

1987

## University of Southern Maine Graduate Catalog 1987-1988

University of Southern Maine

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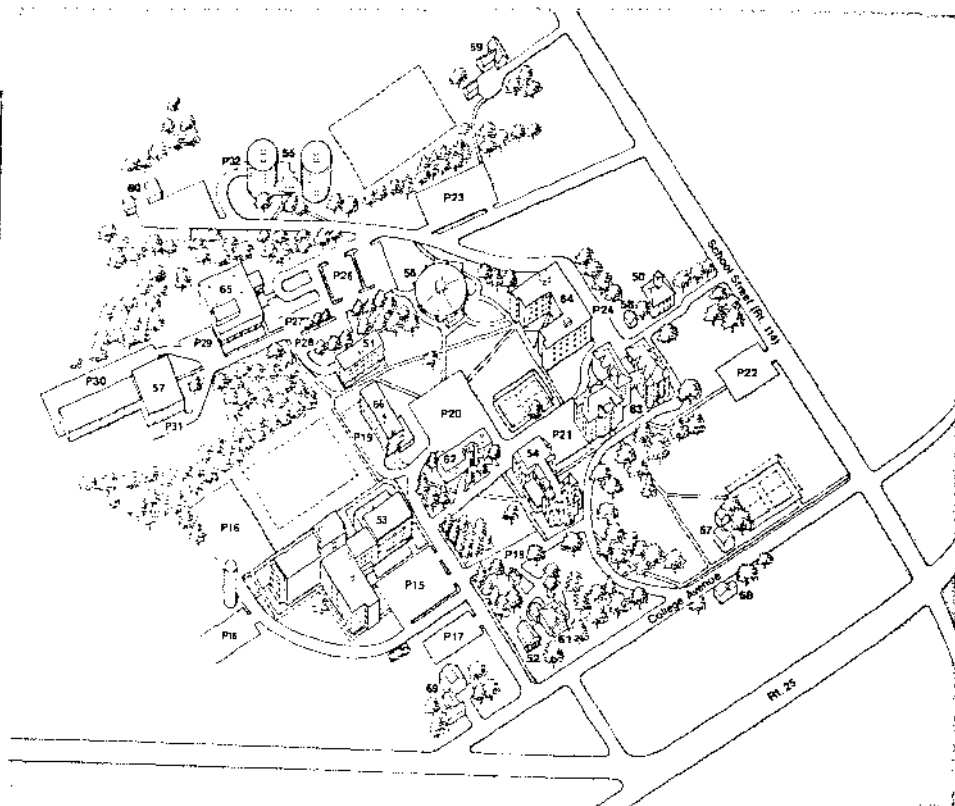
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# University of Southern Maine



# Gorham Campus



## Gorham Campus

- 50. Academy Building
- 51. Anderson Hall
- 52. Art Gallery
- 53. Bailey Hall (Library)
- 54. Corbett Hall
- 55. Dickey Wood Hall
- 56. Dining Center
- 57. Industrial Education & Technology
- 58. Mechanical Maintenance Shop
- 59. McLellan House
- 60. Central Heating & Sewerage Plants
- 61. President's House
- 62. Russell Hall
- 63. Robie/Andrews Hall
- 64. Upton Hastings Hall (Bookstore)
- 65. Warren Hill Gym
- 66. Woodward Hall
- 67. 19 College Avenue
- 68. 24 College Avenue
- 69. 51 College Avenue

## Parking

- P15. Faculty/Staff
- P16. Student Commuter
- P17. Faculty/Staff
- P18. Visitor
- P19. Student Commuter
- P20. Faculty/Staff
- P21. Faculty/Staff
- P22. Student Resident
- P23. Student Resident
- P24. Student Resident
- P26. Student Resident
- P27. Faculty/Staff/Student Commuter
- P28. Student Resident
- P29. Visitor
- P30. Student Commuter
- P31. Faculty/Staff
- P32. Faculty/Staff

# University of Southern Maine

Graduate Catalog  
1987-1988

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University of Southern Maine

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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 does not discriminate on the basis of race, color, religion, sex, national origin, handicap, or age in the recruitment and admission of students, the recruitment and employment of faculty and staff, and the operation of any of its programs and activities; and the University practices affirmative action in hiring and in all other conditions of employment for disabled and Vietnam era veterans as specified by federal and state laws and regulations.

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

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# Academic Calendar 1987-1988

## *Fall Semester*

First Day of Classes  
Labor Day (No Classes)  
Fall Vacation Begins  
  
Classes Resume  
Thanksgiving Vacation Begins  
  
Classes Resume  
Last Day of Classes

Tuesday, September 1 at 8:00 a.m.  
Monday, September 7\*  
After classes on Thursday,  
October 15  
Monday, October 19 at 8:00 a.m.  
At 4:00 p.m. on Wednesday,  
November 25  
Monday, November 30 at 8:00 a.m.  
Saturday, December 19

## *Spring Semester*

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

Monday, January 11 at 8:00 a.m.  
After classes on Saturday,  
February 13  
Monday, February 22 at 8:00 a.m.  
After classes on Saturday, March 26  
Monday, April 4 at 8:00 a.m.  
Friday, May 6  
Saturday, May 7

*\*Special Note:* Monday 4:00 p.m. and later classes will be scheduled for an extra meeting on Friday, October 30

## University of Maine School of Law

### *Fall Semester*

Orientation for first year  
Classes begin  
No classes  
Fall recess  
Thanksgiving recess  
Second- and third-year classes end  
First year classes end  
\*Second- and third-year examinations  
\*First year examinations

Friday, August 28  
Monday, August 31  
Monday, September 7  
Friday, October 9-12  
Thursday, November 26-29  
Friday, December 4  
Friday, December 11  
Wednesday, December 16-23  
Monday, January 4-11

### *Spring Semester*

Second- and third-year classes begin  
First year classes begin  
Spring recess  
All classes end  
University Commencement  
\*Second- and third-year examinations  
\*First year examinations  
Law School Convocation

Monday, January 18  
Monday, January 25  
Saturday March 5-13  
Wednesday, May 4  
Saturday, May 7  
Thursday, May 12-19  
Thursday, May 12-20  
Sunday, May 22

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

# The University

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

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

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

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

This year the University of Southern Maine is pleased to introduce three new graduate programs: New England studies and statistics offered by the College of Arts and Sciences, and school psychology offered by the College of Education.

The University affirms that graduate education should provide the subject matter and require study at a level that builds upon the knowledge and intellectual skills acquired through undergraduate experience. It should strengthen and broaden professional competence and stimulate independent research. Indeed, research, basic and applied, is a critical component of all graduate education. To support these objectives, the University is served both by a strong faculty and the resources of associated facilities, including the Center for Research and Advanced Study (its staff



and library). The libraries of the University contain over 345,000 volumes to support graduate and undergraduate programs, and over 2,400 periodical, yearbook, annual subscriptions, and 679,000 microforms provide current information resources. The libraries also make available nearly 400 bibliographic data bases. The resources of other libraries in the region, as well as the nation, may be identified through the OCLC network and borrowed through the interlibrary loan service. In association with the Center for Research and Advanced Study, faculty address projects related to social, environmental, economic, and health-related issues.

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 programs in law, business, education, nursing, computer science, applied immunology, and public policy and management, as well as the engineering program extended from the University of Maine in Orono. The Council, through the Associate Provost, provides advice regarding the quality and standards of graduate education, review of existing and proposed programs, and policy and procedures regarding admissions, degree requirements, and related matters. The Associate Provost is responsible for the operation of the Office of Graduate Affairs. All graduate students are invited to visit this Office, located in Payson Smith Hall, on the Portland campus.

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

### ***The Portland Area***

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

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

# Admissions

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

## *General Policy*

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

## *Required Submissions*

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

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

## *Submission of Application*

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

## *Application Deadlines*

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

## *Deadline for Enrollment*

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

## *Readmission*

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

## *Classification of Admissions*

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

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

### ***Foreign Student Applications***

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

### ***Admissions Credit***

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

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

### ***Transfer Credit***

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

### ***Admission of the Handicapped***

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

### ***Appeal of Admissions Decision***

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

# Tuition and Fees

## 1987—88

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

### *Schedule of Fees*

*Application Fee* — An application fee of \$15.00 must accompany an application.

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

*Intramural/Fitness/Athletic Fee (IFA)* — Students will be assessed an IFA Fee of \$7.50 for each semester in which they enroll for 6 or more credits.

*Student Activity Fee* — Law School Students are required to pay a \$10.00 Student Activity Fee per semester.

### *Tuition Charges*

#### *Graduate Tuition*

Maine Resident — \$61.00 per credit hour; no maximum

Non-Resident — \$179.00 per credit hour; no maximum

*Note:* For matriculated students: Undergraduate students taking graduate courses will pay undergraduate tuition for those courses. Graduate students taking undergraduate courses will pay the graduate tuition rate for those courses. For non-matriculated students: Students taking all graduate courses will pay the graduate tuition rate for those courses. Students taking both graduate and undergraduate courses will pay the graduate tuition rate for those courses.

#### *School of Law Tuition*

Maine Resident — \$104.00 per credit hour; no maximum

Non-Resident — \$220.00 per credit hour; no maximum

### *Room and Board Charges*

<i>Room Charges</i>	Semester	Year
Double Rooms	\$790.00	\$1580.00
Single Rooms	\$940.00	\$1880.00
<i>Board/M meal Charges</i>		
10 Meal Plan	\$695.00	\$1390.00
14 Meal Plan	\$715.00	\$1430.00
19 Meal Plan	\$755.00	\$1510.00

Students residing on campus must choose one of the meal plans.

### *Other Charges*

#### *USM Health Services Fee and Insurance Package (Optional)*

This optional package is available to all students who are carrying at least three credit hours. Students may elect to pay this fee of \$132.00 per year (includes \$42 USM Health Service Fee and \$90 Insurance Fee) with their fall semester bill. (Rate subject to change.)

#### *USM Health Services Fee (Optional)*

Students may elect to pay this fee of \$42.00 per year with their fall semester bill. This service may be purchased independently of the Insurance Package.

#### *Late Fee*

A late fee of \$25.00 is charged to all students who register after the prescribed day of registration or who fail to satisfy their financial obligations with the business office when due and payable. This fee will also be assessed to students whose registration checks are returned and not cleared by the specified deadline. Students will also be liable to a \$25.00 reinstatement fee

if their registration is revoked for any reason.

#### *Books and Supplies*

The cost of books and supplies varies according to the course for which a student is registered. Books and supplies are not billed on the semester invoice. Payment for them must be made directly to the bookstore at the time of purchase.

#### *Commencement Fee (Excluding Law)*

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

### ***Tuition for Other Classifications of Students***

*Auditing of Courses*—Tuition and fees are charged for audited courses at the usual hourly rate.

*Adding Courses*—Any add must be paid for by cash or check at the time of the add if it results in an additional tuition charge. Bank cards may not be used to pay for added courses. The \$25.00 late fee will apply if this is not done.

*Tuition and Fee Grants*—Tuition and fee grants are restricted to those specifically authorized by the Board of Trustees. For further information about these grants contact the office of Student Financial Aid.

### ***Deposits***

If a residence hall room is requested, a \$75 deposit is required. This deposit will be applied toward the student's account when the student registers and is subject to the refund policies below.

The deposit is forfeited if an applicant withdraws after May 1 for the fall semester or after January 1 for the spring semester. If the applicant notifies the Office of Residence Life of withdrawal prior to May 1 for September enrollment or January 1 for spring semester, the deposit will be refunded. Notification must be in writing.

Students desiring to live in a residence hall must pay a room deposit of \$75 during the spring in order to assure that rooms will be reserved for them in the fall. The deposit will be applied to the fall semester bill. If it is found that residence hall accommodations are not desired, the deposit will be refunded if the Office of Residence Life is notified by May 1. After May 1, the \$75 is nonrefundable.

#### *School of Law*

A nonrefundable tuition deposit of \$150 is due by April 15, or within two weeks of acceptance if the applicant is accepted after April 1. Although this deposit is applicable to tuition charges for students who remain enrolled, the deposit is forfeited by students who withdraw. It may be postponed upon evidence of extreme hardship, it should be mailed directly to the Law School Registrar.

### ***Payment of Bills***

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

All University bills, including those for room and board in University buildings, are due and payable before the first day of scheduled classes for the fall and/or spring semester. Bills may be paid at the Business Office for Student Billing on either campus by mail or in person. Checks should be made payable to University of Southern Maine.

The use of bank cards to pay tuition and fees will only be accepted during Open Registration periods. They may not be used to pay for charges incurred as a result of preregistration, late registration, or courses added during Add/Drop period.

Returned Check: A \$5.00 penalty is imposed on all checks from which USM cannot receive payment.

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

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

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

### ***Installment Payment Service***

For parents and students who find it more convenient to make monthly payments, the University of Southern Maine offers a monthly payment service administered by Academic Management Services of Pawtucket, R.I.

This service requires the student to register for and maintain a minimum of six credit hours per semester during the academic year (fall and spring semesters).

The plan enables a student or parent to budget all or part of the fall and spring charges in ten (10) equal installments. The fee for this service is \$45.00 per academic year and includes a life insurance benefit.

### ***Refund Policy***

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

#### ***Tuition Refunds***

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

#### ***Schedules***

<i>Academic Year (Fall &amp; Spring Term)</i>	<i>Refund Percentage</i>
Cancellation prior to First Day of Class	100%
Withdrawal prior to End of First Week	100%
Withdrawal prior to End of Second Week	75%
Withdrawal prior to End of Third Week	50%
Withdrawal prior to End of Fourth Week	25%
Withdrawal after Fourth Week	0%
<i>Sessions which are more than three weeks</i>	
Cancellation prior to First Day of Class	100%
Withdrawal prior to End of First Week	75%
Withdrawal prior to End of Second Week	50%
Withdrawal prior to End of Third Week	25%
Withdrawal after Third Week	0%
<i>Sessions which are three weeks or less</i>	
Cancellation prior to First Day of Class	100%
Withdrawal prior to End of First Week	50%
Withdrawal after First Week	0%

#### ***Provisions***

No part of an advance deposit is refundable after May 1. Although such deposits are applicable to tuition charges for students who remain enrolled, they are **forfeited by students who withdraw**.

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

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

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

### *Room Refunds*

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

#### *Schedules*

##### *Academic Year (Fall & Spring Terms)*

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

##### *Sessions which are more than three weeks*

Cancellation prior to First Day of Class	100%
Withdrawal prior to End of First Week	75%
Withdrawal prior to End of Second Week	50%
Withdrawal prior to End of Third Week	25%
Withdrawal after Third Week	0%

##### *Sessions which are three weeks or less*

Cancellation prior to First Day of Class	100%
Withdrawal prior to End of First Week	50%
Withdrawal after First Week	0%

#### *Provisions*

No part of an **advance deposit** is refundable after May 1. Although such deposits are applicable to room charges for students who remain in the dormitory, they are **forfeited for students who withdraw**.

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

#### *Board Refunds*

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

### *Add/Drop*

Students may **drop courses** during the first two weeks of classes\* without incurring any financial obligation for tuition charges. After this time, the Tuition Refund Schedule will determine the percentage of tuition that will be refunded. For students who withdraw from the University, the Refund Policy is applicable. Credit refunds due from courses dropped will be in the second disbursement of cost-of-living expenses.

All **courses added** must be paid for by cash or check (not bank cards) at the time of the add unless the maximum charge is applicable or the tuition charge is offset by a drop during the first two weeks of classes in order to avoid a \$25 late fee.

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

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

A student is classified as eligible or non-eligible for in-state tuition at the time of acceptance to the University. The decision, made by the campus Business Manager, or other official designated by the campus, shall be made in accordance with these rules upon information furnished by the student's application and any other relevant information. No student once having registered as an out-of-state student is eligible for in-state classification unless he or she has been a resident of the state of Maine for at least a year immediately prior to registration for the term for which in-state tuition eli-

gibility is claimed, and also has become legally domiciled in Maine before such registration. If the student is enrolled for a full academic program, as defined by the University, it will be presumed that the student is in Maine for educational purposes and that the student is not in Maine to establish a domicile and the burden will be on the student to prove that he or she has established a Maine domicile by the time of such registration.

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

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

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

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

- A. Submit "Request for Change of Tuition" Form to the Business Manager, or other designated official. If the Business Manager's (or such other official's) decision is considered incorrect by the student:
- B. The student may appeal that decision in the following order:
  1. To the Executive Director for Budget and Institutional Research or equivalent official as designated by the campus.
  2. To the President of the campus.
  3. To the Treasurer of the University, whose decision shall be final.

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

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

### ***New England Regional Program***

In cooperation with the New England Board of Higher Education the University offers certain graduate programs of study to qualified candidates from the New England states. Tuition rates for regional candidates approved by the Board of Trustees will be that of in-state tuition plus a surcharge of 25 percent. Because the listing of available programs varies from year to year, candidates should consult the *New England Regional Student Program Graduate Catalogue*. Copies may be obtained from the Office of Graduate Affairs or from the New England Board of Higher Education, 45 Temple Place, Boston, Massachusetts, 02111.



