



*FITCHBURG* STATE COLLEGE  
Undergraduate & Graduate Course Catalog  
2002–2003

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# About the College



## History of the College

Established in 1894 by an act of the Massachusetts Legislature, the State Normal School in Fitchburg opened in temporary quarters in the old high school building on Academy Street. Principal John G. Thompson, aided by a teaching staff of three, implemented a two-year teacher training program for women that had forty-six participants. In December 1896, the school expanded into a new building, known as Thompson Hall, and set up the State Schools of Observation and Practice in city buildings on Day Street and Highland Avenue.

In the next decade the school was a trendsetter for programs in Education. The Edgerly School opened, originally as an eighth-grade model and practice school. In 1910, it became one of the first junior high schools in the United States. The following year the school initiated the first practical arts teacher training course in the country for men.

In 1930, the State Normal School was authorized to offer a bachelor's degree in practical arts, and in 1932, when it became the State Teachers College at Fitchburg, four-year degrees were offered in all areas of education.

Under the auspices of the State Division of University Extension summer courses were first offered in 1915, marking the beginning of the college's commitment to Continuing Education programs. In 1935, the college was also authorized to establish graduate programs and in 1954 the first evening courses were offered.

In 1960, the college changed its name and expanded its mission. The State College at Fitchburg diversified its programs to include degrees in disciplines other than education. In 1965, its name was officially changed to Fitchburg State College, which today offers more than fifty undergraduate degree in sixteen academic departments, thirty-two Master's Degree programs, six Certificate of Advanced Graduate Study programs, and eleven Graduate Certificate programs. Enrollment is up to 2,500 full-time and 4,000 part-time students which include 1,100 matriculated graduate students. The campus has expanded from a single structure on High Street to thirty-three buildings on ninety acres, becoming the educational center for the Montachusett region. The college proudly offers traditional and non-traditional programs to serve the educational needs of its students as undergraduate, graduate, and continuing education students.

## State College Mission Statement

There are six comprehensive state colleges—Bridgewater State College, Fitchburg State College, Framingham State College, Salem State College, Westfield State College and Worcester State College—and three specialized colleges—Massachusetts College of Art, Massachusetts College of Liberal Arts and Massachusetts Maritime Academy. All colleges integrate liberal arts and sciences programs with professional education, and the three specialized colleges also focus on academic areas identified in the college's name.

Each college places a special emphasis on teaching and lifelong learning and promotes a campus life that fosters intellectual, social and ethical development. Committed to excellence in instruction and to providing responsive, innovative and educational programs of high quality, they seek to develop each student's critical thinking, quantitative, technological, oral and written communications skills and practical appreciation of the arts, sciences and humanities as they affect good citizenship and an improved quality of life. The state colleges provide a campus environment where the ideas, values, perspectives and contributions of all students are respected.

Massachusetts state colleges are strategically located to facilitate access to baccalaureate and master's degree programs for Commonwealth residents who meet their high standards for admission. In recognition of their responsibilities to Massachusetts taxpayers to manage their resources efficiently and to maintain tuition and fees at a level as low as possible, each college has a distinctive academic focus based upon its established strengths and regional and state needs. Each college is a leader and resource for the community and contributes to the region's cultural, environmental and economic development.

## Mission

Fitchburg State College is an institution of higher education that integrates an interdisciplinary, multicultural liberal arts and sciences core with all professional and arts and sciences majors.

In the process, the college encourages the development of the whole person and prepares students for careers that meet the needs of their varied communities. Our faculty members are teacher-scholars who employ a variety of pedagogies and modes of technological instruction to further such goals for all.

In 1997, the Board of Higher Education designated the college as the site of the Leadership Academy. The college emphasizes the importance of leadership studies, service learning, civic responsibilities, ethical development, and international education. Thus, it is this central theme that animates our mission statement: the establishment of a leadership honors program, extensive course work and extracurricular emphasis, and a commitment to exploring leadership for the twenty-first century.

This comprehensive public college is committed to providing affordable, life-long learning opportunities in undergraduate, graduate, and continuing education. The College is extensively involved in promoting cultural and sound economic development, especially in the Northern Worcester County Area.

## Goals and Objectives

### ***Fitchburg State College's mission strives to:***

- Integrate high-quality professional programs with strong liberal arts and sciences studies
- Promote, facilitate, and model self-reliant learning within a cooperative framework
- Stress high standards of academic, professional, and societal performance
- Provide opportunities for social and academic success to enhance self-esteem
- Foster excellence in teaching, service, and research
- Provide resources and services necessary to support the current and anticipated academic needs of the college
- Promote an atmosphere of collegiality, openness to ideas, and esprit de corps
- Support faculty and administrators with professional development opportunities
- Respond in an affirmative and creative manner to the changing character of society
- Develop a global perspective through international exchanges and programs
- Meet social, economic, technological, and environmental changes
- Support racial, cultural, and ethnic diversity in the college community
- Maintain a healthy, safe, and aesthetic living and learning environment sensitive to local and global concerns
- Establish a unique Leadership Academy curriculum for Honors students

### ***Fitchburg State College seeks to achieve its mission through:***

#### **Mutually supportive strong Liberal Arts and Sciences professional majors:**

- Offering a liberal foundation that encourages multicultural and interdisciplinary courses
- Focusing on modes of inquiry within each discipline to strengthen critical thinking skills
- Providing extensive field experiences that bring together theory and practice
- Integrating technological development across the curriculum
- Educating students for leadership in the world community at both the undergraduate and graduate level through academic and experiential opportunities
- Supporting undergraduate majors that complement graduate programs that, in turn, build on the strengths of the undergraduate offerings

#### **A student-centered environment:**

- Emphasizing creative teaching and active learning
- Providing learning and leadership experiences where students come together to challenge one another's ideas in an environment of mutual respect
- Responding to the intellectual, cultural, volunteer, social, physical, and recreational needs of the residential and commuting populations
- Providing support for students, including an academic advising center, computer facilities, a freshmen readiness program, developmental skills and ESL programs, peer advising, career services, residence life, alumni services, tutorials, counseling, as well as health services
- Offering appropriate services for students with physical and learning disabilities

#### **Commitment to the welfare of the larger community and region that it serves with:**

- Collaborative efforts with school districts, the health care community, social service agencies, the business community, and higher educational institutions, particularly community colleges
- Programs for disadvantaged and gifted students, both outreach and on-campus
- Cultural events and leadership activities that enrich the life of the community
- Faculty, administration, and student participation in community programs
- Tuition and fees that are within reach of people with moderate economic means

# Undergraduate Day School Academic Calendar 2002–2003

## Fall 2002

### August

30 Friday Residence halls open for all new students 8:00 am

### September

2 Monday Labor day—Residence halls open for all students

3 Tuesday President's address to faculty 10:00 am followed by department meetings and student advising

3 Tuesday Freshman Convocation 1:30 pm

4 Wednesday Classes begin 8:00 am

11 Wednesday Final day to add or drop a course

### October

7 Monday Final day for making up Incomplete grades from previous semester

14 Monday Columbus Day—NO CLASSES

### November

11 Monday Veterans' Day—NO CLASSES

20 Wednesday Final day for withdrawal from classes without penalty

27 Wednesday Thanksgiving recess begins 4:45 pm

### December

1 Sunday Thanksgiving recess ends

10 Tuesday Last day of Fall Semester classes

11 Wednesday Reading day

12–20 Final Semester Examinations

## Spring 2003

### January

12 Sunday College opens; Residence halls open for all students 8:00 am

14 Tuesday Departmental meetings and student advising

15 Wednesday Classes begin 8:00 am

20 Monday Martin Luther King Day—NO CLASSES

23 Thursday Final day to drop or add a course

### February

14 Friday Final day for making up Incomplete Grades from the previous semester

17 Monday U.S. Presidents' Day—NO CLASSES

### March

14 Friday Spring vacation begins 4:30 pm

23 Sunday Spring vacation ends

### April

8 Tuesday Final day for withdrawal from classes without penalty

21 Monday Patriots' Day—NO CLASSES

24 Thursday Honors Convocation afternoon classes suspended 1:30 pm

### May

6 Tuesday Last day of Spring Semester classes

7 Wednesday Reading day

8–15 Final Semester Examinations

15 Thursday Residence Halls close

24 Saturday Commencement—Campus Quadrangle

Calendar Subject to Change

# Graduate and Continuing Education Academic Calendar 2002–2003

## Fall 2002

### July

8–31 Walk-in/Mail-in/Phone-in/Fax-in Registration for 2002 Fall Semester  
 Sanders Administration Building  
 9:00 am–7:00 pm Mon.–Thurs.  
 9:00 am–4:00 pm Fri.  
 To register by phone, call 978-665-3181 (MasterCard and VISA ONLY. Charge must be over \$50.00) Fax number is 978-665-4540

### August

1–21 Registration (cont.)  
 22 Late Registration begins. Registrations and course changes accepted prior to the second class meeting. (Class meeting defined as 2.5 hours)

### September

4 First day of classes

### October

7 Final date for making up Incomplete Grades from previous semester. (spring and summer 2002)  
 14 Columbus Day—NO CLASSES

### November

11 Veteran's Day—NO CLASSES  
 27–Dec. 1 Thanksgiving Holiday—NO CLASSES

### December

20 Last day of fall semester classes

## Winter Session 2002–2003

### December

Nov. 25–20 Registration for winter session  
 26 Winter session begins

## Spring 2003

### November

25–29 Walk-in/Mail-in/Phone-in/Fax-in Registration for spring 2003 semester

### December

Dec. 2–Dec. 31 Walk-in/Mail-in/Phone-in/Fax-in Registration for spring 2003 semester  
 Sanders Administration Building  
 9:00 am–7:00 pm Mon.–Thurs.  
 9:00 am–4:00 pm Fri.

### January

2 Late Registration begins. Registrations and course changes accepted prior to the second class meeting. (Class meeting defined as 2.5 hours)  
 15 First day of classes  
 20 Martin Luther King Day—NO CLASSES

### February

14 Final day for making up Incomplete Grades from previous semester. (fall 2001)  
 17 U.S. President's Day—NO CLASSES  
 17–23 Vacation for off-campus sites only

### March

14–23 Spring vacation—on-campus courses

### April

21 Patriot's Day—NO CLASSES  
 21–27 Vacation period—off-campus sites ONLY

### May

16 Last day of spring semester classes.  
 24 Commencement 10:00 am—Campus Quadrangle

**Calendar Subject to Change**

# Graduate and Continuing Education Summer Session 2003

## Summer Session I-May 27-June 27

### **April**

22–30 Walk-in/Mail-in/Phone-in/Fax-in Registration for 2003 summer sessions I and II are accepted.

Sanders Administration Building,  
9:00 am–7:00 pm Mon.–Thurs.;  
9:00 am–4:00 pm Fri.

To register by phone, call 978-665-3181  
(MasterCard and VISA ONLY.  
Charge must be over \$50.00)  
Fax number is 978-665-4540.

### **May**

1–13

Registration (cont.)

14

Late Registration begins for summer session I.  
Registrations and course changes accepted prior  
to the second class meeting. (Class meeting  
defined as 2.5 hours)

26

Memorial Day—No classes.

27

First day of classes for summer session I.

### **June**

27

Final day of classes for summer session I.

## Summer Session II-July 7-August 8

### **April**

22–30

Walk-in/Mail-in/Phone-in/Fax-in Registration for 2003 summer sessions I and II are accepted.

Sanders Administration Building,  
9:00 am–7:00 pm Mon.–Thurs.;  
9:00 am–4:00 pm Fri.

To register by phone, call 978-665-3181  
(MasterCard and VISA ONLY.  
Charge must be over \$50.00)  
Fax number is 978-665-4540.

### **June**

1–24

Registration (cont.)

25

Late Registration begins for summer session I.  
Registrations and course changes accepted prior  
to the second class meeting. (Class meeting  
defined as 2.5 hours)

### **July**

4

Independence Day—No classes.

7

First day of classes for summer session II

### **Aug.**

8

Final day of classes for summer session II.

**Calendar Subject to Change**

# Our Commitment to You



## The Fitchburg State Guarantee

Fitchburg State guarantees that its graduates will be prepared to meet the standards of the careers for which they have been educated. If within three years of a student's graduation from the college an employer determines that the graduate is not sufficiently or properly educated to those standards, the college will provide the necessary course or courses at no cost.

## Institutional Accreditations, Approvals, Memberships, and Affiliations

### Accreditations

Fitchburg State College is accredited by the New England Association of Schools and Colleges, Inc.; the Commission on Collegiate Nursing Education; the International Assembly for Collegiate Business Education; the Council for Standards in Human Service Education; the National Accrediting Agency for Clinical Laboratory Sciences; and the National Council for Accreditation of Teacher Education.

The New England Association of Schools and Colleges is a non-governmental, nationally recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering postgraduate instruction.

### ***Accreditation by the New England Association assures that the institution:***

- Meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer group review process
- Maintains the necessary resources to achieve its stated purposes through appropriate educational programs and gives reasonable evidence that it will continue to do so in the foreseeable future
- Maintains its demonstrated institutional integrity

Inquiries regarding the status of an institution's accreditation by the New England Association should be directed to the administrative staff at the college or to the Association at:

Commission on Higher Education  
New England Association of Schools and Colleges  
The Sanborn House, 15 High Street  
Winchester, Massachusetts 01890  
617-729-6762

Addresses for other accrediting agencies include:

Commission on Collegiate Nursing Education  
One Dupont Circle, NW  
Suite 530  
Washington, DC 20036-6791  
202-887-6791

International Assembly for Collegiate Business Education  
P.O. Box 25217  
Overland Park, Kansas 66225  
913-631-3009

National Accrediting Agency for Clinical Laboratory Sciences  
WWW.NAACLS.ORG  
773-714-8880

### Approvals

- The Massachusetts Department of Education and the National Association of State Directors of Teacher Education and Certification
- The Interstate Certification Compact in Certification of Educational Personnel
- The State Board of Registration in Nursing
- Board of Higher Education, Commonwealth Honors Program

## Institutional Memberships

- The American Association of Colleges of Teacher Education
- The College Entrance Examination Board
- The Massachusetts Association of Colleges of Nursing, the National League for Nursing Council of Baccalaureate and Higher Degree Programs, and the Massachusetts and Rhode Island League for Nursing
- The American Association of State Colleges and Universities and the International Association of Colleges and Universities
- The American Council on Education
- The New England Association of College Admissions Counselors and the American Association of Collegiate Registrars and Admissions Officers
- The Council of Colleges of Arts and Sciences and the Council of Graduate Schools
- The North American Association of Summer Sessions
- American Assembly of Collegiate Schools of Business and the Association of Collegiate Business Schools and Programs
- American Academy for Liberal Education
- American Association of Colleges of Teacher Education

## Affiliations

The McKay Campus Schools serves as the Teacher Education Center at Fitchburg State college, as well as a public elementary school for the city of Fitchburg. This dual mission adds a uniqueness to the teaching and learning atmosphere at McKay. This collaboration with higher education is a partnership that brings professionals together in our school setting to share:

- responsibility for the preparation of new teachers
- the professional development of experienced classroom teachers
- the professional development of university faculty serving as teacher educators
- the support of research directed at improvement of practice
- enhanced student learning for our elementary students

The McKay Campus School and Fitchburg state College have a shared understanding of and commitment to learning for children and adults. This culture of learning is one that values risk-taking, inquiry, reflection and collegiality. This community has children at its core and encompasses school and college faculty, parents and members of the wider community of Fitchburg and its surrounding towns.

## Servicemembers Opportunity College

Fitchburg State College is a fully-approved SOC member. The SOC principles and criteria subscribed to by all member institutions provide the basis for a consistent and uniform approach to meeting the educational goals and special needs of military personnel. The Associate Registrar serves as the counselor for this important program.

## Collegewide Policies

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### Affirmative Action Policy

It is the policy and commitment of Fitchburg State College not to discriminate on the basis of race, religion, color, age, gender, sexual orientation, disability, veteran status, marital status, or national origin in its educational programs, activities, admissions, or employment policies, and to comply with the requirements of Federal Executive Orders 11246 and 11375 as amended; the Civil Rights Act of 1964 as amended; Title IX of the Educational Act of 1972; Sections 503 and 504 of the Rehabilitation Act of 1973; Section 402, Vietnam Era Veterans Readjustment Assistance Act of 1974; the Civil Rights Restoration Act of 1988; Americans with Disabilities Act of 1990; the Civil Rights Act of 1991; and pertinent laws, regulations, and Executive Orders, directives of the Board of Higher Education of the Commonwealth of Mass., the Commonwealth of Massachusetts, and other applicable state and federal statutes.

Inquiries concerning the application of, or compliance with, the laws and regulations prohibiting such discrimination should be addressed to:

- Director of Human Resources/Affirmative Action and designated Title IX Coordinator; 978-665-3172; or
- Steven J. Lanciani at 978-665-3118 Vice President for Facilities Management and designated Coordinator for Section 504 and the Americans with Disabilities Act; or
- Office of the Assistant Secretary of Civil Rights, United States Department of Education, Washington, D.C.

### Sexual Harassment Policy

It is against the policy of Fitchburg State College for any member of the college community, male or female, to sexually harass another employee or student. The college is committed to providing a working, living, and learning environment that is free from all forms of abusive, harassing, or coercive conduct. This policy seeks to protect the rights of all members of the College Community (faculty/librarians, administrators, staff, and students) to be treated with respect and dignity.

Sexual harassment consists of unsolicited verbal, non-verbal, and/or physical conduct, which has the effect of interfering with student or employment status or of creating an intimidating, hostile, or offensive environment. The college's Affirmative Action Grievance Procedures will serve as a system of review and resolution for both formal and informal complaints. Further information or advice may be obtained by contacting the Director of Human Resources/ Affirmative Action at 978-665-3172.

## Privacy and Confidentiality Regulations

A Fair Information Practices Act (FIPA) administrator directs the Privacy and Confidentiality Regulations. Copies of the regulations as part of FIPA Chapter 766 (of the Acts of 1965) are posted on bulletin boards at the college and kept on file at the Registrar's Office.

Students should note that if any of these regulations should conflict with applicable provisions of the Federal Privacy Act of 1974 as amended, or with any regulations promulgated pursuant to said act, the provisions of said federal act or federal regulations shall control.

## Human Studies Policy

The college has established a Human Studies Policy and Committee, which reviews and approves the adequacy of protection provided for human subjects serving as research subjects. The college is cognizant of its responsibility to protect the privacy, safety, health, and welfare of such subjects. A copy of this policy may be obtained in the Office of Academic Affairs.

## Drug-Free Environment

Fitchburg State College is in compliance with the Drug-Free Workplace Act of 1988 and the Drug-Free Schools and Communities Act, Amendment of 1989. Information regarding these acts and the College's compliance with them is distributed to the college community yearly and is also available from the Director of Human Resources.

## Alcohol Policy

Fitchburg State College enforces all state laws and city ordinances regarding the possession, use, and sale of alcoholic beverages including those prohibiting drinking by individuals under 21 years of age. College policy restricts when, where, and how alcohol may be served and the amount of alcohol that a resident student may bring into the residence halls.

The FSC community recognizes the importance of personal and communal responsibility with regard to its alcoholic beverage policy. It assumes that any student who has consumed alcohol accepts responsibility for his/her consequent behavior. Being intoxicated will not be accepted as an excuse for erratic, irresponsible behavior either to individual or others' person or property. Any student found to be intoxicated will be considered in violation of the Alcohol Policy and will be subject to the Student Discipline System.

Massachusetts law forbids the possession of, use, and sale of alcoholic beverages to persons under 21 years of age. The law also forbids falsifying age and identification cards. The college enforces the law and expects all students, faculty, administrators, and staff to abide by it.

Use or possession of alcoholic beverages in public areas (campus grounds, athletic events, parking lots, academic buildings, dining hall, Campus Center) regardless of age, except at approved functions, is prohibited. Open containers of any alcoholic beverage is a violation of this policy.

A complete copy of the Alcohol Policy is available in the Undergraduate Student Handbook or from the Office of Student Affairs.

## Substance Abuse Policy

In accordance with the Drug-Free Schools and Communities Act, Fitchburg State College has adopted the following Substance Abuse Policy:

Only in an environment free of substance abuse can the college fulfill its mission of developing the professional, social, cultural, and intellectual potential of each member of its community. The use of illicit drugs and alcohol impairs the safety and health of students and employees, inhibits personal and academic growth and undermines public confidence in the college. For these reasons, it is the policy of Fitchburg State College that all college activities and college property shall be free of the unlawful use of drugs and alcohol.

### Prohibited Conduct

The students and employees of Fitchburg State College shall not unlawfully manufacture, distribute, dispense, possess, or use controlled substances or alcohol. Any individual who violates this prohibition will be subject to disciplinary action. Sanctions may include expulsion or firing from the college, mandatory participation in an alcohol/drug abuse assistance or rehabilitation program, as well as referral of the matter to law enforcement agencies for prosecution.

Students and employees are required to notify the Director of Human Resources (and, in the case of students, the Director of Financial Aid) within five days of being convicted of violating a criminal drug statute in the workplace.

A complete copy of the Substance Abuse Policy is available in the Undergraduate Student Handbook or from the Office of Student Affairs.

## No Smoking Policy

Effective July 1, 1994, Fitchburg State College became a smoke-free environment. Smoking is not allowed inside any college building with the exception of designated bedrooms in residence halls.

Those members of the college community who have special difficulties in complying with a smoke-free environment are urged to seek the assistance of either the Human Resources or the Health Services Office.

## Inclement Weather Policy

Whenever inclement weather, usually in the form of snow and/or ice, makes driving conditions exceptionally hazardous, classes for that day will be canceled. In the event that day classes (on-campus and/or off-campus sites) are canceled, all evening classes and programs for that date are automatically canceled. Make up sessions are required.

Cancellation announcements can be heard on:

WEIM	(1280/AM)	Fitchburg
WXLO	(104.5/FM)	Fitchburg/Worcester
WINQ	(97.7/FM)	Winchendon
WTAG/WSRS	(580/AM; 96.1/FM)	Worcester
WBZ Storm Center	(1030/AM; TV News 4)	Boston
WCAT	(99.9/FM)	Orange

WCVB-TV5		Boston
WRKO-7 News		Boston
WXPL	91.3/FM	FSC Campus Radio (after 8:00 am)

or by calling 978-665-3006 (residence students),  
or 978-665-4003 (off-campus, commuter students.)

The decision to cancel classes scheduled for weekends or holidays rests with the instructor. Students should consult with their instructor for his/her class cancellation and make up policy.

### Notice of Catalog Changes

The rules, regulations, policies, fees and other charges, courses of study, and academic requirements that appear in this catalogue were in effect at the time of its publication. Like everything else in this catalogue, they are published for informational purposes only, and they do not constitute a contract between the College and any student, applicant for admissions or other person.

Whether noted elsewhere in this catalogue or not, the College reserves the right to change, eliminate, and add to any existing (and to introduce additional) rules, regulations, policies, fees and other charges, courses of study and academic requirements. Whenever it does so, the College will give as much advance notice as it considers feasible or appropriate, but it reserves the right in all cases to do so without notice.

### Waiver of Academic Regulations

The college acknowledges that extenuating circumstances relative to rules, regulations, and programs occasionally require a waiver of regulations. Although students may petition for a waiver, they should understand that the justification for a waiver should be as exceptional as the granting of one.

Petitions for a waiver of regulations begin with the Dean of Undergraduate Studies or Dean of the Graduate Studies.

The provisions of this catalog are **not** to be regarded as an irrevocable contract between the College and its students.

The Higher Education Amendments of 1998 clarified the information that colleges must disclose to current students. The following Notice of Availability describes the kinds of information available and where you can gain access to it. You may request a paper copy of any information referenced below by contacting the office listed.

## Notice of Availability

### Family Educational Rights and Privacy Act (FERPA)

Description: FERPA affords students certain rights with respect to the student's educational records.

Location: [www.fsc.edu/registrar](http://www.fsc.edu/registrar)

Contact: Registrar  
Email—[Registrar@fsc.edu](mailto:Registrar@fsc.edu)  
Phone—978-665-3137

### FFEL/Direct Loan Deferments for Performed Services

Description: FFEL/Direct Loan deferments available for Peace Corps or volunteer service

Location: [www.fsc.edu/finaid](http://www.fsc.edu/finaid)

Contact: Director of Financial Aid  
Email—[finaid@fsc.edu](mailto:finaid@fsc.edu)  
Phone—(978) 665-3156

### Financial Assistance Available

Description: Federal, state and institutional need-based and non-need based financial assistance available to students. Rights and responsibilities of financial aid recipients are also available.

Location: [www.fsc.edu/finaid](http://www.fsc.edu/finaid)

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Contact: Director of Financial Aid  
Email—[finaid@fsc.edu](mailto:finaid@fsc.edu)  
Phone—978-665-3156

### Cost of Attendance

Description: Cost of attendance for undergraduate day students

Location: [www.fsc.edu/treasurer/studentacctstreas\\_studtaccts.html](http://www.fsc.edu/treasurer/studentacctstreas_studtaccts.html)

Contact: Student Accounts Manager  
Email—[stuaccnts@fsc.edu](mailto:stuaccnts@fsc.edu)  
Phone—978-665-4126

### Cost of Attendance—GCE

Description: Cost of attendance for undergraduate evening and graduate students

Location: [www.fsc.edu/gce](http://www.fsc.edu/gce)

Contact: Assistant Dean of Evening Programs  
Email—[gce@fsc.edu](mailto:gce@fsc.edu)  
Phone—978-665-3181

### Return of Title IV Funds Refund Policy

Description: Policy regarding recipients of federal Title IV financial aid that withdraw from the College

Location: [www.fsc.edu/finaid/](http://www.fsc.edu/finaid/)  
FSC Undergraduate and Graduate Course Catalog

Contact: Director of Financial Aid  
Email—[finaid@fsc.edu](mailto:finaid@fsc.edu)  
Phone—978-665-3156

### Withdrawal Policy

Description: Policy regarding students enrolled at FSC who officially withdraw from the College

Location: FSC Undergraduate and Graduate Course Catalog

Contact: Dean of Undergraduate Studies  
Phone—978-665-3215

### Academic Programs

Description: Information regarding FSC's academic programs

Location: [www.fsc.edu/academics](http://www.fsc.edu/academics)  
FSC Undergraduate and Graduate Course Catalog

Contact: Registrar  
Email—[registrar@fsc.edu](mailto:registrar@fsc.edu)  
Phone—978-665-3137

### Accreditation/Approval/Licensure

Description: Entities that accredit, license, or approve the College and its programs and procedures for reviewing FSC's accreditation, licensing, or approval documents

Location: [www.fsc.edu/community/aboutus/facts/](http://www.fsc.edu/community/aboutus/facts/)

Contact: Vice President for Academic Affairs  
Phone—978-665-3432

### Special Facilities and Services for Disabled Students

Description: Special services and facilities available for disabled students

Location: [www.fsc.edu/disability](http://www.fsc.edu/disability)

Contact: Director of Disability Services  
Phone—978-665-3562

### Study Abroad

Description: Federal Title IV financial aid eligibility for students enrolled in a Study Abroad program

Location: [www.fsc.edu/finaid/](http://www.fsc.edu/finaid/)

Contact: Director of Financial Aid  
Email—[finaid@fsc.edu](mailto:finaid@fsc.edu)  
Phone—978-665-3156

### Completion/Graduation Rates

Description: The percent of first-time full-time freshmen who successfully complete a baccalaureate program at this college within six years.

Location: [www.fsc.edu/registrar](http://www.fsc.edu/registrar)

Contact: Director of Institutional Research  
Email—[tcarroll@fsc.edu](mailto:tcarroll@fsc.edu)  
Phone—978-665-3171

### Title II Institutional Report

Description: Required annual report on the number of undergraduate and graduate students who complete the college's initial licensure programs, as well as additional information on the state of the college's education preparation program.

Location: [www.fsc.edu/academic/educationunit](http://www.fsc.edu/academic/educationunit)

Contact: Associate Dean of Education  
Phone—978-665-3747  
Email—[mcaurso@fsc.edu](mailto:mcaurso@fsc.edu)

### Campus Security Report

Description: The Department of Public Safety/Campus Police Annual Security Report which includes required policies and procedures and crime statistics.

