice II

This course provides the opportunity for students to build on theories, concepts, and research findings in adult health nursing introduced in NUR 661. Emphasis is placed on nursing interventions as an area for clinical scholarly inquiry in advanced practice in adult health nursing. Two credits for seminar; three credits for practicum. Prerequisite: NUR 661. Cr 5.

NUR 692 Thesis

Completion of thesis under the guidance of a faculty thesis committee. Cr 5.

NUR 694 Thesis Continuation

Students who have completed all thesis credits but have not completed the thesis and continue to need faculty advisement must register for this course each semester until completion of the thesis. Cr 1.

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

Coordinator of Student Affairs: Carlene R. Goldman

Professors: Barringer, Clary, Delogu, Gale, Maiman; *Associate Professors:* Colgan, Louden, Murphy; *Assistant Professors:* Coburn, LaPlante; *Adjunct Associate Professor:* Goettel; *Adjunct Assistant Professors:* Bernotavicz, Honey; *Faculty Associates:* Bowditch, Dexter, O'Hara, Peterson-Moulton

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 and private 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 the northeast.

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, business regulation, intergovernmental relations, and social 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 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, sociology, 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 persons 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.

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 and

banks in the areas of strategic planning, personnel management, government relations, finance, research, 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 44-47 credit hours of academic coursework. An internship for those students with little or no public sector work experience is required. Students may receive course credit or waiver for prior graduate study or professional experience. In addition, there is a one credit computer requirement for those students who are inexperienced with MS-DOS computing.

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.

Human Services Development Institute

The Human Services Development Institute (HSDI), a unit of the University of Southern Maine's graduate program in public policy and management, is dedicated to improving health and human services through research and program evaluation, policy analysis, technical assistance, and training. Since its founding in 1972, HSDI has successfully conducted collaborative research and development programs responsive to the needs of decision makers in government and private agencies. The Institute has marshalled the knowledge and expertise of the University to identify and solve policy and management problems related to the organization, financing, delivery and effectiveness of health care and human services. The Institute has extensive experience in the fields of health care, child welfare, social services, aging, substance abuse, mental health, and developmental disabilities.

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 accept 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. A limited number of students may be admitted for the spring semester. 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 part-time students should be able to complete the degree in three years while continuing professional responsibilities. Full-time students will usually require two years to complete the degree.

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 the fall semester (September). The program will approve a limited number of early admissions prior to the April deadline 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

First semester students are expected to begin with the year-long 6 credit introductory course, Politics, Management and Policy Making. In addition, the 5 credit year-long sequence in applied statistics/research design should be taken in the program as early as possible.

FullTime Students

Full-time students will be able to complete the program in two years or less. They should take as many core courses as possible in the first year, remaining sensitive to the possible need to fit in an occasional track concentration course and/or elective course 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 track requirements are fulfilled; they are then free to exercise concentration and elective options for the remaining credits, finishing with the capstone course.

Part-Time Students

Students planning to graduate in May of the third year should plan to take 14 to 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, track concentration, and elective courses in the second and third years. Again, sensitivity to alternate year course sequencing is advised.

Special Students

Public service professionals, advanced undergraduates, and community residents may request instructor permission to enroll in PPM courses as a special student. Because special student status is dependent on space availability, those interested are urged to contact instructors as early as possible.

Program Requirements

Forty-five to forty-seven credit hours are required in the program, with 24 of those credits in the core curriculum. Requirements beyond the core include nine credits in the policy analysis or public management track, nine credits in either a selected concentration or elective courses, and a three credit capstone course. Students with little or no public sector experience must complete a two credit internship. The one credit computer course may be waived for those with strong computer skills.

The Core Curriculum

At the center of the curriculum is a core of study in policy analysis and public management, providing a foundation of knowledge and skills for effective performance in public policy and management.

The core of study includes a year-long course which integrates politics, management, and policy making, as well as courses which approach the study of public policy from the perspectives of economics, law and ethics,

and courses in the theory and techniques of computing, statistics, research design, and public budgeting and finance.