# Student Financial Aid

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

## *Eligibility for Aid*

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

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

Before receiving funds, a student must be admitted to the University and register for at least six credit hours. Student aid recipients must demonstrate satisfactory academic progress to maintain eligibility.

Students receiving assistance must submit a Statement of Registration Compliance. This form certifies that the student has either registered with the Selective Service Administration (all males born after 1959 are required to register) or are exempt from registration. Students must also submit a statement certifying that they have never defaulted on repaying a student loan and do not owe a repayment of federal grant funds. This statement is provided by the Student Financial Aid Office. Students who have defaulted or owe a repayment are not eligible for assistance.

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

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

## *Application Procedures*

New graduate students may apply for financial aid at any time but are encouraged to apply in the early spring. Continuing students are given priority if their FAF (Financial Aid Form) is received by the College Scholarship Service by April 1, 1988. Continuing students who miss the deadline may receive less aid than on-time applicants. The FAF is available from the Student Financial Aid Office.

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

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

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

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

### ***How Financial Aid Is Allocated***

The University begins reviewing student aid applications in early spring. Once a student is accepted, all necessary financial aid application materials are received, and the University is told how much federal aid it will have for students, a notice of eligibility is sent. If a student receives outside scholarship funds, the amount of aid from the University may have to be reduced.

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

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

### ***Types of Aid Available***

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

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

*National Direct Student Loans* are funded by the federal government, the University, and former borrowers repaying loans. No repayment is required until after the student ceases his/her education. Once repayment begins, the student is charged 5 percent simple interest on the amount borrowed. While the monthly repayment amount varies with the amount borrowed, a minimum of \$30 must be repaid each month.

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

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

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

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

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

For additional information, contact the Office of Student Financial Aid, University of Southern Maine, Corthell Hall, College Avenue, Gorham, Maine 04038 or telephone (207) 780-3250.

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

# Academic Policies

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

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

## *Grading System*

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

Other letter grades are as follows:

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

I Incomplete: a temporary grade given when the student because of extraordinary circumstances has failed to complete course requirements. Incomplete grades must be resolved by the end of the subsequent semester; the Registrar shall notify faculty members involved, and their department chair, of students who have carried unresolved incompletes on their transcript for one semester. If the incomplete is not resolved by the instructor an I grade will be automatically counted as an F (failure) in the grade point average and so indicated on the student's permanent record. Under special circumstances, the instructor may request that the dean extend the time limit for a specific period.

INC Permanent Incomplete: When a temporary incomplete (I) grade is not resolved to a normal letter grade, a permanent incomplete may be assigned in extraordinary circumstances as determined by the instructor and the dean. In unusual circumstances wherein the faculty member is no longer available, the dean may exercise this function.

L Stopped attending: The grade of L may be assigned to students who stopped attending a course without officially dropping the course. The grade of L will be computed as an F for purposes of the student's grade point average.

MG Missing Grade: Occasionally, faculty may assign students invalid grades for a course, or may fail to submit a grade for a particular student in a course. In these cases, the Registrar's Office will note this act by designating a missing grade, or MG instead of a grade for the course. Missing Grades must be resolved by the end of each semester. The Registrar shall notify faculty members involved, and their departmental chairperson, of students who have carried unresolved MGs on their transcript for one semester. If the missing grade is not resolved by the instructor, an MG grade will be automatically counted as an F in the grade point average and so indicated on the student's permanent record. Under special circumstances, the instructor may request that the dean extend the time limit for resolution to a specific period.

W Withdrawal after the second week through the sixth week of a semester. If a student has not officially withdrawn by the end of the sixth week of the course, one of the above regular grades, normally F, will be assigned. The W notation may be obtained after the sixth week under unusual circumstances if so determined by the instructor and the dean. A threat of failure is not considered to be an unusual circumstance.

Y Satisfactory progress after one semester of a two-semester course. Grade and credits to be given upon completion of second semester.

AU Student attended courses on a noncredit, audit basis.

## *Academic Record Changes*

Considerable care is taken to ensure that course registration and grades entered on a student's permanent record are accurate. Any student who suspects an error has been made should take the matter up immediately with the Registrar's Office. Records are assumed to be correct if a student

does not report to the Registrar's Office within one year of the completion of a course. At that time, the record becomes permanent and cannot be changed.

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

### ***Permanent Academic Record***

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

### ***Confidentiality Policy***

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

### ***Grade Point Average***

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

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

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

### ***Add/Drop***

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

### ***Enrollment and Auditing***

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

### ***Credit for Undergraduate Work***

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

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

### ***Requirements of Graduate Study***

#### ***Thesis Requirements***

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

#### ***Oral and Written Comprehensive Examination***

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

#### ***Directed Study***

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

#### ***Continuous Enrollment and Residency***

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

#### ***Leave of Absence***

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

#### ***Time Limit***

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

### ***Registration Policies***

#### ***Registration***

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

### *Advanced Registration*

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

### *Registration Status*

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

### *Student Advisement*

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

### *Extramural Course Credit*

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

### *Substitutions and Waivers*

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

### *Degree Progress*

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

### *Withdrawal*

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

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

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

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

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

## ***Program Transfer***

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

## ***Graduation***

### ***Graduation Requirements.***

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

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

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

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

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

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

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





# School of Applied Science

*Dean:* Brian C. Hodgkin

*Associate Dean:* Arthur O. Berry

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

## Master of Science in Computer Science

*Interim Chair, Department of Computer Science:* Charles Welty

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

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.

### Admissions

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. The Graduate Record Examination (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. Required application materials are those specified program admission requirements (above) along with three letters of recommendation attesting to the candidate's academic and/or professional accomplishments.

An application will not be acted upon until all these materials have been received. The application deadline is March 1 for fall semester (September) and October 1 for spring semester (January) admission.

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 status 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.

### **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 credits. 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. A maximum of 9 credit hours of transfer credit may be used toward the degree.

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 insure breadth in the field, each student is required to take MAT 380 Probability and Statistics, COS 450 Operating Systems, COS 472 Artificial Intelligence, and COS 380 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.

For further information and application, telephone 780-4386, or write: Office of Graduate Affairs; University of Southern Maine; 96 Falmouth Street; Portland, ME 04103.

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### *Graduate Courses*

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

#### **COS 550 Advanced Operating Systems**

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

#### **COS 552 Computer Networks and Distributed Processing**

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

#### **COS 555 Advanced Computer Architecture**

This course presents topics from research areas in computer architecture as well as advanced and emerging technologies. Possible

topics are parallel machines, content addressable memories, VLSI systems. Prerequisite: COS 355. Cr 3.

#### **COS 558 Database Management**

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

#### **COS 562 Modeling and Analysis of Computer Systems**

Development and analysis of deterministic models of modern computer systems. Queuing models will be used to analyze computer operating systems and computer communication networks. An operational analysis approach to performance evaluation and bottleneck analysis will be emphasized. Applications to actual systems will be considered. Other topics include: model validation, system measurement, mean value analysis, and computational algorithms. Prerequisite: COS 450 and MAT 380. Cr 3.

**COS 565 Software Design and Development**

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

**COS 566 Simulation and Analytical Modelling**

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

**COS 570 Seminar: Advanced Topics in Computer Science**

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

**COS 580 Theory of Computation**

The study of computability theory; automata theory, and formal languages. Topics are similar to those discussed in COS 380 but will be covered in greater depth, with the emphasis on developing the ability to apply these abstract

notions to practical situations. Prerequisite: COS 480. Cr 3.

**COS 582 Design and Analysis of Algorithms**

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

**COS 585 Combinatorial Optimization**

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

**COS 697 Independent Study**

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

**COS 698 Master's Project**

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

## Master of Science in Applied Immunology

*Director:* Neal S. Rote

*Adjunct Faculty:* Bagwell, Lovett

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 immunological 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/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.

### *Facilities*

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

### *Admission Requirements*

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.

It is strongly recommended that applicants to the Applied Immunology Program submit Graduate Record Examination scores, including the general score and a score for one relevant advanced test. 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. The application deadline for this program is May 1 for maximum consideration, 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 advisor who will be responsible for ensuring that the student fulfills all requirements for the program.

All students must complete the following courses:

Cellular Immunology	3 credits
Cellular Immunology Laboratory	3 credits
Molecular Immunology	3 credits
Molecular Immunology Laboratory	3 credits
Medical Immunology	3 credits
Medical Immunology Laboratory	3 credits
Journal Club	3 credits
Biostatistics and Computers	3 credits
Thesis Research	6 credits

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

- Flow Cytometry
- Hybridoma Biology and Monoclonal Antibody Production
- Immunochemistry
- Immunocytochemistry
- Cellular Immunology
- Autoimmune Diseases
- Reproductive Immunology
- Radioimmunoassay and Enzyme Immunoassay Methodology
- Experimental Logic
- Laboratory Management
- Scientific Writing
- Computer Science

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

### *Assistantships*

A limited number of graduate assistantships are available. Further information may be obtained by contacting the director of the Applied Immunology Program, Neal S. Rote, at (207) 780-4299. Other forms of financial aid are described elsewhere in this catalog.

#### **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 Programs Offered in Cooperation with the University of Maine**

*Chair, Department of Engineering:* Brian C. Hodgkin

### **Civil Engineering**

*Program Coordinator:* Chet Rock, University of Maine

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

# Electrical Engineering

*Program Coordinator:* William H. Peake, University of Maine

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

## *Application*

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, Physics of 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 Physics of Semiconductor Devices I
- ELE 566 Physics of Semiconductor Devices II
- ELE 567 VLSI Devices and Technology
- ELE 571 Advanced Microprocessor-Based Design

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

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*Electrical Engineering Graduate Courses*

**ELE 512 Linear Systems Analysis**

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

**ELE 521 High Voltage Engineering**

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

**ELE 523 Mathematical Methods in Electrical Engineering**

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

**ELE 533 Advanced Robotics**

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

**ELE 535 Computer Vision**

An introduction to computer vision and perception. Image generation, the physics of images and sensors, binary images, image processing and understanding, computational methods for recovery and representation of visual information, a general review of available vision systems and their applications in automation. Prerequisite: COS 140 or COS 160, and ELE 314 or equivalent. Lec 2, Lab 3. Cr 3.

**ELE 550 Electromagnetic Theory**

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

**ELE 552 Wave Propagation**

Theory of propagation of electromagnetic waves, sound waves and unbounded media

considered. Theoretical techniques presented and their application to wave propagation in the ocean, ionosphere and the earth treated. Prerequisite: ELE 453 or equivalent. Lec 3 Cr 3.

**ELE 553 Microwave Circuits and Devices**

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

**ELE 562 Microwave Acoustics**

The theory of acoustic wave propagation in nonpiezoelectric and piezoelectric media. Particular attention will be focused on bulk acoustic waves, surface acoustic waves, plate modes, 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 Physics of 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 Physics of Semiconductor Devices II**

Application of the principles of ELE 565 to specific devices. Prerequisite: ELE 556. 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 596 Transportation Vehicle and Urban Noise**

Theory of transportation system noise propagation; air transportation noise; noise-estima-

ting procedures; noise exposure forecast, community exposure; surface vehicle noise; traffic noise models; urban noise propagation; criteria for air and surface vehicles. Prerequisite: ELE 436. Lec 3. Cr 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.

**INT 454 (ELE, PHY) Optical Communications**

Theory of optical dielectric waveguides; light propagation, attenuation, pulse broadening, and mode coupling in fiber-optic waveguides. Coupling components, semi-conductor light sources and detectors, modulation and switching of light, repeaters for fiber-optic systems, optical integrated circuits and optical communication systems. Lec 3. Cr 3.

**INT 498 (CHY, ELE) Undergraduate Research Participation**

Research topics to be chosen by the students in consultation with faculty members in the departments and programs in the College of Engineering and Science. Students are required to submit a final report describing their research and present an oral seminar. Cr 1-3

# College of Arts and Sciences

*Dean:* Stephen J. Reno

## Master of Arts in New England Studies

*Director:* Joseph Conforti

The New England studies program offers an interdisciplinary master's degree in the arts, humanities, and social sciences that focuses on the New England region. The program provides unusual, even unique opportunities to study the development and the distinctiveness of New England culture. The curriculum is comprised of courses that use interdisciplinary approaches and materials in the study of the New England region. Students also have opportunities to participate in internships, to pursue independent study, and to conduct in-depth research.

Students will be admitted to the program beginning with the fall 1988 semester. For details of the proposed curriculum, application procedures and deadlines, or other information, contact Joseph Conforti.

## Master of Science in Statistics

*Director:* Bhisham C. Gupta

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 4.0 scale, or have demonstrated proficiency in the following courses:

COS 160 Introduction to Programming: Pascal

MAT 252 Calculus C

MAT 295 Linear Algebra

MAT 381 Probability Theory

MAT 382 Statistical Inference

### *Application*

An applicant for admission must submit the following materials directly to the Office of Graduate Affairs, University of Southern Maine, 96 Fal-mouth Street, Portland, Maine 04103.

1. An application for admission to the graduate program.
2. A copy of official transcripts showing the grades earned in all of the applicant's previous academic work.
3. Three letters of recommendation.
4. A \$15 application fee.

An application will not be acted upon until all these materials have been received. Applicants are encouraged to submit applications as early as possible. The students of this program will be admitted twice a year, in the fall and in the spring. Application deadlines are August 1 for fall admission and November 1 for spring admission.

Applicants who meet the entrance requirements for a master's degree in statistics will be granted regular admission status. Applicants who do not meet the entrance requirements of the program may be granted conditional admission status during which time the student must take courses

indicated by the Graduate Admission Committee to fulfill the conditions for regular admission. These courses will carry no credit toward the master's degree and must be successfully completed prior to the completion of 12 hours of graduate coursework, after which the student may be granted regular admission status.

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

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-I

MAT 586 Design and Analysis of Experiments-II

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.

*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.

For further information and application, telephone 780-4386, or write: Office of Graduate Affairs, University of Southern Maine, 96 Falmouth Street, Portland Me. 04103.

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#### **MAT 561 Stochastic Models in Operations Research**

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

Cr 3.

**MAT 582 Introduction to Time Series Analysis**  
Objectives and simple descriptive techniques of time series analysis, probability models for time series, estimation in the time domain,

forecasting, Box-Jenkins methodology, spectral analysis. Prerequisite: MAT 381. Cr 3.

#### **MAT 584 Design and Analysis of Experiments I**

Certain notions of planning of experiments, quadratic forms and their distributions, least square estimates, generalized linear hypothesis, estimable functions, construction of confidence ellipsoids and related tests, completely randomized and randomized block designs, two-way layouts, three-way and higher-way layouts, Latin square and orthogonal Latin square designs. Prerequisites: MAT 380, MAT 295.

Cr 3.

#### **MAT 586 Design and Analysis of Experiments II**

Random effects and mixed effects models, BRB designs, nested designs, split plot designs.

Youdean Square designs, 2, 3 and  $2 \times 3$  factorial designs, response surface methodology. Prerequisite: MAT 584. Cr 3.

#### **MAT 690 Abstract Algebra**

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

#### **MAT 691 Real Analysis**

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

#### **MAT 692 Functional Analysis**

Topological groups and topological vector spaces, metrizable, locally convex spaces, Hahn-Banach and Krein-Milman theorems, dual spaces, Banach spaces, Hilbert spaces, Banach algebras. Prerequisite: MAT 691. Cr 3.

#### **OPR 661 Operations Research I**

Formulation and analysis of mathematical programming models in operations research, linear and nonlinear programming classical optimization, network flow theory, integer programming, dynamic programming. Prerequisite: 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, STA 661. Cr 3.

#### **OPR 663 Network Optimization**

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

#### **OPR 665 Simulation**

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

#### **STA 601 Statistical Packages**

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

#### **STA 602 Consulting Techniques**

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

#### **STA 641 Theory of Probability**

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

#### **STA 642 Mathematical Statistics**

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

#### **STA 651 Multivariate Analysis**

Multivariate normal distribution, estimation of the mean vector and the covariance matrix, distribution of sample correlation coefficient, Hotelling's  $T$  statistic, Wishart distribution, testing the general linear hypothesis, MANOVA. Prerequisites: STA 642, MAT 295. Cr 3.

#### **STA 652 Non-parametric Methods**

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

#### **STA 660 Stochastic Processes**

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

#### **STA 664 Queueing Theory**

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

#### **STA 670 Linear Models**

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

#### **STA 672 Data and Regression Analysis**

Certain concepts of data reduction, simple linear regression using matrices, residual analysis, certain techniques to select a best regression equation, multiple regression,

analysis of variance and covariance, data analysis and computation using statistical package programs. Prerequisites: MAT 382, STA 60L. 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 60L. Cr 3.

**STA 674 Sampling Theory and Surveys**

Simple random stratified, systematic, cluster and multi-stage sampling, PPS sampling, opti-

mum 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 681 Topics in Applied Statistics**

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

# School of Business, Economics and Management

*Dean:* Richard J. Clarey

*Associate Dean:* Robert W. Findlay

*Director of Graduate Programs:* Bruce H. Andrews

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

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

The School of Business, Economics and Management has an enrollment of approximately 2,000 students in its undergraduate and graduate programs. Nearly half of the undergraduate students work part-time, and 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 has been offered since 1964. The School of Business, Economics, and Management, in cooperation with the University of Maine at Augusta, extends its MBA offerings to Augusta and Lewiston/Auburn. At all sites, the MBA program is tailored for working students and all courses are offered in the late afternoon or evenings. Courses are occasionally offered on weekends.