Location: [www.fsc.edu/campuspolice](http://www.fsc.edu/campuspolice)

Contact: Director of Public Safety/Chief of Police  
Phone—978-665-3110

### Report on Athletic Program Participation Rates and Financial Support Data

Description: Data regarding athletic program participation rates of students at FSC and related costs and revenues

Location: Athletics Department

Contact: Director of Athletics  
Email—[slauder@fsc.edu](mailto:slauder@fsc.edu)  
Phone—978-665-3314

# Admissions



**S**tudents who seek a quality education are invited to apply for admission to Fitchburg State College. Fitchburg State welcomes applications from high school graduates, students returning to college after a hiatus, transfer students, and international students. After careful review of the application and supporting materials, admission is offered to students whose secondary school and/or college records and backgrounds offer the promise of a successful and satisfying undergraduate experience.

## Undergraduate Admissions

### Admission Standards

Fitchburg State College is committed to providing excellent, accessible, and affordable life-long learning opportunities in undergraduate, graduate and continuing education. The college seeks students who are motivated to achieve academic excellence, and who represent a broad variety of backgrounds and interests.

With the guiding principles of quality, access and diversity in mind, Fitchburg State has adopted standards which support the standards established by the Commonwealth of Massachusetts. These standards provide a framework for the individual evaluation of each applicant to the college.

### Campus Visits

The Admissions Staff encourages all applicants to visit the Fitchburg State College campus. A variety of visitation programs, including student guided tours, are available to people interested in learning more about the campus and its programs.

Interviews are not required, but can provide the Admissions Committee with helpful information. Applicants who desire to have an interview are invited to call the Admissions Office for an appointment. The college encourages students with disabilities to discuss their situations with an Admissions Counselor so that the College can better accommodate their needs.

### Admissions Office Hours

Monday, Tuesday, Wednesday, and Friday:  
8:00 am to 5:00 pm  
Thursday: 8:00 am to 8:00 pm  
Saturday: 9:00 am to 12:00 pm (during the academic year)

### Student guided tours are scheduled

Monday–Friday at 11:30 am, and 2:30 pm.  
Saturday at 10:30 am and 11:30 am (during the academic year)

For information about open house programs, individual interviews, other visitation options and to receive admissions materials contact the Admissions Office at:

Admissions Office  
Fitchburg State College  
160 Pearl Street  
Fitchburg, Massachusetts 01420-2697  
Telephone: 978-665-3144  
Email: [admissions@fsc.edu](mailto:admissions@fsc.edu)  
Web Site: [www.fsc.edu](http://www.fsc.edu)

### Applications Filing Dates

All materials should be submitted as early as possible. Recommended filing dates for the fall and spring semesters are listed below. After these dates, contact the Admissions Office to determine if applications are still being accepted.

#### Fall Semester

First Year Students: April 1  
Transfer Students: April 1

#### Spring Semester

First Year Students: December 1  
Transfer Students: December 1

Fitchburg State College employs a “rolling admissions” policy. Rather than notify all applicants simultaneously, we do so on a continuing basis over a period of several months, beginning in the early part of January for September applicants.

There are no deadlines for applications to evening programs, which are accepted year-round.

# Application Procedure

## Application Procedures—First-Time College Students

To be considered for admission to the College, applicants must submit the following to the Office of Admissions:

**1** A completed **Application for Admissions**

**2** A **General Equivalency Diploma (GED)** and/or a **transcript** of the complete high school record through the first marking period of the senior year.

### Secondary School Preparation

The minimum required college-preparatory academic units required for admission are:

- English: 4 years
- Mathematics: 3 years (includes: Algebra I, Geometry, Algebra II or other advanced mathematics courses)
- Science: 3 years (includes 2 years of laboratory science)
- Social Science: 2 years (includes one year of U.S. History)
- Foreign Language: 2 years (must be in the same language).
- College Preparatory electives: 2 years (from the above areas, or from college preparatory courses in the Arts, Humanities or Computer Sciences.)

Additional work in the math and sciences is strongly recommended, particularly for students intending to major in the sciences or science-related fields.

If an applicant graduated from a high school that did not offer the required Academic Units and that high school has received a waiver from The Board of Higher Education, the applicant may substitute other college preparatory electives.

Students submitting the GED must also submit a high school transcript reflecting work completed while attending high school.

**3** Scores from **Scholastic Aptitude Test (SAT)**, or the ACT.\* Although not required, the college welcomes the results of the College Entrance Board Subject Tests.

\* Applicants with documented learning disabilities are exempt from taking any standardized college entrance aptitude test for admittance to any public institution in the Massachusetts (M.G.L. Chapter 15A, Sec 30).

**4** An **essay** on personal goals or results from SAT II.

**5** Letters of recommendation, while not required, are helpful in the evaluation process.

**6** A resume of activities if time has lapsed between the time of high school graduation and the application process to Fitchburg State College.

**Acceptance to FSC is contingent upon graduation from high school or equivalent preparation (GED).**

## Application Procedures—Special Admissions Applicants

A candidate who demonstrates the potential for academic success, has met the Academic Units requirement (“First-Time College Students”), and meets one of the three stipulations below is considered minimally qualified for admission as a special admissions applicant. Applicants must still meet the minimum admission standards as stated by the Massachusetts Board of Higher Education.

**1** Applicants present an Individual Education Plan or the equivalent under Chapter 766 or Chapter 344. Also, applicants who have a demonstrated language disability that would preclude the applicant from learning a foreign language must substitute two units from the humanities and/or the social sciences.

**2** Special talent applicants who satisfy the following:

- A combined SAT score of 900 or equivalent percentile rank from an ACT, TOEFL, or ELPT score
- Have declared a major, and
- Based upon the applicant’s special talent, the major department chooses the requirements for application to the College and, after review, recommends the applicant for admission to that major. The department may require additional documentation such as a portfolio or writing sample and/or an interview.

**3** Applicants who are educationally disadvantaged because of low income, limited English proficiency or racial discrimination must submit an SAT or ACT score for advising purposes. Applicants for whom English is a second language should provide scores from the TOEFL or the ELPT.

**Minimum qualification does not guarantee acceptance to the college.**

## Application Procedures—International Students

Fitchburg seeks a culturally diverse campus and welcomes applications from students from other countries.

In addition to the basic admissions requirements for new and transfer students, international students must submit several additional items, including:

- The Test of English as a Foreign Language (TOEFL) with a minimum score of 550 on paper-based test or a minimum of 213 on computer-based test, is required if the applicant’s native language is not English
- The Test of Spoken English (TSE) may be requested if proficiency is not indicated
- An official, notarized bank statement showing sufficient funds will be available to support the student for one academic year. Students may also submit INS form I-134.
- These documents should be forwarded by April 1 for the fall semester and September 1 for the spring semester
- All transcripts should be sent directly from the original institution to the admissions office with an English translation.
- A copy of all past I-20’s and/or IAP 66’s
- Students on F-1 visas must study on a full-time basis and are not eligible for state or federal financial aid.

## Application Procedures—Non-Traditional Students

A non-traditional student is a student who does not enter college immediately after completing high school. Generally the student has experience in a career, at home, or in the military.

Admissions requirements are similar to those of any new student; including:

- High school transcript and/or GED
- SAT or ACT scores\*
- Letters of recommendation
- Resume of activities showing life experience
- \* Waived if student is out of school three years

## Part-Time Non-matriculating Students

A non-matriculated student is a high school graduate who is not applying for a degree program but wishes to enroll in college courses. These students may enroll in a maximum of three courses or 11 credits. Registration for non-matriculated students is scheduled after the degree-seeking students have registered. Nonmatriculating students (those not enrolled in degree or certificate programs) may take courses for which they have fulfilled any specified prerequisites.

## Dual Enrollment Program

The Commonwealth of Massachusetts will pay for college-level courses for juniors or seniors in high school with the following:

- 3.0 or better Grade Point Average
- Recommendations from the high school to take college level courses

Fitchburg State College encourages high school students to participate in this program and holds special registration for these students each semester. Please contact the Admissions Office for additional information at 978-665-3144.

## Joint Admissions

Students enrolled in Massachusetts Community Colleges may seek joint admission to Fitchburg State College. Such a student must complete an Associates Degree in a Transfer Program, which enables them to continue their education at FSC as juniors. Requirements for joint admissions are:

- Completed Associate’s Degree with 2.5 average in a Transfer Program
- Approval of the appropriate academic departments
- Presentation of appropriate credentials  
(a second admission review is not required)

## Leadership Academy Honors Program Applicants

The college encourages academically talented students to consider the college’s honors program, The Leadership Academy. The Leadership Academy is characterized by the following:

- A program for our academically strongest students with leadership potential or experience
- Weaves themes of leadership into a separate core liberal arts and sciences curriculum
- Collaborative teaching and learning model
- Extensive co and extra curricular options
- Emphasis/commitment to the community; service learning
- Generous scholarship package to reduce the need for full or part-time work

Admission to the Leadership Academy is selective, based on factors including: grade point average, SAT Scores, and participation in honors and advanced placement courses. The selection committee also considers letters of recommendation, history of community service, extracurricular interests, and other activities that demonstrate leadership potential.

## Alternate Admission Programs

The college supports two alternate admission programs for students who either do not meet the admission criteria established for Massachusetts state colleges or have non-traditional backgrounds: The Fitchburg State College/Mount Wachusett Community College Institute and the Summer Bridge Program. Both are described below. Both programs require students to submit the regular application for admission; no additional applications are required. For more information on either of these programs, please contact the admissions office.

### ***The Fitchburg State College/Mount Wachusett Community College Institute***

*The Institute* is a collaborative program sponsored by MWCC and FSC to serve the educational needs of students. This program seeks to serve those students initially denied admission to the public four-year institution of their choice due to the admission standards set forth by the Massachusetts Board of Higher Education.

*The Institute* provides the opportunity for a student to ultimately enroll at FSC by first completing necessary course work at MWCC. Students enrolled in *The Institute* benefit from FSC and MWCC’s long-standing tradition of collaboration, articulation agreements, close proximity to each other, a shared regional transportation system, and a commitment to support students’ academic, co-curricular and social development.

There are many benefits associated with the participation in *The Institute*:

- On-campus housing at FSC is offered to enrolled students
- Coordinated academic advising is offered at both colleges
- Coordinated academic assessment is offered at both colleges
- Coordinated orientation program is offered at both colleges
- Access to selected student activities on both campuses (while students are enrolled at MWCC they are not eligible for intercollegiate athletics or elected office in student government at FSC)
- Complete access to all student support services at both colleges
- FSC and MWCC participation in the Worcester Consortium allows students to take one class free of charge at other participating Consortium schools

### ***The Summer Bridge Program***

This program is designed to support selected students by developing the academic, social and co-curricular skills needed to insure academic success at the college level.

*The Summer Bridge Program* will serve 60 students each year. Students, in preparation for their admission to the college, will attend a five-week summer program. This is a full-time (7 days per week) residential program available to the student at a nominal cost. During this summer program, students will earn academic credits, receive developmental support for academic and co-curricular skills, and participate in a rich social program.

Students who complete the Summer Bridge program with a 2.0 GPA and the recommendation of the Summer Bridge Coordinator will be admitted to the college.

This program is modeled after successful programs available at colleges across the country. Its goal is to improve retention rates for students who, for a variety of reasons, are considered at risk for academic success. The college's varied resources support this comprehensive program—academic advising, financial aid, assessment, student activities, campus living, career development, library services, to name but a few areas.

### Application Procedures—Transfer Students

Transfer students who want to be considered for admission to the college must meet the following criteria:

- Twelve or more semester units (eighteen quarter units) of college credit must be earned by planned entrance date. Students with less than 12 semester credits are considered first-time college students.
- A grade point average of 2.0 or better with 24 or more transferable credits from an accredited college or university or a 2.5 or better with 12 to 23 transferable credits. Having such an average, however, does not guarantee admission to specific programs.
- If a prospective transfer student has earned 23 transferable college credit with an a 2.5 GPA, then the student's high school work must satisfy first year student's admissions requirements.

The following credentials must be submitted:

- An **Application for Admission**
- **Transcripts** of all previous college work, including a statement of honorable dismissal from the last college attended
- A 300-word **essay** describing your educational goals and motivation to go to college
- A final **high school transcript**

### Evaluation of Credit

The amount of credit that will transfer into an FSC program is determined only after the student has been accepted to the college. Transfer credit is normally granted under the following conditions:

- Work was completed in an accredited college and/or university and the student received a 2.0 (C) or better
- Transferred courses which correspond with those offered at Fitchburg State College will be given full credit. Courses which do not fit the degree program may be counted as fulfilling the free elective requirements of the four-year curriculum

Students transferring from two-year institutions will be entitled to a maximum of two years of credit (60 semester hours). Students transferring from baccalaureate level institutions may be entitled to more, but they may not transfer more than 50% of the total credit hours required in their major. They also must complete a minimum of forty-five credit hours in residence in order to receive a degree from Fitchburg State College.

The grade point average from previously attended colleges and universities is dropped, and a new GPA is established, reflecting the student's performance while matriculating at Fitchburg State College.

For some transfer students, the requirements and provisions of "The Commonwealth Transfer Compact" apply. The complete text of the "Compact" is printed following this section.

## The Commonwealth Transfer Compact

### January 1990

For students transferring from Massachusetts community colleges to public colleges and universities offering the baccalaureate degree.

### Section I: Requirements for Transfer Compact Status

A student shall be eligible for Transfer Compact status if he or she has met the following requirements:

- Completed an Associate's degree with a minimum of 60 credit hours exclusive of developmental course work
- Achieved a cumulative grade point average of not less than 2.0 (in a 4.0 system) at the community college awarding the degree
- Completed the following minimum general education core exclusive of developmental course work:

English Composition/Writing .....	6 credit hours
Behavioral and Social Sciences .....	9 credit hours
Humanities and Fine Arts .....	9 credit hours
Natural or Physical Sciences .....	8 credit hours
Mathematics .....	3 credit hours

The sending institution is responsible for identifying the transcript of each student who is a candidate for transfer under this compact.

### Section II: Credits to be Transferred

The 35 credits in general education specified in Section I will be applied toward the fulfillment of the receiving institution's general education requirements.

A minimum of 25 additional credits will be accepted as transfer credits by the receiving institution. These credits may be transferred as free electives, toward the receiving institution's additional general education requirements, toward the student's major, or any combination, as the receiving institution deems appropriate.

Only college-level credits consistent with the standards set forth in the Undergraduate Experience recommendations are included under this Compact. Credits awarded by the sending institution through CLEP, challenge examinations, and other life-experience evaluations for course credit may be included when the community college certifies that a student qualifies under this Compact.

### Section III: Credits Beyond the Associate Degree

To complete the baccalaureate degree, a student who transfers under this Compact may be required to take no more than 68 additional credits unless:

- The student changes his or her program upon entering the receiving institution; or
- The combination of additional general education requirements, if any, and the requirements of the student's major at the receiving institution total more than 68 credits

Under these circumstances, transfer students will be subject to the same requirements as native students. (The term "native student" refers to students who began their undergraduate education at the baccalaureate institution.)

### Section IV: Admission to Competitive Majors or Programs

If, because of space or fiscal limitations, the receiving institution does not admit all qualified applicants to a given major or program, the receiving institution will use the same criteria for applicants who are transfer students under this Compact as it does for its native students.

### Section V: Transfer Coordinating Committee

A Transfer Coordinating Committee, convened by the Higher Education Coordinating Council of the Commonwealth of Massachusetts, will monitor use of the Transfer Compact, resolve appeals as they pertain to the provisions in this document, and collect and analyze relevant data.

### Section VI: Publication of Requirements

Each public college and university shall include in its official undergraduate catalog the provisions of the Commonwealth Transfer Compact. A transfer student may not be held to any degree requirements at the receiving institution that were established less than three years prior to transfer admission.

### Section VII: Transfer Records

The student with Transfer Compact status will be provided (by the receiving institution) a list of courses to be fulfilled to earn a baccalaureate degree, no later than the end of the semester the student enrolls. With the agreement of the student, a copy will be provided to the Transfer Officer at the sending community college.

### Section VIII: Transfer Officer

The President or Chancellor of each public institution of higher education will identify an individual who serves as that institution's Transfer Officer. The Transfer Officer's responsibility will be to assist students with transfer activities.

### Section IX: Student Appeals

A student who believes that the provisions of this Compact have not been applied fairly to his/her transfer application has the right to appeal.

Initially, differences of interpretation regarding the award of transfer credit shall be resolved between the student and the institution to which he/she is transferring. If a difference remains unresolved, the student shall present his/her evaluation of the situation to the institution from which the student is transferring. Representatives from the two institutions shall then have the opportunity to resolve the differences.

Absent a satisfactory resolution, differences of interpretation may be presented to the Transfer Coordinating Committee.

### Section X: Effective Date

The Commonwealth Transfer Compact takes effect January 9, 1990.

## New England Regional Student Program

This program enables residents of Connecticut, Maine, New Hampshire, Rhode Island, and Vermont to be considered for admission to programs of study not offered by public colleges in their home states. Applicants selected under this program are granted reduced tuition rates (50% above regular in-state tuition, rather than full out-of-state tuition). For further information, please contact the Admissions Office or the New England Board of Higher Education, 45 Temple Place, Boston, Massachusetts 02111.

## Worcester Consortium

All students enrolled full-time at Fitchburg State College are eligible to take one course each semester at one of the Worcester Consortium Colleges: Anna Maria College, Assumption College, Atlantic Union College, Becker College, Clark University, College of the Holy Cross, Fitchburg State College, Massachusetts College of Pharmacy and Health Sciences, Mount Wachusett Community College, Nichols College, Quinsigamond Community College, Tufts University School of Veterinary Medicine, University of Massachusetts Medical School, Worcester Polytechnic Institute, and Worcester State College.

Please contact the Registrar's Office for additional information.

## Air Force Reserve Officer Training Corps

Fitchburg State College students may participate in Air Force Reserve Officer Training Corps (AFROTC) at Worcester Polytechnic Institute. Qualified U.S. citizens who earn their degree from Fitchburg State College and satisfactorily complete the AFROTC program requirements will be commissioned as second lieutenants in the United States Air Force. AFROTC offers a four-year and two-year program for qualified individuals to earn their commission. Two- and three- year scholarship opportunities are also available to qualified individuals in specific areas of academic study. For more details write the Department of Aerospace Studies, 100 Institute Rd., Worcester, Massachusetts 01609-2280, or call (508) 831-5747, or email at [AFROTC@wpi.edu](mailto:AFROTC@wpi.edu).

# Tuition and Fees



## Undergraduate Day Tuition and Fees

The schedule of fees, tuition, methods of payment and refund policies are those in effect at the time of publication. They are subject to change without notice. Funds accrued for educational purposes are applied on a first funds received, first funds applied to bill basis.

### 2002–2003 Tuition Rates

- In-state students ..... \$970/year ..... \$485/semester
- Out-of-state students ..... \$7,050/year ..... \$3,525/semester
- New England Regional .. \$1,455/year ..... \$727.50/semester

Students aged 60 or over may enroll in classes tuition-free, provided seating is available after the registration of tuition-paying students.

### 2002–2003 Standard Fees

The fees listed below are on a per year basis and are payable in equal installments at the beginning of each semester, except where indicated.

Application Fee, In-state .....	\$10
(not refundable or applicable to tuition, one time only)	
Application Fee, Out-of-state .....	\$40
(not refundable or applicable to tuition, one time only)	
College Fee .....	\$2,460
Health Insurance (per annum) .....	\$856
(required only if not covered by private insurance)	
MASSPIRG (optional) .....	\$14
Student Activity Fee .....	\$90
Capital Projects Fee .....	\$168

### Room and Board

The college offers a variety of on-campus housing as described in the Student Life section of the catalog. Campus Living Residence Hall rates are as follows:

Aubuchon Hall .....	\$1,560/semester .....	\$3,120/year
Herlihy Hall .....	\$1,496/semester .....	\$2,992/year
Russell Towers .....	\$1,472/semester .....	\$2,944/year
Mara Village .....	\$1,532/semester .....	\$3,064/year
Town Houses* .....	\$2,051/semester .....	\$4,102/year

The above rates are for double occupancy in listed Residence Halls. Additional charges are added to the base rate for single occupancy as follows:

Design Single .....	\$350/semester .....	\$700/year
Premium Single .....	\$500/semester .....	\$1,000/year
*single rate already included		

For 12 month contracts add \$1200 /year.

Residence Hall rates include cable television, internet access and telephone service (exclusive of long distance charges) in the stated room rate.

### Dining Services

Whether you like to eat three times a day, or prefer a lighter daily diet, Fitchburg State has a meal plan to meet your needs. You can grab a quick bite between classes in our Commuter Cafe or enjoy a complete hot meal in our all-you-can-eat Holmes Dining Hall.

#### Meal Plan

##### 19-Meal Plan

- Any 19 meals/week
- Three guest passes/week
- \$3.50 lunch exchange for the Commuter Cafe Monday–Friday till 4 pm
- \$75 in Falcon Dollars

##### 15-Meal Plan

- Any 15 meals per week
- \$50 in Falcon Dollars
- One guest pass/week

##### 10-Meal Plan

- Any 10 meals per week
- \$10 in Falcon Dollars

##### 5-Meal Plan

- Any 5 meals per week for breakfast or lunch, Monday–Friday at Holmes Dining Hall
- \$15 Falcon Dollars

Falcon Dollars can be used in the Commuter Cafe or in vending machines located in academic buildings and residence halls.

## Deposits

The following advance deposits are nonrefundable:

- Fee bill deposit ..... \$85  
(paid once at time of acceptance;  
credited toward first semester fee bill)
- Housing Deposit ..... \$150

The Housing Deposit is required of all students requesting on-campus accommodations. The Housing Deposit is paid one time and will remain current as long as an active housing contract is maintained consecutively. Upon successful completion of all housing contracts the deposit will be refunded less any outstanding charges.

## Payment Options

Bills can be paid in the form of cash, cashier's checks, money orders, bank checks, traveler's checks, MasterCard, VISA, Discover, or personal checks. Fitchburg State College also has a tuition payment plan that is administered directly through the Tuition Management Services (TMS).

Any payments that become past due immediately jeopardize the student's enrollment. Until debts are cleared, a student will not be permitted to register for a subsequent semester or summer session. Furthermore, the student may not be issued diplomas, degrees, or other official statements unless otherwise mandated by law. Any collection costs associated with the collection of this debt is the responsibility of the student. Additionally, the Treasurer's Office may refer my account to the State Attorney General or State Intercept program to recover any debt owed to Fitchburg State College.

Please Note: A student will be charged \$30 for any personal checks returned to the college by the bank. A \$25 late payment fee will also be incurred.

## Institutional Refund Policy

The following Institutional Refund Policy is a reference for all students withdrawing from the College. The information below reflects the percentage of charges the student will be charged for dependant on the official effective week of withdrawal. If a student is using Financial Aid against your total charges, please refer to the Financial Aid return of Title IV refund policy.

## Enrollment Period

The fall and spring terms are a 15-week schedule. The 50% point is up to the seventh week. The 60% point is up to the ninth week of school.

## Institutional Refund Policy

Withdrawal prior to the start of classes .....	100%
Before the beginning of the second week .....	100%
From the second week but before the third week .....	50%
From the third week but before the fourth week .....	50%
From the fourth week but before the fifth week .....	25%
From the fifth week but before the sixth week .....	25%
From the sixth week but before the seventh week .....	25%
From the seventh week but before the eighth week .....	25%
From the eighth week but before the ninth week .....	0%
From the ninth week but before the tenth week .....	0%

Students who withdraw after the seventh week will have no adjustments to their charges.

## Dropping Courses Below Full-Time

This is the refund policy proposed for all part-time students who drop state supported courses during the first three weeks of school.

Dropping prior to the start of classes .....	100%
Before the beginning of the second week .....	90%
From the second week but before the third week .....	50%
From the third week but before the fourth week .....	50%
After the fourth week .....	0%

Refund will only be generated if the total payments exceed total charges after adjustments have been generated.

## Health Insurance

All matriculated students registering for nine or more semester hours must be enrolled in a student health insurance plan offered by the college or in a private health insurance program with comparable coverage. Students covered by insurance other than that offered by the college must sign a waiver card. If a waiver card is not signed, a student will be automatically billed the current health insurance rate a year for the college insurance plan. To obtain a brochure about the college sponsored insurance, please call 978-665-3130.

## Unpaid Charges

If a student receives Title IV aid and has unpaid charges owed to the college, the college may automatically credit the refund to the student's account up to the amount owed by the student.

*\*Based on policies in effect on May 8, 2001. All policies are subject to change.*

# Undergraduate Evening and Graduate Tuition and Fees

## 2002–2003 Tuition Rates

The Graduate and Continuing Education tuition charges for all students are as follows:

Undergraduate .....	\$110 per semester hour of credit
Graduate .....	\$150 per semester hour of credit

## 2002–2003 Standard Fees

All students must pay the following fees:

Application Fee (non-refundable) .....	\$25
Application Fee for International Students (non-refundable) .....	\$50
*Comprehensive Registration Fee .....	\$75 each semester
Capital Projects Fee .....	\$7 per credit
*Late registration fee .....	\$25

Students auditing classes pay regular tuition and fees.

\*Nonrefundable unless a course is cancelled by the college.

## Payment Options

Payment for tuition and fees must be made at time of registration in the form of cashier's check, money order, bank check, traveler's check, personal check, MasterCard, VISA, or Discover.

Any payment that becomes past due immediately jeopardizes the student's enrollment. Until debts are cleared, a student is not permitted to register for a subsequent semester or be issued academic transcripts or other official statements unless otherwise mandated by law.

Please note: All returned checks require a \$30 returned check fee to cover charges by financial institutions. Students who do not respond to notification to rectify their account will have their account placed on hold and will be placed in the collection process.

## Tuition Waivers and Vouchers

Some tuition waivers and/or vouchers may be used as partial payment for course(s) taken through Graduate and Continuing Education. When using waivers or vouchers, students need to register in-person or by mail. The appropriate original eligibility form with all required signatures must be presented at the time of registration. **A tuition refund will not be issued if a waiver is presented after registration.** It is important that students check with their own Human Resource Department to determine eligibility. Not all tuition waivers apply to non-state funded programs such as those offered through Graduate and Continuing Education.

Tuition waivers, remissions, and vouchers do **not** apply to non-credit Life-long Learning courses, conferences, teleconferences, independent studies, directed studies, internship, practica, fieldwork, or professional development seminars and lectures offered through the Office of Graduate and Continuing Education.

## Refund Policy

The amount of a refund to a student depends on the official date of the student's withdrawal. The official date of withdrawal is the date when the Registrar's Office receives the completed withdrawal form.

### **Refunds for courses designated "Special or Institute Scheduling":**

- 100% refund one week prior to the first class meeting
  - 50% refund less than one week prior to first class meeting
  - No refund of tuition on the first day of class or thereafter
- If a course is canceled by the college, a student receives a full refund of tuition and fees.

### **Class meeting is defined as 2.5 hours.**

Note: Independent and directed studies, internship, fieldwork, and practica are also considered to be special scheduling courses.

### **Refunds**

Refunds are determined by the number of hours a class has met: Class hours

- Prior to the first class meeting ..... 100% refunded
- Prior to second class meeting ..... 90% refunded
- Prior to fourth class meeting ..... 50% refunded
- No refunds issued after 4th class meeting ..... 0% refunded

### **Class meeting is defined as 2.5 hours.**

If a course is canceled by the college, a student receives a full refund of tuition and fees.

### **Refunds for Federal Financial Aid**

Please refer to the Federal Title IV Policy section which appears in this catalog.

## Students Over Sixty Years of Age

There is no tuition charge for students over 60 years of age enrolling in credit yielding graduate or undergraduate courses. They are welcome to enroll in any class, provided space is available after the registration of tuition paying students. Students over sixty years of age are responsible for paying fees.