PPM 600	Computing Fundamentals for Public Policy & Management	1 credit
PPM 610	Politics, Management and Policy Making	6 credits
PPM 611	Economics for Public Policy	3 credits
PPM 613	Law and Public Policy	3 credits
PPM 614	Ethics and Public Policy	3 credits
PPM 601/602	Applied Statistics for Management & Policy and Research Design	5 credits
PPM 640	Public Budgeting and Finance	3 credits

Tracks of Study

After completion of the core courses, students select a nine credit track of study in either policy analysis or management. The tracks are designed to provide more depth of knowledge in one of the two primary curriculum areas. Each track requires one course, with the additional six credits selected from a range of designated courses which may change over time as student interests and program initiatives vary.

Policy Analysis Track

Required Courses

PPM 622 Policy Analysis in Theory and Practice

Select an additional six credits:

PPM 603 Advanced Research Methods

PPM 604 Evaluation Methods

PPM 621 Applied Policy Analysis

Management Track

Required Courses

PPM 630 Organizational Dynamics

Select an additional six credits:

PPM 604 Evaluation Methods

PPM 621 Applied Policy Analysis

PPM 632 Human Resource Management

PPM 633 Strategic Planning

PPM 634 Managing the American City

PPM 641 Public Financial Management

Concentrations and Electives

Beyond the core and the track requirements, students have the option of choosing a nine credit concentration in such fields as public financial management, land use and environmental policy, health and human services policy, nonprofit management, and regional economic development. For information on specific concentration and elective course offerings, contact the program office at 780-4380.

Internship

A two credit internship is required for preservice students with little or no prior experience. Faculty and staff work with managers and policy makers throughout the region to develop meaningful opportunities.

Capstone Project

A three credit capstone project will be required for all students matriculating beginning in the fall of 1989. The capstone project experience is intended to integrate learnings from all program courses, and should be taken in the final semester, just prior to graduation.

PPM 600 Computing Fundamentals for Public Policy and Management

Introduces students to the use of MS-DOS based computing through a combination of in-class instruction and practice, and the preparation of exercises outside of class. Students learn the basics of word processing and spreadsheets. Using Word Perfect, students learn to enter and format text, and print out simple documents. Using Quattro (a Lotus 1-2-3 compatible spreadsheet software) students learn to create a spreadsheet, move, copy and delete ranges of data, use a formula to create new variables or update existing data (including "what-if" iterative processing). No previous computing experience is assumed.

Cr 1.

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. Prerequisite: PPM 600.

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. Prerequisites: PPM 600, PPM 601.

Cr 2.

PPM 603 Advanced Research Methods

Extends the student's understanding of quantitative data analysis and research methods. Expands statistical skills in the areas of multiple regression, significance testing, analysis of variance, and selected other multivariate techniques. Introduces students to a range of data acquisition methods, including on-line searching and database construction and maintenance. Prerequisite: PPM 601 or equivalent introductory statistics course.

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 610 Politics, Management and Policy-Making

Examines the relationship between the political process, policy-making and public management. Topics include policy formulation, adoption, implementation and evaluation. Specific attention is given to the ways that key political variables (public opinion, elections, parties, interest groups and leadership styles) influence public policy; the role of policy analysis in government, contemporary issues of public policy, and how public bureaucracies implement policy through planning, organizing and other administrative processes. The course is team-taught and is offered as three two-unit modules. (Year-long course.)

Cr 6.

PPM 611 Economics and Public Policy

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 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 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 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 610. Cr 3.