## *Application*

Information and application materials can be obtained by contacting the Office of Graduate Affairs, 96 Falmouth St., Portland, Maine 04103 (207-780-4386) or the Admissions Office at the University of Maine at Augusta (207-622-7131). Application for admission to the MBA program should be sent to the University of Southern Maine, Office of Graduate Affairs, 96 Falmouth Street, Portland, Maine 04103. Completed applications are evaluated by the MBA Graduate Admissions Committee. Completed applications must include Graduate Management Admission Test (GMAT) results, official transcripts from colleges and universities attended, and three letters of recommendation. (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.) An application will not be acted upon until it is complete. Applicants are encouraged to apply as early as possible, but completed applications must be received by the following dates to assure action for the specified term: August 1 for the fall semester; December 1 for the spring semester; and May 1 for the summer sessions.

## *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 1986-1987 academic year the average GMAT score among students given admission into the MBA program was 557. Students whose native language is not English must submit a Test of English as a Foreign Language (TOEFL) score of at least 550.

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

## **MBA Program Requirements**

Prerequisites	Credit Hours
	0-16.5

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

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

### **MBA Core**

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

#### **I. Courses to be taken early in program:**

MBA 600 Social Responsibility	3.0
MBA 605 International Business	3.0
MBA 610 Managerial Economics	3.0
MBA 630 Managerial Accounting	3.0
MBA 640 Management Theory	3.0
MBA 642 Managerial Behavior	3.0

#### **II. Courses to be taken later in program:**

MBA 620 Financial Management	3.0
MBA 660 Marketing Management	3.0
MBA 670 Operations Research	3.0
MBA 680 Organizational Strategy and Planning	3.0

### **MBA Electives** 9.0

Students select graduate courses in business, economics, or administration from the following list, although courses outside the School of Business, Economics and Management may be taken with approval of the Graduate Program Director.

MBA 613 Macroeconomic Analysis and Forecasting	3.0
MBA 627 Investment Management	3.0
MBA 643 Organizational Change and Development	3.0
MBA 651 Industrial Relations and Personnel Management	3.0
MBA 653 Collective Bargaining	3.0

MBA 665 Marketing for Nonprofit, Service, and Public Sector Organizations	3.0
MBA 667 Market Research and Analysis	3.0
MBA 669 Business Logistics	3.0
MBA 675 Production/Operations Management	3.0
MBA 685 Entrepreneurship and Business Formation	3.0
MBA 690 Information Systems Management	3.0
MBA 691 Independent Study	1.0-3.0
MBA 699 Special Topics	1.0-3.0

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

### ***Related Policies and Procedures***

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

2. 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.

3. A person enrolled in a graduate program in business or administration at another university, who is in good standing at that university, may enroll in graduate courses within the School of Business, Economics, and Management as a transient student on a space-available basis, providing that the required prerequisites for those courses have been fulfilled.

4. Individuals who are in the process of submitting their credentials for possible admission into the MBA program may be allowed to register for 500-level MBA prerequisite courses for one semester. These courses will apply toward fulfilling MBA prerequisite requirements. Enrollment is on a space-available basis and requires approval from the Director of Graduate Programs.

5. Students wanting to register in graduate courses in the School of Business, Economics and Management, but who are not admitted to the MBA program or are not degree candidates, may be enrolled as Special Students. Special Students may be permitted to enroll in 600-level MBA core or elective courses. During the first semester as a Special Student, individuals who are in the process of submitting their credentials for possible admission into the MBA program may be allowed to register for up to nine credits of 600-level courses. These courses will apply toward the 39-credit requirements as long as the student is admitted to the program for the next session (fall, spring, summer). If the Special Student is not admitted before the next session, these 600-level courses will not apply toward fulfilling any degree requirements. Applications for Special Student admission are available from the Director of Graduate Programs in the School of Business, Economics and Management. The application form, including evidence of ability to perform graduate work and satisfactory fulfillment of specific course prerequisites, must be submitted prior to the start of the course. If Special Student admission is gained, enrollment is on a space-available basis.

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

7. 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, only nine credits used to fulfill requirements for that degree may be applied toward completion of the MBA degree.

8. A student admitted to the MBA program may apply to have graduate credits transferred from other regionally accredited institutions of higher education. In order to apply, a student must have earned nine hours of graduate credits from the University of Southern Maine and received a



grade of B (3.00) or better in the course requested for transfer credit. To be accepted, the course also must be judged applicable to a student's program of study. A maximum of 15 semester hours of transfer credit may be counted from AACSB accredited programs. Up to 9 semester hours of transfer credit may be counted 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.

### ***MBA 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.

#### **MBA 501 Economic Analysis**

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

Cr 1.5 per module.

#### **MBA 502 Fundamentals of Accounting**

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

Cr 1.5 per module.

#### **MBA 503 Linear Algebra and Calculus for Business**

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

Cr 3.

#### **MBA 504 Probability and Statistics for Business Decision Making**

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

Cr 3.

#### **MBA 505 Introduction to Computers in Management**

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

Cr 1.5

#### **MBA 506 Intensive Survey of Business Functions**

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

Cr 1.5 per module.

#### **MBA 600 Social Responsibility**

Legal problems, including antitrust law, rights and responsibilities of officers and directors, and legal problems confronting managers of non-profit organizations. This course also

covers business ethics and attempts to develop practical solutions to the ethical issues that confront today's managers. Prerequisite: MBA 501. Cr 3.

#### **MBA 605 International Business**

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

#### **MBA 610 Managerial Economics**

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

#### **MBA 613 Macroeconomic Analysis and Forecasting**

The first part of the course examines forecasting techniques that are important to managers. The second part of the course develops the 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 627 Investment Management**

A systematic and in-depth treatment of security analysis and portfolio management. The security analysis segment develops E-I-C methodology augmented by deterministic valuation models. A major empirical analysis is carried out in conjunction with the theoretical developments. The portfolio management segment develops Markowitz efficient sets and the subsequent developments as contained in Sharpe-Lintner-Mossin theory. Related readings in Fama-Roberts market efficiency tests

are assigned as needed. The empirical analysis component of this segment revolves around generating Markowitz efficient portfolios and measuring beta coefficients. Prerequisite: MBA 620. Cr 3.

#### **MBA 630 Managerial Accounting**

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

#### **MBA 640 Management Theory**

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

#### **MBA 642 Managerial Behavior**

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

#### **MBA 643 Organizational Change and Development**

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

#### **MBA 651 Industrial Relations and Personnel Management**

A comprehensive investigation of the changing pattern of industrial relations in the United States. Major emphasis is on the human, social,

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

#### **MBA 653 Collective Bargaining**

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

#### **MBA 660 Marketing Management**

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

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

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

#### **MBA 667 Market Research and Analysis**

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

#### **MBA 669 Business Logistics**

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

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

#### **MBA 670 Operations Research**

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

#### **MBA 675 Production Operations Management**

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

#### **MBA 680 Organizational Strategy and Planning**

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

#### **MBA 685 Entrepreneurship and Business Formation**

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

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

**MBA 690 Information Systems Management**

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

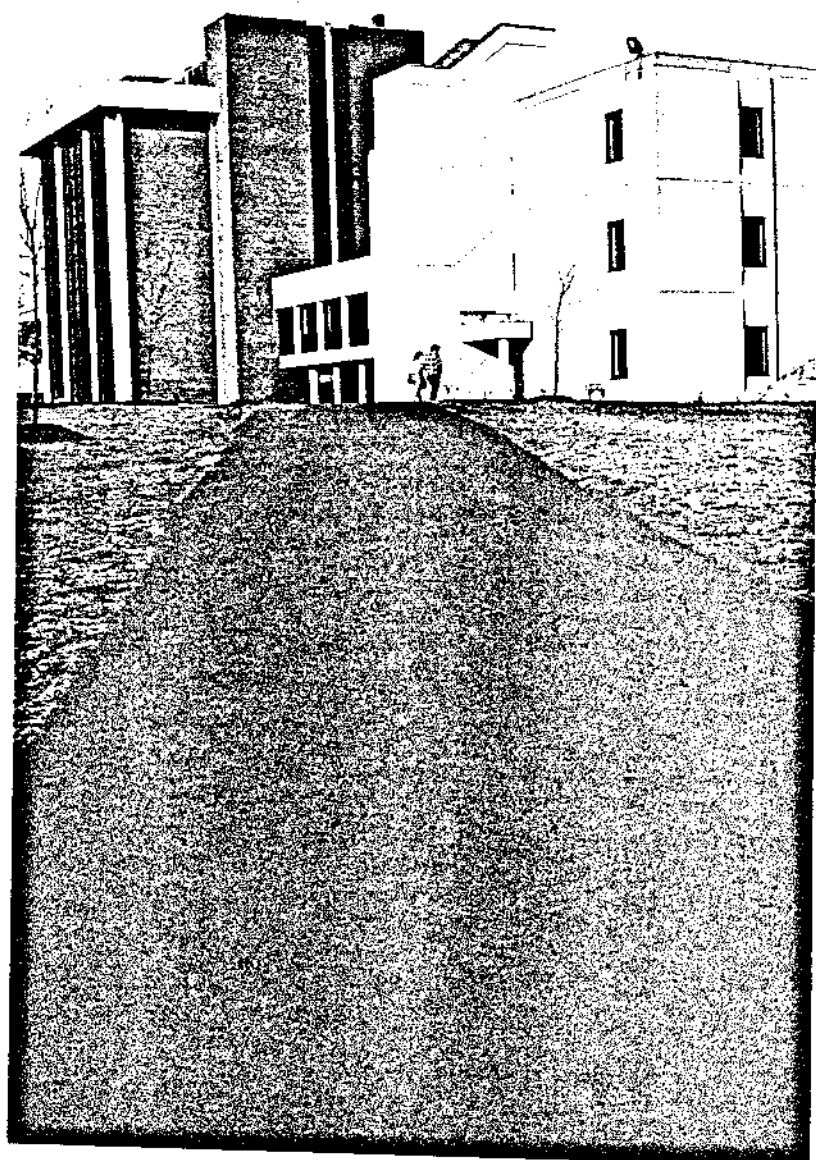
through a series of "real world" case studies and in-class discussion emphasizing a practical managerial perspective. Prerequisite: MBA 505, or permission of instructor. Cr 3.

**MBA 691 Independent Study**

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

**MBA 699 Special Topics**

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



# College of Education

*Dean:* Dorothy D. Moore

*Graduate Education Specialist:* Virginia M. Lewis

*Director of Professional Development Center:* George C. Lyons

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

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

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

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

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

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

**Community Building:** encouraging teamwork and collaboration in problem solving.

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

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

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

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

The College of Education offers the following programs:

## **Department of Professional Education: Graduate Division**

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

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

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

*Reading Program:* concentrations in elementary or secondary adult reading.

The USM Mobile Graduate Program is offering a master of science in education degree to northern Maine students in two programs, Educational Administration and Instructional Leadership. This degree program will be available from 1985 through 1990 at UMPI. For further information please contact Dr. Lloyd R. Chase, program coordinator, at UMPI at 764-0311, ext. 315.

### **Department of Human Development**

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

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

*School Psychology:* a new program which prepares the student to be licensed as a Psychological Examiner and to be certified as a School Psychological Examiner.

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

### **Admission to Graduate Education**

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.

#### *Requirements for Admission*

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. Have filed a complete application with the Office of Graduate Education.

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

#### *Application Procedure*

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

A completed application contains the following items:

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

#### *Admission Credit*

Admission credit is credit earned for graduate coursework completed at the University of Southern Maine after the student has made formal appli-

cation to a graduate program but prior to matriculation into a graduate program.

Admissions credit must be approved by the appropriate department chair prior to course registration and is subject to the condition that a grade of B or better is received for the coursework. A maximum of six credit hours may be approved for admissions credit. Exceptions to the maximum must be approved by the appropriate program faculty.

#### *Transfer Credit*

Transfer credit is 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 admission application. Up to a total of 6 credit hours may be approved as transfer credit, provided these credits were earned no more than three years prior to matriculation. 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 which would not have received graduate credit if taken at the University of Southern Maine; 2) correspondence courses; 3) courses which exceed time limits prescribed for a particular degree program; 4) courses in which a grade lower than a B was received; 5) courses which are inappropriate for inclusion in the student's program of study.

#### *Application Deadlines*

A complete application must be filed before the following deadlines: for January matriculation: October 1, 1987; for May or September matriculation: March 1, 1988.

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

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

#### *Admissions Decisions*

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

#### *Appeal of Admissions Decisions*

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

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

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

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

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

Should the applicant wish to pursue the appeal process further, a written appeal should be submitted to the Associate Provost. Still further appeal of the admissions decision may be made to the Provost.

#### *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.



## **Comprehensive Examination**

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

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

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

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

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

## **Degree Progress**

Satisfactory progress toward a degree is based on continuous enrollment, which requires that every graduate student earn at least 6 credits toward his/her degree program every calendar year from the time of first registration until completion of all requirements for the graduate program. In addition, satisfactory progress toward completion of a degree is defined as maintaining a cumulative grade point average of 3.0 (B average) or better. However, in any semester in which the cumulative grade point average falls below 3.0, the student will be placed on probation and must bring the cumulative grade point average to a 3.0 within the time set by the graduate program or he/she will be withdrawn from the program and must apply for readmission.

## **Department of Professional Education**

*Professor:* O'Donnell; *Associate Professors:* Amoroso, Cohen, Curry, Deady, Lyons, Silvernail, Smith; *Assistant Professors:* Broyles, Rees, Spruill

### **Educational Administration Program**

The program in educational administration focuses on the preparation of leaders for educational contexts—elementary and secondary principals, assistant principals, program coordinators, department chairpersons, and team or unit leaders. The program of study is designed to develop specific leadership competencies that are evaluated in performance situations. Faculty members in the program believe that the degree preparation of administrative personnel should ensure the development of leadership competencies in the following areas:

#### *Conceptual skills*

- a. view their organization as a complex social system in continuing interaction with other social systems;
- b. identify, grasp, and utilize theories, models, and conceptual constructs basic to organizational leadership;
- c. be knowledgeable about basic constitutional and statutory laws pertaining to education and the human services and how they have been interpreted by the courts;
- d. work for the provisions of equal opportunity of all clients.

#### *Interpersonal Skills*

- a. link activities and communication across system boundaries;
- b. influence people as individuals, role holders, and members of groups and organizations;
- c. be proficient in skills of communication.

#### *Technical Skills*

- a. assess the needs of interdependent systems and the needs of people living and working within the system's boundaries;

- b. understand and utilize research findings, relevant research techniques and procedures;
- c. diagnose the need for system change and be able to employ appropriate strategies to implement and maintain improvements;
- d. understand the rights, responsibilities, and ethics inherent in collective negotiations;
- e. understand and use management systems and procedures.

Every student admitted to graduate study in the program in educational administration progresses through a cycle of 1) individual needs assessment and perspective setting; 2) study of conceptual foundations of organizational leadership; 3) study of leadership functions; and 4) application of knowledge and skills related to functions.

### ***Programs and Requirements***

#### **Required Core Courses (18 credits)**

- EDU 670 Introduction to Administration
- EDU 600 Research Methods and Techniques
- HRD 626 Group Process and Procedures
- EDU 671 Organizational Behavior
- EDU 672 Political Basis for Decision Making
- EDU 685 Seminar in Administration (to be taken upon completion of 27 hrs.)

#### **Elective Courses (18 credits)**

Elective courses must be approved by the student's advisor. A partial list of courses include:

- EDU 604 Curriculum Development
- EDU 674 Strategies for School Improvement
- EDU 675 School-Community: Inter-system Communication
- EDU 676 Systems Approach to Educational Planning
- EDUX 677 Humanities in Leadership
- EDU 678 School Law
- EDU 679 Evaluation & Supervision of School Personnel
- EDU 680 Staff Development
- EDU 681 Principal-Student Relationships
- EDU 682 Labor Relations for School Administrators

Two Electives may be chosen from outside the program or an individual may elect to write a thesis and/or complete an independent study.

The master of science in education degree in the educational administration program requires 36 credits of coursework.

#### ***Concentration in Special Education Administration***

The administration of special education program is open only to students matriculated into the educational administration program.

#### **Required Core Courses (18 credits)**

These courses are the same as the required core courses for the educational administration program listed above *except* EXE 685 Advanced Seminar in Special Education will be substituted for EDU 685 Seminar in Administration.