## Health Insurance

All matriculated undergraduate students registering for 9 or more semester hours and graduate students registering for 6.75 credits or more must be enrolled in a student health insurance plan offered by the college or in a private health insurance program with comparable coverage. Students covered by insurance other than that offered by the college must sign a waiver card. If a waiver card is not signed a student will be automatically billed for the college insurance plan. To obtain a brochure about the college sponsored insurance, please call 978-665-3181.

## Public Disclosure

Fitchburg State College has copies of its most recent audited financial statement available in the Treasurer's Office.

The schedule of fees, tuition, methods of payment and refund policies are those in effect at the time of publication. They are subject to change without notice.

# Financial Aid



**T**he Financial Aid Office at Fitchburg State College is committed to providing an affordable education for every student admitted to the school. The college adheres to the basic premise that the student and family are primarily responsible for meeting college costs. Financial aid is available to assist with the educational expenses that remain after the family's resources have been taken into account.

## Application Process

Financial aid funds are awarded on a first-come, first-served basis, according to demonstrated financial need. In order to receive priority consideration, students must file:

- the Free Application for Federal Student Aid (\*FAFSA) with the federal processor by March 1st
- the Fitchburg State College Financial Aid Application with the FSC Financial Aid Office by March 1st
- any additional information needed to complete an applicant's file as requested in writing by the Financial Aid Office

Applications are accepted and processed after the priority dates listed above. Late applications will be reviewed on a funds available basis. All applications must be made prior to the academic year in which the applicant will be attending college to ensure the availability of financial aid to put toward the fall semester's bill.

\*The FAFSA may be obtained from the Financial Aid Office or from the guidance department of most secondary schools. Each FAFSA requires four to six weeks to process.

Please remember that financial aid is not automatically renewed. It must be applied for each year.

## Financial Aid Programs

Financial aid programs fall into three main categories:

- gift aid
- student loans
- work programs

## Financial Aid for Undergraduate Students

### Gift Aid

Gift aid is usually in the form of grants or scholarships and does not need to be earned or repaid. The following gift aid programs are available to undergraduate students at Fitchburg State College:

**The Federal Pell Grant**, named after its sponsor, Senator Claiborne Pell, is a federally funded entitlement program designed to assist undergraduate students who have exceptional need. Grants range from \$400 to \$4,000 per academic year (July 1st to June 30th).

**The Federal Supplemental Educational Opportunity Grant (SEOG)** is a federally funded program, which awards funds to undergraduate students with extreme financial need and who would otherwise be unable to attend a postsecondary institution. Average grants range from \$500 to \$1,000 per academic year.

### Massachusetts State Grant Programs

These programs are administered by the Office of Student Financial Assistance (OSFA) of the Commonwealth of Massachusetts. To qualify for the first two programs students must be enrolled **full time**. The Financial Aid Office verifies information and processes payments for state grant programs.

**MA State Grant** is gift aid based on financial need. Grants range from \$300 to \$1000 per academic year. Students are notified of their eligibility by OSFA and must complete the requirements as stated in their award letter.

**Performance Bonus** is gift aid awarded based on financial need and academic achievement. Students must earn at least 24 college credits and maintain a cumulative Grade Point Average of 3.0 or higher. The Performance Bonus is awarded in addition to the MA State Grant.

**MA Cash Grant** is need based gift aid from FSC funded by the Commonwealth of Massachusetts and awarded to undergraduate Massachusetts residents.

**Tuition Waiver** is a state-funded program for Massachusetts residents. Applicants with demonstrated need can receive a reduction in tuition. Award amounts vary, but they cannot exceed the total tuition cost for which an undergraduate day student is billed.

**MA-Part-time Grant** is awarded to part-time undergraduate students with demonstrated financial need. Awards average \$550 per year.

**Special Fee Scholarship** is awarded to full-time undergraduate day students who are not a resident of Massachusetts and who demonstrate financial need. Average award is \$1,000 per year.

### Other State Grants

Students from other states may be eligible to receive a grant or scholarship from their respective state. Each program has its own individual guidelines and deadlines. Students are urged to contact the appropriate agency in their state for further information.

# Financial Aid for Undergraduate and Graduate Students

## Student Loans

Student loans are long-term, low-interest loans, which come due only after graduation, withdrawal from the college, or upon less than half-time enrollment. Student eligibility for these loans is based on financial need and availability of funds. To apply for the loans indicated below both the FAFSA and FSC Application for Financial Aid are required. Once students are awarded a loan or loans, additional paperwork is required.

### **Federal Perkins Loan**

- Available for qualifying undergraduate and graduate students
- Low-interest (5%) loan from the federal government and FSC
- Repayment begins nine months after the student either leaves school or drops below half-time status
- Provisions for deferment, postponement, or cancellation are available for some specialized areas

### **Nursing Student Loan**

- Assists students who are furthering their education in Nursing
- Low-interest (5%) loan from the federal government and FSC
- Repayment begins nine months after a student leaves school or drops below half-time status

For more information about repayment and deferment contact the Loan Collections Office, located in the Treasurer's Office.

### **Massachusetts No-Interest Loan Program**

- Zero interest loan from the Commonwealth of Massachusetts
- Repayment begins six months after a student leaves school or drops below half-time status

### **Federal Direct Student Loan Program**

Enables both undergraduate and graduate students with demonstrated financial need to apply for a loan through FSC, instead of applying through a bank. If a student qualifies for a **Subsidized Direct Loan**:

- The federal government pays the variable interest on the loan while the student is in school
- Repayment begins six months after graduation, withdrawal from the school, or upon less than half-time enrollment

An **Unsubsidized Direct Loan** is available to undergraduate and graduate students who do not demonstrate financial need or who are eligible to borrow additional funds beyond the subsidized loan:

- Loan has the same low variable interest rate as the Subsidized Loan
- Federal government does not make interest payments on behalf of the student
- Interest on the loan accrues once the loan is made. The interest payments can be deferred or paid while the student is in school.

For information on other educational loans, interest rates, eligibility standards, and requirements, applicants should contact the Financial Aid Office.

## Student Employment

The college advocates 'earning while learning' as a supplement to the gift aid and loan components of a student's financial aid package. The current work programs include:

### **Federal Work Study**

- Federally funded part-time employment on campus
- Students are paid an hourly rate every two weeks for time worked
- Hours to work are available during the academic year, holidays, and the summer
- Open positions are posted in the Financial Aid Office

### **Fitchburg State College Employment**

- Part-time on-campus employment for a limited number of students
- Students are paid an hourly rate every two weeks for time worked
- Open positions are posted in the Financial Aid Office

### **Off-Campus Employment**

The Career Services Center, located on the third floor of the Hammond Building, provides listings of part-time positions from the local community.

- Positions are posted on a bulletin board in the G-Lobby of the Hammond Building
- Flexible hours are offered to accommodate academic commitments

## Eligibility for Financial Aid

### **Determining Financial Need**

Although Fitchburg State College does not set the standards to measure financial need, the Financial Aid Office will help students and their families with the process of applying under Federal and State guidelines. No student should assume that he or she is ineligible for financial aid. All students, regardless of family income, are encouraged to apply.

A student's financial need and financial aid eligibility is based on careful review of the information provided on the Free Application for Federal Student Aid (FAFSA) and the Fitchburg State College Application for Financial Aid. **Financial need** is based on the difference between expected **educational costs** and the **family or student contribution** toward those costs.

**Educational costs** vary according to the individual circumstances of the student, and include such items as tuition, fees, room and board, books, supplies, transportation, and personal expenses.

**Family or student contribution** is determined by the Federal formula known as Federal Methodology (FM), which factors in such items as income, assets, number in household, and number in college. As a result, the amount of family contribution may vary, even between households having approximately the same income.

## Student Financial Aid Budgets

A student's financial aid budget is based on his or her cost of education, which includes both direct and indirect expenses.

Direct expenses are paid by the student to the college, including tuition, fees, and room and board (for on-campus students). These expenses are set by the college and the Commonwealth.

Indirect expenses are those over which the student has some control, including books, supplies, transportation, personal/miscellaneous, and room and board (for off-campus students). These expenses are based on estimated costs for students at FSC.

### ***A typical budget for a full-time undergraduate student living in a residence hall for the 2002-2003 school year is:***

Tuition .....	\$1,030
Fees .....	1,988
Room .....	2,940
Board .....	2,160
Books/Supplies .....	600
Transportation .....	350
Personal/Misc. ....	*1,500
<b>Total .....</b>	<b>\$10,568</b>

\* includes health insurance expense

### ***A typical budget for a half-time continuing education student for the 2002-2003 school year is below:***

Tuition .....	\$1,320
Fees .....	214
Room (off-campus) .....	2,700
Board (off-campus) .....	2,160
Books/Supplies .....	300
Transportation .....	500
Personal/Misc. ....	1,500
<b>Total .....</b>	<b>\$8,694</b>

### ***A typical budget for a graduate student carrying six credits each semester for the 2002-2003 school year is:***

Tuition .....	\$1,800
Fees .....	214
Room (off-campus) .....	2,700
Board (off-campus) .....	2,160
Books/Supplies .....	300
Transportation .....	1000
Personal/Misc. ....	1,500
<b>Total .....</b>	<b>\$9,674</b>

Not all students will spend exactly these amounts. Budgets will vary depending on enrollment and housing status.

Students are awarded financial aid based on their total budget. When the money for a student's financial aid is actually received at the college, it is first used to satisfy the student's direct expenses. Once a student's bill with the college is satisfied, the balance of his or her aid is available and may be used to satisfy any indirect expenses the student may have.

Students should plan to start the semester with enough money for books and at least the first two month's rent (if living off campus). Financial aid refunds will not be available to cover these expenses. The Treasurer's Office will notify the student about which aid has been received, which aid has been used to satisfy their bill, and which aid (if any) is available for their use.

## Satisfactory Academic Progress

Eligibility for continued financial aid for a returning student is based on need (as detailed above) and Satisfactory Academic Progress (SAP). SAP is the **qualitative** and **quantitative** measurement of progress toward the completion of a course of study according to the standards of the college. Students are solely responsible for maintaining their academic progress. Those who have not done so will be notified of their ineligibility for financial aid during the award letter process.

SAP standards apply to all matriculated students.

**Qualitative measure:** students must maintain an appropriate cumulative Grade Point Average according to the regulations listed below.

To be in good academic standing, full-time undergraduate students must meet the following standards:

- Freshmen (0-29 credits) must maintain an overall cumulative GPA of 1.6 or higher at the end of two semesters.
- Sophomores (30-59 credits) must maintain an overall cumulative GPA of 1.8 or higher.
- Students with 60 credits or more must maintain a 2.0 cum to remain in good standing

**Quantitative measure:** based on credits successfully completed during the academic year, which runs from fall through the following summer.

- Full-time undergraduate students must successfully complete 20 credits during each academic year
- Part-time undergraduate and all graduate students must successfully complete 67% of the number of attempted credits for each semester

Students who have been denied financial aid because they were not making satisfactory academic progress may again receive aid the semester after attaining satisfactory academic progress.

It is the responsibility of the student to officially notify the Financial Aid Office of any changes to their academic standing. Aid cannot be awarded until this official notification is received.

## Appeal Process

Students have the right to appeal to have their financial aid reinstated under the following circumstances:

- If extreme circumstances during the course of the academic year have impacted a student's academic progress, then a letter of appeal may be submitted to Academic Affairs
- If a student has not met the requirements but has demonstrated academic progress, a letter of appeal may be submitted to the Director of Financial Aid

These appeals will be reviewed by the Dean of Undergraduate Studies. If the Dean determines that the student is making significant academic progress, he or she may be granted a one-semester probationary period to make up course work. Winter and/or summer sessions may be used to make up credits or improve cumulative GPAs.

## Return of Title IV Funds

Refund Policy for Students Who Receive Federal Financial Aid

### **Applicability**

This refund policy applies to all full-time and part-time students enrolled at Fitchburg State College who are receiving Federal Title IV Financial Aid and withdraw from all classes.

This policy is mandated by federal regulation.

This policy deals only with the percentage of aid that is earned by a student. Charges incurred by a student who withdraws from the College are determined in accordance with the Institutional Refund Policy.

### **Withdrawal Requirements**

All matriculated undergraduate students that wish to withdraw from the College must do so by contacting the Student Affairs Office. The official date of withdrawal for this policy is the date that the student begins the official withdrawal process or the date that the student officially notifies the College of his or her intent to withdraw.

### **Refund Policy**

Refund of Federal Title IV Financial Aid will be based on the date a student completely withdraws from the College as described above. During the first 60% of the semester a student earns Title IV funds in direct proportion to the length of time that he or she remained enrolled. A student who remains enrolled beyond the 60% point earns all aid for the semester.

The percentage of the semester that a student remains enrolled is derived by dividing the number of days that a student remains in attendance by the number of days in a semester. Calendar days are used, but breaks of at least 5 consecutive days are excluded from both the numerator and denominator.

Unearned Federal Title IV Aid other than Federal Work Study must be repaid by the student in the following order:

Federal Unsubsidized Direct Loan

Federal Subsidized Direct Loan

Federal Perkins Loan

Federal Parent (PLUS) Loan

Federal Pell Grant

Federal SEOG

### **Other Title IV Financial Aid**

Students must repay 100% of unearned loans according to the terms of their Promissory Note. 50% of unearned grants must be repaid within 30 days of withdrawal from the College.

An example of the Return of Title IV Funds Policy is available in the Financial Aid Office.

It is very possible that a student who receives federal financial aid and withdraws from the College will owe a balance to the FSC Student Accounts Office and may be required to repay funds to the U. S. Department of Education. Students considering withdrawal from FSC are advised to contact the Financial Aid Office.

## Aid for Veterans

U.S. Veterans are entitled to certain financial aid benefits at FSC for undergraduate degree programs. While all veterans are urged to keep informed about benefits available to them through the Veterans' Administration, they should contact the Registrar's Office to establish eligibility for such benefits. The Registrar's Office will provide the veteran with an Application for Benefits or the Change of Place of Training Form, whichever is applicable. Along with an application, the veteran needs to provide the following documents for the Registrar's Office:

- a DD214 Form notarized by a Veteran Notary
- his or her marriage certificate
- birth certificates for each dependent child

All veterans, whether or not exempt from paying tuition, must pay all fees.

For more information on Veterans' Education benefits write to:

Regional Office  
Department of Veteran Affairs  
JFK Federal Building, Government Center  
Boston, Massachusetts 02203

Some Vietnam and Desert Storm veterans from Massachusetts are entitled to attend Fitchburg State College on a no-tuition basis.

Additional information may be obtained from:

The Commonwealth of Massachusetts  
Department of Education  
1385 Hancock Street  
Quincy, Massachusetts 02169

Or, call the hot line at 1-800-827-1000.

## Scholarships for Undergraduate Students

In addition to the gift aid programs already listed, FSC has numerous scholarships of its own. These scholarships are administered by the College Scholarship Committee or by the appropriate area representative. To assist in the evaluation of need, a Scholarship Application or a Free Application for Federal Student Aid (FAFSA) may be required. Scholarship applications are available in the Financial Aid Office after January 1st. Completed applications must be received in the Financial Aid Office no later than March 1st.

**Alumni Legacy Scholarships** are available to full-time students who have a parent, grandparent, spouse, sibling or dependent who is a Fitchburg State College alumnus/a. Priority is based on academic excellence and/or financial need.

**Vincent J. Mara Scholarship** is available to full-time students currently enrolled at Fitchburg State College, who are demonstrating academic excellence with a GPA of 3.5 or above. Community service or extracurricular activities are considered, but not required for application. A letter of recommendation from a member of the faculty is preferred.

**Fitchburg State College Citizen's Award** is awarded to full-time entering freshmen or transfer students who have achieved a combined SAT score of 1000 and have a 3.3 GPA. Transfer students must hold an Associates Degree to be considered. Preference is given to students who have demonstrated leadership in school or community activities. No application is necessary. For information contact the Admissions Office.

**City Year Scholarship** is awarded every four years to a graduate of the Boston City Year Program. For information contact the Financial Aid Office.

**Dean's Undergraduate Scholarship** is awarded annually to an undergraduate matriculated honor student(s) who is pursuing a bachelor's degree by attending evenings.

**Departmental Scholarships** offer a unique opportunity for upperclass students to work closely with the departmental chair in their discipline. High consideration is given to those students with a record of academic excellence and previous departmental service. Financial need is not a requirement for consideration and award decisions are made through each specific department.

**Martin Luther King Scholarship** is awarded to full-time entering freshmen who demonstrate academic achievement, financial need, and community involvement.

**Fitchburg State College Merit Scholarship** is a renewable scholarship awarded to full-time entering freshmen and transfer students. Freshmen must have a combined SAT score of 1100 and have a 3.5 GPA. Transfer students must be graduates of a Massachusetts public community college and have a 3.3 GPA. No application is necessary. For more information contact the Admissions Office.

**Leadership Academy Scholarship** students enrolled in the Leadership Academy are ensured grant and scholarship financial aid covering the cost of billed in-state tuition and fees.

Leadership Academy participants are required to apply for financial aid by completing the Free Application for Federal Student Aid and the FSC Application for Financial Aid. If you are eligible for need-based grant aid (money you never have to repay) or outside scholarships, these funds are first used toward the cost of the Leadership Scholarship at Fitchburg State college. The Leadership Academy Award represents a commitment by the college to ensure grant funding at the stated level. The Scholarship is limited to 8 semesters of coursework during the regular academic year, and students are required to register for a specified number of credits each semester. Funding for the award is drawn from several sources: institutional, federal or state grant financial aid, and outside scholarships.

**Presidential Free Tuition Scholarships** are awarded to entering students who graduated from high schools in Massachusetts. The scholarship recognizes scholastic achievements and requires a combined SAT score of 1200 or higher and a 3.5 GPA.

**The President's Scholars Awards** are available to undergraduate students who have completed a minimum of 15 semester hours at the college and have achieved a grade point average of at least 3.75.

**Sterilite Corporation Scholarship** is awarded to a student who demonstrates financial need.

**Student Government Association Scholarship** are available to sophomores, juniors, and seniors with a grade point average of 2.2 or higher and a record of student leadership.

**Senator Paul E. Tsongas Scholarship Program** is awarded to entering students who are high achievers and Massachusetts' residents. The scholarship is in the amount of tuition and fees and is renewable with a 3.3 grade point average.

**VNA (Visiting Nurses Association) Trust Scholarship** is awarded to a Nursing major by the Nursing Department.

**Class of 1955 Scholarship** is available annually to a full-time student of FSC.

**Class of 1967 Scholarship** is available annually to an FSC student chosen on the basis of academic merit and financial need.

### Fitchburg State College Scholarships and Awards Named in Grateful Recognition of their Benefactors

**Ken and Cherie Ansin '96 Scholarship** is awarded to a non-traditional Human Services undergraduate student.

**Matti N. Antila Poetry Award** is awarded annually to a junior for a poetry composition. The award is made possible by Lauri and Signe Sipila in memory of Signe Sipila's parents, Matti N. and Fanny P. Antila.

**W.E. Aubuchon, Jr. Scholarship**, is awarded to an FSC student selected by the Financial Aid Department

**Leo J. Bourque Memorial Scholarship** is awarded to a full-time undergraduate, who is at least a three-year resident of Leominster and who demonstrates financial need.

**Charlotte B. Bonjukian Memorial Fund** is awarded to a non-traditional upper-class nursing student.

**Richard E.T. and Linda A.C. Brooks Scholarship** in memory of Elmer V. and Eileen M. Brooks. Seven available annually to students who meet the following criteria: (a) financial need (b) academic promise based on actual high school record (c) intent to major in a science degree program (preference to Chemistry but not limited to) and (d) interest, based on high school actual performance, in participating in varsity athletics. Preference is given to the children of employees of ChemDesign.

**Mary F. Burnham and Mary Frances Burnham Scholarship Fund** is available to full-time undergraduate students who have completed at least one semester at Fitchburg State. Students must be currently working to support their education. Those who demonstrate financial need preferred.

**Stephen W. Clair Memorial Scholarship** is awarded to a student with financial need who is a Geography/Earth Science major, has earned at least 30 credits, has at least a 3.0 GPA, and is an active member of the Geography Club.

**William E. Clark III Memorial Scholarship** is awarded to a student who evinces academic achievement, financial need, and the potential to succeed.

**Roberta A. Fitzmaurice Connors '63 Scholarship** is awarded to a full-time student in the early childhood education program who demonstrates the ability to be an outstanding early childhood educator.

**Garrett Conrad Scholarship** is awarded annually to a student with a disability. Applicants must be registered with Disability Services; qualify under ADA; enrolled for at least six credits each semester, and have completed at least one semester at Fitchburg State College. Preference is given to students with an outstanding record of service and commitment to the college and community.

**The Elaine T. Coyne Women in Film Scholarship** is available to a female student under criteria established by the Communications/ Media department.

**A. Wallace Cunningham Scholarship** is awarded to a student with a demonstrated financial need and whose academic record proves high achievement.

**Carol Mulloy Cuttle Scholarship** is awarded to a Fitchburg area sophomore, junior, or senior in the special education department who demonstrates financial need.

**Dean's Undergraduate Award** is awarded to an evening undergraduate degree student who has completed at least 80 credits with a GPA of 3.5 or better.

**Dr. Edward T. Donnelly Scholarship** is available annually to a full-time undergraduate student with a teacher education major or minor and a demonstrated financial need.

**Ethel P. Mandrus Donohue '41 Endowed Scholarship** is awarded to a first-year student from Hampden County who will major in special education. Additional selection criteria include a minimum grade average minimum of 3.0 and demonstrate school and community participation.

**Donovan Engineering & Construction Co./Bud Greenwald Scholarship** is awarded annually to a senior majoring Industrial Technology with a construction Technology concentration, a minimum 3.2 GPA, and the desire to enter the construction profession.

**Henry Frank Scholarship** is awarded to full-time entering freshmen and transfer students from Norwalk, Connecticut, or from within a fifteen-mile radius of Orange, Massachusetts. Preference is given to the former and selection is based on academic achievement.

**Fitchburg Mutual Insurance Company W. Bruce Adams Scholarship** is available annually to a graduate of a public high school in one of the following towns: Ashburnham, Ashby, Fitchburg, Leominster, Lunenburg, or Westminster, who meets income (adjusted gross income \$40,000–\$60,000) and academic (3 pt. average or better on a four pt. scale) criteria.

**Wayne J. Griffin Electric Inc. Scholarships** (2) are tuition (in-state) and fees scholarships, awarded to full-time, upper-class students who are majoring in Industrial Technology/Construction Technology, maintain a 3.2 GPA, and plan to enter the construction technology fields.

**Grace Gummo Nursing Scholarship** is awarded to deserving students in the Nursing Program.

**Patrick and Mary Hammond Band Scholarship** is awarded to a full-time undergraduate student chosen as the outstanding member of the Fitchburg State College Band.

**The Patricia A. Hess '94 Memorial Scholarship** is awarded annually to a female, non-traditional student who has been out of high school for at least ten years. The recipient must be an undergraduate English and/or History major with a minimum of 3.0 GPA and 30 credit hours and demonstrates a love of learning and will be based upon merit. Awarded by the Financial Aid Committee with the recommendation of the Social Science Department faculty.

**The Walter F. Harrod '40 Scholarship** is awarded as a one-year renewable scholarship when supported by sustained academic performance and evidence of good character. The recipient must be a junior industrial technology major with a minimum 2.8 GPA and who has earned at least 90 credit hours and demonstrates the desire and capacity to enter the professional field within industrial technology. Financial need may be used in awarding the scholarship and will be awarded by the Financial Aid Committee with the recommendation of the Industrial Technology Department.

**Walter Harrod Community Service Scholarship** is awarded to an Industrial Technology major who demonstrates community service commitment.

**Leo J. Hines Memorial Scholarship** is awarded to a qualified English major demonstrating academic excellence.

**Jeanne M. Joyal '53 Endowed Scholarship** provides scholarship assistance to a resident of Western Massachusetts who will be a first-year student and major in elementary education. The recipient must possess a minimum of 3.0 GPA in high school and demonstrate school and community participation.

**Kirkpatrick-Percival Scholarship** is awarded to an outstanding senior Psychology major.

**Jacqueline LaCoy Scholarship** offers the opportunity for returning communications/media students to work closely with television production faculty. Priority is given to students with a record of television production excellence, previous departmental service, and an interest in teaching television production.

**LeBlond-O'Sullivan Memorial Scholarship** is awarded to full-time juniors or seniors with financial need and a record of service to the college.

**Ruth Lee Scholarship** is available annually to a student from the North Central Massachusetts Region, (one of the cities and towns included in the North Central Mass. Chamber of Commerce membership), on the basis of academic merit.

**Francis Marcille '60 Memorial Award** is awarded to a graduating senior Industrial Technology major who intends to teach in a Massachusetts school.

**Dr. Robert F. McGuire Memorial Award** is awarded to an undergraduate and a graduate student annually from the computer science department.

**Myra McGuirk-Bonitz '14, G'52 Scholarship** is available annually to an undergraduate student graduating from a high school within the Fitchburg city limits who has chosen education as a major field of study.

**Buddy McMurray Good Fellowship Award** is given to a student whose contribution to the college is positive, salutary, and inspirational, as well as indicative of the goals he or she set by entering Fitchburg State.

**John McNaney Memorial Scholarship** is available to an outstanding Chemistry major.

**Dorothy Meilinger Memorial Scholarship** is awarded to seniors majoring in Special Education, who have a Grade Point Average of 3.5 or above and a demonstrated financial need.

**Annette Rose Mitchell Scholarship Fund** is awarded to a senior Nursing student who has maintained a 3.0 GPA for three years.

**Flora D. Mulholland Memorial Scholarship** is awarded to a Nursing major evincing high scholastic achievement and a demonstrated financial need.

**Kevin L. Mumper Memorial Scholarship** is awarded to a student who is a member of the Student Government Association.

**Dr. Helen O'Flaherty Scholarship**, in honor of a former professor, is awarded annually to a student majoring in Early Childhood Education who demonstrates financial need. Membership in a minority group will confer preference. The prior year recipient will automatically receive the award if he or she maintains satisfactory academic progress under college policies.

**Kathleen Mary O'Neil Scholarship** is awarded to a full-time female undergraduate student who is a citizen of the United States and has a class rank in the upper 50th percentile.

**The Owens-Mara Award** is available to an elementary education major completing junior level work during the spring semester and selected by the education department based upon promise as a future elementary leader.

**Dr. Frank Patterson Memorial Award** is awarded to a member of the FSC instrumental ensembles for private lesson instruction at the Indian Hill Music Center.

**Dr. A.J. Polito '48 '49 Memorial Trust** is in honor of FSC veterans and FSC faculty members who have served the institution. It is awarded to a relative or friend of a FSC veteran; to a relative or friend of a faculty member; and to a relative or friend in the Center for Italian Culture Program.

**John L. Powers Memorial Scholarship** is awarded to an Industrial Technology major who has maintained at least a 2.0 GPA and demonstrates financial need.

**Clifford Querolo Scholarship** is awarded to a student in the Industrial Technology Program or to a student who intends to teach industrial, vocational, or occupational education.

**Dean Rachupka '93 Memorial Scholarship** is awarded to a Senior majoring in education from North Central Massachusetts who is active in his/her community and has a GPA of 3.0 or higher.

**Michael P. and Barbara Riccards Scholarship** is available annually to an undergraduate student on the basis of financial need and academic record.

**Louis P. Shepherd Award in Creative Writing** is given annually for the year's best student portfolio of creative writing. The award is named in honor of the late Louis P. Shepherd, a longtime English professor at Fitchburg State College, and made possible through a gift from Professor Shepherd's wife, Ruth, and his daughter, Rae Shepherd-Shlechter.

**M. Lillian Smith Scholarship** is awarded to a student in the Education Program.

**Special Education Scholarship** is available annually for a Special Education major student with a 2.7 average in the major who has a financial need and is active in the Special Education Club.