PPM 622 Policy Analysis in Theory and Practice

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. Major topics include Benefit-Cost Analysis, Risk Assessment and Decision Analysis. Prerequisites: PPM 601, 602, 610, 611, 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 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 610. 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 640 Public Budgeting and Finance

Provides students with both a theoretical and practical introduction to the debates, tradeoffs and implications of budgeting for public services and securing financing for their provision. Examines essential public finance theory as it relates to revenue raising and resource allocation decision making by the public sector. Specific topics include market failure and government economic intervention, public revenue sources, characteristics of high quality revenue systems, budget review and analysis, and budget development and presentation using Quattro. Prerequisites: PPM 600 and 601. Cr 3.

PPM 641 Public Financial Management

Examines the finance function in public organizations as it operates during the fiscal year and in the longer range setting. Topics include government fund accounting, internal resource analysis and management, including cash management, risk management, purchasing and capacity management, capital planning and programming, and debt financing and management. Prerequisite: PPM 640 or EDU 683. Cr 3.

PPM 642 Seminar in Financial Analysis

Examines a selected number of public financial management topics in depth. Students enrolled in the course participate in a research project with significant public policy or management implications. The central course coverage focuses on the financial analysis of governments, including the evaluation and

management of financial condition. Other topics will vary slightly each semester. The course is offered to correspond to the research focus selected. Prerequisite: PPM 64L. Cr 3.

PPM 649 Applied Research in Finance

Provides an intensive client-directed experience in which students work individually or in groups investigating an important finance policy issue or exploring a municipal financial management concern. Prerequisite: PPM 640. Cr 3.

PPM 650 Regional Economics

This course surveys basic regional economic concepts, economic impact analysis, and economic modeling. Students work extensively with economic data for Maine and other states. Cr 3.

PPM 651 Government-Business Relations

This course covers government regulation of business (including basic elements of competition policy, the regulation of transportation and utilities, and environmental regulation) and basic elements of economic development policies (financing, business development assistance, locational subsidies, etc.). Cr 3.

PPM 652 The New England Economy

This course covers the economic history of New England and examines specific topics in the contemporary New England economy and the economy of the individual New England states. Cr 3.

PPM 656 Topics in Maine Growth and Development

A seminar for persons who wish to develop their research skills and apply them to an issue of Maine growth and development. It is designed to add to our knowledge and understanding of the Maine economy, its historical evolution, its contribution to the well-being of Maine people, and its current and future requirements. These matters will be explored through readings in Maine history, demography, education, transportation, energy and natural resources, and resource and growth management. Research techniques in the social sciences will be explored through examination and discussion of current public policy analyses. Cr 3.

PPM 660 Land-Use Planning and Policy: Theory and Practice

Introduces students to the concept of land use in the broadest context possible. The course is concerned with land as a resource for human development, for economic and community growth, for environmental protection, and for cultural preservation. This course will be the foundation for the concentration in land-use and environmental policy. 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 663 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 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 664 Land Use Planning and Policy: Practice and Application

This course and PPM 660 together constitute the foundation for PPM students concentrating in land use planning and policy. PPM 664 will focus primarily on the implementation of land use policies and plans as part of the overall management framework in local, regional and state government. The course will consist of two sets of collaborative student team presentations in class and several lectures and case studies on various implementation techniques. Cr 3.

PPM 665 Planning Methods for Growth Management

Introduces students to a variety of planning techniques and approaches to growth management. Specific topics include the role of planning in local and regional growth management, land use planning, zoning and subdivision regulation, development phasing and moratoria, and public investment and tax policy for growth management. Emphasis is given to potential consequences, intended and unintended, of growth policies, particularly as they affect the housing market. Students will work together to develop and then defend a growth management policy plan. Cr 3.

PPM 667 Comprehensive Community Planning

Introduces students to the purpose, design, and preparation of comprehensive planning for cities and towns. Class sessions will focus on various elements of comprehensive community planning, including inventory and analysis of community opinion, socio-economics, housing, public facilities, natural resources, and plan implementation tools. Students will learn about data sources for comprehensive planning and methods of policy analysis. The utility and limitations of comprehensive planning for growth management purposes will be given special emphasis. Cr 3.