#### **Function Courses (18 credits)**

Function courses must be approved by the student's advisor. A partial list of courses includes:

- EXE 682 Special Education: Law, Conflict, and Resolution
- EXE 601 Education Program for Exceptional Children
- EDU 604 Curriculum Development
- EDU 679 Evaluation and Supervision
- EXE 684 Administration in Special Education

#### **Exceptionality Program**

The master of science in education degree in the exceptionality program provides training for individuals who are teachers or who wish to be teachers of students who are exceptional. The program is offered jointly by the University of Southern Maine and the University of Maine at Farmington

Six areas of specialization are offered: 1) emotional disturbance, 2) learning disabilities, 3) mental retardation, 4) hearing impairment, 5) secondary special education, and 6) education of the gifted/talented. In addition, a course sequence in special education administration is offered for those individuals matriculated into the educational administration program. The master of science in education in the exceptionality program requires 36 credits of coursework.

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

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

## **Program Requirements**

### *A. Learning Disabilities, Emotional Disturbance, Mental Retardation*

#### Professional Core (12 credits)

- EXE 601 Educational Programming
- EXE 653 Assessment in Special Education
- EDU 620 Foundations of Reading
- EDU 600 Research Methods & Techniques

#### Specialization

##### Characteristics and Issues (6 credits)

- EXE 620 Learning Disabilities—Theory & Practice
- EXE 630 Mental Retardation—Theory & Practice
- EXE 610 Emotional Disturbance—Theory & Practice
- EXE 690 Psychology of Adolescents with Disabilities

##### Skills (9-12 credits)

- EXE 622 Advanced Methods—Learning Disabilities\*
- EDU 621 Reading Remediation\*
- EXE 632 Advanced Methods—Mental Retardation
- EXE 612 Advanced Methods—Emotional Disturbance
- EXE 680 Methods and Materials for Teaching Young Children with Moderate/Severe Handicaps
- EXE 695 Methods for Teaching Secondary Level Handicapped Students
- EXE 624 Advanced Assessment with Practicum
- EXE 683 Topical Seminar
- EXE 606 Practicum in Exceptionality/Seminar (6 credits)

##### Related Electives (3-6 credits)

- HRD 620 Fundamentals of Counseling
- EDU 621 Reading Remediation
- EXE 682 School Law/Conflict Resolution
- Others upon recommendation of advisor

\*Required for learning disabilities concentration

### *B. Hearing Impairment*

#### Professional Core (12 credits)

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

#### Specialization (21 credits)

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

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

### *C. Special Education Administration* (open only to students matriculated in the Educational Administration Program)

#### Professional Core (18 credits)

Required courses as specified for the Educational Administration Program

#### Specialization (15 credits)

- EXE 682 Special Education: Law, Conflict, and Resolution
- EXE 601 Educational Programming for Exceptional Children
- EXE 684 Administration of Special Education
- EDU 604 Curriculum Development
- EDU 679 Evaluation and Supervision of School Personnel
- Elective (3 credits)

### *D. Secondary Special Education*

#### Professional Core (12 credits)

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

#### Specialization (18 credits)

- EXE 690 Psychology of Adolescents with Disabilities
- EXEX 692 Transitional Planning and Programming for Secondary Students
- EXEX 693 Pre-vocational and Vocational Assessment
- EXEX 694 Vocational Education for Special Needs Students.
- EXE 695 Methods for Teaching Secondary Level Handicapped Students
- EXEX 696 Secondary Practicum/Seminar

#### Related Electives (6 credits)

- HRD 610 Introduction to Rehabilitation Services
- HRD 612 Psychological Aspects of Disability
- HRD 620 Fundamentals of Counseling Skills
- HRD 641 Human Resource Development in Community Settings

Others upon recommendation of advisor.

### *E. Gifted and Talented Education*

#### Professional Core (15 credits)

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

#### Specialization (12 credits)

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

#### Electives (9 credits)

Graduate students in the exceptionality program may select electives in the fields of concentration of rehabilitation administration, elementary or secondary guidance, and exceptionality. A changing selection of electives is offered each semester.

#### *Special Program Requirements*

Each student entering the program must have had previous experience or at least 16 credits in exceptionality. 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 a recommendation by a school principal or special education director
2. At least a 2.5 undergraduate grade point average
3. A written essay
4. Graduate Record Examination or Miller Analogies Test Score.

#### **Instructional Leadership Program**

The Instructional Leadership program seeks to develop graduate students for leadership roles in the improvement of curriculum and instruction of schools. It assumes that curriculum and instruction will be continually examined and evaluated as conditions of society and learners change.

The program will encourage critical inquiry into the process and substance of schooling and education by focusing on the following:

1. the use of an interdisciplinary perspective in understanding local, state, and national issues and the circumstances of an individual school;
2. the creation and use of knowledge;
3. a developmental and cognitive perspective of learners and learning and how these relate to the creation of a responsive curriculum;
4. the change process, how school cultures resist and promote change, and the functions of leadership and its impact on changing curricula, instruction, and schools; and
5. different ways of assessing and evaluating school programs and their places in promoting changes in the curriculum of a school.

The program will use an adult learning perspective to design the learning experiences for the students in the program. This perspective is an important one for promoting change and inquiry at the school level where learning is done by adults and children.

#### ***Program Requirements***

The 42-hour program is organized into three parts.

##### Required Core Courses (18 hours)

- EDU 610 Seminar I: Critical Issues in Teaching and Learning
- EDUX 601 Quantitative Action Research Methods
- EDUX 602 Qualitative Action Research Methods
- EDUX 604 Curriculum Conceptions I
- EDUX 605 Curriculum Conceptions II
- EDU 611 Seminar II: Changing Contexts for Teaching and Learning Concentrations (18 hours)

Six courses selected from a concentration with approval of advisor. Concentrations are being considered in the areas of:

Applied Immunology  
Curriculum and Evaluation  
Educational Administration  
Exceptionality  
New England Studies  
Reading

#### Final Seminar and Paper

Seminar III EDU 612 (6 credit hours) concludes the coursework of the program. In this final interdisciplinary seminar, students identify problematic aspects that exist at their school and alternative ways that they and their colleagues might solve these problems. The seminar concludes with a proposal for examining these problems and the alternatives in a paper (similar to a thesis). The final paper replaces the conventional comprehensive examination. In this paper, students demonstrate their skills of collecting information and analyzing it; applying the knowledge and understanding gained in their previous work in the core and the concentration to these problems; and using relevant literature to analyze the problem and create alternatives.

Students enrolled in Teachers for Elementary Schools and Teachers for Secondary Schools may pursue the master's degree after they have successfully completed one year of teaching and written a letter stating their interest in and commitment to the purposes and rationale of the program. If approved for continuation in the Instructional Leadership Program, they must complete all of the core courses, Seminar III, and the final paper.

#### *Admissions*

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

Evidence in support of admission shall include:

1. a completed application form with \$15.00 fee;
2. transcripts of all previous work;
3. results of the Miller Analogies test or the Graduate Record Examination;
4. three letters of recommendation addressing the student's potential for success in the program and as an instructional leader;
5. GPA of 3.0 on all previous undergraduate and graduate work;
6. evidence of satisfactory completion of at least 60 hours of liberal arts courses.

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

The admission process requires a formal interview. Candidates to be interviewed will be selected on the basis of the information above. During the interview, issues related to the following topics will be covered: 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 is required and will be administered as part of the interview process.

#### **Reading Program**

The graduate reading program consists of concentration of courses that deal with all facets of literacy. The course and clinical experiences acknowledge the close bond that exists between research and classroom practice. The program is designed to prepare classroom teachers, reading teachers, learning disability specialists and others whose major focus is helping students to become competent language users.

Course experiences are hierarchical and cumulative in nature, culminating with EDU 529, Clinical Experiences. For this reason it is recommended that core courses be taken at the University of Southern Maine.

## **Program Requirements**

### **Required Core Courses (24 credit hours)**

EDU 600	Research Methods and Techniques
EDU 620	Foundations of Reading Instruction
EDU 621	Reading Remediation
EDU 510	Developing the Composition Process
EDU 514	Teaching Reading in the Content Areas
EDU 529	Clinical Experiences
EDU 634	Seminar in Reading Research

### **Electives**

EDU 511	Children's Literature
EDU 513	Adolescent Literature
EDU 524	Supervised Practicum in Reading Disabilities
EDU 622	Language and Reading for Young Children
EDU 630	Organizing for Elementary Reading Instruction
EDU 633	Special Applications of Reading Methods

### **EDU 501 Introduction to Computer Application**

This course is designed to orient the pre-service and in-service teacher to terminology, operation, evaluation, and applications of microcomputers, hardware and software, as related to our educational system. Additionally, the course will deal with other more traditional electronic media related to modern learning processes. Cr 3.

### **EDU 510 Developing the Composition Process**

A course in language arts emphasizing the development of writing proficiencies. Writing growth and its relationship to reading and oral language development is examined. A thorough study of current research and theory relating to the composition process leads to the development of instructional programs that will foster students' growth as writers. Appropriate for elementary teachers; most secondary teachers can be accommodated. Cr 3.

### **EDU 511 Children's Literature**

Designed for teachers who wish to develop a deeper understanding of the literature written for children ages 4-12, and who want to become competent and creative catalysts in bringing children to books. Attention is given to standards of selection, curriculum implications, and methods for using books to individualize reading instruction. Students are expected to read widely in juvenile collections in order to establish a basis for selecting appropriate literary fare. Cr 3.

### **EDU 513 Adolescent Literature**

This course is designed for the middle or secondary teacher who wishes to develop a deeper understanding of literature for adoles-

cents and who needs to learn how to help young people read widely. Attention will be given to the dynamics of adolescence, individualizing reading, standards of selection, and creative methods of introducing books. Cr 3.

### **EDU 514 Teaching Reading in Content Areas**

This course explores techniques and processes that can be applied by content teachers to improve reading ability. Emphasis is on competencies that students use in content areas and strategies for teaching them how to apply them—a process of integrating the teaching of reading/study skills while teaching a subject matter. The course has practical application for all classroom teachers in grades 4 through 12. Cr 3.

### **EDU 524 Supervised Practicum in Reading Disabilities**

Clinical experiences given in conjunction with the Reading Clinic or the University Reading Academy. Working under supervision, students use selected assessment instruments with adults/children who have learning and reading difficulties. Testing sessions will be unique and geared to specific diagnostic needs perceived by instructors. Cr 1-15.

### **EDU 529 Clinical Experiences**

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

techniques in supervised settings. Prerequisites: EDU 620 and EDU 621 or equivalents.

Cr 6.

### **EDU 600 Research Methods and Techniques**

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

Cr 3.

### **EDU 602 Philosophy and the Teacher**

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

Cr 3.

### **EDU 603 Analysis of Teaching**

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

Cr 3.

### **EDU 604 Curriculum Development**

This basic curriculum course will provide teachers and school and central office administrators with an understanding of what curriculum and curriculum development are. The perspective of this class will differ with some of the existing curriculum and curriculum development concepts presently in vogue in schools. The perspective emphasizes the realities of present classroom conditions but pushes for concepts and processes that will develop a general common education for all students.

Cr 3.

### **EDU 610 Seminar I: Critical Issues in Teaching and Learning**

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

Cr 3.

### **EDU 611 Seminar II: Contexts for Teaching and Learning**

This second seminar of the Instructional Leadership program builds on the work done

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

Cr var.

### **EDUX 612 Practicum/Seminar**

For experienced teachers in the Instructional Leadership Program, a 6-credit field-based project and concurrent seminar provide a framework for applying theory to practice and for demonstrating leadership skills in instructional settings. For students in the Teachers for Secondary Schools strand, a 15-credit, 20-week internship in a classroom offers a training sequence from guided practice to independent teaching. Prior field observations and a concurrent seminar integrate theory and practice. Both strands open to matriculated students only.

Cr var.

### **EDU 620 Foundations of Reading Instruction**

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

Cr 3.

### **EDU 621 Reading Remediation**

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

Cr 3.

### **EDU 622 Language and Reading for Children**

Emphasis is on the process of language acquisition, the characteristics of the English language, concept attainment, and approaches for enhancing language development in young children. The role of language and concept attainment are highlighted along with implications for beginning reading and language arts. Theories and research are related to early childhood education.

Cr 3.

### **EDU 630 Organizing for Elementary Reading Instruction**

Designed for classroom teachers, a workshop/seminar course led by a successful practitioner in methods for organizing and implementing



a classroom reading program. Emphasis is on the translation of professional literature and research to classroom practice. Participants are involved in the process of organizing interest centers, developing record-keeping techniques, and other aspects of successfully managing a reading program in a self-contained classroom. Emphasis is on the wide exposure to methods and techniques for teaching reading. Prerequisite: EDU 620. Cr 3.

#### **EDU 633 Special Applications of Reading Methods**

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

#### **EDU 634 Seminar in Reading Research**

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

#### **EDU 670 Introduction to Administration**

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

#### **EDU 671 Organizational Behavior**

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

#### **EDU 672 Political Bases of Decision Making**

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

**EDU 674 Strategies for School Improvement**  
Principles and practices derived from behavioral science theory and research findings studied in "specific" situations. Consideration of problems and strategies associated with identifying need for change, stimulating, coordinating, implementing, and evaluating innovations in organizations. Cr 3.

#### **EDU 675 School-Community: Inter-System Communication**

Conceptual understanding of theory and practice related to the technology of communication applied within and without the context of educational organizations. Analysis of basic elements involved in the communicator's role in the administrative process is the focus. Emphasis will be placed on the nature and role of the organizational communicator, audiences, message treatment, and evaluation of audience response. Cr 3.

#### **EDU 676 Systems Approach to Educational Planning**

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

#### **EDU 678 School Law**

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

#### **EDU 679 Evaluation and Supervision of School Personnel**

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

#### **EDU 680 Staff Development**

Designed for students nearing completion of the educational administration program. Concepts from previous courses are integrated into a model for planning and action at the school building level. Organizational develop-

ment functions of diagnosing, designing, developing, implementing, evaluating, organizing, and managing are integrated into an operational staff development program. Cr 3.

#### **EDU 681 Principal-Student Relationships**

New legislation and court interpretations are forcing reexamination of the role of the student. This course examines implications for the principal including student rights, discipline, school organizations, procedures and records, curriculum needs, program development, student reporting, school climate, and staff development. Cr 3.

#### **EDU 682 Collective Negotiations**

Topics in this course include: history and current status of negotiations in Maine public schools; an in-depth study of the negotiating process; existing current contracts; contract grievance procedures; impasse resolution; contract administration; and implications for school administrators. Cr 3.

#### **EDU 685 Seminar in Administration**

A culminating course in the administration sequence for students nearing the completion of their program. The seminar will include, but not be limited to, the following components: an evaluation phase including student-faculty examination of both oral and written presentations by the participants; a field assignment in which participants will have a practical encounter with administrative practices, strategies, and policies currently in use in the public schools; and a placement phase in which participants will develop up-to-date vitae and letters of application. Cr 3.

#### **EDU 699 Independent Study**

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

#### **EXE 601 Educational Programming for Exceptional Children**

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

#### **EXE 606 Practicum in Exceptionality/Seminar**

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

#### **EXE 610 Emotional Disturbance—Theory and Practice**

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

#### **EXE 612 Advanced Methods—Emotional Disturbance**

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

#### **EXE 620 Learning Disabilities—Theory and Practice**

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

#### **EXE 622 Advanced Methods—Learning Disabilities**

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

#### **EXE 624 Advanced Assessment and Practicum**

An intensive study of assessment practices and techniques, and the interrelationship to teaching exceptional students. Students in the program will focus on specific special education students and undertake an in-depth analysis of strengths, weaknesses, and remedial strategies. Cr 3.

#### **EXE 630 Mental Retardation—Theory and Practice**

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

#### **EXE 632 Advanced Methods—Mental Retardation**

This course will examine techniques, methods, and materials used in teaching students who are mentally retarded. An examination of the research literature concerning appropriate methodologies will be made. Cr 3.

**EXE 640 Communication and Deafness**

The course will describe the full range of communication modes currently used with hearing impaired children in the United States, and the presuppositions behind the various approaches, including: oral/aural, American Sign Language, Manual English, Cued Speech, fingerspelling, etc. The relationship between communication and language and the role of vision and residual hearing in language acquisition will be studied. Factors associated with the selection of a particular mode of communication over the other modes will be examined. Cr 3.

**EXE 641 Foundation of Education—Hearing Impaired**

This course will provide an historical overview tracing past and present trends in the education of hearing impaired children. Students will be introduced to the various philosophical approaches to the education of this population. Sociological implications and psychological characteristics of deaf and hearing impaired people will be examined. Students will learn about their role and responsibilities as teachers in the education/counseling of parents with hearing impaired children. Cr 3.

**EXE 642 Oral/Aural Development and Instruction**

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

**EXE 644 Language Development and Language Intervention**

This course examines issues related to (a) the nature of language, (b) language acquisition, (c) the assessment of language, and (d) language development at home and in the classroom. Language intervention and classroom instruction will focus on children with hearing impairments, but theoretical bases and approaches may be applicable to all children. Cr 3.

**EXE 646 Audiology/Aural Habilitation**

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

duced. 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 Impaired**

This course is designed for students interested in teaching hearing impaired students in a variety of mainstreamed and specialized settings. Field experience includes student observation and practice teaching in selected areas of specialization i.e. preschool, elementary, or high school. Students participate in one or two practica depending upon the student's career goals. Cr 3.