**Daniel J. Sullivan Scholarship** is available to students demonstrating financial need.

**Philip J. Tardanico Scholarship** is awarded to a junior enrolled as an Industrial Technology major. The scholarship is based on academic excellence, enthusiasm for and commitment to a career in teaching; strong moral character, and financial need. A letter of reference must be submitted from a faculty member in the Industrial Technology Department.

**Michael Vignale Memorial Scholarship/Trust Fund** is available to a Chemistry major.

**Dr. Burnham Walker Memorial Scholarship** is awarded to a full-time student majoring in Biology, Chemistry, Nursing, or Clinical Lab Sciences. Awards are based on financial need and academic achievement.

**Lara A. Willard Memorial Scholarship** is available annually to a female undergraduate nursing student based upon achievement, a demonstrated financial need, and the potential to succeed.

**Carl T. Witherell Scholarship** is awarded to a full-time undergraduate enrolled as an Industrial Technology major.

**Xarras Scholarship** is awarded to a full-time undergraduate student. Preference is given to graduates of Fitchburg High School.

**Ying Jean and Sui King Yee Endowed Scholarship** is awarded to a first-year Asian-American student and based upon an excellent scholastic record and demonstrated participation and achievement in school and community activities.

## Scholarships for Graduate Students

Graduate students are advised to review the complete financial aid section of this catalog beginning on page 31. Consult the Financial Aid Office for eligibility requirements.

### Graduate Scholarship Program

Graduate scholarships are available in varying amounts. Scholarships are awarded in the form of tuition and fee waivers. For application deadlines, processes and procedures the student should contact the Graduate Office.

### Dean's Graduate Scholarship

This award recognizes and honors graduate students who have achieved academic excellence in the course of their graduate studies. Scholarships in varying amounts are awarded annually in the form of tuition and fee waivers.

#### **Eligibility**

- Students who have applied to a graduate program at Fitchburg State College and have an undergraduate GPA of 3.5 or better
- Graduate students enrolled in a graduate program, have a GPA of 4.0, and are recommended by their Graduate Advisor or the Program Chair

#### **Application and Selection Process**

To apply for the Dean's Graduate Scholarship Awards, students must submit:

- Completed Scholarship Application
- Current Dated Resume
- Recommendation of Graduate Program Chair through signature on the application
- Academic record/transcripts

The application and supporting materials should be mailed by **February 15th** to the Dean of Graduate Studies.

### The Carla Borg Scholarship

Available annually for a graduate student in special education who has demonstrated exemplary skills in including students with special needs as part of their school/community.

### Dorothy Holmes Toporeck '28 Graduate Scholarship Program

This award recognizes and honors students who have demonstrated scholastic excellence in their undergraduate studies and who are pursuing a Master's Degree at FSC. The scholarship is only available to graduates of the FSC undergraduate program.

The amount of the award is determined annually. Scholarships are awarded in the form of tuition and fee waivers and may be used over a period of two years.

#### **Eligibility**

Candidates must have completed their undergraduate degree at FSC with a 3.25 GPA or better, and have been accepted into a graduate program at the College.

Students currently enrolled in a graduate program must have a GPA of 3.75, an undergraduate GPA of 3.25 or better, and be recommended by their Graduate Advisor or the Program Chair.

#### **Application and Selection Process**

To apply for the Dorothy Holmes Toporeck Graduate Scholarship, students must submit:

- Completed Scholarship Application
- Current dated resume
- Recommendation of Graduate Program Chair through signature on the application
- Academic record/transcripts

The application and supporting materials should be mailed by **February 15th** to the Dean of Graduate Studies.

All scholarship applications are reviewed by the Graduate Council and recommendations are made to the Dean of Graduate Studies. Once award recipients are chosen, they are notified by the Dean and an announcement is made at the Honors Convocation.

For further information or applications, contact the Graduate and Continuing Education Office.

## Graduate Assistant Program

Newly admitted and current graduate students are eligible to apply for Graduate Assistantships. The maximum amount of the award is \$5500 for the academic year. The appointment and award includes a tuition waiver for 24 semester hours of graduate course work for the academic year of the award (excluding Independent Studies). Graduate Assistants must pay all fees.

### ***Qualifications***

Newly accepted graduate students seeking appointments to Graduate Assistant positions must have an undergraduate GPA of 3.0.

Continuing Graduate students must have a graduate GPA of 3.5.

### ***Application***

A completed application form, resume, and an unofficial transcript must be submitted by the applicant to the secretary for the Dean of Graduate Studies, Office of Graduate Studies, no later than the second week of May.

### ***Load and Academic Requirements to Maintain Assistantship***

- Graduate Assistants must carry a load of six semester hours of graduate work per semester in their program, which is considered full time. Overloads/underloads may be petitioned to the Dean
- Graduate Assistants are required to work up to 20 hours per week, which is considered a full-time work schedule
- Graduate Assistants are not allowed to secure a second position on campus

# Undergraduate Academic Policies and Procedures



All students at FSC are expected to be familiar with and act in accordance with academic policies and procedures. The policies are interpreted and administered by the Dean of Undergraduate Studies. Students acting outside of these policies may be subject to administrative action. Special consideration may be given to students admitted or later identified as physically handicapped, learning disabled, or economically or educationally disadvantaged.

## General Course Requirements

To fulfill requirements for a Bachelor's Degree, students must complete either the requirements of the Liberal Arts and Sciences Program (explained in the Curriculum section of catalog) or the requirements of the Leadership Academy program, as well as the requirements for their major.

## The Major

Undergraduate degree candidates must declare and complete a major in one program of study offered by the college. Requirements for undergraduate majors are described in the Undergraduate Day Programs and Undergraduate Evening Programs sections.

### Declaring a major

Students may declare a major when they are admitted to the college. If a change of major is desired, students must complete a change of major card available in the Registrar's Office.

### Pre-Majors (undeclared)

Students with 60 semester hours of college course work must apply for and be admitted to a major prior to registering for additional courses.

Transfer students with 60 or more credits when admitted as "Pre-Majors" have until either October 1 or March 1 of their first semester at Fitchburg State College to declare their major.

### Requirements for a Major

A 2.0 cumulative GPA and 2.0 GPA in courses in the major are the minimum requirements for both admission to and completion of all major programs. Some majors, however, may have requirements higher than a 2.0 GPA in major courses for either entrance or completion.

### Dismissal from a major

Students not making satisfactory progress in completing the academic requirements of the major may be asked to select another major.

Professional programs of study may require a departmental review of students to determine if they are qualified to continue in the major. If in the review process the student is judged as unsuitable for the profession, regardless of academic standing, the student may be asked to select another major.

Successful completion of an academic program in any major field or professional program does not obligate the faculty to recommend licensure or certification, even if the candidate is awarded the academic degree.

## Grading Policy

Grades are awarded on a numerical scale as follows:

4.0	A	Excellent
3.5	B+	Very Good
3.0	B	Good
2.5	C+	Above Average
2.0	C	Average
1.5	D+	Below Average but Passing
1.0	D	Well Below Average but Passing
0.0	F	Failing
	IN	Incomplete
	IP	In Progress
	W	Withdrawn
	AU	Audit
	S	Satisfactory
	U	Unsatisfactory

All grades except 0.0, U, IN, W, and AU are passing grades and earn credit toward the degree.

### Computing quality points and cumulative GPA

- **Quality Points** = semester hours (s.h.) carried by the course multiplied by numerical grade. (For example, a three-credit course with a grade of 3.0 would earn nine quality points.)
- **Cumulative grade point average** = total quality points earned in all courses divided by total credit hours completed

### Repeating Courses and Grade Substitution

#### Repeating Courses after a Failing Grade

A student may repeat a course in which the assigned grade is a 0.0 or U (Unsatisfactory). In these cases, the new grade will be substituted for the original grade in calculating the student's cumulative GPA. The original grade, however, will continue to appear on the transcript. A transfer grade of 2.0 or better eliminates the original failing grade in calculating the cumulative gpa. Because grades from transfer courses are not transferable, the new grade itself is not calculated into the cumulative average.

#### Repeating Courses after a Passing Grade or Audit

A student may repeat **once** any FSC course for which a 1.0, 1.5, or AU is earned. Courses must be taken at FSC and, if at all possible, should be taken within the following year.

The repeated course will be indicated as such on the student's transcript.

### **Satisfactory and Unsatisfactory Grades**

Any course can be taken for an S/U grade with the following exceptions:

- Courses required for a major unless the department has designated them as acceptable.
- Courses taken to fulfill the LA&S writing requirement.
- Courses taken to fulfill the LA&S mathematics proficiency requirement.

and with the following limitations:

- A maximum of 12 credits of S/U can be applied toward the minimum credits required for a degree.
- Only one course in each LA&S cluster may be taken S/U.
- No more than two courses in any discipline (as identified by course-number prefix) may be taken S/U.
- Only one course per semester may be taken S/U.
- No quality points are awarded with the S/U grade.

Students must request the S/U option by the Add/Drop deadline. Once recorded, the designation cannot be changed.

### **Incomplete**

- An Incomplete (IN) is given in lieu of a grade if a student has successfully completed at least 80% of the required course work but cannot complete the rest due to certifiable illness or the death of an immediate family member.
- Students must complete the required course work by the end of the **fourth week of classes** of the following semester in order to receive a grade; otherwise the IN is automatically changed to a grade of 0.0.
- While an IN is not counted in determining academic status, it may have an impact on eligibility for financial aid and athletic participation.
- Grades that result from the fulfillment of an IN will not remove a Probationary, Suspension, or Dismissal status, nor will they count toward Dean's List or President's List eligibility.

### **Audit**

- An Audit (AU) is entered into the transcript to indicate that a student has been officially enrolled in a course for neither grade nor credit.
- Students who wish to audit a course during the day must record the audit designation with the Registrar's Office by the end of the Add/Drop period.
- Students who wish to audit a course during the evening must register the audit designation with the Registrar's Office before the third class meeting.

### **Withdrawal from a Course**

- If a student officially withdraws from a course by the end of the eleventh week of classes, or prior to the twenty-sixth class hour for special scheduling classes in Continuing Education, a W (Withdrawn) is entered on the transcript. No credit is awarded for the course, and it does not affect the cumulative GPA.
- If the student officially withdraws after the end of the eleventh week of classes or after the twenty-sixth class hour for scheduling classes in Continuing Education, a grade of 0.0 is entered on the transcript. A waiver is sometimes granted for documented, critical extenuating circumstances.

### **Transcripts**

Transcripts are prepared upon submission of a signed transcript request form. Please include your social security number, name, address, dates of attendance, and degree area. Transcripts are free of charge.

To obtain a transcript write to:

Office of the Registrar  
Fitchburg State College  
160 Pearl Street  
Fitchburg, MA 01420-2697

### **Attendance**

Each instructor has the prerogative to place a value upon class attendance and must inform the class of that value early in the semester. The instructor's class-attendance standard should be stated in the course syllabus. If a student is absent from a class meeting, the student is required to produce appropriate documentation for the instructor's review.

Section 2B of Chapter 151c of the General Laws of the Commonwealth of Massachusetts reads as follows:

*Any student in an educational or vocational institution, other than a religious or denominational educational or vocational training institution, who is unable, because of religious beliefs, to attend classes or to participate in any examination, study, or work requirement on a particular day shall be excused from any such examination or study or work requirement, and shall be provided with an opportunity to make up such examination, study, or work requirement which may have been missed because of such absence on any particular day; provided, however, that such makeup examination or work shall not create an unreasonable burden upon the school. No fees of any kind shall be charged by the institution for making available to the said student such opportunity. No adverse or prejudicial effects shall result to students who avail themselves of the provisions of this section.*

## Academic Standing

All courses completed at Fitchburg State College, including those taken during winter or summer sessions, determine current academic standing. The grades and credit for wintersession courses are included in the following spring semester's GPA and for summer session courses in the following fall semester's GPA.

Credits transferred from another institution are applied to a student's total number of credits earned, but grades earned from transferred credits are not calculated into the cumulative GPA.

### **Good Academic Standing**

To achieve good academic standing, students must:

- Maintain an overall cumulative GPA of 2.0 or higher
- Maintain a cumulative GPA of 2.0 or higher in the major
- Meet any additional requirements of the major which have been approved by the All-College Committee and are consistent with college policy

## Honors

Fitchburg State College honors students who have high academic achievement throughout their college career as well as at graduation. The honors are:

### **President's List**

Honors students for consistently high academic achievement. Students are named to the President's List when they have attained a semester average of 3.75 or higher for three successive semesters while maintaining full-time status. Incompletes do not count toward the President's List.

### **Dean's List**

Honors students who have attained an average of 3.2 or better for the semester while maintaining full-time status. Incompletes do not count toward the Dean's List.

### **Summer Dean's List**

Students taking 12 semester hours or more through Continuing Education during the summer sessions who maintain an average of 3.2. These students can be named to the President's List if they meet the specified cumulative average.

## Graduation Honors

Graduation honors recognize outstanding academic careers as signified by a high cumulative average. To graduate with honors, a student must have completed **at least 60 credits** with a numerical grade at the College.

*Summa Cum Laude* honors students who graduate with a cumulative GPA of 3.8 or higher.

*Magna Cum Laude* honors students who graduate with a cumulative GPA of 3.5 to 3.79.

*Cum Laude* honors students who graduate with a cumulative GPA of 3.2 to 3.49.

A *Commonwealth Scholar Special Distinction* is given to students who have completed the Leadership Academy (Honors Program) and a senior thesis.

## Probation

If a student's cumulative GPA falls below 2.0 at the end of any semester, that student will be placed on probation. **To avoid suspension the student must meet the following criteria:**

- A student on probation who has attempted fewer than 33 semester hours and who has maintained a cumulative GPA of 1.6 or higher for two semesters may enroll for a third semester to improve academic standing.
- A student on probation who has attempted 33 to 59 semester hours and who has maintained a cumulative GPA of 1.8 or higher for four semesters may enroll for a fifth semester to improve academic standing.

### **Students on probation must:**

- Meet with their academic advisors before the start of the second week of each semester to review current course load and arrange periodic meetings throughout the semester.
- Contact the Academic Advising Center during the first two weeks of the semester.
- Utilize the many resources the college offers, including faculty, Counseling Services, Academic Success Centers, Expanding Horizons, Career Services, and other support systems, as needed.

### **Students placed on probation for the first time will remain eligible to:**

- Hold elected or appointed office
- Serve on campus committees
- Participate on athletic teams (provided academic progress meets the criteria in Section 1)

Any additional probations will disqualify a student from eligibility for these activities.

Students who voluntarily withdraw from the college while on probation will remain on probation if they are readmitted.

Students who maintain the college's academic standards for probation must also meet the financial aid and athletic eligibility requirements for satisfactory academic progress. (Financial aid and athletics have additional academic requirements for probationary students. Students should consult the appropriate office to determine their eligibility.)

## Suspension

**Any student who earns a grade point average of 1.0 or lower in his/her first semester of full-time study at Fitchburg State College will be suspended from the college.** In all other cases, students will be suspended if they have spent at least one semester on probation and do not meet the following GPA and credit criteria:

- A student who has attempted fewer than 33 semester hours and has a cumulative GPA below 1.6 after two semesters
- A student who has attempted 33-59 semester hours and has a cumulative GPA below 1.8 after four semesters
- A student who has attempted 60 credits and has less than a 2.0 cumulative GPA

Suspended students are not eligible to enroll in any credit course in any division of Fitchburg State College for at least one semester.

Following suspension, students must submit a letter requesting re-admission before the deadline established by the Registrar. Students who are readmitted after a suspension do so under contract with the Dean of Undergraduate Studies.

Suspension status is not changed by a voluntary withdrawal.

## Dismissal

Once students have been readmitted after a suspension, they must meet probationary standards and do so under contract with the Dean of Undergraduate Studies for enrollment to avoid dismissal.

Dismissal status results in permanent dismissal from all divisions of Fitchburg State College. A dismissed student may not enroll in any credit courses in any division of the college for a period of 5 years.

## Credit Elimination Policy

The Credit Elimination Policy applies to students who leave the College and desire to return after five or more calendar years. Such students may eliminate all or part of previously earned credits from their transcripts, in units of one semester or more. When a particular semester of credit is designated to be eliminated, all credits from this semester must be eliminated.

This policy requires that:

- Credit elimination may only occur once
- A request for credit elimination must be in writing
- The Dean of Undergraduate Studies must approve the request

## Transfer Credit

Credit received for courses completed at other regionally accredited institutions of higher education may be transferred to Fitchburg State College and applied toward degree programs if:

- The courses are equivalent to courses offered by Fitchburg State College or appropriate to programs at Fitchburg State College
- The grade received was at least a 2.0 (C) or higher

Credit for courses transferred with passing grades below 2.0 may be approved in exceptional circumstances or if the credits are included as part of an Articulation Agreement/Associate's Degree program covered by the Commonwealth of Massachusetts Transfer Compact or the Joint Admissions Program.

- A maximum of 60 SH credit from 2 year institutions, college level examinations, military will be considered for transfer
- A maximum of 75 SH of credit will be considered from 4 year baccalaureate institutions

### **Value of transferred credit**

- Transferred credits count only as credit hours earned
- No quality points or grades are transferred or calculated in the student's cumulative GPA
- A minimum of 45 semester hours toward a baccalaureate degree must be completed at Fitchburg State College
- For students with one major degree program and one or more minors, no more than 50% of major credits and 50% of minor credits can be completed as transfer credits. For students with two major programs (double majors), up to two-thirds of the credits (67%) in **one** of the two majors may be accepted as transfer credit, upon the advice of both major advisors and with the approval of the Department Chairs and the Dean of Undergraduate Studies. At least 50% of the two majors combined must be FSC coursework (that is, any additional courses accepted as transfer credit for one major must be balanced by additional FSC coursework in the second major).
- Major departments may have additional requirements

Approval of transfer credit may be authorized by the Registrar, the Dean of Undergraduate Studies, or the Dean of Graduate Studies.

## Academic Dishonesty Policy

Academic dishonesty in all its forms, including cheating, fabrication, plagiarism, and the facilitating of academic dishonesty by aiding and abetting any of the aforementioned, is not tolerated at Fitchburg State College. Violators will be subject to the following process.

### Step One Procedures

- Within ten days of the discovery of the alleged offense, the faculty member involved will contact the student, inform him/her of the circumstance in question, and arrange a meeting to discuss it.
- If the faculty member finds the student responsible for the alleged behavior, he/she will write a statement, either during the meeting with the student or within seven days of it, indicating the alleged dishonesty, his/her judgment regarding it, and the sanctions, if any, to be imposed.
- If the student is found not responsible, he/she will be notified in a statement written by the faculty member as described above.
- In either case, the student will sign the statement, indicating either that he/she accepts the outcome or that he/she has seen the statement but does not accept the outcome. The student gets a copy of this statement, and the faculty member retains the original as part of his/her records for the class.

Students found responsible for the alleged behavior based upon the evidence presented may be subject to one or more of the following sanctions by the faculty member:

- Be required to complete additional course requirements; this may include repeating part or all of the work in question.
- Receive a grade of 0.0 for the work in question.
- Receive a grade of 0.0 for the course
- Be referred to the department chairperson for transmittal of the case to the Committee on Academic Dishonesty. If the referral is made at a time when a grade is due to the Registrar, the faculty member will submit an Incomplete for the student.

### Step Two

When the faculty member has taken the action described under #4 above, the faculty member agrees that the disposition of the case, including the imposition of any actions, will be determined by the Committee. Once a case is referred to the Committee on Academic Dishonesty, the procedures and timelines of the Student Judicial Code apply.

The Academic Dishonesty Committee is composed of two faculty members appointed for a one-year term by the MSCA faculty union, two student members of the Student Conduct Board, and an administrator from the Office of Academic Affairs, who will chair the committee.

### Step Three

When the student believes that the accusation made and/or the sanctions imposed by the faculty member are unfair, he/she may take the case to the department chairperson. The chairperson will arrange a meeting with the student and the faculty member. Within ten days of this meeting, the chairperson will notify the student and the faculty member in writing of his/her opinion on the case.

If the student is dissatisfied with the outcome of an appeal to the chairperson, he/she may appeal the case to the Committee on Academic Dishonesty. This process is initiated by contacting the Dean of Undergraduate Studies or another administrator in the Office of Academic Affairs.

Cases may be referred directly to the Committee when the student(s) accused of academic dishonesty is not in the class of the discovering faculty member or when a student(s) wants to bring a case against another student(s).

Students found **responsible\*** for the alleged behavior by the Committee may be subject to the following actions:

- Have the sanction(s) imposed by the faculty member lessened
- Have the sanction(s) imposed by the faculty member upheld
- Receive a grade of 0.0 for the work in question
- Receive a grade of 0.0 for the course
- Be required to perform some kind of service to the college community
- Be referred to the President of the college with a recommendation of Suspension
- Be referred to the President of the college with a recommendation of Expulsion

Students found **not responsible\*** for the alleged behavior by the Committee will be recompensed in one or more or all of the following ways:

- All work which had been in question will be accepted
- The sanction(s) imposed by the faculty member will be removed

An opportunity to redo part or all of the assignment or exam in question will be granted when the Committee finds that a seeming act of academic dishonesty was unintentional and the result of a lack of understanding of proper procedure.

\* Rules of Evidence do not apply in college hearings. Evidence “beyond a reasonable doubt” is not necessary for a student to be found responsible. The Committee will be asked to determine, from the case presented by both sides, which side has more evidence to support its position.

# Undergraduate Day Policies and Procedures

## Course Registration

### **Approval of Course Schedule**

Prior to course registration each semester, students must meet with their advisor to review their academic progress and to develop a course schedule for the upcoming semester. Advisors must approve course selections before the student is permitted to register.

### **Identification of Class Standing**

For the purpose of registration and financial aid, the following classifications are identified:

- Freshmen ..... students with between 0-24 earned credits
- Sophomores ..... students with between 25-48 earned credits
- Juniors ..... students with between 49-72 earned credits
- Seniors ..... students with 73 or more earned credits

### **Add/Drop**

During the first five class days of the semester, students may either add or drop a course; during the sixth class day, students may only add courses. Although students may make changes to their schedule during the Add/Drop period without the approval of their advisor, they should confer with their advisor when making changes that affect their progress towards graduation or fulfillment of their major requirements.

### **Course Withdrawal**

Through the eleventh week of the semester, students may withdraw from courses and receive a W (Withdrawn). Appropriate forms are available at the Registrar's Office and must be signed by the course instructor, the faculty advisor, and, if the student is dropping below 12 semester hours, the Dean of Undergraduate Studies. Withdrawal after the eleventh week results in a grade of 0.0.

## Course Load

**Graduation requirement:** a minimum of 120 semester hours in all majors (See Undergraduate Day Programs)

**Full-time status:** a minimum of 12 semester hours each semester. Students must maintain full-time status to remain eligible for financial aid, varsity athletics, academic honors, including Dean's List, participation in student governance, VA benefits, scholarships, and health insurance coverage. Both day and continuing education courses are included in calculating total semester hours.

**Maximum allowable course load:** 18 semester hours. Students registering for more than 18 semester hours (whether solely at Fitchburg State College or in conjunction with courses taken at another college) must have the permission of the Dean of Undergraduate Studies along with their major advisor. A student with a cumulative GPA below 3.0 will normally not be granted permission to register for more than 18 semester hours. Students taking overloads without permission may be denied credit for overload courses, regardless of grades earned.

**Four-year undergraduate degree:** at least 15 semester hours per semester are recommended for graduation in four years. Certain majors may require enrollment in specific courses or with specific course loads in certain semesters; students are responsible for understanding requirements for their major.

**Program enrollment:** Under certain circumstances, day program students may be permitted to enroll full time for a semester through the Continuing Education programs, and vice-versa. Approval for such enrollments must be granted by the Dean of Undergraduate Studies.

## Withdrawal from the College

Students who withdraw from the college, either during or between semesters, must complete a withdrawal form available at the Student Affairs Office. Students who withdraw within the first eleven weeks of the semester will receive a "W" in each course.

Students who leave the college after eleven weeks of the semester will receive a grade of 0.0 or "U" in all their courses unless granted a waiver by the Dean of Undergraduate Studies for documented extenuating circumstances.

Students withdrawing in good standing may apply for readmission to the Registrar before May 1 for fall semester or November 1 for spring semester. Readmission is not guaranteed. The Registrar will consider academic, financial, and college discipline records, in addition to space available, when granting readmission.

Students must complete the registration process prior to the start of classes of the semester they wish to be readmitted.

## Student Grievance

A student who is dissatisfied with a grade received or with any other aspect of instruction in a particular course is to confer with the Instructor, who will explain the reasons for awarding the grade. If such a conference fails to achieve a satisfactory resolution, the student should confer with the Department Chair. If still unsatisfied, the student may then appeal in writing to the Dean of Undergraduate Studies to adjudicate the situation.

# Undergraduate Evening Policies and Procedures

## Course Registration

Students must register for courses within the curriculum requirements as set in the College Catalog of the year of matriculation. However, it is the right of the college to alter the requirements to meet statutory, educational, or professional standards.

For regularly scheduled courses, students must register before the second class meeting. Early registration is recommended for all matriculated students and applicants in order to secure seats in the courses needed to proceed in degree programs. The regular registration period ends two weeks prior to the start of the semester, with “late registration” and late charges commencing thereafter. Please refer to the semester course bulletin for specific registration dates.

## Senior Level—Graduate Credit Policy

A senior level student (90 semester hours or more) with a 3.5 GPA or better may register for Graduate credit courses at the 6000 level and above with the following restrictions:

- Approval must be obtained from the Dean of Graduate Studies or designee
- Combined Graduate and Undergraduate credit load in a semester is not more than 15 hours
- No more than three Graduate credits may be taken in a semester
- Recommendation of the appropriate Undergraduate Advisor and Registrar must be submitted to the Dean of Graduate Studies for approval
- No more than nine semester hours of Graduate credit may be accumulated by a senior. Graduate credits are applicable to maintain full-time status to receive financial aid
- Graduate courses taken toward undergraduate degree requirements cannot be transferred into a graduate program at Fitchburg State College

## Scheduling of Courses

The Office of Graduate and Continuing Education schedules courses at times that are convenient for working adults. Schedules are created in the academic departments in consultation with the Office of Graduate and Continuing Education. Most courses are offered in the late afternoon or evening; some courses are scheduled on weekends. Winter session and summer session courses are scheduled during mornings, afternoons, or evenings.

## Course Load

**Fall and spring semesters:** Maximum academic load is nine credit hours.

**Winter session:** Maximum academic load is six credit hours.

**Summer session:** The maximum academic load during the combined summer sessions is 12 credit hours.

Any student registering for credit beyond the normal load must submit a written request seeking approval from the Dean of Undergraduate Studies prior to registering by submitting an academic petition waiver form.

**Full-time status:** a minimum of 12 semester hours each semester. Students must maintain full-time status to remain eligible for financial aid, varsity athletics, academic honors, including Dean’s List, participation in student governance, VA benefits, scholarships, and health insurance coverage. Both day and continuing education courses are included in calculating total semester hours.

## Course Changes

Changes to courses must be made before the second meeting. No change in credit is permitted after the second meeting. After the start of the second class meeting, the dropping of a class is considered a withdrawal. A change of credit to audit status must be made before the third class meeting of a course. (Class meeting is defined as 2.5 hours.)

## Course Withdrawals

Withdrawals without academic penalty may be made through the end of the eleventh week of classes for regularly scheduled courses and up to the twenty-sixth class hour for special scheduling courses or institute courses. Course withdrawal is initiated by calling the Registrar’s Office, or by visiting that office in the Sanders Administration Building. In either case, the student must receive a confirming copy of the completed Course Withdrawal Form. Any student who withdraws by simply not attending classes automatically receives a failing grade for the course.

## Cancellation of Courses

The College may cancel courses for insufficient enrollment or for other reasons deemed to be in the best interest of the college. Students who sign up for a course which is canceled may transfer to another course or receive a full refund of tuition and fees.

## Withdrawal from the College

A matriculated undergraduate student may initiate withdrawal from the college by contacting the Student Affairs Office. A student who does not register for a course for two years is automatically withdrawn. A matriculated student who decides to return to FSC must initiate reinstatement through the Registrar’s Office.