PPM 668 Historic Preservation through Growth Management

Explores the policy foundations for preservation of historic, scenic, and natural resources. Considers elements of preservation planning for rural and urban areas. Provides experience in identification and evaluation of historic, cultural, and natural resources in the comprehensive planning process. Case studies utilized. 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 679 Research Seminar: Topics in Health and Human Service Policy

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 684 Community Leadership and Volunteerism

This course will explore the nature of volunteer leadership as it evolves from community-based concerns. It will include the philosophical and historical basis for volunteerism and the management of volunteers in nonprofit organizations. Cr 3.

PPM 689 Community Leadership Institute

Provides practical, hands-on training for current and emerging volunteer community leaders. 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 experiences of the Institute. Cr 3.

PPM 691 Public Speaking

Integrates the mechanics of effective speech writing and delivery. The goal of the class is to give students experience in preparing and delivering speeches; to provide historical and current background on the nature of oral and written communication; to provide exposure to important speeches and orators; and to provide instruction for preparing and delivering speeches. Cr 1.

PPM 692 Working Effectively in Small Groups: Tools for Greater Effectiveness

This course explores basic concepts and strategies for enhancing personal effectiveness in working groups, whatever their purpose. In addition to discussing effective communication strategies and group dynamics, the course will introduce students to the Myers-Briggs Type Indicator. The MBTI, a widely used and respected psychological instrument based on the theories of Carl Jung, characterizes 16 personality types which differ in styles of gathering information, making decisions, and responding to the world. The course seeks to heighten awareness of critical group processes, and to develop practical personal skills. Cr 1.

PPM 695 Independent Study

Cr 3.

PPM 696 Internship

Students without a substantial and relevant work experience in public service are required to complete an internship during the course of their studies. Determination of whether an internship will be required will be made upon admission to the program. The internship will be designed to expose the student to the formulation and implementation of public policy in a work setting. It will usually be with a public or nonprofit agency, although internships with private agencies involved in a public policy issue may be accepted. Cr 2.

PPM 699 Capstone Project

The Capstone Project is each student's opportunity to integrate materials learned in the core, track, and concentration courses into a single project. The form of the Capstone Project will be determined by the student's program of study and interests. It is designed in consultation with a PPM faculty member; with the Capstone Coordinator (the PPM faculty member responsible for overseeing Capstone Projects), and, if appropriate, with practitioners from outside the University. Cr 3.

HRD 650 Social and Public Policy in Aging

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.

HRDX 655 Long-Term Care: Current and Future Issues

This course explores the organization, financing, and delivery of long-term care services, with an emphasis on current topics in the United States and directions for the future. The overriding question in this course is the extent to which a coordinated system of long-term care can be designed to meet the needs of disabled and chronically ill Americans. The course will examine who receives long-term care, who provides these services, the quality of these services, and who pays for long-term care. Research results will be integrated with practical experiences expressed in current literature to provide a comprehensive view of long-term care and its challenges. Cr 3.

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. 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. Cr 2.

LAW 633 Natural Resources Law

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 include the 1982 Law of the Sea Treaty, Fishery Conservation and Management Act, 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. 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. 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.

MBA 643 Organizational Change and Development

Focuses on 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. Includes simulations, case studies, experiential exercises, and

applied strategies for changing and improving organizations, using an array of behavioral science approaches. Prerequisite: MBA 642 or permission of the instructor.

Cr 3.

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

An introduction to the application of marketing concepts to nonprofit, nonbusiness, 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.

NUR 606 Health Policy, Ethics, and Change

Uses sociopolitical and ethical frameworks 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 putting into operation policy.

Cr 3.

PAA 655 Nonprofit Organization Management (UM)

Cr 3.

Office of Sponsored Research

Director: Robert J. Goettel

The Office is responsible for encouraging grant and contract initiatives that support program-related activities of academic departments and research and development units. The Office promotes awareness of funding opportunities and deadlines among faculty and staff, maintains up-to-date information on potential sponsors, assists faculty and staff in identifying possible sponsors for projects, assists in matching project planning to sponsor priorities and requirements, and assists in contacts with funding agencies.