**EXE 656 Summer Institute**

These institutes are designed to provide in-depth coverage of specialized areas in the education of the hearing impaired. Topics to be covered include: Parents of Hearing Impaired Children; Language and Curriculum Development; Speech, Speech Reading and Auditory Training; Mainstreaming Hearing Impaired Children in Regular Educational Settings; Multiple Handicapped Hearing Impaired; Classroom Organization and Behavior Management Techniques for Teachers of the Hearing Impaired; and Reading Instructions for the Hearing Impaired. Cr 3.

**EXE 659 Education of Gifted and Talented**

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

**EXE 660 Curriculum and Method for Teaching the Gifted**

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

**EXE 662 Creativity and the Gifted/Talented**

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

**EXE 663 Management in Education of Gifted**

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

**EXE 664 Gifted Students in Special Populations**

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

**EXE 665 Institute for Program Planners**

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

**EXE 666 Models in Education of the Gifted**

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

**EXE 683 Topical Seminar**

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

**EXE 684 Administration in Special Education**

A field-based course designed to offer experience in administering special education programs. The course emphasizes the organization and administration of special education programs. Cr 3.

**EXE 685 Advanced Seminar in Special Education**

An advanced course that will integrate and synthesize research and practices across disciplines in exceptionality. Individual and group presentations will be required as well as a major paper. 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 690 Psychology of Adolescents with Disabilities**

This course examines the growth and development of disabled adolescents from a social context point of view. Handicapped individuals experience an adolescence shaped by their own particular characteristics, as well as by the milieu in which they grow. Developmental concepts presented in coursework and readings will be supplemented by observations and interviews with adolescents, their teachers, and their families. Cr 3.

**EXEX 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. Cr 3.

### **EXEX 693 Pre-vocational and Vocational Assessment**

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

### **EXEX 694 Vocational Education for Special Needs Students**

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

### **EXE 695 Methods for Teaching Secondary Level Handicapped Students**

This course is designed for primary service providers to mildly and moderately handicapped students at the secondary school level. Participants will examine three main service delivery components: 1) assessment and remediation of basic skills, 2) life skills

instruction, and 3) case management. Service delivery models, development of IEP's and specific instructional techniques for secondary learners will be included. Cr 3.

### **EXEX 696 Secondary Practicum/Seminar**

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 12 weeks at an approved practicum site and will attend regularly scheduled seminars. The field experience includes student observation, practice teaching and visitations to other community-based programs. The seminars are planned to aid students in integrating and synthesizing research related to transitional services to handicapped students. Cr 3.

### **EXE 699 Independent Study/Directed Study**

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

### **MAT 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.

### **MAT 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: MAT 502. Cr 3.

### **MAT 509 Topics in the History of Mathematics**

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

### **MAT 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.

### **MAT 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.

#### **MED 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.

#### **MED 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: MED 512. Cr 3.

#### **MED 539 Metric Education**

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

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

These courses investigate some specific area from the broad academic disciplines of music history and music theory (the topic for a given semester's course is determined by the needs and background of students expected to enroll). Such work not only assists students in acquiring in-depth knowledge and understanding of the specific subject involved, but

also provides a model for procedure in such a study for future self-instruction by the serious advanced student. Topic courses may be taken more than once, assuming that each time a student enrolls a different topic is under investigation. Cr 3.

#### **MUE 520 Problems in Administration and Supervision**

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

#### **MUE 521 Current Trends in Music Education**

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

#### **MUE 522 Vocal Workshop**

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

#### **MUE 523 Instrumental Conducting Workshop**

The course will focus on stylistic study of scores from contrasting periods, advanced baton and left-hand techniques, and non-verbal communication procedures. Literature, rehearsal procedure, and tone and intonation development for all levels of band organizations will be covered. Cr 3.

## **Department of Human Resource Development**

*Professors:* Callender, Southworth; *Associate Professors:* Brady, Moore, Sutton; *Assistant Professors:* Davis, Stevens

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

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

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

Coursework is offered at several off-campus sites as well as on the Gorham campus. 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 South-

ern Maine, as well as with other graduate programs within the University system. Faculty are actively involved with organizations and individuals in the local and regional community. The Department also offers undergraduate courses in human development and family studies, and an undergraduate early childhood intern program.

#### *Admissions*

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

Evidence in support of admission shall include:

1. A completed application form with \$15.00 fee.
2. Transcripts of all previous work.
3. Results of the Miller Analogies Test or the Graduate Record Examination (must be taken within five years of the application deadline date).
4. Three letters of recommendation addressing your potential for success in the program and as a counselor or adult educator.
5. A personal narrative: The narrative, preferably typed, will be evaluated in terms of clarity of expression, grammatical construction, and other facets of English composition, as well as the quality of responses. The narrative should address the following subjects:
  - A. Relevant educational and experiential background.
  - B. Reasons for desiring to be in the helping professions.
  - C. Intention of pursuing a career in counseling or adult education.
  - D. Reasons for seeking admission to the program.
  - E. A statement of personal philosophy.
  - F. Information about special status, e.g., veteran, handicapped, minority, etc. (optional)
  - G. A statement of personal strengths and weaknesses.

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

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

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

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

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

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

#### **Adult Education Program**

The master of science in adult education, started in 1972, is the only graduate program of its kind in northern New England. Originally established to meet the region's need for trained public school administrators of adult education, the program today prepares educators for a variety of

human resource development roles in all types of organizational and community settings. Today's students are also educators in non-school settings — hospitals, recreation agencies, business, human service organizations. Most seek professional competence and recognition for a position currently held. Usually, the student already is a professional with credentials in a specified field such as nursing, social work, counseling, criminal justice, or education and now practices that profession through an adult educator role. These vary as a trainer, teacher, staff development specialist, program designer, or organizational change agent. Others are contemplating career change or entry and see adult education as a versatile field with strong growth potential.

### *Program Requirements*

Required Courses		Credits
HRD 600	Adult Education and Human Resources Development	3
EDU 600	Research Methods and Techniques	3
HRD 605	Life Span Development II	3
	or	
HRD 631	The Adult Learner	
HRD 649	Seminar in Adult Education and Human Resource Development	
		<u>3</u>
		12

### Middle Core (minimum of 4 courses required)

HRD 605	Life Span Development II	3
HRD 620	Fundamentals of Counseling Skills	3
HRD 631	The Adult Learner	3
HRD 632	Program Development in Adult Education and Human Resource Development	3
HRD 633	Managing Adult Education and Human Resource Development	3
HRD 667	Action Research and Evaluation Methodologies in Human Resource Development	3
		<u>3</u>
		12

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

### Self-Designed Courses

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

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

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

### *Concentrations (3 courses, 9 credit-hour certificate)*

#### 1. Training and Development

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

#### 2. Educational Gerontology

HRD 650	Social and Public Policy in Aging
HRD 651	Older Person as Learner
HRD 652	Coordinating Educational Programs for the Older Adult in the Community



- HRD 653 Human Resource Development and the Older Worker
- HRD 654 Gerontology and the Helping Professions

### 3. Community Education

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

### 4. Adult Public School Education

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

### 5. Counseling

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

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

Minimum number of credit hours required for the degree: 36

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

### **Counselor Education Program**

Over the past 20 years, the program has provided the state of Maine with several hundred qualified counselors in both school and rehabilitation 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.

#### *Purpose*

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

### *Objectives*

The Counselor Education Program is designed to foster the following:

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

### *Program Requirements*

Required Core Courses for All Specialties		<i>Credit Hours</i>
HRD 604 Life Span Development I		3
HRD 605 Life Span Development II		3
HRD 620 Fundamentals of Counseling Skills		3
HRD 621 Fundamentals of Counseling Theories		3
HRD 626 Group Process and Procedures		3
HRD 665 Psychological Measurement and Evaluation		3
HRD 690 Individual Counseling Practicum		3
EDU 600 Research Methods and Techniques		3
		<u>24</u>
<i>Elementary School Counseling Specialty</i>		
Required Core Courses		24
Required within the Specialty		
HRD 607 Introduction to School Guidance Services		3
HRD 622 Counseling Young Children		3
HRD 603 Consultation		3
HRD 627 Group Counseling		3
HRD 670 Career Development and Occupational/Educational Information		3
HRD 686 Internship		6
		<u>21</u>
Electives		3
Total Program Credit Hours		<u>48</u>
<i>Secondary School Counseling Specialty</i>		
Required Core Courses		24
Required within the Specialty		
HRD 607 Introduction to School Guidance Services		3
HRD 670 Career Development and Occupational/Educational Information		3
HRD 603 Consultation		3
HRD 627 Group Counseling		3
HRD 686 Internship		6
		<u>18</u>
Electives		6
Total Program Credit Hours		<u>48</u>

<i>Rehabilitation Counseling Specialty</i>	
Required Core Courses (excluding HRD 604)	21
Required within the Specialty	
HRD 686 Internship	6
HRD 692 Advanced Individual Practicum	3
Required Rehabilitation Courses	12
	<u>21</u>
Electives	6
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	6
HRD 692 Advanced Individual Practicum	3
	<u>12</u>
Electives	12
Total Program Credit Hours	48

#### *Electives*

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

- HRD 501 Strategies and Techniques in Classroom Management
- HRD 502 Family Implications for Educators
- HRD 609 Seminar in School Counseling
- HRD 610 Introduction to Rehabilitation Services
- HRD 611 Medical Aspects of Disability
- HRD 612 Psychological Aspects of Disability
- HRD 613 Legal Issues in Counseling
- HRD 619 Seminar in Rehabilitation
- HRD 623 Behavioral Intervention: A Psycholinguistic Approach
- HRD 625 Counseling the Elderly
- HRD 628 Introduction to Marriage and Family Counseling
- HRD 666 Individual Assessment: A Holistic Approach
- HRD 667 Action Research and Evaluation Methodologies
- HRD 671 Vocational Aspects of Disability/Placement in Rehabilitation
- HRD 673 Perspectives on Chemical Dependency
- HRD 677 Human Sexuality for Counselors
- HRD 678 Sex Role Issues in Human Services

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

#### **Master of Science in School Psychology**

*Contact Person:* Willard Callender

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, research, psycho-educ-

cational principles, and practitioner skills. Through practicum training students are introduced to children's cognitive, social, and emotional behavior; instructional models and teaching style; and to the differential effects of teacher-student interactions and classroom climate. During the final portion of their coursework, students intern for 1,200 clock hours under the supervision of a licensed school psychologist. Individuals graduating from this program will be prepared to be licensed as a Psychological Examiner by the Maine Board of Examiners of Psychologists and to be certified by the Maine Department of Educational and Cultural Services as a School Psychological Examiner.

Students will be admitted to the program beginning with the fall 1988 semester. Beginning January 1, 1988, details of the proposed curriculum, application procedures and deadlines, and other information will be available. Please contact the chair of the Human Resource Development Department, Willard Callender, 400 Bailey Hall, University of Southern Maine, Gorham, telephone 780-5316.

#### **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 areas of family relations and child development that are relevant to educators. Consideration will be given to such topics as dating, sexuality, marital relationships, divorce, adult-child relationships, and home-school relationships. The course will provide an overview of the issues and current research in the field. 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. Prerequisites: None. Cr 3.

#### **HRD 600 Adult Education and Human Resource Development**

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

#### **HRD 603 Consultation**

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

#### **HRD 604 Life Span Development I**

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

#### **HRD 605 Life Span Development II**

Examines the processes underlying growth, development, and behavioral changes of humans from young adulthood through old age to death. The interaction of biological, cognitive, and psychosocial development in adulthood. Cr 3.

**HRD 607 Introduction to School Guidance Services**

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

**HRD 609 Seminar in School Counseling**

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

**HRD 610 Introduction to Rehabilitation Services**

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

**HRD 611 Medical Aspects of Disability**

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

**HRD 612 Psychological Aspects of Disability**

This course provides students with an understanding of the psychological elements related to the disability experience. The course considers adjustment to disability from an 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 619 Seminar in Rehabilitation**

This course is designed for advanced students in rehabilitation and for practicing rehabilitation counselors. The seminar provides an overview of rehabilitation practice, with an emphasis on problematical issues. Topics may

include casework management, vocational evaluation, administrative issues, and utilization of community resources. Prerequisite: permission of the instructor. Cr 3.

**HRD 620 Fundamentals of Counseling Skills**

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

**HRD 621 Fundamentals of Counseling Theories**

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

**HRD 622 Counseling Young Children**

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

**HRD 624 Counseling the Adult Learner**

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

**HRD 625 Counseling the Elderly**

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

**HRD 626 Group Process and Procedures**

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

**HRD 627 Group Counseling**

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

**HRD 628 Introduction to Marriage and Family Counseling**

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

**HRD 631 The Adult Learner**

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

**HRD 632 Program Development in Adult Education and Human Resource Development**

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

**HRD 633 Managing Adult Education and Human Resource Development**

This course examines the administrative and leadership skills necessary for the development and management of units such as adult education centers, continuing education of-

fices, and training and staff development departments in profit and non-profit organizations. Particular attention is given to the development of mission statements, the use of advisory boards, community needs assessment approaches, developing goals and objectives, program development, personnel management, and the development of a management style. Cr 3.

**HRD 634 Materials and Methods in Adult Education**

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

**HRD 635 Training and Staff Development**

This course acquaints the student with the organization, staffing, functions, methods and techniques of training and staff development units in modern work organizations. Attention is given to the development of in-service training programs for key levels of staff such as supervisors, managers, front-line workers, and support staff. Special emphasis is given to the systematic relationship of the training office to other human resource development functions in contributing toward an effective organization and a supportive climate in which to work. Cr 3.

**HRD 636 Continuing Education for the Professions**

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

**HRD 637 Community Education**

Community Education is concerned with major issues and trends affecting the lives of citizens of a community. It measures well-being by the extent to which people have the opportunity to learn all they need to survive and flourish. It is a philosophy; a movement, an approach to school organization and mode of community development. Community education is examined in such forms for relevance to

improved practice of educators and other community human resource developers. The course begins with societal trends bearing upon the quality of community life as context for analysis of community and community change; then, moves to community education process, program, and skills of delivery as studied in specific community settings. Cr 3.

#### **HRD 640 Human Resource Development in Organizational Settings**

Personnel directors, trainers, personnel counselors, career counselors, job designers, employment forecasters, collective bargaining, performance evaluators, and unit managers are among the many organizational members who "develop" the human resources of a work organization. This course examines the theories of human development explicitly or implicitly held by holders of such positions, how divergent or compatible these views are, and the probable effects on employees. The course particularly centers on approaches and tools managers use to develop the human resources of an organization in a conceptually consistent, effective, and humane way. A companion course is Human Resource Development in Community Settings, which looks at the interface between community organizations and their clients, this course focuses on the intersection between organizations and their employees. Prerequisite: none. Cr 3.

#### **HRD 641 Human Resource Development in Community Settings**

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

#### **HRD 645 Summer Institute in Educational Gerontology**

Each summer the Department offers an Institute in Educational Gerontology which supplements and extends the content, on a rotating basis, of each of the five courses in its regular concentrations (HRD 650, 651, 652,

653, and 654). This institute can be taken in combination with the regular courses for credit toward the concentration certificate. Cr 3.

#### **HRD 649 Seminar in Adult Education and Human Resource Development**

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

#### **HRD 650 Social and Public Policy in Aging**

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

#### **HRD 651 The Older Person as an Adult Learner**

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

#### **HRD 652 Coordinating Educational Programs for Older Adults in the Community**

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

#### **HRD 653 The Aging Worker**

This course examines the demographics, assets, and problems of the older worker. The implications for employer and employee will

be studied in such areas as planning for and adjustment to retirement, vocational training, and job modification. Strategies that facilitate adult development and learning will be examined, along with a survey of various resources available to support the needs of the older worker. 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 665 Psychological Measurement and Evaluation**

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

#### **HRD 666 Individual Assessment: A Holistic Approach**

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

#### **HRD 667 Action Research and Evaluation Methodologies**

This course will provide an overview of the role of research and evaluation within organizations and community settings. Techniques in survey development and evaluation strategies will be emphasized. A number of methodologies will be presented, such as: the nominal

group, the Delphi technique, assessment centers, performance appraisal, interviews and observation. Cr 3.

#### **HRD 670 Career Development and Occupational/Educational Information**

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 671 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 673 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 additions. 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. Prerequisites: None. Cr 3.

#### **HRD 676 Human Learning**

The aim of this course is to study the basic principles of learning as they relate to human behavior. Consideration is given to learning theories, related research and their application to the field of education. Emphasis is on student development of a theoretical position which will include a range of methods and approaches for personal educational practice. Cr 3.

#### **HRD 677 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 678 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.

#### **HRDX 680 Institute in Group Counseling**

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

#### **HRD 686 Internship in Counselor Education**

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

#### **HRD 687 Internship in Adult Education**

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

#### **HRD 690 Individual Counseling Practicum**

This course is an intensive supervised experience in applying professional knowledge and

skills to the practice of counseling with individuals. Role playing, video tapes, audio tapes and demonstrations are used in helping each student develop an integrated counseling style. Prerequisite: approval of the supervising professor. Cr 3.