## Student Grievance

A student who is dissatisfied with a grade received or with any other aspect of instruction in a particular course is to confer with the Instructor, who will explain the reasons for awarding the grade. If such a conference fails to achieve a satisfactory resolution, the student should confer with the Department Chair. If still unsatisfied, the student may then appeal in writing to the Dean of Undergraduate Studies to adjudicate the situation.

# Student Support Services



**F**itchburg State College is committed to the academic success of its students. Several programs are available to advise, assist, and guide students, including individual advisors, the Academic Advising Center, and the Academic Success Centers. Students are encouraged to consult with any or all of these programs throughout the academic year.

## Academic Advising

The Advisor is a critical resource for all students during their academic career. Every student is assigned a faculty advisor. The advisor fulfills many important functions for a student, including:

- Being the primary resource in the planning of a course schedule each semester
- Advising students regarding any problem or concern involving their academic program

### Advisor Availability

#### **Undergraduates**

All faculty have at least three office hours during the week set aside for meetings with their students. Hours are posted on doors of faculty offices, in the office of the secretary of the major department, and are also available through the Office of Academic Affairs.

#### **Graduate and Continuing Education Students**

For general advising purposes faculty advisors are available each night, Monday through Thursday, during the semester. Appointments with advisors for general advising are made through the Office of the Registrar.

### Academic Advising Center

The Academic Advising Center specializes in assisting undergraduate day students who:

- Have not declared a major (31-60 credits)
- Challenge courses via Life Experience Credit Award Program (LECAP)
- Are experiencing academic difficulty
- Are needing help in interpreting specific academic regulations

The Center is staffed by two full-time administrators chosen for their specific expertise in assisting students to make the best possible use of their academic experience.

The Advising Center, located on the third floor of the Hammond Building, is supervised by the Associate Vice President for Academic Affairs.

## Academic Success Centers

The Academic Success Centers are a group of programs and services that work collaboratively to support students toward their academic success and assist students to achieve their Fitchburg State College degree. The collective approach is pro-active and student centered.

Students are encouraged to investigate the programs and services and consider how the Centers' staff can assist them to address their concerns and realize their goals.

For further information, visit the Academic Success Centers web site at <http://www.fsc.edu/success>.

### Mathematics Center

The Mathematics Center offers peer tutors who specialize in one-on-one tutoring on a drop-in basis. Tutoring is available for fundamentals of arithmetic and algebra through upper-level mathematics major courses. Peer tutors focus on assisting students to learn strategies for problem solving and proving theorems. A listing of specific subject specialties and tutors' hours are posted at the Math Center and on the web site at <http://www.fsc.edu/tutoring/math>.

### Writing Center

The Writing Center offers help for all types of writing problems, from planning to grammar, sentence structure, and editing. The English Department operates the Writing Center, which is staffed by both faculty and peer tutors. Any instructor at the college may refer a student to the Writing Center, and any student who desires to take advantage of the many programs and materials may do so by simply applying for a Writing Center Workshop or on a drop-in basis.

## Reading Center

The Reading Center recognizes that all students read at different skill levels and designs its programs to meet individual needs. The Center offers one credit electives that can be taken for up to three semesters. These courses provide:

- Enrichment programs for students who want to increase reading speed while maintaining good comprehension
- Programs for students who want to build stronger vocabularies
- Comprehension exercises to help students better understand what they read
- Methods to adjust reading speeds to meet particular needs
- The development of study groups
- Academic support of freshman and introductory level courses

A listing of the courses being supported each semester is available from the Academic Success Center. Announcement in classes will be made by faculty teaching the selected courses.

## Assessment Center

The Assessment Center administers the required placement tests in Algebra, Reading, Writing and Foreign Languages for all new freshman and transfer students. Students also receive advisement on the required beginning sequence of courses appropriate for them at Fitchburg State College.

Please visit our web site at <http://www.fsc.edu/tutoring> and select the “Assessment Center: for further information regarding waivers, test dates, test registration and practice tests.

## Peer Tutor Center

The Peer Tutor Center offers free individual peer tutoring, in a variety of subjects, designed to assist students to increase their academic performance. Individual Study and Learning Strategy Sessions are also available.

Students are assisted to craft a study plan that aligns with their learning style. To enhance retention of content and concepts, tutoring sessions focus on note taking and test preparation strategies that help students attain the best results for their study time.

The Fitchburg State College Academic Success Peer Tutor Center has earned the prestigious College Reading and Learning Association (CRLA) “National Peer Tutor Certification” status. This provides the Peer Tutor Center the authorization to award National Peer Tutor Certification to peer tutors who meet the four standards of quality, (tutor training, selection, experience and evaluation) detailed by the CRLA.

## The ACCESS Program

The ACCESS Program is a highly successful academic support program designed to meet the needs of undergraduate students from low-income backgrounds. The students who participate in ACCESS possess the motivation and potential to receive a college education but have been denied access to a quality education because of educational or economic disadvantages. The ACCESS Program provides students with:

- One-to-one advising
- Assistance with study skills
- Tutoring in a wide variety of courses
- Help with reading, writing, and mathematics
- Counseling on a variety of financial, social, and personal concerns

The ACCESS staff maintains an open door policy for academic counseling and advising. Through referrals, the staff involves students with many other college faculty and staff who possess the special skills needed to help students cope with academic, financial, social, and personal concerns.

The ACCESS Office also serves as a resource to the college community on various issues such as minority student development, Black History Month, Latino Awareness Month, and the following student organizations:

The Black Student Union

The Latin American Student Organization

The Iota Phi Theta Fraternity, Inc.

The Phi Beta Sigma Fraternity, Inc.

The Zeta Phi Beta Sorority, Inc.

The ACCESS program serves Massachusetts residents who meet one of the following criteria:

- The first person in the family to attend college
- Family income less than \$25,000 per year
- Attendance in a public high school located in or near Boston, Lawrence, Lowell, Springfield, or Worcester
- Participation in academic programs such as Upward Bound, Talent Search, METCO, or Urban Scholars
- Receives public assistance

When applying to the college, students interested in the ACCESS Program should place a check mark in the box next to ‘ACCESS Program’ on the Student Profile of the application. The college encourages students and parents to visit the campus and talk with the staff about the program.

The ACCESS Office is located in room 320 in the Hammond Building and the telephone number is 978-665-3399.

## Expanding Horizons

Expanding Horizons is a student support services program designed to promote the academic success of FSC students who are from low-income backgrounds, families where neither parent has attained a baccalaureate degree, and/or students with disabilities. Funded by the federal government, Expanding Horizons is part of the nationwide network of TRIO Programs, established over thirty years ago, that have helped an estimated 2 million students to enter and graduate from college despite barriers due to race, ethnic background, socio-economic circumstances, or disability.

The Expanding Horizons Program at Fitchburg State College endeavors to create a smaller learning community within the larger campus community. EHP staff work with students to facilitate the adjustment to college and enhance their ability to attain their fullest academic potential. Towards these ends EHP offers the following programs and services:

For freshman and transfer students:

- Extended Pre-semester Orientation Program
- Peer Mentors
- Explorations I and II (a freshman orientation course—one credit)
- Individualized Academic Assessment

For all Expanding Horizons students:

- Learning Specialist Support
- Career and Academic Counseling
- Personal Problem Solving
- Professional Developmental Writing Tutor
- Study Skills Support
- Peer and Professional Tutors
- Junior/Senior Seminar—preparation for graduate school and/or the transition to employment
- State of the Art Computer Work Stations for student use
- Social and cultural activities
- EHP works in collaboration with all the Academic Success Centers to promote student success

To be eligible for Expanding Horizons, a student must be a citizen or national of the United States or meet the residency requirement for federal financial assistance; be enrolled or accepted for enrollment at Fitchburg State College and:

- Meet federal low income guidelines
- Be first generation to college (neither parent has achieved a baccalaureate degree)

And/Or

- Be a person with a disability

For further information or to be a participant in the Expanding Horizons Program come to our office on the third floor of the Hammond Building or call 978-665-3064.

## International Education Office

Fitchburg State College encourages a global perspective on campus by promoting programs for international students as well as for students who want to study in another country. Both types of students enrich the cultural and ethnic diversity of the college community. The International Education Office benefits foreign students, those who wish to study in another country, and those who are interested in an on-campus international experience.

Services offered to international students include assistance with their transition to college, cultural awareness programs, and guidance when completing the necessary paperwork and communications with the United States Immigration Service.

Fitchburg State College encourages students to consider a semester or a year of study in another country as part of their educational experience. The college has established a number of direct exchange programs with colleges and universities throughout the world. Students also have the choice of applying for international programs not identified by the college. For specific information about international study possibilities, contact the Office of International Education, 349 Highland Ave. (Highland House), 978-665-3089.

Students interested in an on-campus international experience have the opportunity to request an international roommate or join ISU (International Student Union), a student-run organization that welcomes incoming international students to campus.

## Disability Services

Disability Services is the primary support system for students with disabilities taking classes in the day and evening division. A number of services are available including an adaptive computer lab, tutors, peer mentoring, tape recorders, testing accommodations, note takers, readers, interpreters, support groups, coaching, and consultation with faculty. The adaptive computer lab houses a voice activated computer system, Braille printer, scanner with print recognition, screen enlargement programs, a closed circuit television for the visually impaired, speech synthesizers, and screen reading programs and Kurzweil 3000. Disability Services and the Adaptive Computer Lab are located on the third floor of the Hammond Building. Contact 978-665-4020 or 978-665-3575 TTY for more information.

### Academic Accommodations

All accommodations are provided based upon assessment of individual need. Students desiring an accommodation that will enable them to fully participate in academic or campus activities should follow these procedures:

- Submit the appropriate documentation to the Office of Disability Services from a certified diagnostician
- Meet with the Staff of Disability Services
- Complete an accommodation sheet
- Submit the completed accommodation sheet to the appropriate department

### Testing Accommodations

Students with disabilities needing testing accommodations for placement exams or other standardized tests must submit requests for accommodations to the Office of Disability Services at least one week prior to the test date. Extended-time, out-of-classroom testing, oral exams, and other alternative testing are options offered to students with disabilities.

### Reduced Course Load

Waivers may be available to students with disabilities who need the accommodation of a reduced course load. Waivers are granted by the Dean of Undergraduate Studies. Students with disabilities needing the accommodation of a reduced course load will not be penalized by Financial Aid or Housing.

## Career Services

The Career Services Center provides a variety of programs and activities to assist students and alumni in planning for career decisions during and after Fitchburg State College. The Center provides all aspects of career guidance and counseling, as well as assists students in the school to work, undergraduate to graduate transition. Career Services offers appropriate information for all stages of a student's career development. The Center follows a developmental approach to career education; exploration which leads to assessment and finally to decision making.

Among the services provided are:

- Career Counseling, graduate school advisement, career assessment/interest inventories
- Group workshops & individual sessions on business etiquette, job search techniques, resume preparation, business/thank you/cover letter writing, interview skills/mock interviews, career/major decision making and planning.
- The Career Library, housed within the Career Center, is an extensive collection of up to date career information. The library contains organizational directories, graduate school information as well as current periodicals on occupational information. In the Career Library students and alumni have access to computers with career related software packages. Also available is SIGI Plus, a specialized computer based career exploration program. Handouts are available on a variety of career exploration and job search topics.
- The Career Services Center offers an online job posting service on the Internet through College Central at [www.collegecentral.com/fitchburg](http://www.collegecentral.com/fitchburg).
- Coordination of on campus and off campus career events such as career fairs, corporate recruitment and expos.
- The publication of the Annual Placement Survey which supplies statistical data on the most recent graduates and their career tracks.
- Several national programs of standardized testing are administered through the Center including Graduate Record Examination (GRE) Subject Test, DANTES Subject Standardized Tests (DSST) and the Miller Analogies Test (MAT). Information and registration bulletins are also available for the Graduate Record Examination (GRE) General Battery, The Graduate Management Admission Test (GMAT), the Law School Admission Test (LSAT) and the Medical College Admission Test (MCAT) and the College Level Examination Program (CLEP).
- All services are accessible through the Career Services Center's web site at [www.fsc.edu/careersvs](http://www.fsc.edu/careersvs).

The Center is located on the third floor of the Hammond Building. The hours are 8:30–5:00pm, Monday–Friday and evenings by appointment. Students may drop in during these hours to use the resources or may make an appointment for career counseling or other services. If you have any questions regarding services offered by the Career Center, contact us at 978-665-3151 or [careersvs@fsc.edu](mailto:careersvs@fsc.edu).

## Counseling Services

The Counseling Services Office provides confidential short-term counseling to all students at no charge. Clinicians are available for individual, group and couples counseling, crisis intervention, educational programming, outreach workshops, community referrals, and inservice training.

Clinicians are consulted for a number of reasons, including:

- Coping with loss
- Relationship concerns
- Loneliness/home sickness
- Self-esteem problems
- Academic concerns
- Family problems
- Feelings of depression or anxiety
- Roommate difficulties
- Alcohol/drug abuse
- Stress
- Sexual abuse
- Eating concerns
- Sexuality issues

Counseling Services offers a variety of outreach programs to educate students in the areas of sexual assault and violence prevention, body image, stress and anger management, eating disorders, and depression.

The Counseling Services Center is located on the third floor of the Hammond Building. The hours are 8:30 am to 5:00 pm, Monday through Friday. Appointments can be made in person or over the telephone (978-665-3152). Students can see a clinician without an appointment during the daily “walk-in” time, which is from 2:00 pm–3:00 pm daily, however it is strongly encouraged that students schedule appointments if at all possible.

Counseling Services provides 24 hour emergency response to the college during the regular academic year. The counselor-on-call can be reached through the Campus Police Department at (978-665-3111), or by contacting Campus Living staff.

## Student Health Services

Student Health Services provides ambulatory care and health education/promotion, and maintains health records for all full-time undergraduate students at the college. Services include:

- Emergency care of acute illness and injury
- Evaluation, treatment &/or referrals as needed
- Immunizations routinely available include: tetanus-diphtheria (Td), mumps-measles-rubella (MMR), Hepatitis B, Influenza, and Meningitis Vaccine
- Tuberculin skin testing (PPD)
- Health education and health promotion
- Allergy injections ordered by student’s physician (student supplies own allergy medication). Injections are administered exclusively during physician office hours.
- Women’s health care, such as, breast exams, gynecologic exams, and contraception
- Men’s health care

Nurse practitioners and a consulting physician provide health care. The physician has regularly scheduled appointments and is available for telephone consultation. A laboratory facility is available for minor tests free of charge. Outside laboratory services are available for a fee. Some equipment can be borrowed on a limited first-come, first-served basis.

Student Health Services is located in the Anthony Building across the parking lot from Sanders Administration Building.

### Health Requirement Policy

In compliance with Massachusetts Public Law 105 CMR 220.600, the following are the immunization requirements for Fitchburg State College.

Full-time Matriculated Undergraduate, Graduate, or other category of Residential Student and International Students\* studying on campus.

- Completed FSC Health Form including a Physical Exam that has been completed within the past year;
- One dose of mumps and rubella vaccine(s) given at or after 12 months of age or serologic proof of immunity;
- Two doses of live measles containing vaccine(s) given at least one month apart beginning at or after 12 months or serologic proof of immunity;
- A booster dose of TD within the past 10 years, and
- In September 2001, 3 doses of hepatitis B vaccine will be required for all full-time freshmen. This requirement will continue to be phased-in and apply to all full-time students (Freshman through Graduate) by 2005.

\*International students must present proof of freedom from tuberculosis.

### **Part-time Matriculated Undergraduate Students in Health Sciences.**

- Need the state required immunizations as stated above in # 2-5. A complete physical is not required for part-time students.

### **Part-time and Full-time Matriculated Undergraduate and Graduate Nursing Students**

- Annual physical
- Annual PPD (TB test) and proof of a negative chest x-ray if the PPD test was positive;
- Need the state required immunizations as stated above # 2- 4 plus
- 3 doses of hepatitis B vaccine and a copy of dated immune titer.

Failure to comply with these requirements will prohibit you from registering for classes.

### **Student Health Insurance**

Every student registered for 9 or more credits is required by law to purchase health insurance. **Students must purchase the school sponsored health plan or show proof of comparable coverage in an alternate health plan in order to enroll.**

When a student registers they will receive an Enrollment/Waiver Form. All students must complete this card by either choosing to be enrolled in the Student Health Insurance Program or waiving participation by providing the policy number of an alternate insurance plan.

If you do not complete the Enrollment/Waiver Form, the college will automatically enroll you in the health plan and include the cost of the insurance in your tuition bill. **You will be enrolled in the plan unless you inform the school that you do not wish to participate in the school insurance program.**

If you would like more information regarding the Student Health Insurance Program you can call Student Health Services at 978-665-3216 or visit the following web sites:

- Qualifying Student Health Insurance Program (QSHIP) at [www.state.ma.us/dhcfp](http://www.state.ma.us/dhcfp), which offers information about the Student Health Insurance Program as mandated by the Commonwealth of Massachusetts. Once entering the site click on "Student Insurance".
- 2000-2001 Student Health Insurance Plan of the Massachusetts State College System offered by The Chickering group at [www.chickering.com](http://www.chickering.com). Click on "Customer Service" then enter the Fitchburg State College Policy Number 711112 to access the college's specific policy.

## **Substance Awareness/ Smart Choices Program**

The Office of Campus Living manages the campuswide alcohol and drug prevention efforts. A range of supportive and educational services are provided to inform students of current facts and trends in alcohol and other drugs and promote alternative (alcohol-free) activities. We focus on reducing high risk drinking and increasing the awareness of the relationship between alcohol and violence.

The office provides leadership opportunities for students, and offers a comprehensive training to volunteer Peer Educators. With the assistance of the Peer Educators, the Office achieves the following goals:

- Facilitating educational workshops and training
- Conducting yearly campus research
- Alternative (nonalcoholic) activity programs
- Co-sponsorship of campuswide awareness events such as Alcohol Awareness Wee, Major Speakers, and the Health fair
- Coordinating events such as Alcohol Awareness Week, Aids/HIV Awareness Day, and the Great Smoke-out Day

## **McKay Curriculum Resource Center**

The McKay Curriculum Resource Center provides faculty and students in Education Programs assistance in the research and development of curriculum materials, motivational tools, and evaluation and assessment devices. The Center houses textbooks, instructional aids, media materials, and computer software, which may be used in the classrooms at the elementary and secondary levels.

## **Child Development Center**

The Fitchburg State College Child Development Center is an Early Childhood Program designed to meet the child care needs of the college community. The center-based program provides warm, loving care that meets the Standards and Areas of the National Academy of Early Childhood Programs. The Child Development Center is currently licensed to provide services to children between the ages of 2.9 years through six years. The enrollment priorities are as follows: students, faculty/staff, and community. The program is also a training site for students of the college in Early Childhood Education Teacher Training.

The program is licensed by the Massachusetts Office for Children, and is located in the McKay Campus School Teacher Education Center. The center is open from 7:30 am to 5:30 pm Monday through Friday, on a year-round basis. The Fitchburg State College Child Development Center is managed by Associated Children's Services, Inc., a private agency. For more information about the program, call 978-343-9149.

## Campus Police Department

The Campus Police Department is committed to maintaining the highest level of community policing with its basic philosophy being deeply rooted in service to the entire college community. The Department operates 24 hours a day, 7 days a week utilizing cruiser, bike, and walking patrols of the entire campus and employs many students in various capacities. The Campus Police Department offers a wide variety of proactive services, which include:

### Freshmen/Transfer Student Mentor Program

The Campus Police Officers make special efforts to interact with students on a daily basis and also through a Mentor program designed to introduce Campus Police Officers to students.

### Student Security Team/Student Escort Service

The Student Security Team of the Campus Police Department provides escorts anywhere on campus and within a ten minute walking radius of the campus. The Student Security Officers work in pairs and have direct radio communications with Campus Police Officers. The Student Team is available from 7pm to 1am, seven nights a week during the school year. Escort requests at other times are handled by Campus Police Officers. To request an escort, please call (978) 665-3111, TTY (978) 665-3588 or use any emergency call box on campus.

### Emergency Call Boxes

Located throughout campus at strategic spots are emergency call boxes with blue lights that connect directly to Campus Police. An officer will immediately be dispatched to your location.

### Crime Prevention Programs and Presentations

Campus Police makes numerous presentations to students on a whole range of issues including theft, rape, alcohol and drug abuse. The nationally recognized R.A.D. (Rape Aggression Defense) Program is offered free of charge to female staff, students and faculty by certified R.A.D. instructors from Campus Police. We also provide the campus with personal safety whistles, and to those individuals in more difficult situations, Screecher emergency alarms and 911 emergency phones. Additionally, many of our Officers are fully licensed Special State Police Officers with all police powers to investigate and prosecute all crimes on campus.

### Operation Identification Program

Record the serial numbers, model numbers, brand names and description of personal property. Engravers and forms are available from Campus Police to mark personal property as a theft deterrent.

### Parking Regulations

Fitchburg State College provides parking facilities for over 1,000 vehicles. The college requires that all vehicles utilizing the parking facilities must display the proper identification sticker. Stickers may be obtained at the Campus Police Department located in Russell Towers on Authority Drive.

Resident students may have vehicles on campus. Along with a required sticker, residential students must adhere to specific parking regulations. A booklet entitled "Motor Vehicles Regulations" with specific parking information should be obtained when the vehicle is registered.

### Handicapped Parking Permit

All permanently disabled motorists who wish to utilize the college's handicapped parking facilities need a parking permit from Campus Police as described above and also should display a State issued handicapped plates. Motor vehicles displaying a state issued parking permit or state issued plates are eligible to park in all designated college handicapped spots.

### Fitchburg State College Shuttle Bus and Additional Parking

The Campus Police Department oversees the college shuttle service which continuously transports students, staff and faculty to and from the Wallace Civic Center parking lot (John Fitch Highway) and the main campus. The FSC shuttle operates non-stop from 7am to 6:30pm on class days during the academic year.

### Motorist Assists

Dead battery, keys locked in your vehicle are events with which Campus Police can provide assistance. Call 665-3111 or use an emergency call box.

### Campus Police Website

For additional information about the Campus Police Department, please visit us at [www.fsc.edu/campuspolice](http://www.fsc.edu/campuspolice).

# Student Life: Beyond the Classroom



*F*itchburg State College maintains that emotional, physical, social, and spiritual growth extends beyond the classroom and into the total campus environment. The college offers individuals and groups a variety of avenues for self-discovery and expression. Fitchburg State students who choose to become active in campus life, by accepting new commitments and adding responsibilities, often find avenues which will direct them toward their career and other life goals. They develop significant, enduring relationships with faculty, administrators, and other students, thus establishing a support network for years to come.

## New Student Orientation and Registration

The orientation program at Fitchburg State College is designed to assist incoming, full-time students in making the transition from high school or work to college. Built on a concept of “student development,” the orientation takes a holistic approach to addressing students’ intellectual, emotional, physical, social, and spiritual dimensions.

Coordinated by the Student Affairs Office, the orientation helps both students and their families with the transition to FSC and gives them a feeling for and identity with FSC, as follows:

- Students focus on testing, academic advising, and registration for classes
- Students are introduced to campus life and services available to them through a variety of programs and activities
- The Family Program gives valuable information about the college, as well as tips for easing students’ and family members’ transition to FSC

The orientation program consists of one registration day during the summer and a 5 day program prior to classes in the fall. All new students receive advance notification and information about the program and are expected to attend.

## Campus Living

### On-Campus Housing

Fitchburg State College offers a variety of housing options within the five residence halls/complexes. The halls range from traditional residence halls, high-rise buildings, suites and apartment style units. The residence halls at Fitchburg State provide more than just a roof over your head and three square meals a day. Each hall/complex has its own unique attributes but they all provide you a place to socialize, interact with your fellow students and most importantly, a place to study.

Living on campus is also very affordable when you consider all the things included in your housing contract, such as utilities, maintenance, local telephone service that includes call waiting, and voice mail. Every room is also wired for fiber-optic network for unlimited access to the Internet and electronic mail—one port per student. Cable television along with a movie channel is also included in every room. Campus Living also offers a number of additional services such as a linen program, especially designed for the extra long beds in the residence hall rooms.

While each residence hall/complex is unique, all include “Living & Learning Centers”—computer rooms. Depending on the size of the hall/complex, these rooms house between two-four computers, which are connected to a laser printer and the campus data network. Students can conduct research, write papers, surf the net or check their email from these centers. These centers are also for studying and a place for faculty to visit, to enhance the academic environment.

### **Aubuchon Hall**

Aubuchon Hall is an eleven story high-rise, housing 288 students. While Aubuchon is one of the largest facilities on campus, it allows for smaller communities to be formed within the building. Each floor consists of four suites with four double occupancy rooms, living room and bathroom. In addition, each floor has its own lobby, laundry facility and kitchenette with microwave. Aubuchon Hall is also home to the First Year Residential Experience (F.Y.R.E.) program. There is a full kitchen, activity room and recreation room with a pool table, ping-pong, and large screen TV on the ground floor.

### ***Herlihy Hall***

Herlihy Hall is the only traditional style college housing with long corridors allowing for an open community. It is a co-educational facility that is home to 140 students. Students who reside in Herlihy are usually a mix of freshmen through seniors. The rooms in Herlihy are some of the largest double occupancy rooms on campus. The building is in the process of being remodeled to include completely new bathrooms, sprinkler systems and upgrades to the individual student rooms. Herlihy is also equipped with a community television and recreation room, a kitchen/laundry room, computer/study room, and a newly renovated entry lobby.

### ***Russell Towers***

Russell Towers is a nine story high-rise and is home for up to 400 residents in a modified suite arrangement. There are 36 suites with six bedrooms in each suite along with a suite bath, and open lounge space. These semi-suites allow for smaller communities to be developed within the overall facility. Russell Towers offers a limited number of triple rooms for those desiring such living accommodations. This facility includes upper-classmen but is made up primarily of freshman. Russell Towers also features several community lounges, computer room, pool table and a central laundry room.

### ***Mara Village***

Mara Village consists of seven residential buildings and one commons building. Each building is comprised of suites that house, on average, eight students with a suite bath and lounge. Each building houses approximately 48 students which allows for some close communities to be developed within the larger village complex that houses 325 students. Mara is also home to the recently created graduate/non-traditional student housing option. Mara is the newest facility at FSC and is located on the northeast corner of the main campus. Each residential building has a common lounge and kitchen. The Commons building is home to the building director, and includes a large meeting room/lounge, computer lab and laundry room.

### ***The Townhouses***

The Townhouses are primarily reserved for upperclassmen, who select their apartment based on a priority point lottery system. The complex consists of seven apartment style buildings. Each apartment is equipped with a combination living room/kitchen area, one and one-half baths and separate bedrooms. There is also a commons building that houses a lounge and computer lab, laundry room, and the complex office.

All the residence halls are located conveniently on the perimeter of the main campus. The halls are grouped in two areas: East Campus, which consists of Mara Village and the Townhouses; West Campus, which consists of Aubuchon Hall, Russell Towers and Herlihy Hall. Each area is staffed by a full-time professional staff member who is responsible for overseeing the operations and staff. Each building is staffed with a building director and resident assistants (RA). All these individuals are available to assist students in working out living arrangements, guide residents in adjusting to campus life, and serve as educational and social programmers, building managers, and resource/referral aides.

## **Living Options**

In addition to the variety in the type of housing, there is a variety of living options available:

- Alcohol Free Housing
- Graduate/Non-Traditional Housing - over age 23
- Designed Single Rooms
- Premium Single Rooms (double occupancy rooms for one)
- Twelve-month housing
- Handicapped Accessible Housing

Additional questions concerning on-campus housing should be directed to the Office of Campus Living, Aubuchon Hall 978-665-3219.

## **Student Activities, Organizations, and Volunteer Center**

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### **Student Activities and Hammond Campus Center**

The Student Activities and Hammond Campus Center Office coordinates the co-curricular programs and activities, and the operations of the Campus Center building. The Department is committed to enhancing students' educational experiences through the development of, and participation in diverse programs and leadership activities. The Hammond Campus Center endeavors to serve as the focal point of the campus, bringing together members of the Fitchburg State community.