Faculty and research staff of the University of Southern Maine are involved in a wide range of research, policy and program development and evaluation, technical assistance, and training initiatives for public and private agencies in the state and throughout the nation. Many of these programs are implemented through institutes and centers designed to bring the resources of the University to bear on problems and issues of concern to society. To develop new knowledge and understanding and to transfer knowledge to practitioners, these institutes and centers often include USM faculty and staff from several disciplines in interdisciplinary teams engaged in the study of specific problems. The eleven USM institutes and centers and the academic units with which they are primarily affiliated are as follows:

Center for Business and Economic Research CBER is a unit of the School of Business, Economics and Management.

Center for Housing and Land Use CAH is a unit of the School of Business, Economics and Management.

Center for Real Estate Education CREE is a unit of the School of Business, Economics and Management.

Child and Family Institute The Child and Family Institute, within the Division of Human Resources, serves children, families, and those who work with children and families. CFI provides leadership and promotes excellence through a comprehensive delivery of educational programs, consultation services, library resources, research, networking, model program development, and advocacy. Contact the institute at 780-5455 for further information.

Cumberland Legal Aid Clinic CIAC is a unit of the School of Law

Human Services Development Institute HSDI is a unit of the Public Policy and Management Program.

Institute for Real Estate Research and Education IRERE is a unit of the School of Business, Economics and Management.

Marine Law Institute MLI is a unit of the School of Law.

Production Technology Center PTC is a unit of the School of Applied Science.

Professional Development Center PDC is a unit of the College of Education.

Small Business Development Center SBDC is a unit of the School of Business, Economics and Management.

Center for Technology Transfer CTT is a collaborative program with the University of Maine.

See the appropriate school or college section of this catalog for further information.

Summer Session

Director: Rosa S. 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, courses for music educators, Childhood Psychopathology Institute, 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 4,000 students who enroll in academic courses, over 8,000 people attend summer conferences held in University facilities. Cultural events such as a faculty lecture series, 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.

Convocation

Each year the University of Southern Maine sponsors a year-long series of lectures, conferences, and cultural events focused on an important contemporary theme. Previous themes have included "The Age of the Computer," "Peace and War in the Nuclear Age," "The Changing Roles of Women and Men," "The Aging of America," "The Arts in Our lives," "The Constitution: Roots, Rights and Responsibilities," and, for a three-year period, "Worlds in Flux: the Soviet Union, Latin America and East Asia." During 1990-91, the University community will focus on East Asia.

The Convocation scholar for 1990-91, Professor Craig Dietrich of the History Department, views Convocation as an opportunity to focus attention on China, Japan, Korea, Taiwan, and neighboring areas, their political, social, and economic conditions, their culture and history, and their place in today's world.

Convocation events planned for 1990-91 include a Chinese scholar in residence; a faculty-staff-student study tour of Japan; an alumni tour of China (tentative); increased cooperation with Chinese and Japanese universities; performances, exhibits, and a film series; visits by scholars, journalists, business persons, and political activists; and conferences on U.S.-Japanese economic relationships and on Asian minorities in America.

All students, faculty, and staff are encouraged to participate in Convocation by offering ideas and by supporting and sponsoring events in collaboration with the Convocation Committee, by sharing in the organization 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 the administrative chair of Convocation.

Division of Continuing Studies

Director: William G. Mortensen

The Division of Continuing Studies 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, Maine Dietetic Association, 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, and personal computer managers. The Department also offers the Community Leadership Institute.

Department of Conferences

Director: Kathleen S. LeBel

The Department assists University and community organizations in planning conferences and in using University facilities.

Lifeline Center for Fitness, Recreation, and Rehabilitation

Director: Thomas J. Downing

The Lifeline Center is designed to help individuals and organizations in southern Maine effect health-enhancing lifestyles by providing leadership and services in exercise, rehabilitation, education, recreation, and employee wellness.