#### **HRD 691 Group Counseling Practicum**

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

#### **HRD 692 Advanced Individual Practicum**

This is the advanced course in counseling practicum. In addition to building on the skills developed in HRD 690 (Practicum), emphasis will be placed on the structural analysis of typical client problems and the use of appropriate strategies of intervention. Other emphases will include the staffing of actual cases and a knowledge of community resources available to the counseling clientele. Cr 3.

#### **HRD 698 Directed Study in Human Resource Development**

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

#### **HRD 699 Independent Study in Human Resource Development**

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

# School of Law

*Dean:* L. Kinvin Wroth; *Associate Dean:* Thomas M. Ward

*Professors:* Carson, Cluchey, Delogu, Friedman, Gregory, Lang, Loper, Potter, Rogoff, Ward, Wroth, Zarr; *Associate Professors:* Brett, Kandoian; *Visiting Associate Professors:* Khoury, Sharon, Soifer; *Lecturers:* Allen, Beirne, Coffin, Harnish, Patterson, Priest, Rieser, Sheppard, Wessler; *Adjunct Professors:* Godfrey, Wernick.

The University of Maine School of Law is a small school that offers high quality legal education to a carefully selected student body. The Law School is fully accredited by the American Bar Association and is a member of the Association of American Law Schools. Established at Portland in 1961, the Law School is the successor to the University of Maine College of Law which existed in Bangor from 1898 to 1920. It is an administrative unit of the University of Southern Maine, but, as the only law school in the state, has responsibilities to the statewide University system. The school is located in a modern building, fully accessible for handicapped students, that provides excellent facilities for classroom and seminar discussion, library research, moot court participation, clinical practice, legal publications, and student activities. The Law School shares the building with the University of Southern Maine's Center for Research and Advanced Study and some University administrative offices.

The Law School offers a three-year, full-time program leading to the juris doctor degree. It has no evening division. The weekly class schedule consists of about 14 hours distributed throughout both morning and afternoon, Monday through Friday, and occasionally on Saturday morning. The Law School has recently established a limited part-time program on an experimental basis.

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

The Donald L. Garbrecht Law Library, named for the law librarian who served the school from 1963 to 1979, contains over 200,000 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 approximately 40 percent are women; the number of students in the School is about 210, making it one of the smallest in the country. The student body is remarkably varied in age, professional and academic experience, and background. Students are drawn from a large number of colleges and universities throughout the nation. The academic quality of entering students has been improving steadily. Classes entering in recent years had a median score on the Law School Admission Test of approximately 37 and a median undergraduate average of B plus.

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

# School of Nursing

*Dean:* Nancy P. Greenleaf; *Associate Dean for Undergraduate Affairs:* Sallie C. Nealand; *Associate Dean for Graduate Affairs:* Kathleen MacPherson  
*Associate Professors:* Dorbacker, Greenleaf, MacPherson, Stern; *Assistant Professors:* Peake-Godin, Thompson

## Master's Program in Nursing

Nursing is an art and a science committed to holistic health care. The process of nursing is also creative and caring and requires the development of knowledge and the use of critical thinking. The nurse must be able to utilize research as a basis for professional nursing practice. In this practice, nurses' roles focus on the prevention of illness and the promotion, maintenance, and restoration of health. Believing strongly that health is promoted by principles of social justice, nurses utilize ethics and political activity to advocate for health policies that alleviate human suffering. Through these activities, the profession of nursing is strengthened. Nursing produces a shared space between humans where intimacy may be experienced, where caring and nurturance may be given and received, where advocacy may be expressed, and where health may be restored.

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

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

Four components of the program are:

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

## Objectives

The master's degree program in nursing prepares professional nurses for roles of leadership in nursing practice, education, and management by enabling the graduate to:

1. synthesize theories and advanced knowledge from nursing; physical, behavioral, and social sciences; and the humanities to support advanced nursing practice and role development;
2. demonstrate competence related to a specific functional role in either education or management;
3. demonstrate initial competence in conducting research in nursing;
4. contribute to nursing knowledge through scholarly inquiry;
5. plan and initiate needed changes in the health care system and in the practice and delivery of health care through appropriate leadership and political strategies;
6. engage in multidisciplinary relationships with consumers and other health professionals for the purpose of improving health care;
7. assume a role in the interpretation of professional nursing to the public;
8. assume responsibility for continued professional and self-development.

## Admission

Please consult the Admissions section of this catalog for general policies and procedures.

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.

### *Requirements for Admission*

Recommendation for admission to the master's degree program in nursing will be based on the following:

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 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. (Scores submitted must be for test taken within the last five years.)
4. Three letters of reference reflecting professional practice and academic achievement.
5. A course in introductory statistics completed within the last five years. (A course in applied statistics is recommended.)
6. Evidence (photocopy) of current licensure as a registered professional nurse and eligibility of licensure in Maine.
7. Evidence (photocopy) of professional liability insurance.
8. One year of clinical nursing practice.
9. A recent course in total health assessment.
10. A completed application.

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

Application for admission and supporting material must be received by the Office of Graduate Affairs by April 1 for a September 1 acceptance.

### *Admission Credit*

Admissions credit is credit earned for graduate coursework completed at the University of Southern Maine prior to matriculation into the graduate program. Admission credit must be approved by the graduate faculty prior to registration and is subject to the condition that a grade of B or better was received for the coursework. A maximum of six credit hours may be approved for admission credit. Exceptions to the maximum must be approved by the program faculty.

### *Special Student Status*

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

### *Transfer Credit*

Transfer credit is credit earned for coursework prior to matriculation in the graduate program. This 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: 1) courses which would not have received graduate credit if taken at the University of Southern Maine; 2) correspondence courses; 3) courses which exceeded time limits prescribed for the program; 4) courses in which a grade lower than a B was received; 5) courses which are inappropriate for inclusion in the student's program of study; 6) courses taken for credit toward a graduate degree program offered by any other college in the University of Southern Maine.

### *New England Regional Student Program*

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

### **Program Requirements**

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

#### **Core**

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

#### **Research**

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

#### **Clinical**

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

#### **Role**

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

#### *Nursing Management*

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

#### *Nursing Education*

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

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

#### *Academic Policies*

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

#### *Continuous Enrollment*

Students enrolled for thesis or project advisement must maintain continuous enrollment, but may take less than six credits per calendar year.

#### *Professional Liability Insurance and Licensure*

Students are required to maintain current professional liability insurance and registered professional nurse licensure.

**NUR 510 Historical Perspectives in the Nursing Profession**

Surveys historic events in nursing and relates selected aspects to current concerns of the profession. Cr 3.

**NUR 520 Ethical Issues in Health Care**

Analysis of selected contemporary ethical issues confronting health care professionals. Examination of major ethical theories and principles and related decision-making models. Cr 3.

**NUR 540 Nutrition: The Older Adult**

A course addressing nutritional needs of the elderly and how these needs can be met; the effects of aging, economics, and social factors on food intake; an overview of disease and disability conditions which respond to diet modifications. Cr 3.

**NUR 560 Dimensions of Aging**

This course offers the opportunity to explore differences between the true effects of aging and the various processes that affect persons as they grow older, management of specific health problems of the elderly, and resources available for elder care. Emphasis will be placed on nursing role and responsibility in meeting the unique needs of the elderly. Graduate standing or permission of the instructor is required. Cr 3.

**NUR 603 Nursing Theory and Knowledge Development**

This course explores contemporary issues in theory development and the social production of knowledge for nursing. Students will examine the social and historical context of knowledge development in nursing with an emphasis on the relationship between theory, research and conduct in a practice discipline. Cr 3.

**NUR 604 Nursing Research**

The research process in nursing will be explored with emphasis on the nature of inquiry in a practice discipline. An overview of conventional and alternative paradigm approaches to research will be provided. Students will critically examine contemporary questions of ethics and social responsibility in research. Cr 3.

**NUR 605 Nursing Role and Leadership**

This course will examine the historical, social and political context of nursing's emerging leadership patterns. Obstacles to effective leadership will be emphasized such as powerlessness, oppression and sex role stereotyping. Creative strategies for facilitating change will be explored. 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 mas-

ter's prepared nurse in influencing and operationalizing policy. Cr 3.

**NUR 619 Concepts in Nursing Management**

This course introduces students to major concepts in financial and human resource management in health care organizations. Emphasis is on synthesis of organizational and nursing theories in the management process. Cr 2.

**NUR 620 Practicum in Nursing Management**

This course provides for application principles through guided experiences in health care organizations. Focus is on organizational analysis and problem solving in nursing. Prerequisite: NUR 619. Cr 5.

**NUR 631 Concepts in Nursing Education**

Introduces students to major concepts of nursing education such as philosophies, curriculum development, evaluation methods, and education models. Included are emerging instructional technologies and trends in professional education. Cr 2.

**NUR 634 Practicum in Nursing Education**

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 strategies of teaching, role interpretation, and functions common to educational roles. Prerequisite: NUR 631. Cr 5.

**NUR 651 Advanced Community Health: Theory and Practice I**

This course focuses on the concept of community assessment/analysis as the basis for meeting the needs of families and groups. Students will conduct a comprehensive community assessment. 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 have the opportunity to work in multidisciplinary settings. Cr 5.

**NUR 690 Thesis/Project Seminar**

A research seminar in which the student refines the thesis/project proposer. Cr 1.

**NUR 692 Thesis**

Completion of thesis under the guidance of a faculty thesis committee. Prerequisite: NUR 690. Cr 5.

**NUR 693 Project**

Completion of project under the guidance of a faculty project committee. Prerequisite: NUR 690. Cr 5.

**NUR 695 Directed Study**

A student will select a faculty member to guide readings related to a chosen topic. A research paper may be required. Credit allocation up to 3 credits is negotiated with faculty. Cr var.

# Public Policy and Management Program

*Director:* Stephen T. Honey

*Professors:* Clary, Delogu, Maiman; *Associate Professor:* Silkman; *Assistant Professors:* Coburn, Hamilton, LaPlante, Loudon; *Adjunct Professor:* Goettel

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 elsewhere.

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 resolution of problems is by nature practical, requiring decisions and action, hence the importance of ability to apply theoretical knowledge effectively to policy and management activities. Interdisciplinary studies and practical experiences in the application of knowledge are major features of the Public Policy and Management Program.

The curriculum and learning environments of the program maintain a healthy and dynamic tension between the realities of clinical work and the rigors of academic pursuits. Both students and faculty seek stimulating and productive balances:

- among the disciplines of economics, sociology, political science, philosophy, and law;
- between the theoretical studies of the classroom and the practical applications of the field project and internship;
- between the generic skills of analysis, research, and management, and more specialized knowledge of a particular substantive policy field.

Thus, the program seeks to graduate those who understand the social, economic, political, and organizational contexts in which policy is developed and implemented; who comprehend the use and limitations of various quantitative tools; who know the principles of human and financial resource management; who can articulate ideas clearly, both orally and in writing; and who are competent to manage effectively in one of the broad substantive areas of concentration provided in the program.

Where will such graduates be employed? A master of arts in public policy and management prepares individuals for careers in government, nonprofit organizations, and the private sector. The program educates future leaders. Over time some graduates will become local and state policy leaders in such fields as planning, social services, court administration, education, business regulation, and legislation. They will work as policy analysts, agency directors, and town and city managers. Others will work in management and consulting firms, regional planning offices, institutions of basic and higher education, and some will be elected officials. They will teach, write, administer, and advise.



Job opportunities for graduates are not limited to nonprofit organizations and government. Some students will find work in major corporations in the areas of strategic planning, personnel management, government relations, and corporate philanthropy.

Although the program is based in Maine and will use the region as its laboratory for analyzing public policy problems, the knowledge and skills that students develop will be applicable in localities and settings throughout the nation.

The two-year master of arts in public policy and management requires 48 credit hours of academic coursework, plus a summer internship for those students with little or no public sector work experiences. Students may receive course credit or waiver for prior graduate study or professional experience.

The core courses are organized in two strands to include both policy analysis and public management approached from an interdisciplinary perspective. A substantive concentration may be achieved through elective courses and field experiences. It is through the concentration and associated field work that students learn to apply the disciplinary knowledge and skills attained in the core courses to the substance of a particular policy field.

To be successful the most knowledgeable and decisive leader must have the ability to transmit information effectively. Therefore, the program pays significant attention throughout to honing students' communication skills. It emphasizes skills in writing memoranda, preparing technical analysis, presenting oral advocacy and formal testimony, developing nontechnical communications for the media and public consumption, as well as giving verbal instructions and motivational sessions.

### ***The Core Curriculum***

At the center of the curriculum is a core of study common to both policy analysis and public management. These 30 credit hours are required for all students and define a body of knowledge and skills considered basic preparation for successful performance as a leader in any field of public policy and management.

Core courses include the study of public policy from the disciplinary perspectives of economics, political science, law and philosophy; research methods of statistics and evaluation; and the study of dynamics of managing in the public sector and government budgeting.

PPM 621 Foundations of Public Policy

PPM 622 Applied Policy Analysis

PPM 611 Economic Analysis

PPM 612 Political Analysis

PPM 613 Law and Public Policy

PPM 614 Ethics and Public Policy

PPM 601 Quantitative Analysis

PPM 602 Evaluation Methods

PPM 630 Foundations of Public Management

PPM 632 Government Budgeting

#### ***Concentrations and Electives***

In addition to the core, students choose 18 credit hours of electives, 9 or more of which may be used to develop a concentration in policy analysis, public management, a substantive policy area defined by the program or an area proposed by the student with advisor/program approval. Concentrations currently offered include policy analysis, public management, health and human services, and environment and natural resources.

#### ***Policy Analysis Concentration***

PPM 603 Advanced Research Methods

PPM 623 Advanced Policy Analysis

PPM 651 Workshop in Policy Analysis

#### ***Public Management Concentration***

PPM 631 Organizational Dynamics

PPM 634 Financial Management

PPM 635 Advanced Topics in Finance  
PPM 650 Workshop in Public Management

Health and Human Services  
PPM 670 Issues in Health Care Policy  
PPM 671 Health Planning and Regulation  
(other courses being developed for '88-'89)

Environment and Natural Resources  
PPM 660 Land Use, Environmental Law and Policy  
PPM 661 Pollution Control Policy  
(other courses being developed for '88-'89)

Additional electives, including managing America's cities, state and local government, and other offerings through the University, may be selected to develop a total program that meets individual personal and professional needs.

#### *Internship*

An internship is required for those students with little or no prior experience. It is offered on a noncredit basis.

### **Course Sequencing**

#### *First Year*

##### *Fall*

PPM 611 Economic Analysis  
PPM 613 Law and Public Policy  
PPM 621 Foundations of Public Policy  
PPM 630 Foundations of Public Management

##### *Spring*

PPM 601 Quantitative Analysis  
PPM 612 Political Analysis  
\* PPM 622 Applied Policy Analysis  
\* PPM 631 Organizational Dynamics  
PPM 632 Government Budgeting

*Summer* (rotating selection of core courses)

#### *Second Year*

##### *Fall*

PPM 602 Evaluation Methods  
\* PPM 623 Advanced Policy Analysis  
\* PPM 634 Financial Management

##### *Spring*

\* PPM 603 Advanced Research Methods  
PPM 614 Ethics & Public Policy  
\* PPM 635 Advanced Topics in Finance  
\* PPM 650 Workshop in Public Management  
\* PPM 651 Workshop in Policy Analysis

#### *Electives*

##### *Fall*

LAW 616 State & Local Government  
PPM 661 Pollution Control Policy  
PPM 670 Issues in Health Care Policy  
PPM 690 Managing American's Cities

##### *Spring*

PPM 660 Land Use, Environmental Law & Policy  
PPM 671 Health Planning & Regulation

\*Courses with prerequisites

**Joint Degrees  
Program:  
Law and  
Public Policy**

The joint degrees program offers students an opportunity to earn both a law degree and a public policy and management degree 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.

**Lectures, Seminars,  
and Conferences**

The public policy forum offers regularly scheduled lectures and seminars during the academic year. Local, state, and national leaders, both elected and appointed, address issues of current importance. Each fall, the faculty invites leaders and policy makers from Maine and the Northeast to a one-day conference on an issue of significance to state and local government. The Program sponsors other conferences during the year as challenges and opportunities arise.

The Community Leadership Institute, sponsored by the Public Policy and Management Program in cooperation with the Department of Community Programs, is a three-month noncredit course of study designed for current and potential volunteer leaders of public and nonprofit boards, committees, and commissions. The purpose of the Institute is to prepare participants to make a meaningful contribution in the volunteer sector of their community by providing them with the following:

- greater knowledge of economic, political, legal, and social frameworks of southern Maine
- heightened awareness of key public policy issues affecting development in southern Maine and their interdependencies
- greater understanding of the dynamics of change and how to influence it
- improved skills of communication, analysis, and problem solving
- increased self-awareness and self-confidence
- opportunities for networking with community leaders of diverse styles from a wide range of organizations

Those interested in participating in the next session of the Institute should contact the Department of Community Programs (780-4045) or the Public Policy and Management Program (780-4380) to receive application materials and deadlines.