The Student Activities Office and the Hammond Center are the hub of extracurricular events on campus. The office is committed to the principles of leadership development, enhancing student life outside the classroom, and to providing cultural and social opportunities. The offices maintain many resources about the college student organizations and the numerous opportunities open to individual students.

### **Student Organizations**

#### ***Student Government Association (SGA)***

The purpose of the Student Government Association as set forth in its constitution is:

“ . . . to be the democratic ruling body for and by the students, whose main goals are to unite the student body and address their various needs; to secure and defend the rights and freedoms necessary for our full participation in the educational process; to ensure the civil rights of the membership; to be a voice for the student body to the faculty, administration, and the community at large.”

As the official voice of the students, the **Student Government Association** plays two important roles for the student body:

- Participates in campuswide committees as well as state and national student organizations
- Governs the many committees responsible for student affairs, activities, and clubs

The governing body of SGA is the SGA Council, which is comprised of an Executive Board and Commuter's Board. Elections for positions on these boards are held every spring for the upperclass members and in the fall for freshmen.

The SGA offers a number of services to its members, including programming, photocopying, and legal advice. Student participation is welcomed and encouraged.

### ***Clubs, Fraternities, Sororities, and Other Groups***

The college is proud to support a wide variety of student organizations that encompass a broad spectrum of interests. Participation in student organizations is encouraged to round out the academic experience and develop skills which will last a lifetime.

Membership in college clubs and organizations is generally open to all FSC students; for meeting times and locations, contact the Campus Center/Student Activities Office.

A list of the organizations on campus includes:

## **Academic Honor Societies**

### ***National***

- Alpha Lambda Delta (Freshman Honor Society)
- Alpha Delta Omega (Human Services)
- Epsilon Pi Tau (Industrial Technology)
- Kappa Delta Pi (Education)
- Lambda Pi Eta (Communications)
- Omicron Delta Epsilon (Economics)
- Sigma Theta Tau (Nursing)
- Sigma Tau Delta (English)
- Phi Alpha Theta (History)
- Psi Chi (Psychology)

## **Academic Interest Groups**

- Accounting Society
- Associated Builders and Contractors
- Biology Club
- Chemistry Club
- Clinical Laboratory Science Club
- Communications/Media Club
- Computer Science and Math Club
- Debate Team
- Early Childhood Club
- Elementary/Middle School Education Club
- English Club
- Fitchburg Industrial Technology Association
- Geo Club
- Honors Club
- Human Services Club
- Leadership Academy Club
- Marketing Club
- National Association of Homebuilders
- Nursing Student Association
- Psychology Club
- Society for Advancement of Management
- Sociology Club
- Special Education Club/Council for Exceptional Children

## **Fraternities**

- Iota Phi Theta Fraternity, Inc.
- Sigma Pi
- Sigma Tau Gamma

## **Sororities**

- Phi Sigma Sigma
- Sigma Sigma Sigma

## **Residence Hall Government**

- Residence Hall Association
- Townhouse Board of Governors

## **FSC Student Government**

- Commuter's Board
- SGA Senate
- SGA Council
- SGA Class of 2002
- SGA Class of 2003
- SGA Class of 2004
- SGA Class of 2005

## **Special Interest Groups**

- Black Student Union
- CED Celebrating Everyone's Differences
- Dance Club
- FSC Band
- FSC Cheerleaders
- FSC Falcon Players
- FSC First Responders
- Haitian Student Organization
- International Student Union
- Christian Fellowship at FSC
- Inter-Fraternity Sorority Council
- Martial Arts
- Latin American Student Organization
- MASSPIRG
- One in Ten and Friends
- Outdoor Recreation Club
- Programs Committee
- Society of Motion Pictures and TV
- Society for Technical Communication
- Students for a free Tibet
- The Point* (Newspaper)
- WXPL Radio—91.3 FM
- Volleyball Club

## AmeriCulture Arts Festival

The AmeriCulture Arts Festival, in its fourth season, serves as well as challenges the local, regional and national community by providing a variety of visual and performance art created to serve one central issue that has had and continues to have an impact on American culture. The issue this year is “The American Family: Comic, Conflicted & Courageous.”

Students may audition or interview for performance or technical theater opportunities. Performance opportunities include play, musical, film, and dance productions. Academic credits are available for high school interns and college students. High school students may receive 1-3 college credits. College students may apply to the festival for a 3-6 credit scholarship that may be used for any course offered during Summer Session I or II, or in the fall evening session through Graduate and Continuing Education.

The festival provides students with an opportunity for the practical application of skills while working with theater professionals, including members of the Actors’ Equity Association and the Director’s Guild unions, in all aspects of theater. The festival prides itself on a diversity philosophy that welcomes people with different ethnic backgrounds and physical abilities.

For information on how you can become involved, please call 978/665-3547 or send email to [americulture@fsc.edu](mailto:americulture@fsc.edu).

## Musical Groups

Fitchburg State College offers a variety of musical programs for both the musician and the music lover.

**60-piece Concert Band** performs music of all types, from the transcriptions of classics to contemporary sounds.

**Jazz-Rock Ensemble** features big band, jazz, rock, and experimental music for stage bands.

**FSC Choir and Chamber Choir** performs a wide selection of mixed-voice choral pieces.

Whenever instrumentalists are available, small ensembles of various instruments, including brass, woodwind, and recorder, get together to play.

## Religious Life

Many churches, synagogues, and other religious congregations are located within walking distance of the campus. In addition, the Newman Center student parish, whose modern center was built with the help of Fitchburg State Industrial Arts students, provides a spiritual and social gathering place for many students. The Center, which hosts many student functions throughout the academic year, is located on Highland Avenue, adjacent to the college.

## Intercollegiate Athletics

The Department of Athletics at Fitchburg State College, supported by the General Student Fee, offers every student an opportunity to participate in athletic activities on intercollegiate athletic teams. These opportunities enhance the academic experience by providing healthy competition at a high level of skill.

### Intercollegiate Sports

The Fitchburg Falcons varsity teams have enjoyed national and regional recognition as highly competitive NCAA Division III teams. The sixteen varsity teams represent men and women in both indoor and outdoor competition.

Fitchburg State is a member of eighteen intercollegiate Athletic Associations, which entitles successful teams to participate in tournament and championship play. FSC is a charter member of the Massachusetts State College Athletic Conference (MASCAC), which includes seven other state colleges.

The Student-Athlete Advisory Committee, composed of students and cochaired by the Director of Athletics, oversees the Intercollegiate sports program. They provide direction and insight to meet the interests, needs, and abilities of the student body in concert with Title IX and gender equity.

The college offers three seasons of Intercollegiate varsity competition as follows:

#### **Fall Season**

Competition runs from early September through early November:

- Men: football, soccer, cross-country
- Women: soccer, field hockey, volleyball, cross-country

#### **Winter Season**

Competition runs from November to early March; practice starts in late October or early November

- Men: hockey, basketball, indoor track
- Women: basketball, indoor track

#### **Spring Season**

Competition runs from late March through early May; baseball and softball practices start in early February, and the teams often travel to Florida for spring break. Track and field practice starts once indoor track has finished its season.

- Men: track and field, baseball
- Women: track and field, softball

Information regarding preseason tryouts and team meetings is available in the Athletic Department and by notices posted throughout the campus, and on the Athletic Department website at [www.fsc.edu/athletics](http://www.fsc.edu/athletics).

### Athletic Eligibility

Students who wish to participate on intercollegiate teams must be full-time students and be making “satisfactory progress toward a baccalaureate,” defined as successful completion of:

- 24 semester hours of course work prior to entering their third full-time semester
- 48 semester hours of course work prior to entering their fifth full-time semester
- 72 semester hours of course work prior to entering their seventh full-time semester

Full or part-time status shall be determined by the end of the Add/Drop period. Students are required to successfully complete 24 semester hours of course work during their previous two full-time semesters to remain eligible. See Academic Policies and Procedures section for academic requirements. In addition to Fitchburg State College academic requirements, students must meet the requirements of the NCAA, ECAC, and MASCAC.

## Recreational Activities

The new Recreation Center is the “Hub” for active Recreational activities at the College. Activities offered within the Center are both structured and informal, and are designed to satisfy the needs of all students. A dynamic intramural sports program offered at the Recreation Center and executed by the Intramural Coordinator with the support of several student sports officials, offers the opportunity for all students to participate in a wide range of activities.

The sports offered help to meet the recreational needs and requests of the college community and include: volleyball, floor hockey, basketball, wiffleball, soccer, wallyball, softball, inner-tube water polo, racquetball, flag football and bowling. Promotional flyers are posted throughout the campus during the year to inform students as to when they should submit their team entry forms for each sport. Team Entry forms are available at the Recreation Center and in the Hammond Campus Center affixed to the Recreational Activities bulletin board, and should be submitted to the Intramural Coordinator in the Recreation Center (x 3613).

Students who prefer something more informal and non-structured have many opportunities to use the (14 hours per day of choices) state-of-the-art fitness center, the private dance/aerobics studio, the aquatic center, the arena, the racquetball courts or the suspended jogging track. Favorite activities are: dance club, pick-up basketball, club volleyball, racquetball, handball, wallyball, weight training (free weights and selectorized circuits), cardiovascular training (steppers, treadmills, elliptical trainers, bicycles), lap swimming, water basketball, water volleyball, aqua jogging, fitness walking, and much more!

Recreation Services Department 665-3683.

## Student Code of Conduct and Discipline System

### Student Code of Conduct

Fitchburg State College recognizes that students or guests, as members of society and citizens of the United States of America, are entitled to respect, consideration, and guaranteed freedoms of speech, assembly, and association under the U.S. Constitution. The college further recognizes the students' right within the institution to freedom of inquiry and the responsible use of the services and facilities of the college.

Students at Fitchburg State College have a responsibility to act in a manner that promotes the well-being, respect, safety, and security of all members of the college community. Behavior, whether on or off-campus, that calls into question a student's suitability as a member of the academic community, or places college members at risk, will not be tolerated. Such behavior will result in disciplinary action ranging from a warning to dismissal.

The complete text of the Student Code of Conduct is found in the *Undergraduate Student Handbook* which is available at the Student Affairs Office.

### Student Discipline System

The goal of the Student Discipline System is to support the educational mission of the college by insuring that an atmosphere of acceptance, curiosity, and integrity is maintained on the campus. By educating and enforcing mature and responsible behavior, the Student Discipline System promotes students' respect for the rights of others, their receptivity to new and challenging ideas, and civil and courteous behavior. The complete text of the Student Discipline System is found in the *Undergraduate Student Handbook*, which is available at the Student Affairs Office.

### Good Neighbor Policy

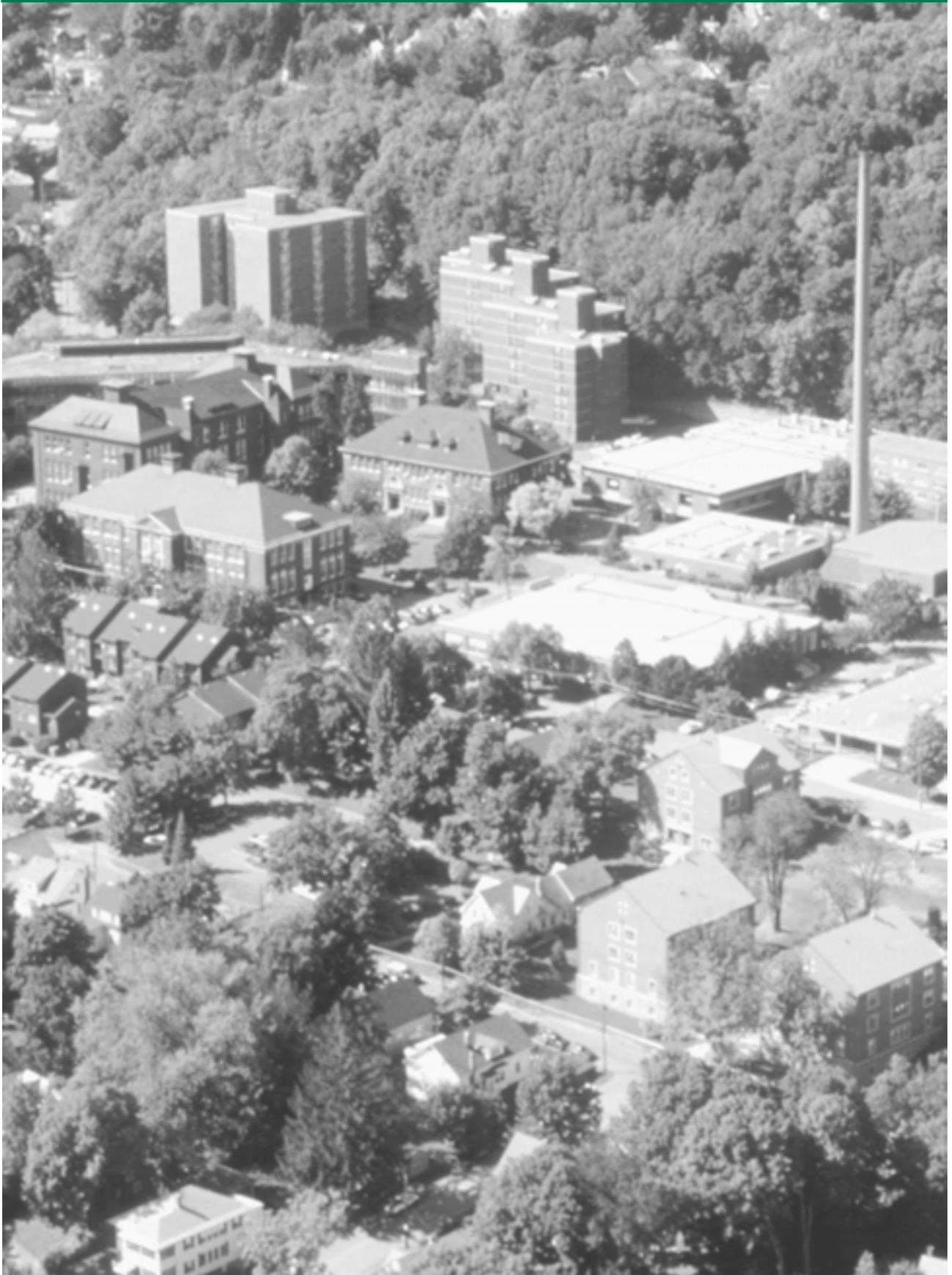
Students who reside in or visit the college neighborhood are expected to demonstrate respect and concern for all members of the local community. As such, FSC expects students to demonstrate responsible citizenship in the local neighborhood by participating in any of the several community service opportunities available for students. Contact the Volunteer Center for more information.

To support the goal of being “good neighbors,” the following conduct (and any other of a like sort) will not be tolerated and will constitute violations of college policy for which students are subject to being disciplined whether the conduct occurs on or off the campus:

- making excessive or unreasonable noise
- sponsoring parties for profit (the illegal sale or distribution of alcoholic beverages, which may include the use of tickets, tee-shirts, mugs, cups and/or any other items as a price or condition of admission)
- sponsoring excessively large parties
- serving minors alcohol
- disorderly conduct, harassment of neighbors, defacing or damaging property, throwing objects out windows
- public drinking, public urination
- using, selling, or distributing illegal drugs
- interfering with the City of Fitchburg Police or utility agencies in the performance of their duties
- using, selling, manufacturing, or distributing fake IDs

Students who violate college policy and/or federal, state, or local law and, by so doing, call into question their suitability as members of the college community, are subject to the ruling of the Student Discipline System in addition to the appropriate body of federal, state, or local law. If found responsible, students are subject to sanctions up to and including loss of residence or suspension or dismissal from the college.

# Campus and Facilities





# Campus Map

## 1 Conlon Building

1A Fine Arts

1B Industrial Technology  
Communications/Media

## 2 Weston Auditorium

## 3 Condiike Science

## 4 Sanders Administration

## 5 Newman Center

## 6 Alumni/Development House

## 7 Anthony Receiving

## 8 Parkinson Hall

## 9 Dupont Facilities Building

## 10 Holmes Dining Commons

## 11 Egerly Hall

## 12 Percival Hall

## 13 Thompson Hall

## 14 Hammond Campus Center/Library

## 15 Miller Hall

## 16 Recreation Center

## 17 McKay Campus School

## 18 Athletic Fields

## 19 Highland House

## Residence Halls

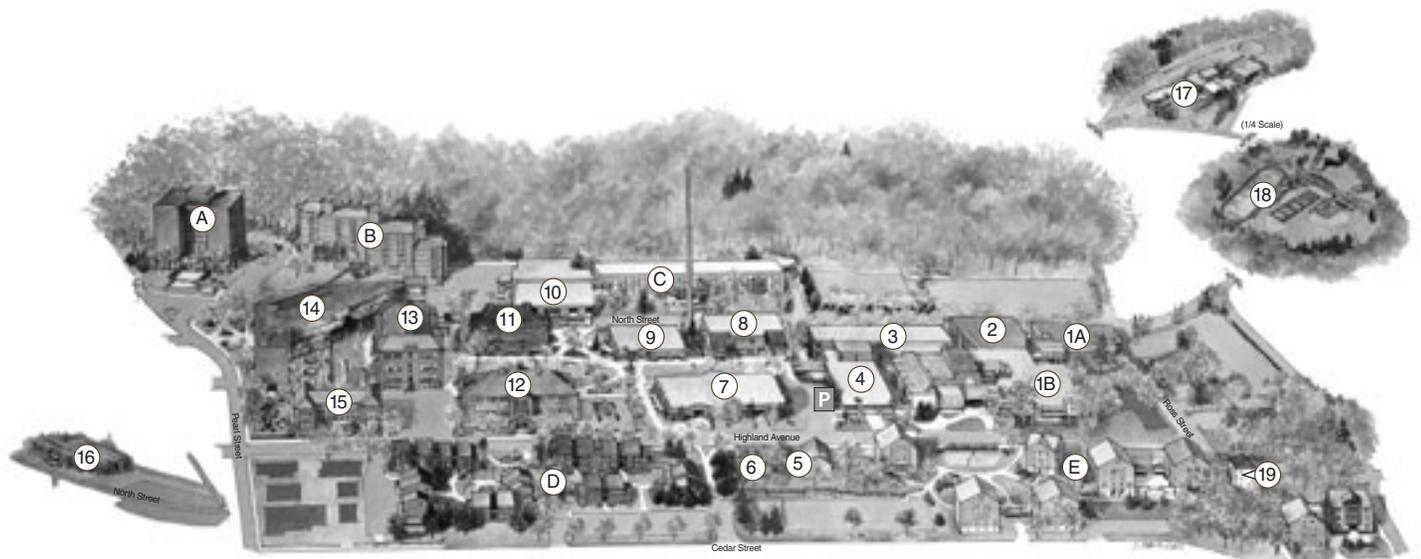
A Aubuchon Residence Hall

B Russell Towers

C Herlihy Residence Hall

D Townhouse Apartments

E Mara Village



## Buildings and Grounds

Located in the unique three-mountain area known as the Montachusett region, FSC features a traditional New England quadrangle graced by historic brick buildings. Residence units, academic buildings, the library/campus center, auditorium/theater, dining commons, recreation center, and other facilities are all within a short walking distance from one another. Just north of the campus is a 36-acre athletic and recreational area as well as the McKay Campus School. Other outdoor recreational opportunities are available in the 120-acre conservation area spanning three neighboring communities. A new athletic and recreation complex on the south end of campus officially opened in September 2000.

## Campus Facilities

All students are encouraged to utilize the many campus services and facilities available, including the computer center, athletic facilities, library, and many others. Access to these facilities often requires a valid **Identification Card**, which can be obtained at ACMS on the second floor of the Conlon Industrial Arts Building. ID Cards should be validated every semester.

### The College Library

The Fitchburg State College Library, [www.fsc.edu/library](http://www.fsc.edu/library), located in the Hammond Building, is a comprehensive information center dedicated to the educational development of students. A knowledgeable staff and easily accessible print and electronic collection promotes the interaction between students and resources available to them. The main library serves the undergraduate and graduate programs. A second library, located in the McKay Campus School, serves the McKay teachers, staff, and children. There is easy off-campus access to databases for all students and a wide variety of services for distributed learning students ([www.fsc.edu/library/distance.html](http://www.fsc.edu/library/distance.html)) including on-site instruction, document delivery, online and voice mail reference, and research guides.

The library provides the following services and volumes:

- Book collection of 210,900 volumes and 476,000 microform equivalents
- 14,200 volume Reference Collection and a Children's Collection of 7,300 volumes
- Approximately 1,400 print periodical titles and access to 10,000 full text on-line periodical titles
- 25,300 periodical volumes
- 16,500 reels of microfilm
- Access to approximately 100 On-line indexes, abstracts and reference services
- CD-Rom reference services
- Computer classroom for library instruction
- Local area network for access to electronic resource to reference services and on-line databases
- On-line library catalog, and database searching on every floor
- Access to other library catalogs
- Borrowing arrangements with 28 other Massachusetts academic libraries

- Resources in Education Collection (ERIC), a comprehensive updated Education library system consisting of 436,500 items
- Special Collections Department which includes the college archives and the manuscript collections of former FSC students, faculty, and alumni, including Robert Cormier and Robert Salvatore

The library is open 97 hours and seven days a week and provides study tables, carrels, and seating on all four levels. Library hours vary during the winter and summer semesters as well as holidays. Students are encouraged to call for complete schedule information. Service for the collection is provided by five professional librarians, who assist at the Library Information Desk and also conduct library instruction classes for the college community. To arrange for such a session students can contact the staff at the Library Information Desk at 978-665-3223.

### Campus Center

The Campus Center serves as a gathering place for both commuter and resident students. Located in the Hammond Building, the Center's facilities include:

- Campus Information Center
- Commuter Cafeteria
- Art Gallery
- Ground Zero Game Room
- College Bookstore
- Underground Pub
- Post Office
- Meeting and Function Rooms
- Offices of the Student Government Association, the student newspaper, *the Point*, and the Student Organization Club Room
- Volunteer Center
- Student Organization Room
- Summer Conference Center
- Leadership Commons

### Computer Facilities

Fitchburg State College has several computer facilities around the campus to serve the general administrative, educational, and research needs of the campus.

#### ***The Office of Management Information Services (MIS)***

The MIS Department serves the technology needs of the entire college community for networking, Internet access, research, telecommunications, and student record-keeping systems. Culminating in 1997, the FalconNet telecommunications upgrade project provided Fitchburg State College with a campus-wide, scalable, ATE/Ethernet Network. With that came enhanced technological tools of voice, video, and data communications as well as comprehensive network security measures. An extensive User Services and Support Program, in the form of a Help Desk and an updated, end-user training program and facility, manifests the college's commitment to excellence in the delivery and upkeep of its systems and services.

Newly implemented programs, such as Remote Internet Access for faculty, staff, administration, alumni and FSC community members, demonstrate the outreach potential of this commitment. Infrastructural improvements, coupled with enhanced services, allow the use of technology for video-conferencing, distance-learning, and extended library services.

Fitchburg State College provides both classroom and residence halls with high-speed T-1 network connectivity. Students, faculty, and staff enjoy Internet access and electronic mail service as well as a variety of research tools. The college maintains several residence hall and specialized classroom computer labs, featuring the full gamut of platforms and operating systems.

The implementation of this state-of-the-art FalconNet network and related services enabled the college to step to the forefront in the delivery of information technology at both the local campus and in Massachusetts Higher Education. Just as FalconNet touches every aspect of the college campus and community, the Management Information Systems department keeps its goal—to be a leader in all aspects of improving technology and the quality of education at Fitchburg State College. MIS is steadfastly preparing itself, both in personnel and scalable equipment, to lead the college into the new millennium.

### ***Academic Computing/Media Services***

As an information technology provider at Fitchburg State College, Academic Computing/Media Services (ACMS) supports teaching, learning, research, and administration at Fitchburg State College by:

- Leading the college as a technology resource, providing state-of-the-art solutions within the bounds of resource availability, and working closely with other information technology providers on and off campus.
- Delivering timely and helpful services to campus constituents. Excellent customer service is our top priority. We improve the quality of our services by learning from ongoing evaluations and other sources.
- Creating and maintaining an organization whose employees are valued for their diversity, creativity, productivity, and adaptability. Learning and sharing information in a climate of mutual respect and cooperation will be commonplace as we work together toward our common goals.

### ***Instructional Computing Facilities***

Supported by ACMS, there are five open microcomputer classrooms and a designated Student Computer Laboratory providing a wide range of computing resources including Internet connections, instructional applications, word processing software, and local area network services. Six multimedia presentation classrooms and six multimedia mobile carts facilitate classroom teaching. Other computing equipment and facilities are also available for instructional use in the ACMS central office and other academic departments.

- A Macintosh computer classroom with 25 G3 Power Macintosh computers is located on the third floor in Hammond building.
- Located in Edgerly 106 is a personal computer classroom with 25 Pentium II computers, a lectern, a video projector, an ELMO presenter, a VCR and surround sound systems.

- McKay B147 is a multimedia computer classroom with 10 G4 power Macintosh and 10 Pentium 4 computers, a lectern, a video projector, an ELMO presenter, a VCR, a smart board and surround systems.
- McKay C175 and C177 are two personal computer classrooms conveniently located next to each other with 20 Pentium computers and multimedia lectern in C175, and next to each other with 20 Pentium computers and a multimedia lectern in C175, and 10 Pentium computers in C177. The two computer classrooms are alternately scheduled to ensure the availability for both classroom teaching and individual use at all times.
- The Student Computer Laboratory with 35 Pentium computers and 5 G3 Macintosh computers is located on the third floor in Hammond building.
- The six multimedia presentation classrooms are located in Thompson 111, Percival 102, Edgerly 102, Conlon Arts 214, McKay C174, and Condiike Science Lecture Hall. All six classrooms are equipped with a networked computer, video projector, an ELMO presenter, a VCR and surround sound system.
- The six multimedia mobile carts are located in the following buildings: Conlon Arts, Thompson, Percival, Condiike Science, Edgerly, and McKay
- The Smart Classroom for real time, interactive video communications is located in Room 212, Conlon Arts building
- To support faculty and research activities, six laptop computers, a portable video projector, digital camera, a color printer, and a scanner are available at the ACMS central office for long term and short term checkout by faculty.

### ***Media Facilities***

ACMS provides a wide range of audio/visual equipment and campus wide media support and services.

- Media equipment is available in all classroom buildings and at ACMS for checkout.
- The Falcon net Cable Television system provides 40 channels of programming to Fitchburg State College's residence halls, classrooms, and offices.
- Satellite down link for interactive video conferencing.
- A video library maintains a collection of video tapes for instructional recreational, and distance learning use.
- Student, faculty, and staff ID production.
- Video/photography production for instructional activities and administrative events.
- Audio/visual equipment maintenance and repair are also provided at ACMS.

More information is available by dialing 978-665-3262 or visiting our Web site at <http://acms.fsc.edu>.

### ***Adaptive Computing Lab***

The Adaptive Computing Lab addresses those students with special computing needs. Housed in the Hammond Building (third floor), it contains equipment needed to provide large print, braille, voice-operated computing, talking scanners, and other software and hardware.

### Computer Science Department

The Computer Science Department has additional equipment dedicated for use in that discipline, including:

- Electronic hardware and prototyping equipment to support both analog and digital laboratories
- Small microprocessor systems that allow students to work on design experiments that would be impossible or, at least impractical, on larger computer systems
- Computer networks and intranet systems including SPARC workstations running Solaris, and Intel PCs with Windows '95, Windows NT, Linux, and a Novell network

This provides students with state-of-the-art systems and design equipment currently being used in industry. These computer laboratories also provide the students with access to the Internet as well as a Web server for developing their own home pages.