Many of Lifeline's fitness and rehabilitation activities require medical clearance from personal physicians. Application to all programs should be made well in advance. Free brochures and registration information is available by calling 780-4170.

Information on Lifeline programs and activities may be found in the USM undergraduate catalog. Student rates are available for most programs.

Further information about these programs may be obtained by contacting the Division of Continuing Studies, 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* and the *Small Business Development Center* of the School of Business, Economics and Management; the *Production Technology Center* of the School of Applied Science; and the *Continuing Legal Education* unit of the University of Maine School of Law.

Administration of the University of Southern Maine

Administrative Organization as of June 1, 1990

President: Patricia R. Plante, 705 Law Building, Portland tel: 780-4480
Provost and Vice President for Academic Affairs: John Deegan, Jr., 711 Law Building, Portland tel: 780-4485
Vice President for Administration: Samuel G. Andrews, 723 Law Building, Portland tel: 780-4484
Vice President for Student Affairs: Larry G. Benedict, 721 Law Building, Portland tel: 780-4035
Vice President for Development and External Affairs: Stephen T. Honey, 731 Law Building, Portland tel: 780-4382
Executive Assistant to the President: Robert J. Goettel, 709 Law Building, Portland, tel: 780-4482

Administrative Offices Serving Students

Admissions

Daniel Palubniak, Director

Advising and Academic Information

Lawrence Bliss, Director

Applied Science, School of

Brian C. Hodgkin, Dean

Arts & Sciences, College of

Dave D. Davis, Dean

Athletics

Paula D. Hodgdon, Acting Director

Bookstores

Cynthia S. Quinn, Director

Business, Economics and Management, School of

Richard J. Clarey, Dean

Child Care Services

Helene Gerstein, Director

Continuing Studies, Division of

William G. Mortensen, Director

Counseling & Career Services

Ira Hymoff, Director

Education, College of

Dorothy D. Moore, Dean

Educational Media Service

Ronald W. Levere, Director

Financial Aid, Student

Melody Havey, Director

Graduate Affairs, Office of

Martin A. Rogoff, Associate Provost

International Student Development, Office of

Domenica T. Cipollone, Director

Law, University of Maine School of

Donald N. Zillman, Dean

Lewiston—Auburn College

Helen L. Greenwood, Dean

Libraries

George Parks, University Librarian

Nursing, School of

Kathleen I. MacPherson,

Interim Dean

Off-Campus Instruction and Academic Support, Division of

John W. Bay, Director

Police and Safety

Coin P. Hauk, Director

Public Policy and Management Program

Richard E. Barringer, Director

Registrar's Office

John F. Keysor, Registrar

Residence Life

Joseph M. Austin, Director

Student Activities and Campus/Student Centers

Judith S. Ryan, Director

Student Billing

Richard R. Campbell, Associate

Executive Director for Financial

Resources

Student Health Services

Judith LaFountain, Director

Student Testing and Assessment, Office of

David L. Silvernail, Director

Summer Session

Rosa S. Redonnett, Director

Graduate Faculty

- Amaroso, 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) Associate Professor of Business Administration; University of Connecticut, B.A., 1967; Polytechnic Institute of New York, M.S., 1969; Ph.D., 1980
- Artz, Nancy** (1989) Assistant Professor of Business Administration; The Pennsylvania State University, B.S., 1979; J.L. Kellogg Graduate School of Management, Northwestern University, M.M., 1982
- Atkinson, Robert** (1987) Associate 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
- Barnes, Richard E.** (1989) Associate Professor of Education; Carleton College, B.A., 1964; Harvard University, MAT 1969; Ed.D., 1979
- Barringer, Richard E.** (1988) Director and Professor of Public Policy and Management; Harvard University, A.B., 1959; University of Massachusetts, M.A., 1963; Massachusetts Institute of Technology, Ph.D., 1968
- Bernotavicz, Freda** (1985) Research Associate, Human Services Development Institute and Adjunct Assistant Professor of Public Policy and Management; Nottingham University, England, B.A., 1962; Syracuse University, M.S., 1966
- 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) 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
- Briggs, David A.** (1984) Assistant Professor of Computer Science; Swarthmore College, B.A., 1975; University of Massachusetts at Amherst, M.S., 1984; Ph.D., 1988
- 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
- Cassidy, Donna M.** (1987) Assistant Professor of Art and New England Studies; University of Lowell, B.A., 1979; Boston University, M.A., 1982; Ph.D., 1988