**Admissions**

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—these are the attributes we seek 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 20 and 25 students will be admitted each year to begin in the fall semester. They may choose either full- or part-time study. All required courses are offered after 4:00 p.m., enabling mid-career professionals an opportunity to combine work and graduate studies. All students must complete requirements for the degree within six years.

Applicants should present a completed application to the University of Southern Maine, Office of Graduate Affairs, 96 Falmouth St., Portland, Maine 04103, with a nonrefundable application fee of \$15.00. Make checks payable to the University of Southern Maine. In order to assure full consideration, applicants should file the completed application on or before **April 1**. Supporting credentials include:

- Official transcripts of all previous college work;
- Official scores for the Graduate Record Examination;

Three letters of recommendation from persons able to comment from direct knowledge on the applicant's ability to pursue graduate study and on the applicant's commitment to and promise of success in public service.

Applications received after April 1 may be considered on a space-available basis. The program will approve a limited number of early admissions prior to April 1 for outstanding applicants whose materials are complete. Most applicants are notified by the Office of Graduate Affairs from May 1 to May 30.

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#### **PPM 601 Quantitative Analysis**

Introduces students to the use of quantitative methods in the analysis and evaluation of public policy. Emphasis is placed on the application of probability, statistics, and data analysis techniques. Topics include sampling, estimation, hypothesis testing, forecasting, and the analysis of correlation and causality. Particular attention is paid to organizing and reducing large and complex data sets for the purpose of drawing inferences about causal effects. Computer exercises will be used to illustrate the application of these topics in such areas as educational finance, manpower training programs, and hospital cost containment.

Cr 3.

#### **PPM 602 Evaluation Methods**

Introduces students to the methods and techniques used to assess effectiveness and monitor the performance of programs, whether provided directly by a 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 for obtaining evaluators is covered. Prerequisite: PPM 601.

Cr 3.

#### **PPM 603 Advanced Research Methods**

Begins where Statistics leaves off and extends the student's understanding of quantitative policy analysis in the areas of multi-variate statistics, time series analysis, and forecasting. Students will be expected to perform secondary analyses of existing data bases and to review and critically evaluate published work in this field. In addition, all students will complete a semester-long project involving the collection and statistical analysis of original data relating to a public policy issue or concern.

Cr 3.

#### **PPM 611 Economic Analysis**

Introduces students to fundamental economic concepts and illustrates their application in a wide range of public policy problems. The central theme is the usefulness and limitations of economic analysis in the public policy formation and evaluation process. Particular attention is paid to the theory of consumer behavior, markets and market processes, the nature and causes of market failure and strategies, and models for government intervention.

Application exercises and case materials are drawn from a variety of substantive policy areas such as the agricultural price support system and government transfer programs. Previous background in economics, especially microeconomic theory, is most helpful. Cr 3.

#### **PPM 612 Political Analysis**

Examines the ways key political variables influence the formulation and implementation of public policy. The course views politics as a collective process for distributing public and private goods. Attention is given to the impact of forces and constituencies outside as well as inside government, including public opinion, elections, parties, interest groups, and leadership styles. Differences among political institutions, and the effects of these differences on policy outcomes, are also explored. Course materials involve national politics and students analyze the linkages between politics and policies through individual studies of state and local decision making.

Cr 3.

#### **PPM 613 Law and Public Policy**

Introduces the student to legal analysis and emphasizes the role of the law in the choices faced by public policy makers. Students will examine materials ranging from constitutional provisions to statutes, regulations, and case decisions. The course will consider social values and custom; how these factors limit and shape the law and then directly or indirectly shape the options of policy makers. The course provides an introduction to the fundamentals of legal research and insight into judicial and administrative processes. There is some exposure to substantive law particularly in the areas of jurisprudence, constitutional law, procedure, and administrative law.

Cr 3.

#### **PPM 614 Ethics and Public Policy**

Examines the ethical issues involved in the formulation, implementation, and evaluation of public policy. The premise of the course is that nearly all public policy decisions contain an ethical dimension and that critical attention needs to be paid to this component. Competing models of ethical analysis are investigated and applications explored in the context of specific policy case studies. Among questions to be addressed are: Can one speak in a clear, precise manner about the "ethical obligations" of public officials? If so, how specifically and on what basis? Are there inherent conflicts between the ethical obligations of individuals as private citizens and individuals as public servants? Is there any cogency to the

claim that different social roles yield different ethical obligations? Should it be a goal of public policy to define and enforce community ethical standards? Cr 3.

#### **PPM 621 Foundations of Public Policy**

Introduces students to a number of issues that help shape the process and substance of public policy making in the United States, presented from a variety of disciplinary perspectives. Students will participate in a mock constitutional convention exercise. Cr 3.

#### **PPM 622 Applied Policy Analysis**

This is 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. Cr 3.

#### **PPM 623 Advanced Policy Analysis**

Presents a series of modules on selected topics which are fundamental to policy analysis. Among the topics to be covered are cost-benefit analysis, decision analysis, and public finance. Since this course is scheduled near the completion of each student's stay in the program, the previous coursework will serve as a solid foundation and each of the modules will be delivered at a fairly high-powered level. Cr 3.

#### **PPM 630 Foundations of Public Management**

Designed to introduce both policy and management students to the concepts, theories, and problems of managing in the public sector. As an overview course, Foundations of Public Management is required for both policy and management track students. Cr 3.

#### **PPM 631 Organizational Dynamics**

Examines a variety of topics related to the understanding, management, and analysis of organizations. At the broadest level, the class is an examination of the dynamic relationship between the way organizations are structured, the behavior that occurs within them and the external environment. Many of the topics focus on basic issues of organizational theory. Students will have the opportunity to apply organizational concepts to actual problems that public and nonprofit managers face on a day-to-day basis. Students will also gain in the ability to apply specific techniques of managerial analysis. The approaches that will be covered draw on quantitative analysis, group dynamics, forecasting, modeling, and personnel assessment. Cr 3.

#### **PPM 632 Government Budgeting**

Examines the roles and impacts of resource allocation and resource management decision making on the formation, implementation, and effectiveness of public policies and pro-

grams. Topics include the budget process, budget management, tools and techniques of budgeting, the impact of scarcity on budgeting, basic public finance concepts, equity and intergovernmental fiscal relations. The integration of budgetary concepts and approaches with the reality of the economic and political environment in which budgetary decisions must be made is emphasized. The course format includes lectures, seminars, case discussion, and simulations. Prerequisite: PPM 611. Cr 3.

#### **PPM 634 Financial Management**

Introduces concepts from accounting and financial management which are relevant to the management of the financial condition of governments. Emphasis of the course is on analysis of factors and conditions, both endogenous and exogenous, which may increase or diminish the governmental unit's fiscal flexibility and health. Topics include fund accounting, understanding financial relationships as expressed in reports, analyzing financial condition and strategies for improving financial performance. Prerequisite: PPM 632. Cr 3.

#### **PPM 635 Advanced Topics in Finance**

Looks at various issues in budgeting, financial management and/or public finance. Actual course content will vary depending upon instructor and current problems or concerns. Focus of the course is the northern New England region. Possible topics include fiscal impact analysis, capital budgeting and innovative financing approaches, forecasting expenditures and revenues, economic development, equity-based finance. Prerequisite: PPM 634. Cr 3.

#### **PPM 650 Workshop in Public Management**

Provides field-based experiences in public management. Working individually or in a small group, students complete a project for a government or community agency. Designed to be a capstone learning experience, the project is completed at or near the completion of the student's course of study. All projects are expected to be of professional quality. Students meet with others enrolled in the course several times during the semester to discuss projects. Cr 3.

#### **PPM 651 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. These problems/issues will be quantitative in nature and will require the sophisticated application of the tools and techniques acquired by the students. In this respect, the course will serve as a capstone course for students in the policy analysis strand. Cr 3.

**PPM 660 Land Use, Environmental Law and Policy**

Examines the origins of legal power to address land use issues; the types of land use problems that are being encountered in the society; and some of the regulatory responses to these problems that have been fashioned at state and local governmental levels. While not focusing on Maine law exclusively, a number of land use situations which have arisen in Maine will be examined as examples of things happening nationally. The course will emphasize interdisciplinary approaches to land use problems and will not simply ask "what is the law, what are we doing?" but will also ask: "what should the law be, what new approaches seem worth trying, where are we going?" 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 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. The course focuses on the goals, producers, consumers, organization and financing of the system. Students will discuss how the organization and financing of

health care has changed and the effects of these changes on the fundamental policy problems of cost, access to care, and quality of care. Current problems, issues, and policy alternatives will be explored in each of these problem areas. Cr 3.

**PPM 671 Health Planning and Regulation**

Introduces students to the major concepts of planning and regulation and to discrete issues, skills and methods in the field. In addition to covering the practical methods and techniques for planning and regulatory hospital, physician, long-term care, and other services, the course would seek to give students an understanding of the strengths and weaknesses of both planning and regulation and the so-called competition alternatives. Prerequisite: PPM 670. Cr 3.

**PPM 690 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 695 Independent Study**

Cr 3.

# Center for Research and Advanced Study

*Director:* Robert J. Goettel

The purpose of the Center for Research and Advanced Study is to contribute to the development of Maine's economic, social, and environmental well-being through applied research and advanced study. The Center serves and assists governments, industries, institutions, and the people of Maine to solve policy, operational, organizational, and employee problems. The staff of the Center and associated faculty work in interdisciplinary teams to address issues related to economic development, the formation and management of business enterprises, health and human services, education, marine resources, and state and local government. Since the Center's inception in 1972, projects have been supported by numerous state and local agencies in Maine, other New England states, the federal government, private foundations, and the business community.

Staff of the Center come from a wide range of research and practitioner roles in state, local, and federal governments, private business, not-for-profit organizations and institutions, research and development organizations, and university appointments. The academic fields in which the Center staff have been trained include economics, sociology, psychology, political science, business administration, public administration, law, education, health, social work, communications, and counseling.

The Center for Research and Advanced Study is organized in four cooperating institutes.

## Human Services Development Institute

*Acting Director:* Andrew F. Coburn

The Human Services Development Institute's (HSDI) research program focuses on policy, research and analysis, and technical assistance to improve the effectiveness and efficiency of public and private human service systems. Health care; services for children, youth, aging, and families; special needs of the handicapped; and alcoholism are among the areas targeted for research and technical assistance. Interdisciplinary teams are assembled to carry out activities supported typically by state and federal grants and contracts. HSDI has developed special expertise in program evaluation, research policy analysis, financial and cost analysis, data and information management, and human services management training.

## Marine Law Institute

*Director:* Alison Rieser

The Marine Law Institute is committed to research and education in the field of coastal and ocean resource law and policy. Its research considers interjurisdictional problems in marine resource management, the use of scientific knowledge in marine law, and issues affecting the resources of the Gulf of Maine. The Institute is jointly sponsored by the University of Maine School of Law and the Center for Research and Advanced Study. It is a component of the Center for Marine Studies of the University of Maine at Orono. Its policy research and educational projects are supported by grants and contracts from government agencies and private foundations. The quarterly publication, *Territorial Sea*, is partially supported by subscribers.

## New Enterprise Institute

*Director:* Richard J. Clarey

The New Enterprise Institute was formed in 1974 as a business development and research project in the Center for Research and Advanced Study.

Supported by both public and private sources, the New Enterprise Institute operates a Technical Assistance Center which provides technical and other types of assistance to jurisdictions and organizations in the state. NEI also engages in applied research activities directed at supporting local, regional, and state economic development strategies.

## Small Business Development Center

*Director:* Warren G. Purdy

The Small Business Development Center 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. 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. On a statewide basis, 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 Development Office, the University of Southern Maine, and local sponsoring organizations.

In addition to the four institutes the Center provides research and development services in several program areas including economic studies and organized camping. Persons interested in additional information about these programs may contact the Center for Research and Advanced Study, University of Southern Maine, 96 Falmouth Street, Portland, Me 04103, (207) 780-4411

## Summer Session

*Director:* Susan M. Silvermail

During the summer the University offers over 300 credit and noncredit courses, and a number of institutes and programs for graduate and undergraduate students. The Stonecoast Writer's Conference, an Elderhostel program, economic education institute for the classroom teacher, and a music camp for talented high school musicians, represent just a few of the many programs available for people of all ages. Over 8,000 people attend summer conferences held in University facilities, in addition to the 3,000 students who enroll in academic courses. Cultural events such as musical theatre productions, concert series, and poetry readings are also featured. Classes are held days and evenings in several schedule formats. The campus offers residence hall accommodations and meals at reasonable rates. Child care is also available for faculty, staff, students, and conference participants.

For further information, contact the Summer Session Office, University of Southern Maine, 106 Payson Smith, Portland, Me. 04103 or telephone 780-4076.



# Division of Public Service

*Director:* William G. Mortensen

The Division of Public Service is responsible for the development, coordination, and support of all noncredit programming at the University. The Division's mission is to broaden educational access and learning opportunities in southern Maine through programs that respond to practical community needs. The Division offers Continuing Education Units (CEUs) for many courses offered in the various departments. CEUs are a nationally accepted measurement of participation in certain noncredit courses.

## Department of Continuing Education for Business

*Director:* Donald J. Clark

The Department of Continuing Education for Business assists southern Maine employers by offering a variety of seminars, courses, and programs to meet identified needs. Through its program advisory groups, the Department involves business representatives in the planning, implementation, and evaluation of its offerings. These individuals represent nearly all sectors of the regional economy as well as small, medium, and large firms. The instructional staff consists of faculty and staff from the University and individuals from business. The expertise represented by this extensive resource covers nearly every potential topic of interest to area organizations. All offerings of the Department are noncredit and carry CEUs when they meet the requirements of certificate programs.

## Department of Continuing Education for Nursing and Health Professions

*Director:* Mary Ann Rost

The Department provides continuing education offerings for health professionals such as nurses, pharmacists, physical therapists, dietitians, and others at locations throughout Maine. Programs are offered in a variety of formats including workshops, seminars, and evening courses. All programs are awarded Continuing Education Units (CEUs) and are approved by professional associations such as the Maine State Nurses Association, Maine Commission of Pharmacy, and others.

## Department of Community Programs

*Director:* Joanne K. Spear

The Department offers a wide range of programs including professional development in selected areas, personal enrichment and career and skill enhancement. Certificate programs are available to prepare people for roles as legal assistants, personal computer coordinators and community leaders.

## Department of Conferences

*Director:* Kathleen LeBel

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

## Lifeline Adult Fitness Programs

*Director:* Robert Folsom

Lifeline is a comprehensive approach to total fitness through various programs of prevention, intervention, and rehabilitation. Lifeline also promotes adult learning through noncredit courses in stress management, smoking cessation, and nutrition/weight control. All Lifeline activities are designed to promote positive healthy lifestyles through education and exercise.

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Further information about these programs may be obtained by contacting the Division of Public Service, University of Southern Maine, 68 High Street, Portland, ME 04101, (207) 780-4030

Departments offering noncredit programs through the USM schools and colleges for practicing professionals include: *The Professional Development Center* of the College of Education; the *Center for Real Estate Education* of the School of Business, Economics and Management; and the *Continuing Legal Education* unit of the University of Maine School of Law.

## Convocation

*Convocation Scholar:* Merle W. Loper

Each year the University of Southern Maine sponsors a year-long series of lectures, debates, workshops, programs, and cultural events focused on an important contemporary theme. Previous themes have been "The City," "Changing Roles of Women and Men," "The Age of the Computer," "Peace and War in the Nuclear Age," "The Aging of America," and "The Arts in Our Lives." The 1987-88 convocation topic is "The Constitution: Roots, Rights, Responsibilities."

This year's Convocation will encourage us to trace the Constitution's evolution through amendment and judicial interpretation; to look to the future of this noble American experiment, not intended to be infinitely elastic but intended, as Chief Justice Marshall phrased it, "to endure for ages to come, and, consequently, to be adapted to the various crises of human nature." It will also provide opportunity to examine the Constitution's role in our personal and professional lives and to consider our individual and institutional responsibilities as citizens governed under its aegis.