Visit Fitchburg State College's home page at <http://www.fsc.edu>

### McKay Campus School, Teacher Education Center

The McKay Campus Schools serves as the Teacher Education Center at Fitchburg State College, as well as a public elementary school for the city of Fitchburg. This dual mission adds a uniqueness to the teaching and learning atmosphere at McKay. This collaboration with higher education is a partnership that brings professionals together in our school setting to share:

- responsibility for the preparation of new teachers
- the professional development of experienced classroom teachers
- the professional development of university faculty serving as teacher educators
- the support of research directed at improvement of practice
- enhanced student learning for our elementary students

### Resident Housing

A variety of resident housing options are available for students who choose to live on campus. The five campus residence halls provide housing for more than 1350 students. All residence halls are centrally located to classrooms, offices, the library, computer laboratories, auditoriums, and the Campus Center. Situated adjacent to the residence halls is Holmes Dining Commons, where various meal plans are offered to resident hall students. For specific information on resident housing, please refer to the Campus Living section of the catalog.

### Athletic/Recreation Facilities

Fitchburg State College has a wide range of indoor and outdoor athletic and recreation facilities.

- **Recreation Center:** This state-of-the-art recreational facility opened in September 2000. The facility includes the following areas:

A 1,000 seat NCAA Basketball/Volleyball arena

Three teaching stations/intramural courts

Suspended Jogging Track

25 yard, 6 lane Swimming Pool

A Dance/Aerobics Studio

Fitness Center (Circuit Weight Machines, Free Weight Machines, and Cardiovascular Machines)

Racquetball Courts

Classrooms

Exercise Science Laboratory

Sports Medicine Center

Teaching Stations

Locker rooms, Laundry, and Storage Areas

Athletic Department Offices

Exercise and Sport Science Department Offices

Recreation Center Support Offices

- **Robert Elliott Complex:** Located on Pearl Hill Road, the complex is the site of the outdoor athletic facilities, including the baseball, soccer, football, and field hockey fields, a chem-turf track and tennis courts.
- **George Wallace Civic Center:** The ice hockey team practices and competes at the Civic Center on John Fitch Highway.
- **McKay Campus School:** Some intramural events are held in the gymnasium at the Campus School. The softball field is adjacent to the school.

The Athletic Department schedules the use of outdoor campus athletic facilities, while the Director of Recreation Services schedules the use of the various areas within the Recreation Center.

### Biological Sciences Nature Preserve

Nadine Martel Nature Preserve consists of 3.2 acres of land adjacent to the McKay School campus on Rindge Road. The parcel was given to the college in 1999 by Nadine Cookman Martel of Fitchburg for use as an environmental laboratory in undergraduate Ecology and graduate Mammalogy coursework. Students have access to an ideal stream habitat for research in Limnology, Botany and Ornithology.

### Outdoor Recreation in the Montachusett Area

The name "Montachusett" is a conglomeration of the names for the three mountains that surround the College. Mt. Monadnock, Mt. Watatic, and Mt. Wachusett offer trails for hiking and slopes for skiing. Students are encouraged to take advantage of this rugged terrain with free rentals of cross-country skis, canoes, and tents from the Campus Center/Student Activities department. Students may also join the FSC Outing Club, which sponsors outdoor trips.

### Animals on Campus

Due to health and safety considerations, no animals are allowed on campus or in campus buildings at any time. The only exceptions are assist animals and laboratory animals.

# The Curriculum



**A**t Fitchburg State College, each curriculum or course of study has been constructed to help students develop the intellectual skills needed to analyze, interpret, and learn. The purpose of every curriculum is to assist students in recognizing the possibilities as well as the problems of their changing world, to instill within them a moral awareness of their responsibilities toward improving the quality of human life, and to prepare them for careers which will enrich their lives as they contribute to the lives of others.

Each curriculum includes a Liberal Arts and Sciences program and courses in a major field of study. The purpose of the Liberal Arts and Sciences requirements is to develop, through a variety of academic disciplines, a set of well-rounded skills that are analytic and quantitative as well as verbal and aesthetic. By concentrating in a major field of interest, students acquire knowledge of both the theoretical and the practical aspects of their subject.

## Incoming Students: The Readiness Program

All first-year and transfer students will be tested or otherwise evaluated upon entrance to Fitchburg State College to determine their proficiencies in reading, writing, and mathematics. (Exams are scheduled both days and evenings throughout the academic year.) Test results may indicate skill areas which will be strengthened by a reading program to provide new students with a solid and equal start to their college careers.

### Readiness Program/Comprehensive Courses and Requirements

**READ 0100 Reading**—required for first-year students who score below 68 on the reading proficiency examination. This course is taught by faculty from Mt. Wachusett Community College.

**ENGL 0100 Basic College Writing**—required for first-year students who score 3 or lower on essay and if they have no transfer credit equivalent to Writing I and/or Writing II. This course is taught by faculty from Mt. Wachusett Community College.

**MATH 0100 Basic Mathematics I**—required for students who score below 50 on the Placement Exam. This course is taught by faculty from Mt. Wachusett Community College.

**MATH 0200 Basic Mathematics II**—required for students who score below 82 on the Placement Exam. **Transfer students** who fail the mathematics examination will not be required to take these courses unless they wish to enroll in a mathematics course at the 1000-level or above.

Credit for READ 0100, ENGL 0100, MATH 0100 and MATH 0200 is considered Institutional Credit only; that is, **the credit will not count toward graduation**, but will count toward full-time status for purposes of financial aid and athletic eligibility. Additionally, the grades received in these courses will be counted in each student's Grade Point Average.

### Foreign Language Placement Exam Requirement

This required assessment is designed to assist students to achieve their foreign language education goals. French, German, and Spanish tests are administered through the Internet. Immediately after the test, you will receive your results and be advised as to the proper FSC foreign language course in which you should enroll based on your placement score.

Latin is a pencil and paper exam. A Latin score that places the student higher than Intermediate Level 2 satisfies the Foreign Language graduation requirement for the Bachelor of Arts degree or the Leadership Academy program. All other Latin scores will be used to recommend the appropriate level Latin course that can be taken through the Worcester College Consortium during the Fall or Spring semesters. Information on these courses can be located at <http://www.cowc.org>. FSC does not currently offer courses in Latin.

Students planning to take French, German, Spanish, or Latin are required to take a placement test if you meet one of the following conditions:

- Completed a high school level French, German, Spanish, or Latin course
- One of these languages is your native language or you have had experience with the language

Students who have not had any formal or informal experience with a foreign language do not need to take the placement test, but may register for French for Beginners (FREN 1000); German for Beginners (GER 1000); Spanish for Beginners (SPAN 1000); or Italian for Beginners (ITAL 1000).

### Common Graduation Requirements

In order to be eligible to graduate with a baccalaureate degree from Fitchburg State College, the following general requirements must be met:

- Successful completion of an appropriate discipline-based evaluation chosen by the department and approved by the Vice President for Academic Affairs
- Successful completion of at least 120 semester hours of course work; 45 of these must be attained in residence (normally including the senior year)

- A cumulative GPA of 2.0 or higher
- A minimum of 2.0 average in major course of study\*
- An application for graduation must be filed with the Registrar's Office by January 1 of the year of anticipated graduation

\* Some majors require a major GPA higher than 2.0 for graduation.

### Liberal Arts and Sciences Program Requirement

Of the 120 semester hours needed to graduate, candidates must complete a minimum of 60 hours satisfying the requirements of the Liberal Arts and Sciences Program, which includes the Readiness in English and Mathematics (if necessary) and the Constitution requirement (for teacher education majors only) as well as the following components:

- Quantitative/Scientific Cluster (“Q” symbol in course schedule)—4 courses, 1 must be a mathematics course beyond the readiness level; one must be a science lab. (NB: 4 courses, regardless of whether they carry three or four hours of credit, must be completed)
- Ideas and Events Cluster (“I” symbol in course schedule)—three courses, one must have a historical perspective
- Human Behavior Cluster (“B” symbol in course schedule)—2 courses
- Literature, Language, and Arts Cluster (“L” symbol in course schedule)—4 courses, 1 must be in Literature and 1 must be in Arts
- Writing I & II—ENGL 1100 and 1200, or their equivalent if taken at another institution.
- Health and Fitness—(See Health and Fitness Requirement under Exercise and Sport Science Program)
- Junior/Senior Writing—specific requirement(s) defined by the department of the student's major
- Computer Literacy—specific requirement(s) defined by the department of the student's major
- Speaking/Listening—specific requirement(s) defined by the department of the student's major
- Interdisciplinary (“IDIS” or departmental prefix in schedule)—two courses, one of which must be taken in the freshman year. These courses can simultaneously meet the requirements in content clusters
- Multicultural (“C” symbol in course schedule)—2 courses, which can simultaneously meet the requirements in content clusters
- Intermediate and Advanced Requirement—3 courses at the Intermediate or Advanced level in a Liberal Arts or Science discipline outside one's major. These courses can simultaneously meet the requirements in content clusters
- Liberal Arts and Sciences Electives—4 courses chosen from among those designated as part of the Liberal Arts and Sciences Program

Candidates should be aware that the following restrictions apply with respect to fulfilling their Liberal Arts and Sciences requirements:

- Credits earned in one course cannot be divided

- Credits earned toward graduation cannot be counted twice, even though courses that satisfy Liberal Arts and Sciences requirements may sometimes fulfill the requirements of one's major course of study

Certain majors specify which courses must be taken to satisfy Liberal Arts and Sciences requirements. Students should read the section pertaining to their selected major carefully before registering for classes.

### Additional course work required for graduation from individual programs and certificates

Teacher certification or initial provisional certification requires knowledge of the Federal Constitution and that of the Commonwealth. Candidates may fulfill it by successfully completing one of the following courses:

<i>HIST</i>	<i>1400</i>	<i>United States History I</i>
<i>HIST</i>	<i>1500</i>	<i>United States History II</i>
<i>POLS</i>	<i>1500</i>	<i>State and Urban Government</i>
<i>POLS</i>	<i>1000</i>	<i>U.S. Government</i>

### Leadership Academy Honors Program

Leadership Academy Honors Program students complete LAS requirements through a specialized set of courses. See Leadership Academy.

### Freshman Foundation Year

The courses required in a full-time, undergraduate student's first year demonstrate that the Liberal Arts and Sciences program offers content and skills that are significant in the development of critical thinking and serve as the foundation for further learning in major areas. Along with fulfilling the Freshman Foundation courses as outlined below, every incoming freshman will be required to read two books that are related to a designated theme.

### Freshman Foundation Year Program

- Writing I and Writing II
- Liberal Arts and Sciences courses in at least three clusters
- An Interdisciplinary course
- Additional courses chosen in consultation with advisor

### Major Course of Study

Candidates must choose a major course of study, either at the time of enrollment or before the end of their sophomore year. The requirements of the major vary from 33 to 63 semester hours. Students must formally apply to their major by filling out a form available from the Academic Advising Center, Registrar or from the chair of the department.

### Changing a major or degree program

Students may change their major or degree program as long as they can meet the requirements for their new major. Frequently changing one's major increases the amount of time required to complete the baccalaureate program, and not all programs (e.g., Nursing) can accept applicants who wish to transfer to that field.

Programs having requirements for internal transfer are Communications/Media, Human Services, Clinical Laboratory Science, Nursing, and Education.

### Double Major

Degree candidates wishing to earn a baccalaureate with two majors must satisfy the requirements of both programs, even if doing so requires more than 120 semester hours of study. All students receiving a BSEd must also complete a major in an Arts and Sciences discipline.

#### Double major candidates

- Enroll for the second major as they did for the first
- Are assigned an advisor in each major
- Select which degree is to be granted—the BA, BS, or BSEd—since only one degree is permissible

### Academic Minor

The academic minor is an ideal way to explore a field other than that of one's major.

Minors are offered in African-American studies, art, biology, business administration, chemistry, computer science, criminal justice, dance, economics, English, French, geography, German, graphics, history, industrial/organizational psychology, industrial science, international studies, mathematics, music, philosophy, physical education, political science, psychology, public service management, Russian studies, sociology, Spanish, theater, and women's studies. (Not all minors are available in the evening.)

Although the minimum number of credits required for a minor is fifteen, the amounts vary significantly from discipline to discipline, as do the prerequisites. See the "Undergraduate Programs" section of the catalog for further information.

## Degrees Offered

Fitchburg State College offers three undergraduate degrees:

- Bachelor of Arts
- Bachelor of Science
- Bachelor of Science in Education

Each degree has its own specific requirements for graduation. Students may be awarded only one degree unless they have fulfilled the provisions for a double degree.

### Double Degree

Students wishing to earn two bachelor's degrees may do so by satisfying the degree requirements for the two programs prior to receiving the second degree. They must earn 30 semester hours credit beyond the 120 hours required for the first degree.

### Three-Year Degree Program

In 1996, Fitchburg State College began offering selected students the opportunity to complete their bachelor's degree in three years. This program is primarily for full-time, undergraduate students in the Interdisciplinary Studies major, although some other majors may be available.

Students who enter this program must have completed at least six credits through Dual Enrollment, Advanced Placement examinations, CLEP examination, or transfer credits.

For further information, contact the Admissions Office.

## Program Alternatives

Students may take advantage of a number of program options designed to help degree candidates tailor their course of studies to best suit their individual needs.

### Leadership Academy Honors Program

The Academy is a coordinated four-year honors program offering an enriched curriculum for full-time undergraduate students with very high academic achievements.

**Freshmen** are invited to join the Leadership Academy based on their high school grades and preparation, SAT scores, rank in class, and leadership potential.

For further information, see the Leadership Academy Program in the Undergraduate Day Programs section.

Transfer students, those transferring from other two or four-year colleges, and students who have been at Fitchburg State College for one semester to a year may apply for acceptance to the Leadership Academy. These students will typically complete the Leadership Minor. External transfer students should contact Admissions for acceptance. Internal transfers should contact the Director of the Leadership Academy.

### Life Experience Credit Award Program

The Life Experience Credit Award program (LECAP) recognizes that some students may have acquired knowledge and skills through life experiences as well as through formal credit courses. This program allows students the opportunity to ask that their life experiences be evaluated as educational experiences and credited toward an undergraduate college degree. Credit may be awarded for academically verifiable college-level learning acquired through professional experiences, service, noncredit structured and community learning and educational travel. For further information call 978-665-3321 or 978-665-3319.

### Independent Study

Independent Study allows students to step outside of course offerings and explore a specialized area of study in a challenging and new environment. Students are encouraged to seek out Independent Study opportunities under the guidance and supervision of a professor in whose specialization they wish to study. A regularly offered course cannot be given as independent study. Independent study programs and the amount of credit earned from them must meet the approval of the professor, the advisor, and department chair involved, with final approval coming from the Dean of Undergraduate Studies. Usually, only three credits of independent study per semester may be attempted.

### Directed Study

Directed study allows a student to carry out a non-research project or participate in an activity under the direct supervision of a faculty member. In exceptional circumstances, it can be used to offer an existing courses to an individual student. All directed studies require a 2.5 cumulative GPA, written application from student, and approval of faculty sponsor, advisor, department chair and Dean of Undergraduate Studies.

## **CAPS: College Academic Program Sharing**

CAPS allows students the opportunity to enroll in up to 30 semester hours of courses at another state college without going through formal registration procedures, thus giving them a chance to enjoy a more varied educational experience.

To participate in this program, degree candidates must:

- Have attained sophomore status
- Have spent at least one semester in residence at FSC
- Be in good academic standing
- Attain approval to enroll in CAPS from the chair of their major department prior to registering for the semester
- Contact the Registrar's Office for approval if their major is undeclared
- File a CAPS request with the Registrar's Office

## **Worcester Center for Professional Crafts**

Fitchburg State College and the Worcester Center for Professional Crafts have a collaborative arrangement by which students may take courses in the Liberal Arts and Sciences at Fitchburg State College, and may receive credit under the FSC transfer policy for courses taken at the Worcester Center for Professional Crafts.

## **Indian Hill Music Center**

Fitchburg State College and the Indian Hill Music Center have a collaborative agreement by which students may take private lesson instruction at Indian Hill for college credit. See department chair, Humanities, for more information.

## **College-Level Examination Program (CLEP), Defense Activity for Nontraditional Educational Support (DANTES), Departmental Examinations, and Advanced Placement**

Students entering FSC with college-level training or experience can be tested on college course material to earn credit toward their degree. The FSC examination program is especially valuable for individuals who have had learning experiences outside the college classroom (employment experience, life experience, independent study, etc.) which may come to bear upon their formal academic training.

On the CLEP exams, Fitchburg State College adheres to the standards established by the American Council on Education granting credit for tests on which a score of 50 has been achieved. This credit is awarded only to students matriculated at Fitchburg State College

It is possible to gain up to 60 college credits through the program. For students who score 3, 4, or 5 on the Advanced Placement Examination, the College grants advanced placement status and credit in the area tested. See the Academic Glossary for the Advanced Placement Courses accepted.

For further information on the FSC examination program, contact the Career Services Center, 3rd floor, Hammond Building, 978-665-3151.

## **Professional Development Center**

Fitchburg State College believes that excellence in education practice must be supported beyond the conferring of degrees and professional licensure. The Professional Development Center (PDC) is a key element of the College's total strategy to support educators during the critical years of induction into the education profession and beyond. To address this goal, the PDC offers an extensive array of high quality professional development activities to public and private school teachers, counselors, administrators, and other school personnel in North Central Massachusetts. The activities of the Center range from the identification and provision of enrichment courses, workshops, conferences, and other activities to aid educators in strategic planning, implementing school system restructuring, initiating and accomplishing systemic reform, and enriching school curriculum.

In addition to providing leadership in district staff development planning, the Professional Development Center sponsors and manages major conferences on Best Teaching Strategies, conferences for Vocational/Technical High School Teachers and, in concert with the College Board, training for Advanced Placement High School Teachers.

The existence of a responsive PDC at Fitchburg State College enables the College's education programs to collaborate with individual schools or school districts on critical issues. Planned PDC activities provide ongoing and continuously enhanced support services for Fitchburg State College graduates and other educators seeking to remain informed and updated on the latest in education policies and practices.

## **Fitchburg State College Extended Campus Center**

The Extended Campus Center provides quality educational opportunities to constituents seeking professional development and/or formal study in academic degree programs offered through Fitchburg State College. Working within the Office of Graduate and Continuing Education, and collaboratively with faculty, school administrators, industry leaders, and various educational enterprises, Extended Campus Programs coordinate the delivery of undergraduate and graduate courses at off-campus locations.

Currently, Extended Campus Programs has well established collaborative relationships providing degree, certificate and professional development programs with the Merrimack Education Center in Chelmsford, the Jon Jenmarc Agency in Brockton, Project ERR in Middleboro, Rollins Griffith Teacher Center in Boston, NYPRO in Clinton, Research for Better Teaching in Acton and the May Center in Chatham. Additionally, professional development courses and institutes are offered through partnerships with school districts, museum schools, educational collaboratives and private entities.

## Co-Step Program

Fitchburg State College, in collaboration with Middlesex Community College and the Lowell Public Schools, was awarded \$1.25 million in funding from the U.S. Department of Education for a project entitled “Creating Certification Opportunities for Strengthening Transitional Bilingual Education Paraprofessionals.” This program builds upon an existing working partnership and focuses on extending Middlesex Community College’s certificate program and associate degree career ladder program for paraprofessionals to a baccalaureate degree and teacher certification in elementary and special education programs.

## Distance Learning Center

The Distance Learning Center at Fitchburg State College provides students the opportunity to complete college coursework at a distance from the college. Distance Learning courses are offered in a variety of ways. The two most common means are over-the-air courses, taught with a connection to a Fitchburg State instructor (these may involve some on-campus meetings), and courses taught over computer network, in which the student is assigned a faculty mentor who communicates with the student, guides the student’s progress and evaluates student work. Distance Learning courses originating from Fitchburg State are taken by students both within and outside the United States. Courses are offered on both the bachelor’s and master’s levels. Students register for these courses through Graduate and Continuing Education programs by calling the Registrar’s Office. Appropriate tuition and fees apply.

## North East Higher Education Distance Learning Consortium

In May 1998, Fitchburg State formally entered into an agreement with Mount Wachusett Community College for the development and presentation of online courses. The organization formed through this agreement, the North East Higher Education Distance Learning Consortium, allows students from both institutions to take courses developed and operated by either institution. Courses offered through the Consortium allow students to conduct studies leading to degrees in business administration or general studies.

Students participating in online courses have several means of conducting research through the FSC library. Access to online library searches, including ERIC, Education Full Text Data Base, Academic Search Fulltext Elite, and Firstsearch, is available through the library home page at [www.fsc.edu](http://www.fsc.edu).

## Departmental Policies

### Behavioral Sciences, Human Services Program: Policies Governing Student Review, Retention and Dismissal, and Field Work Eligibility

#### *Review, Retention, and Dismissal*

**Admission into the Human Services Program**—Students may enter the Human Services Program (major) either by declaring it as a major upon admission to the college (as a freshman or as an external transfer) or by transferring into the major from another major within the college (internal transfer).

Transferring into the major from another major within the college (internal transfer) necessitates a 2.0 cumulative grade point average, and a determination of suitability for a career in the Human Services field. Suitability will be determined in an interview with one or more Human Services faculty.

**Human Services Review Committee**—Members of the committee are full-time faculty who teach and/or advise students in the Human Services Program. The committee is responsible for implementing all student related policies of the Human Services Program.

**Progress Assessment**—All students will be subject to retention review by the Human Services Review Committee following completion of each of the skill component courses listed below. Retention will be based upon suitability for a career in the Human Services field, specifically:

- a cumulative quality point average of 2.5 in required Human Services informational and skill component courses (Informational: Introduction to Human Services, Introduction to Sociology, General Psychology, Abnormal Psychology, Human Growth and Development; Skill Component: Interviewing Techniques, Social Group Work, and Methods of Case Reporting and Analysis), plus demonstrated writing and oral communication skills
- individual grades of 2.0 or better in the three skill component courses listed above
- demonstrated appropriate Human Services intra-personal and interpersonal behavior, including positive evaluations of student’s field practice (150 hours minimum) experiences
- positive written personal statement outlining the student’s interest in, strengths and “growth areas” for, and intentions in Human Services

Students whose cumulative Grade Point Average falls between a 2.0 and a 2.49 in Human Services informational and skill component courses, whose grade in each of the skill component courses is at least a 2.0, will be reviewed for retention in the program, and a remedial plan may be developed by the Human Services Review Committee.

Students whose cumulative Grade Point Average in Human Services informational and skill component courses is 2.0 or less, and students who receive less than a 2.0 in Interviewing Techniques, Social Group Work, or Methods of Case Reporting and Analysis, will automatically be reviewed, and a remedial plan developed if advisable. A student who receives less than a 2.0 in any two of these three courses would be deemed inappropriate for the program, and would typically be dismissed. In addition, students who fail to demonstrate appropriate intrapersonal and interpersonal behaviors will be reviewed for dismissal from the program.

If a student's dismissal from the Human Services Program is warranted after review by the Human Services Review Committee, the student will be informed in writing as to: (a) the reason for dismissal, and (b) the procedure for appeal. The Human Services Review Committee will notify the chairperson of the Behavioral Sciences Department, who will then recommend to the Dean of Undergraduate Studies that said student not be retained in the Human Services Program.

### **Field Work Eligibility**

Successful completion of Field Work is required for graduation from the Human Services major. Admission into the major, however, does not guarantee a student's entry into Field Work. Eligibility for Field Work is based upon the successful completion of the following requirements:

- Student attends scheduled meetings for Field Work planning and registration, and required preparatory workshops on practical interviewing and resume writing, during the semester before Field Work is undertaken
- Student has current professional liability insurance coverage (automatic upon enrollment in the Field Work course)
- Student completes the application process for Field Work in a timely manner

Student meets the following eligibility criteria:

- A cumulative grade point average of at least 2.5 in the required Human Services informational and skill component courses, and individual grades of at least 2.0 in the three skill component courses
- Demonstrated effectiveness in written and oral communication skills
- Demonstrated intrapersonal and interpersonal behavior that is appropriate for a human services worker
- Positive recommendations by a majority of faculty members in the Human Services Program
- No incomplete grades in any courses, no probationary status, and no unresolved failures in the student's major field of study
- Successful completion of the courses Social Group Work and Methods of Case Reporting and Analysis at least one semester before beginning of Field Work
- A minimum of 150 hours of supervised experience in practice, including at least three different types of experiences in at least two different placements/settings
- Twelve semester hours, with a minimum of three faculty members, in the Human Services Program
- If a transfer student, meets the residency requirement of at least one full semester of course work in the Human Services Program following admission to the Program and prior to the semester in which Field Work is to be conducted

Students who do not meet these specific eligibility criteria for Field Work may request, in writing, that the Human Services Review Committee waive the policy in question. Applications for waivers must be submitted at the same time as the application for Field Work.

## **Progress Review**

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### **Clinical Laboratory Sciences Department**

#### **Technical Standards for Admission**

The Department of Clinical Laboratory Sciences faculty have specified the following nonacademic criteria (technical standards or essential functions) that all applicants are expected to meet in order to participate in the program and in professional practice.

#### **Physical Criteria**

With or without reasonable accommodations, the applicant must be able to participate actively in all demonstrations, laboratory exercises, and clinical experiences. To do this, the applicant must have sufficient motor skills to operate delicate instruments and to perform delicate procedures. The applicant must have good hand-eye coordination; normal vision with or without correction; sufficient color vision to identify structures within stained cell preparations and to distinguish shades of color in manually read biochemical reactions. The applicant must have the ability to move around the student labs and clinical facilities unassisted.

#### **Behavioral Criteria**

The applicant must possess the emotional health necessary to work quickly and accurately under pressure; to be flexible and able to adapt to the changing environment associated with the inherent uncertainties of clinical situations. The applicant must be able to communicate effectively and sensitively with patients, faculty, fellow students, and members of the health care team in order to elicit and transfer information. The applicant must possess the maturity to exercise ethical judgment, honesty, dependability and accountability, and to maintain patient confidentiality.

#### **Intellectual Criteria**

The applicant must be able to think critically and logically and be able to correlate information in order to solve problems associated with clinical practice. To do this the applicant must be able to measure, calculate, reason, analyze, evaluate, and synthesize. The applicant must be able to organize tasks and carry them out in a logical, thorough, and efficient manner.

#### **Progress Review**

Students are evaluated twice for continuance in the Clinical Laboratory Sciences major. Upon completion of 60 semester hours or upon completion of the core curriculum for the freshman and sophomore years, the program director calculates the GPA in the core curriculum courses. Upon completion of 90 semester hours or upon completion of the curriculum for the freshman, sophomore, and junior years, the program director again calculates the GPA in the core curriculum courses. (See Clinical Laboratory Sciences Program.)

- Students with a GPA of 2.5 or above in the Clinical Laboratory Sciences core curriculum continue in the major.

- Students with a GPA of less than 2.0 are referred to the Dean of Undergraduate Studies with the recommendation that they not be retained in the Clinical Laboratory Sciences major.
- Students with a GPA of 2.0 to 2.49 in the core curriculum are referred to the Clinical Laboratory Sciences Appeals Committee for academic review. The committee may recommend some actions that the student must take in order to remain in the major or may recommend that the student not be retained in the major.

#### **Appeal Mechanism for Committee Review**

- A student who has been referred for academic review must submit a written petition to the Clinical Laboratory Sciences Appeals Committee. With the letter of petition, the student may also submit letters of support from his/her academic advisor, instructors, and any other pertinent information which may be relevant to the situation. The Committee reviews the student's record and recommends whether or not the student should continue in the major. Students who do not submit a written petition to the Appeals Committee, are referred to the Dean of Undergraduate Studies with the recommendation that they not be retained in the Clinical Laboratory Sciences major.
- After academic review, the Appeals Committee forwards to the Dean of Undergraduate Studies the names of those students for whom the Committee recommends dismissal from the program. The student is notified in writing of the final decision of the Committee.
- Students who have been allowed to continue in the program after appeal and fail to maintain a 2.5 GPA in the Clinical Laboratory Sciences core curriculum may not petition again for reinstatement. Their names are forwarded to the Dean of Undergraduate Studies with the recommendation that they be dropped from the Clinical Laboratory Sciences major.