- 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 and Senior Research Associate, Human Services Development Institute; University of California, B.A., 1968; University of Southern California, M.A., 1970; Ph.D., 1974
- Cluchey, David P.** (1979) Professor of Law; Yale University, B.A., 1968; State University of New York, M.A., 1970; Harvard Law School, J.D., 1973
- Coburn, Andrew F.** (1981) Director, Human Services Development Institute and Assistant Professor of Public Policy and Management; Brown University, A.B., 1972; Harvard University, Ed.M., 1975; Brandeis University, Ph.D., 1981
- Cohen, Libby G.** (1980) Professor of Special Education; University of Connecticut, Ed.D., 1967; Russell Sage College, M.S., 1971; Boston University, D.Ed. 1977
- Colgan, Charles** (1989) Associate Professor of Public Policy and Management; Colby College, B.A., 1971
- Conforti, Joseph A.** (1987) Director and Professor of New England Studies; Springfield College, B.S., 1967; Brown University, A.M., 1972; Ph.D., 1975
- 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
- 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
- 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
- Drew, Judith C.** (1978) Associate Professor of Nursing; Northeastern University, B.S., 1972; Boston University, M.S., 1977
- 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) Associate Professor, College of Education; University of Wyoming, B.A., 1973; M.A., 1977; Utah State University, Ed.D., 1983
- Friedman, James** (1980) Professor, School of Law; Brown University, A.B., 1971; University of Chicago, J.D., 1974
- Gale, Dennis E.** (1989) Professor of Public Policy and Management; Bucknell University, B.A., 1964; Boston University, M.S., 1968; University of Pennsylvania, M.C.P., 1971; George Washington University, Ph.D., 1982
- Goettel, Robert J.** (1981) Special Assistant to the President and Adjunct Associate 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) Associate Professor of Education; Purdue University, B.A., 1969; Governors State University, M.A., 1975; University of Illinois, Ed.D., 1980
- Goldstein, Nance** (1987) Assistant Professor of Economics, Tufts University, B.A., 1972; University of London, M.Sc., 1979; Thames Polytechnic University, Ph.D., 1988
- 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.** (1982) 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
- Grover, Richard A.** (1988) Assistant Professor of Business Administration; The University of Connecticut, B.S., 1976; The Ohio State University, M.S., 1980; Ph.D., 1984
- 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) Associate Professor of Mathematics, University of Delhi (India), B.A., 1970; M.S., 1972; Ph.D., 1977; Colorado State University, Ph.D., 1987
- Guvench, Mustafa G.** (1989) Associate Professor of Electrical Engineering; Middle East Technical University, Turkey, B.S.E.E., 1968; M.S.E.E., 1970; Case Western Reserve University, M.S., 1975; Ph.D., 1975
- Hamilton, Nathan D.** (1987) Assistant Professor of Archaeology; University of Southern Maine, B.A., 1977; University of Pittsburgh, Ph.D., 1985
- Healy, Phyllis F.** (1987) Associate Professor of Nursing; Hunter College, B.S., 1971; University of California, M.S., 1972
- Heath, John R.** (1976) Professor of Computer Science; University of Maine, B.A., 1968; M.A., 1970; University of Minnesota, M.S., 1976; Ph.D., 1982
- Hillard, Michael** (1987) Assistant Professor of Economics; University of Massachusetts, B.A., 1980; Ph.D., 1988
- Hodgkin, Brian C.** (1976) Dean, School of Applied Science and Associate Professor of Electrical Engineering; University of Maine, B.S., 1964; Johns Hopkins University, Ph.D., 1969
- Hodson, D. Bradlee** (1973) Associate Professor of Accounting and Research Associate, Center for Business and Economic Research; University of Maine, B.S., 1968; University of Pennsylvania, M.A., 1969; C.P.A. (Massachusetts)
- Honey, Stephen T.** (1987) Vice President for Development and External Affairs and Adjunct Assistant Professor of Public Policy and Management; Cornell University, B.A., 1968; Georgetown University, M.A., 1975
- Houlihan, John J.** (1975) Associate Professor of Business Law; Holy Cross College, A.B., 1969; Harvard Law School, J.D., 1972
- Johnson, Rosemary** (1987) Assistant Professor of Nursing; McGill University B.N., 1972; University of Rochester, M.S., 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) Associate Professor of Law; Colby College, B.A., 1964; Illinois Institute of Technology/Chicago—Kent College of Law, J.D., 1975
- Krenzin, Kenneth T.** (1988) Assistant Professor of Business Administration; San Francisco State University, B.A., 1983; B.S., 1983; Stanford University, M.S., 1987; Ph.D., 1988
- 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