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

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

# Administration of the University of Southern Maine

*Administrative Organization as of June 1, 1987*

*President:* Patricia R. Plante, 228 Deering Avenue, Portland tel: 780-4480  
*Provost:* Helen L. Greenwood, 228 Deering Avenue, Portland tel: 780-4485  
*Executive Assistant to the President:* William B. Wise, 228 Deering Avenue, Portland tel: 780-4482  
*Executive Director for Financial Resources:* Samuel G. Andrews, 11 Granite Street, Portland tel: 780-4484  
*Executive Director for Human Resources:* Beth I. Warren, 102 Corthell Hall, Gorham tel: 780-5486  
*Executive Director for University Relations:* Alyce S. O'Brien, 209 Deering Avenue, Portland tel: 780-4440

## *Administrative Offices Serving Students*

### *Admissions*

Dennis P. Farrell, Director

### *Advising and Academic Information*

Richard H. Sturgeon, Director

### *Alumni Association*

Anne M. Theriault, Director

### *Applied Science, School of*

Brian C. Hodgkin, Dean

### *Arts & Sciences, College of*

Stephen J. Reno, Dean

### *Athletics*

Richard A. Costello, Director

### *Business, Economics and Management, School of*

Richard J. Clarey, Dean

### *Business Office*

William B. Bullock, Business Manager

### *Child Care Services*

Stephen F. Lehane, Director

### *Counseling & Career Development*

Ira Hymoff, Director

### *Education, College of*

Dorothy D. Moore, Dean

### *Educational Media Service*

Ronald W. Levere, Director

### *Educational Services*

John Keysor, Dean

### *Financial Aid, Student*

Richard R. Campbell, Director

### *Graduate Affairs, Office of*

David L. Silvermail, Associate Provost

### *Law, University of Maine School of*

L. Kinvin Wroth, Dean

### *Library*

George Parks, Librarian

### *Nursing, School of*

Nancy P. Greenleaf, Dean

### *Off-Campus Instruction and Academic Support,*

### *Division of*

John W. Bay, Director

### *Police and Safety*

Coin P. Hauk, Director

### *Public Policy and Management*

Stephen T. Honey, Director

### *Public Service, Division of*

William G. Mortensen, Director

### *Registrar's Office*

Steven Rand, Registrar

### *Research and Advanced Study, Center of*

Robert J. Goettel, Director

### *Residence Life*

Joseph M. Austin, Director

### *Student Affairs*

Domenica T. Cipollone, Director

### *Summer Session*

Susan M. Silvermail, Director

### *Testing and Assessment, Office of*

David L. Silvermail, Director

## Graduate Faculty

- Amoroso, Henry C., Jr.** (1982) Associate Professor of Education; St. Michael's College, B.A., 1966; Goucher College, M.Ed., 1967; University of Wisconsin, Ph.D., 1978
- Andrews, Bruce H.** (1974) Director of the Graduate Program in the School of Business, Economics, and Management and Associate Professor of Business Administration; University of Connecticut, B.A., 1967; Polytechnic Institute of New York, M.S., 1969; Ph.D., 1980
- Beirne, Piers** (1982) Lecturer, School of Law and Professor of Criminology; Essex University (England), B.A., 1971; Durham University (England), Ph.D., 1975
- Boyle, Conrad L.** (1982) Associate Professor of Marketing; United States Military Academy, B.S., 1959; University of Florida, M.B.A., 1964; University of Washington, Ph.D., 1982
- Brady, E. Michael** (1984) Associate Professor of Adult Education; St. Mary's Seminary and University, A.B., 1971; the University of Connecticut, M.S.W., 1977; St. Mary's Seminary and University, M.Div., 1980; the University of Connecticut, Ph.D., 1982
- Brett, Tybe A.** (1983) Associate Professor of Law, School of Law; Barnard College, B.A., 1977; Columbia University, J.D., 1979
- 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
- Carson, Loftus C., II** (1980) Professor, School of Law; Cornell University, B.S., 1968; Princeton University, M.P.A., 1970; Harvard University, J.D., 1973; University of Pennsylvania, M.B.A., 1980
- Clarey, Richard J.** (1979) Dean, School of Business, Economics and Management and Associate Professor of Management and Director, New Enterprise Institute; Bowdoin College, B.A., 1961; Dartmouth College, M.B.A., 1963; Cornell University, Ph.D., 1968
- Clary, Bruce B.** (1987) Professor of Public Policy and Management; University of California, B.A., 1968; University of Southern California, M.A., 1970; Ph.D., 1974
- Cluchey, David P.** (1979) Professor of Law and Public Policy; Yale University, B.A., 1968; State University of New York, M.A., 1970; Harvard Law School, J.D., 1973
- Coburn, Andrew E.** (1981) Assistant Professor of Public Policy and Management; Acting Director, Human Services Development Institute; Brown University, A.B., 1972; Harvard University, Ed.M., 1975; Brandeis University, Ph.D., 1981
- Cohen, Libby G.** (1980) Associate Professor of Special Education; University of Connecticut, B.A., 1967; Russell Sage College, M.S., 1971; Boston University, D.Ed. 1977
- Conforti, Joseph A.** (1987) Director of New England Studies and Professor of History; Springfield College, B.S., 1967; Brown University, A.M., 1972; Ph.D., 1975
- Conway, Jeremiah P.** (1978) Associate Professor of Philosophy; Fordham University, B.A., 1970; Yale University, M. Phil., 1974; Ph.D., 1978
- Coogan, William H., III** (1972) Associate Professor of Political Science; Boston College, B.A., 1963; Rutgers, M.A., 1964; University of North Carolina, Ph.D., 1971
- Curry, James A.** (1985) Associate Professor of Education; Whitworth College, B.A., 1969; University of Georgia, M.Ed., 1973; Ed.D., 1985
- Davis, Carol Lynn** (1982) Associate Professor of Education; University of Maine at Orono, B.A., 1968; M.S., 1977; Ph.D., 1983
- Deady, John E.** (1981) Associate Professor of Education; Amherst College, B.A., 1947; University of Massachusetts, M.S., 1950; Harvard University, Ed.D., 1956
- Delogu, Orlando E.** (1966) Professor of Law and Public Policy, School of Law; University of Utah, B.S., 1960; University of Wisconsin, M.S., 1963; J.D., 1966
- Dorbacker, Beatrice M.** (1974) Associate Professor, School of Nursing; Columbia University, B.S., 1950; M.A., 1957; Boston University, Ed.D., 1973
- Downey, Loren W.** (1974) Director, University College of Education, and Professor of Education; Drake University, B.A., 1949; University of Oregon, M.S., 1950; University of Arizona, Ed.D., 1966
- Eastman, Joel W.** (1970) Professor of History; University of Maine at Orono, B.A., 1962; M.A., 1965; University of Florida, Ph.D., 1973
- Foster, Cherie** (1982) Assistant 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
- Gabrovsky, Peter N.** (1985) Associate Professor of Computer Science; Sofia University (Bulgaria), B.S., 1965; Warsaw University (Poland), M.S., 1968; Syracuse University, Ph.D., 1976
- Grange, Joseph** (1970) Professor of Philosophy; St. Joseph's College, B.A., 1961; Fordham University, M.A., 1965; Ph.D., 1970
- Greene, Charles N.** (1986) Professor of Organizational Behavior and Management; The Ohio State University, B.S., 1959; M.B.A., 1961; Ph.D., 1969

- Greenleaf, Nancy P** (1981) Dean and Associate Professor of Nursing; Boston University, B.S., 1964; M.S., 1967; D.N.Sc., 1982
- Gregory, David D.** (1972) Professor, School of Law; Duke University, B.A., 1964; University of Maine, LL.B., 1968; Harvard University, LL.M., 1972
- 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
- Hamilton, Michael S.** (1985) Assistant Professor of Political Science; Colorado State University B.A., 1974; M.A., 1977; Ph.D., 1984
- Healy, Phyllis E** (1987) Associate Professor of Nursing; Hunter College, B.S., 1971; University of California, M.S., 1972
- Heath, John R.** (1976) Associate Professor of Computer Science; University of Maine at Orono, B.A., 1968; M.A., 1970; University of Minnesota, M.S., 1976; Ph.D., 1982
- Hodgkin, Brian C.** (1976) Associate Professor of Electrical Engineering; University of Maine Orono, B.S., 1964; Johns Hopkins University, Ph.D., 1969
- Hodson, D. Bradlee** (1973) Associate Professor of Accounting; University of Maine at Orono, B.S., 1968; University of Pennsylvania, M.A., 1969; C.P.A. (Massachusetts)
- Houlihan, John J.** (1975) Associate Professor of Business Law; Holy Cross College, A.B., 1969; Harvard Law School, J.D., 1972
- Hunt, H. Draper, III** (1965) Professor of History; Harvard University, B.A., 1957; Columbia University, M.A., 1960; Ph.D., 1968
- 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
- Khoury, Colleen** (1985) Visiting Associate Professor of Law; Colby College, B.A., 1964; Illinois Institute of Technology/Chicago-Kent College of Law, J.D., 1975
- Lang, Michael B.** (1983) Professor, School of Law; Harvard University, A.B., 1972; University of Pennsylvania, J.D., 1975
- Loper, Merle W.** (1971) Professor, School of Law; Northwestern University, B.A., 1962; University of Chicago, J.D., 1965; Harvard University, LL.M., 1971
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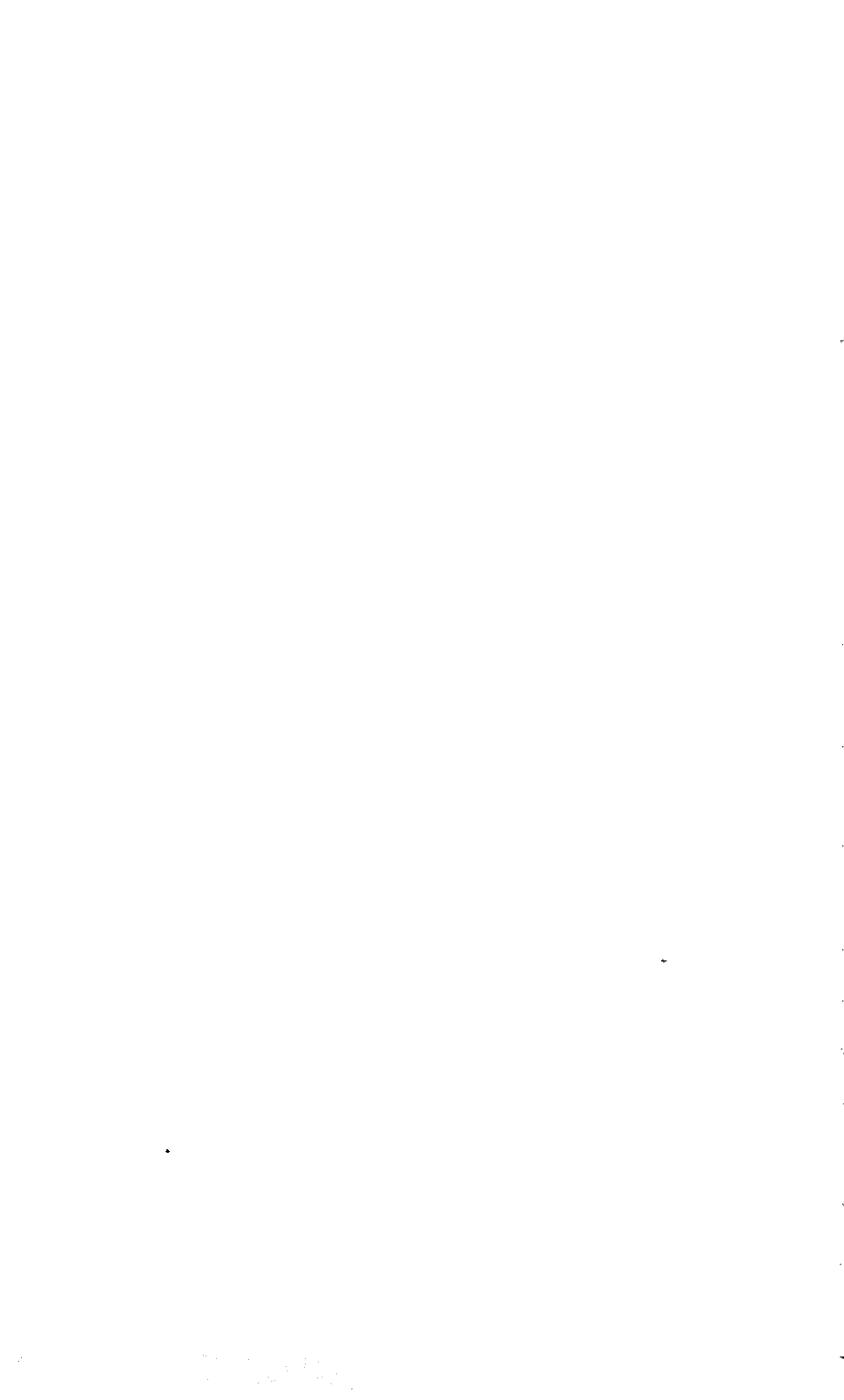
- Richardson, Linda L.** (1986) Assistant Professor of Finance; Connecticut College, B.A., 1970; Montana State University, M.S., 1974
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- Smith, Charles E.** (1969) Associate Professor of Education; Westfield State College, B.S., 1960; University of Massachusetts, M.S., 1963; Ed.D., 1969
- Smith, James W.** (1986) Associate Professor of Applied Science; Pennsylvania State University, B.S., 1961; M.S., 1963; Ph.D., 1967
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- Stern, E. Crista** (1985) Associate Professor of Nursing; University of Nevada, B.S., 1962; Tulane University, M.P.H., 1970; D.P.H., 1976
- Stevens, Reid D.** (1985) Assistant Professor of Education; Suffolk University, B.S., 1971; University of Maine at Orono, M.Ed., 1973; University of Georgia, Ph.D., 1981
- Sturmer, William** (1978) Professor of Management; Fordham College, B.S.S., 1957; University of Wisconsin, M.A., 1960; Fordham University, Ph.D., 1966
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- Wroth, L. Kinvin** (1964) Dean and Professor, School of Law; Yale, B.A., 1954; Harvard, J.D., 1960
- Zarr, Melvyn** (1973) Professor, School of Law; Clark University, A.B., 1958; Harvard University, LL.B., 1963

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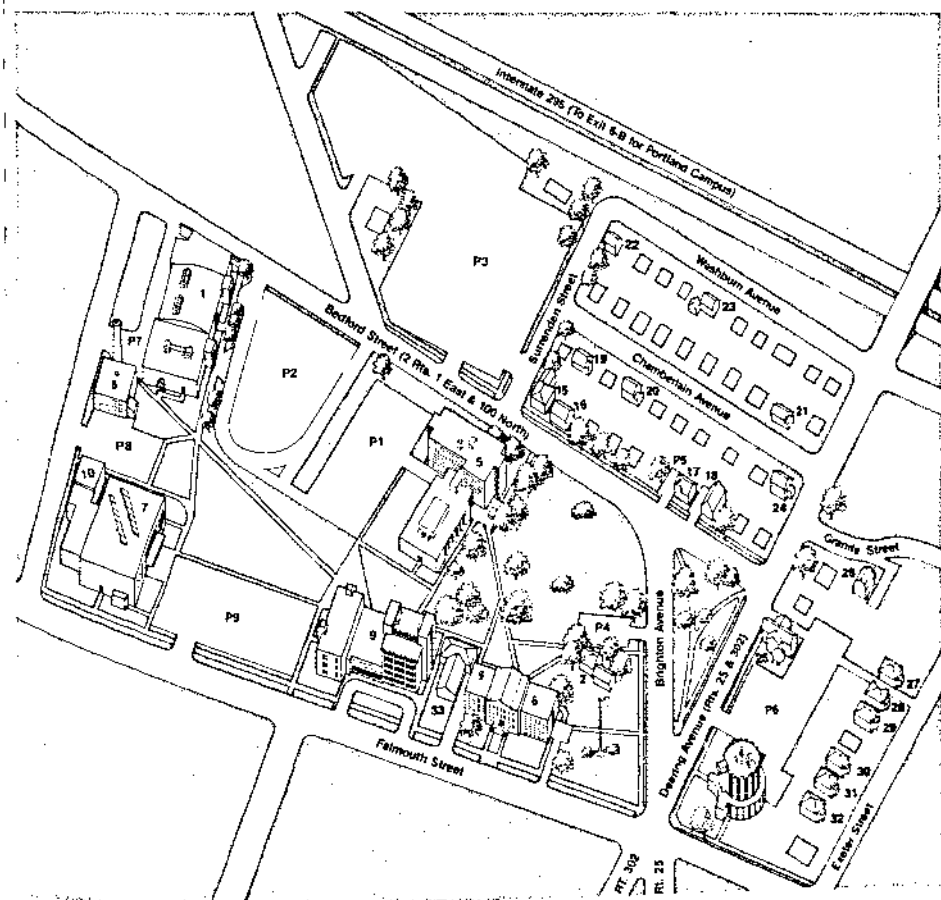








# Portland Campus



## Portland Campus

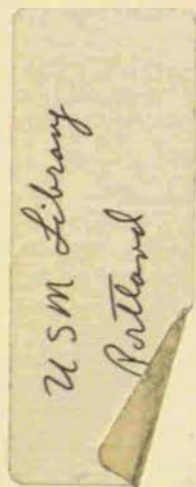
1. Campus Center (Bookstore, Dining Center)
2. Alumni House
4. Law School/Center for Research and Advanced Study
5. Luther Bonney Hall (Library)
6. Payson Smith Hall
7. Portland Gymnasium
8. Central Heating Plant
9. Science Building
10. Child Care
15. 92 Bedford Street
16. 94 Bedford Street
17. 118 Bedford Street
18. 120 Bedford Street
19. 7 Chamberlain Avenue
20. 15 Chamberlain Avenue
21. 38 Chamberlain Avenue
22. 3 Washburn Avenue
23. 25 Washburn Avenue
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
33. West Hall

## Parking

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

CAMPUS MAIL



University of Southern Maine