- LaPlante, Josephine M.** (1985) Assistant Professor of Public Policy and Management; Syracuse University, B.A., 1973; M.A., 1983; Ph.D., 1984
- 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) Associate 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) Assistant Professor of Computer Science; Bowdoin College, A.B., 1979; Rensselaer Polytechnic Institute, M.S., 1981; University of Massachusetts, M.S., 1985; Ph.D., 1989
- MacPherson, Kathleen I.** (1974) Interim 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
- 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) Associate Professor of Economics; State University of New York at Albany, B.A., 1973; University of Massachusetts at Amherst, M.A., 1976; Ph.D., 1981
- 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 and Director, Cumberland Legal Aid Clinic, School of Law, University of Notre Dame, B.A., 1964; J.D., 1972
- Nannay, Robert W.** (1972) Associate Professor of Industrial Education and Technology; Trenton State College, B.A., 1964; M.A., 1967; University of Maryland, Ed.D., 1970
- 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
- Neveu, Raymond E.** (1982) Professor of Finance; Providence College, A.B., 1959, Boston College, M.A., 1961, University of Pittsburgh, Ph.D., 1968
- Ng, Ah-Kau** (1988) Associate 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
- O'Hara, Frank** (1989) Faculty Associate in Public Policy and Management; Haverford College, B.A., 1972; Yale University, M.A., 1975
- 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
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- Wroth, L. Kinvin** (1964) Professor, School of Law; Yale, B.A., 1954; Harvard, J.D., 1960
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Portland Campus



Portland Campus

1. Campus Center (Bookstore, Dining Center)
2. Alumni House
4. Law School/Sponsored Research
5. Luther Bonney Hall (Library)
6. Payson Smith Hall
7. Portland Gymnasium
8. Central Heating Plant
9. Science Building
10. Child Care
15. 92 Bedford Street
16. 94 Bedford Street
17. 118 Bedford Street
18. 120 Bedford Street
19. 7 Chamberlain Avenue

20. 15 Chamberlain Avenue
21. 38 Chamberlain Avenue
23. 86 Winslow Street (Powers House)
24. 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
34. Masterton Hall
35. 126 Bedford Street
36. 102 Bedford Street

Parking

- P1. Faculty/Staff/Handicap
- P2. Student Commuter
- P3. Student Commuter/Resident/Faculty Staff
- P4. Faculty/Staff/Visitor
- P5. Faculty/Staff
- P6. Faculty/Staff/Visitor
- P7. Faculty/Staff
- P8. Faculty/Staff
- P9. Faculty/Staff
- P10. Visitor

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