#### **Progress Review Policy: Communications/Media Department**

- It is the responsibility of all Communications/Media students to meet with their advisors each semester for pre-registration advisement and progress review. During that review, the student's progress through the curriculum is discussed, with particular attention paid to whether or not the student is maintaining the 2.5 GPA or higher required to participate in the capstone internship experience.
- Any student with GPA below 2.5 in the major who has completed the two introductory theory courses—Message Design, and Systems and Theories of Communication—and the first three required courses in his/her concentration will be referred to the Chair with the recommendation that the student be dropped from the Communications/Media concentration.
- Any transfer student who has transferred 9 or more credits toward the major must earn a GPA of 2.5 or higher in the first two required courses in his/her Communications/Media concentration or be referred to the Chair with a recommendation that he/she be dropped from that concentration.

- Students who are recommended to be dropped from a concentration may petition the Chair in writing to a) switch to another Communications/Media concentration (capacity permitting at the time of the petition); or b) appeal the advisor's drop recommendation. If, with respect to (b), the Chair decides to uphold the advisor's drop recommendation, the student may appeal that decision to the Dean of Undergraduate Studies.
- Students must maintain at least a 2.5 GPA in Communications/Media coursework to qualify for the capstone internship experience.
- The internships are described in detail in the *Communications/Media Internship Handbook*.

#### **Nursing**

Graduation from the major requires a 2.5 nursing GPA. Students in the Nursing Program must achieve a 2.0 or better in all required nursing courses to be in good standing in the major. In addition, students must achieve an overall nursing GPA of 2.5 in order to progress to clinical courses NURS 3600, NURS 3700, NURS 3800, NURS 4700, NURS 4750, and NURS 4800. All students in the nursing major must achieve at least 2.0 in BIOL 1200, BIOL 1300, CHEM 1100 and CHEM 1200 to be eligible to enroll in Scientific Foundations for Nursing Interventions I, and Nursing Process with the Well Client I and at least 2.0 for BIOL 2500 for enrollment in Nursing Process with Clients Experiencing Health Alterations I. Students in the major may repeat a nursing course in which a grade of less than 2.0 is received one time. Failure to achieve a 2.0 when a course is repeated results in dismissal from the major. If progression in nursing courses is halted because of inadequate nursing GPA, students may elect to take a course in critical thinking in nursing to raise their GPA to a level sufficient to meet progression policies and continue in the nursing program. Only one course may be repeated for clinical failure or withdrawal due to clinical difficulty. A maximum of twelve (12) credits may be repeated.

# Undergraduate Day Programs



# Undergraduate Day Programs

The College has seventeen Academic Departments, each headed by a Department Chair. Each department has responsibility for one or more majors or degree programs, tracks within the major and minors. In the following section, the requirements for majors and minors are outlined under each discipline. Required and elective courses in each discipline are defined to help students with course selection.

Academic advisors should always be consulted to ensure that courses are taken in the appropriate sequence and are fulfilling all the requirements needed for graduation. Students should make an appointment with the Department Chairperson for special information about application for admission into a particular major or minor.

<b>Departments</b>	<b>Majors/Concentrations/Tracks</b>	<b>Minors</b>
Behavioral Science	<b>Human Services</b> <b>Criminal Justice</b> <b>Psychology</b> Developmental Psychology Industrial/Organizational Psychology <b>Sociology</b>	Criminal Justice Industrial/Organizational Psychology Psychology Public Service Management Sociology Women's Studies
Biology/Chemistry	<b>Biology</b> Biotechnology Exercise Science Environmental Science Secondary Education	Biology Chemistry
Business Administration	<b>Business Administration</b> Accounting Fitness Management International Business and Economics Management Marketing Computer Information System	Business Administration Public Service Management
Clinical Lab Sciences	<b>Clinical Lab Sciences</b> Clinical Chemistry Clinical Microbiology Medical Technology	
Communications Media	<b>Communications Media</b> Film/Video Production Photography Technical Communication Graphic Design	Graphics
Computer Science	<b>Computer Science</b> <b>Computer Information Systems</b>	Computer Science
Early Childhood, Elementary, and Middle School	<b>Early Childhood</b> <b>Elementary</b> <b>Middle School</b>	
English/Speech	<b>English</b> Literature Professional Writing Secondary Education Theater	African-American Studies English Theater Women's Studies
Exercise and Sport Science	Exercise Science Fitness Management	Physical Education Dance Recreation
Geo/Physical Sciences	<b>Earth Science</b> Earth Science/Secondary and Middle School Education <b>Geography</b>	Geography/Earth Science/Physics
Humanities	<b>Interdisciplinary Studies</b> <b>Interdisciplinary Studies (Humanities)</b>	Art French German Music Philosophy Spanish
Industrial Technology	<b>Industrial Technology</b> Architectural Technology Construction Technology Electronics Engineering Energy Engineering Technology Manufacturing Engineering Graphic Arts Technology Technical Theater Arts <b>Technology Education</b>	Industrial Technology Graphics
<b>Leadership Academy</b>	<b>Honors Program</b>	Leadership

UNDERGRADUATE DAY PROGRAMS

(Continued from previous page)

<b>Departments</b>	<b>Majors/Concentrations/Tracks</b>	<b>Minors</b>
Mathematics	<b>Mathematics</b> Secondary Education	Mathematics
Nursing	<b>Nursing</b>	
Social Science	<b>Economics</b> International Business and Economics <b>History</b> History/Secondary Education <b>Political Science</b>	African-American Studies Criminal Justice Economics History International Studies Political Science Public Service Management Women's Studies
Special Education	<b>Special Education</b> Teacher of Students with Special Needs/Elementary 1-6 Teacher of Students with Intensive Special Needs/Elementary 1-6	

## Majors/Degrees/Tracks

### **Biology**

BA Biology  
BS Biology  
Biology/Biotechnology  
Biology/Environmental Science  
Biology/Exercise Science  
† Biology Secondary Education Program

### **Business Administration**

BS Business Administration  
Accounting  
Fitness Management  
International Business in Economics  
Management  
Marketing

### **Clinical Laboratory Science**

BS Clinical Laboratory Science  
Clinical Chemistry  
Clinical Microbiology  
Medical Technology

### **Communications Media**

BS Communications  
Graphic Design  
Film/Video Production  
Photography  
Technical Communication

### **Computer Science**

BS Computer Science  
Computer Information Systems

### **Criminal Justice**

BS Criminal Justice

### **Early Childhood Education**

BS Education  
† Early Childhood Education Program

### **Economics**

BS Economics  
International Business in Economics

† State regulations require a liberal arts or science major in addition to all professional education programs.

### **Elementary Education**

BS Education  
† Elementary Education Program

### **English**

BA/BS English  
Literature  
Professional Writing  
Theater  
† English Secondary Education Program

### **Geography**

BA Geography  
Geography  
Earth Science  
BS Geography  
Geography  
Earth Science  
† Earth Science Secondary Education Program

### **History**

BA History  
BS History  
† History Secondary Education Program

### **Human Services**

BS Human Services

### **Industrial Technology**

BS Industrial Technology  
Architectural Technology  
Construction Technology  
Electronics Engineering  
Energy Engineering Technology  
Graphic Arts Technology  
Manufacturing Engineering  
Technical Theater Arts

### **Interdisciplinary Studies**

BA Interdisciplinary Studies  
BS Interdisciplinary Studies

### **Mathematics**

BA Mathematics  
BS Mathematics  
† Mathematics Secondary Education Program

### **Nursing**

BS Nursing

### **Political Science**

BA Political Science  
BS Political Science

### **Psychology**

BA Psychology  
BS Psychology

### **Sociology**

BA Sociology  
BS Sociology

### **Middle School Education**

BS Education  
† Middle School Education Program

### **Special Education**

BS Education  
† Special Education Program  
Teacher of Students with  
Special Needs (pre-K-8)/Elementary Teacher  
Teacher of Students with Special Needs  
(5-12)/Elementary Teacher  
Teacher of Students with Intensive Special  
Needs (all levels)/Elementary Teacher

### **Technology Education**

† Technology Secondary Education Program

## African-American Studies

### **Chairpersons**

Michael Turk  
Roberta Adams

### **Objectives for the African-American Studies Program**

The interdisciplinary program in African-American Studies provides courses which examine the cultures, history, and literature of African-American peoples. This course work provides students with new perspectives on the significant roles played by these peoples.

### **Requirements for the Minor in African-American Studies**

This interdisciplinary program requires a minimum of 18 credits. Students may use no more than two of their major courses toward the minor.

#### **Required Courses**

AAST 1000 *Introduction to African-American Studies*

Select One:

AAST/HIST 2300 *African American History*

AAST/HIST 2930 *Modern African History*

AAST/HIST 2520 *African American Women's History*

Select One:

AAST/ENG 2670 *20th Century African American Literature*

AAST/ENG 2650 *Other Voices*

#### **Electives (select 3)**

AAST/HIST 2300 *African American History*

AAST/HIST 2930 *Modern African History*

AAST/HIST 2520 *African American Women's History*

AAST/ENG 2650 *Other Voices*

AAST/ENG 2660 *19th Century African American Literature*

AAST/ENG 2670 *20th Century African American Literature*

AAST/SOC 2510 *Peoples and Cultures of Africa*

AAST/MUSC3800 *History of Jazz*

AAST/PHED1310 *African Jazz Dance*

Independent Study, Directed Study, or Topics courses that are pertinent to the minor can be selected in consultation with the coordinators of the African-American Studies Minor.

## Art

### **Chairperson**

Jane Fiske

### **Professor**

Donna Bechis

### **Associate Professor**

Susan Wadsworth

### **Assistant Professor**

Petri Flint

### **Objectives for the Program in Art**

The art program provides undergraduates with a variety of studio and art history courses to increase their aesthetic awareness and skills.

### **Requirements for the Minor in Art**

The minor in art requires a minimum of 18 semester hours, including the following:

#### **Required Studio Courses**

Select Two:

ART 1400 *Drawing*

ART 1450 *Introduction to Painting*

ART 1600 *Design*

ART 1650 *Three-Dimensional Design*

ART 1840 *Introduction to Sculpture*

ART 2450 *Water Based Media*

#### **Required Art history Courses**

Select Two:

ART 1150 *Survey of Art Forms I*

ART 1160 *Survey of Art Forms II* **or**

ART 1100 *Art Appreciation*

and any other art history course

The remaining **six** semester hours may be taken from approved art electives in studio art or art history.

\*Those concentrating in studio arts are recommended to take Drawing and Design.

# Biology

## Chairperson

George Babich

## Professors

George Babich

George Bond

Stanley Krane

Howard Thomas

## Associate Professors Assistant Professors

Margaret Hoey

Christopher Cratsley

Michael Nosek

Natalie Stassen

## Objectives for the Program in Biology

The Biology Department provides undergraduates who wish to major or minor in Biology a variety of courses that can be applied to their specialized major. The department also offers courses in laboratory science for students in all other majors.

## Requirements for the Major in Biology

All students in either the Bachelor of Science or Bachelor of Arts programs in Biology (exceptions listed below) are offered a required core sequence of courses. These core biology courses all involve student laboratory work to develop the skills of scientific inquiry. Students are introduced to computer applications for biological research in General Biology I and II, as part of their Computer Literacy requirement. These skills are utilized and expanded upon in their upper level biology courses. Students also develop scientific literacy through reading, writing, and talking about scientific concepts in these courses. In Developmental biology, the capstone course of the Biology core, students demonstrate their mastery of these skills as part of their Listening and Speaking and Jr./Sr. Senior Writing requirements.

BIOL 1800 *General Biology I*

BIOL 1900 *General Biology II*

BIOL 2300 *Ecology*

BIOL 2800 *Genetics*

BIOL 3250 *Cell Biology*

BIOL 3550 *Developmental Biology*

In addition, 12 semester hours of additional biology electives at or above the 2000 level are required of biology majors. Electives may be chosen in an area of specialization in consultation with a faculty advisor.

Finally, BA and BS students are required to take courses in related sciences and two courses in mathematics at or above the level of MATH 1250. BA students are required to have foreign language proficiency at the Intermediate level.

## Required Courses in Related Sciences

CHEM 1300 *General Chemistry I*

CHEM 1400 *General Chemistry II*

CHEM 2000 *Organic Chemistry I*

CHEM 2100 *Organic Chemistry II*

PHYS 1300 *General Physics I*

PHYS 1400 *General Physics II*

*Exceptions: The requirements are slightly modified for the BS in Biology/Environmental Science and the BS in Biology/Exercise Science programs.*

## BS in Biology/Biotechnology

The Bachelor of Science in Biology/Biotechnology includes all of the core requirements for the BS in Biology. In addition, the 12 semester hours of Biology electives are replaced by Biochemistry, General Microbiology and Molecular Biology.

## BS in Biology with Initial Teacher Licensure

Students interested in pursuing Initial Teacher Licensure must apply for formal admission to the program. For information about undergraduate requirements in teacher preparation, see the section titled: "Teacher Preparation Programs (Undergraduate)." In addition to the required courses for the major, students in the program must take a core sequence of teacher preparation courses.

## Core Requirements

BIOL 2860 *Introduction to Secondary School Teaching*

SPED 3800 *Secondary Programs for Adolescents (14-22) with Special Needs*

ENGL 4700 *Teaching Writing in Secondary Schools*

BIOL 4850 *Biology Teaching Methods*

BIOL 4860/4870 *Biology Practicum in a Secondary School (300 hrs.)*

## BS in Biology/Environmental Science

The Bachelor of Science in Biology/Environmental Science includes all of the requirements of the BS in Biology with the exception that Organic Chemistry I and II are replaced by Elements of Physical Chemistry (ENSC 3000) and Environmental Analysis (ENSC 4000) and the required four biology electives are replaced by Field Techniques in Environmental Science I and II (ENSC 2000 and 2001) and Internship (ENSC 4950).

Additional requirements are:

- Introduction to Environmental Science (ENSC 1000)
- Geology (GEOG 2100)
- Environmental Hydrology (GEOG 4600)
- Seminar in Environmental Science (ENSC 4100)

## BS in Biology/Exercise Science

(See Exercise and Sport Science.)

All students in the Bachelor of Science in Biology/Exercise Science are offered a required core sequence of the following biology and exercise science courses. It differs from the BS in Biology program through the substitution of Anatomy and Physiology II for General Biology II:

BIOL	1800	General Biology I
BIOL	1200	Anatomy and Physiology I
BIOL	1300	Anatomy and Physiology II
BIOL	1650	Nutrition
BIOL	2800	Genetics
BIOL	3250	Cell Biology
BIOL	3450	Biochemistry
BIOL	3550	Developmental Biology
EXSS	2040	Motor Learning
EXSS	2070	Exercise Physiology
EXSS	3020	Biomechanics
*BIOL	4950	Internship <b>or</b>
EXSS	4950	Internship <b>or</b>
EXSS	3450	Exercise Testing and Programming

\* A 2.5 cumulative GPA is required for the internship.

## Requirements for the Minor in Biology

The minor in Biology enables students to demonstrate a substantial and coordinated subsidiary expertise in biological sciences. The minor in Biology requires a minimum of 18 semester hours of course work as follows:

One year (6 or 8 semester hours) of any of the entry-level

Biology sequences:

BIOL	1000	Life Science I <b>and</b>
BIOL	1100	Life Science II <b>or</b>
BIOL	1200	Anatomy and Physiology I <b>and</b>
BIOL	1300	Anatomy and Physiology II <b>or</b>
BIOL	1800	General Biology I <b>and</b>
BIOL	1900	General Biology II

Ten semester hours of 2000, 3000, 4000-level courses selected after consultation with a minors advisor in the Biology Department.

## Business Administration

### Chairperson

James Noonan

### Professors

James Noonan

Janette Purcell

Louis Zivic

### Associate Professors

Diane Caggiano

Sylvia Charland

Joseph McAloon

John McKeon

Harold Schonbeck

Charles Wellens

### Assistant Professors

Francis Morrison

Gary Vostok

Kwahng Kim

## Objectives for the Program in Business Administration

The Business Administration Department prepares each student to take a responsible position within the world of business equipped with a knowledge of business theories, policies, and procedures.

The curriculum is based in the liberal arts, coupled with professional courses and a variety of practical business experiences including the opportunity for experiential learning through internships, structured to give the participant an opportunity to apply the theory of the classroom to a specific work experience.

## The North Central Economic Development Center

The North Central Economic Development Center (formerly known as the Montachusett Economic Center), started at Fitchburg State College in 1981, employs college students and professors to provide management and marketing assistance to a wide variety of local businesses and organizations. These endeavors take the form of a number of outreach efforts including marketing research projects, management and marketing audits, small business assistance, seminars, and online database searches.

## International Initiatives

The Business Administration Department has established the Center for International Research. Research is conducted by faculty and students on international trade and commerce.

## Business and Economic Research Institute

Students and faculty research the latest economic data and banking rates for the region and publish these results.

## Accreditation Standards

Accredited by the International Assembly for Collegiate Business Education (IACBE), Member of American Assembly of Collegiate Schools of Business (AACSB), Member of Association of Collegiate Business Schools and Programs. (ACBSP)

## Requirements for the Major in Business Administration

### Concentrations/Options

The Business Administration Program at Fitchburg State College includes concentrations in one of five areas of business: accounting, management, marketing, fitness management, or CIS (Computer Information Systems).

### Core Curriculum

BSAD	2010	Introduction to Financial Reporting
BSAD	2020	Introduction to Managerial Accounting
BSAD	3200	Principles of Management
BSAD	3300	Fundamentals of Marketing
BSAD	3400	Basic Finance
BSAD	3500	Business Law I
BSAD	4890	Business Policy and Strategy*

### Liberal Arts and Sciences Requirements

SPCH	1000	Speech
ECON	1100	Macroeconomics
ECON	1200	Microeconomics
BSAD	1700	Introduction to Computer Information Systems for Business
MATH	1800	Business Statistics
MATH	2200	Calculus for Business

The courses beyond the core curriculum are open only to Business Administration majors. These upper-level courses are not transferable from another college if they are required within a student's concentration.

\* Jr./Sr. Writing Requirement

## Specializations for the Major in Business Administration

### Accounting Curriculum

BSAD	3010	Financial Reporting Theory and Practice I
BSAD	3020	Financial Reporting Theory and Practice II
BSAD	3120	Cost Accounting
BSAD	4010	Financial Reporting Theory and Practice III
BSAD	4110	International Accounting and Taxation
BSAD	4120	Individual Taxation
BSAD	4140	Auditing
BSAD	4500	Business Law II

One Directed Advanced Elective from the following:

BSAD	4100	Consolidations and Mergers <b>or</b>
BSAD	4130	Corporate, Estate, and Gift Taxation <b>or</b>
BSAD	4160	Not-for-Profit Accounting

### Management Curriculum

BSAD	3210	Human Resources Management
BSAD	3220	Production Management
BSAD	4200	Organizational Behavior and Theory
BSAD	4210	Social and Political Environment of Business
BSAD	4230	Business Fluctuations and Forecasting
BSAD	4880	International Business Management

### Marketing Curriculum

BSAD	3310	Consumer Behavior
BSAD	3320	Market Research
BSAD	3330	Advertising
BSAD	4880	International Business Management

In addition, three marketing electives (from list below) are also required:

BSAD	3340	Small Business Management
BSAD	3350	Total Quality Management
BSAD	4300	Sales Management
BSAD	4310	Retail Marketing
BSAD	4320	Industrial Marketing
BSAD	4330	International Marketing
BSAD	4340	Developing Marketing Strategies

### Business Administration/Fitness Management

(See Exercise and Sport Science.)

BIOL	1200	Anatomy and Physiology I
BIOL	1300	Anatomy and Physiology II
EXSS	1460	Standard First Aid/CPR
BIOL	1650	Nutrition <b>or</b>
EXSS	2060	Exercise, Nutrition and Heart Disease
EXSS	2070	Exercise Physiology
EXSS	3450	Exercise Testing and Prescription
EXSS	4030	Physical Education Fitness and Sport: An Overview
BSAD	4880	International Business Management
EXSS	4950	Internship Fitness Management
		Physical Education Elective (Choose any one physical activity or dance elective.)

### Business/Computer Science: Computer Information Systems Curriculum

(See Computer Information Systems.)

### Business Administration/International Business and Economics

The International Business and Economics program provides students with an understanding of the rapidly changing global economy. It concentrates on explanations of the complexities of the business discipline in relationship to the theory of international trade and finance and the changing roles of international institutions (such as the World Trade Organization and the International Monetary Fund). The concentration provides the student with knowledge of the intricacies of doing business internationally. Students will study international marketing and the commerce, trade and investments of international business.

### LAS Requirements

BSAD	1700	Introduction to Computer Information Systems for Business
MATH	1800	Business Statistics
MATH	2200	Calculus for Business
ECON	1100	Principles of Macroeconomics
ECON	1200	Principles of Microeconomics
IDIS	1200	Introduction to International Studies <b>or</b>
IDIS	1800	Global Issues
HIST	1150	World Civilizations III
SPCH	1000	Speech
ENGL	2400	World Literature I <b>or</b>
ENGL	2500	World Literature II
ENGL	3100	World Novel I <b>or</b>
ENGL	3110	World Novel II

## Major Requirements in Business Administration and Economics

BSAD	2010	Introduction to Financial Reporting
BSAD	2020	Introduction to Managerial Accounting
BSAD	3200	Principles of Management
BSAD	3210	Human Resource Management
BSAD	3300	Fundamentals of Marketing
BSAD	3400	Basic Finance
BSAD	4330	International Marketing
BSAD	4880	International Business Management
BSAD	4890	Business Policy and Strategy
ECON	3550	International Economics
ECON	3600	International Finance Economics

### And either 2 courses from the following list of Macroeconomic courses:

ECON	2200	Comparative Economic Systems
ECON	2400	Money and Banking
ECON	2500	Economic Development
ECON	3650	Intermediate Macroeconomics Theory

### Or 2 courses from the following list of Microeconomics courses:

ECON	2300	Industrial Organization
ECON	2400	Money and Banking
ECON	3660	Intermediate Microeconomics Theory
ECON	3750	Managerial Economics

## Requirements for the Minor in Business Administration

The minor in Business Administration consists of 18 credits. The following four courses are required:

BSAD	2010	Introduction to Financial Reporting
BSAD	3200	Principles of Management
BSAD	3300	Fundamentals of Marketing
BSAD	3500	Business Law I

Two business electives must also be taken. Two of the six required courses may be transferred from another college. Students minoring in Business Administration may take a maximum of two upper-level courses. These courses must be taken at Fitchburg State College and they must be approved by the Department Chairperson.

## Chemistry

### Chairperson

George Babich

### Professors

Judith Ciottone

Meledath Govindan

Da-hong Lu

Daniel V. Robinson

### Objectives for the Program in Chemistry

The Chemistry Program provides coursework for majors in Nursing, Biology, Industrial Technology, Clinical Laboratory Sciences, Environmental Science and Earth Science. A minor in Chemistry also is available to all students.

### Requirements for the Minor in Chemistry

A Minor in Chemistry consists of:

CHEM	1300	General Chemistry I
CHEM	1400	General Chemistry II
CHEM	2000	Organic Chemistry I
CHEM	2100	Organic Chemistry II
CHEM	3000	Analytical Chemistry I

One course selected from Analytical Chemistry II, Physical Chemistry I, Physical Chemistry II, Advanced Inorganic Chemistry, Radiation Chemistry, or Forensic Chemistry, or Natural Products.

# Clinical Laboratory Sciences

## Chairperson

Wanda Roguski

## Assistant Professor Associate Professor Instructors

Robert W. Burnett Wanda Roguski Renee Herold

## Objectives for the Program in Clinical Laboratory Sciences

The Clinical Laboratory Sciences major prepares students to obtain positions in hospital, research, industrial, zoological, and private laboratories as well as to become sales and technical representatives for a variety of industrial corporations. Students are eligible to take certification exams given by the National Credentialing Agency for Medical Laboratory Personnel, American Society of Clinical Pathologists, and other national agencies. The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences. ([www.naacls.org](http://www.naacls.org) or 773-714-8880)

## Requirements for the Major in Clinical Laboratory Sciences (Medical Technology)

Students in the Clinical Laboratory Sciences major develop skills in the basic sciences that serve as the foundation upon which their clinical courses are built. During the first three years, students are introduced to the profession of Clinical Laboratory Science and the clinical courses necessary to practice in the profession. During senior year, students take advanced courses in Clinical Laboratory Science. Skills are developed in well-equipped, modern laboratories similar to those found in both hospital and industrial settings.

Students may choose one of three tracks—Medical Technology, Clinical Chemistry, or Clinical Microbiology.

All students in the CLS program are required to take the following courses:

### Core Requirements

BIOL	1800	General Biology I
BIOL	2800	Genetics
BIOL	3900	Microbiology
BIOL	4810	Immunology
CHEM	1300	General Chemistry I
CHEM	1400	General Chemistry II
CHEM	2000	Organic Chemistry I
CHEM	2100	Organic Chemistry II
CSC	1100	Computer Applications Programming
MATH	1700	Applied Statistics
PSY	2640	Performance Appraisal and Development
CLS	1000	Introduction to Clinical Laboratory Sciences
CLS	2100	Basic Lab Skills
CLS	3000	Professional Issues
CLS	3100	Human Biochemistry I
CLS	3150	Human Biochemistry II
CLS	3200	Immunoassay/Clinical Virology

## Specializations for the Major in Clinical Laboratory Sciences

### Medical Technology Track

CLS	2000	Basic Hematology
CLS	3400	Parasitology/Mycology
CLS	4000	Clinical Hematology I
CLS	4050	Clinical Hematology II
CLS	4200	Clinical Chemistry I
CLS	4250	Clinical Chemistry II
CLS	4400	Clinical Microbiology I
CLS	4450	Clinical Microbiology II
CLS	4600	Immunohematology I
CLS	4650	Immunohematology II
CLS	4800	Clinical Correlations I
CLS	4850	Clinical Correlations II

### Clinical Chemistry Track

CHEM	3000	Analytical Chemistry I
CHEM	3500	Analytical Chemistry II
CLS	2000	Basic Hematology
CLS	4200	Clinical Chemistry I
CLS	4250	Clinical Chemistry II
CLS	4300	Issues in Clinical Chemistry I
CLS	4350	Issues in Clinical Chemistry II

### Clinical Microbiology Track

CLS	3400	Parasitology/Mycology
CLS	4400	Clinical Microbiology I
CLS	4450	Clinical Microbiology II
CLS	4100	Issues in Clinical Microbiology I
CLS	4150	Issues in Clinical Microbiology II

Graduation from the CLS program is not contingent upon passing a certification exam.

Clinical Laboratory Sciences majors fulfill the Liberal Arts and Sciences requirements by successfully completing the following courses:

Computer Literacy: CSC 1100 Computer Applications

Speaking/Listening: CLS 3000 Professional Issues in Clinical Lab Science

Junior/Senior Writing: CLS 3000 Professional Issues in Clinical Lab Science

# Communications Media

## Chairperson

George Bohrer

## Professors

George Bohrer

Peter Laytin

Wayne Munson

Helen Obermeyer

Simmons

Charles Sides

## Associate Professor

Ann Mrvica

## Assistant Professors

Robert Carr

John Chetro-Szivos

Robert Harris

GuntherHoos

Randy Howe

Jon Krasner

Charles Roberts

Jeffrey Warmouth

## Objectives for the Program in Communications Media

The Communications Media Program prepares individuals to assume communication positions as freelancers, independent producers, or employees of corporations, institutions, and media organizations.

The program provides a blend of the principles and practices necessary for the effective design, production, and evaluation of media for information presentation by graphic, photographic, film, video, electronic, and print technologies. In combination with the Liberal Arts and Sciences Program, Communications Media fosters the development of skills critical to adapting to an ever changing technological and knowledge-based society.

## Requirements for the Major in Communications Media

The Bachelor of Science degree in Communications Media requires 54 semester hours in its major requirements. Course requirements are organized into five phases.

### LAS Requirements

PHIL 1100 *Introduction to Philosophy or*

PHIL 2600 *Philosophy of Human Nature*

SOC 1000 *Introduction to Sociology*

PSY 1100 *General Psychology*

## Phase I Freshman Introductory Requirements

Phase I exposes students to the foundations, concepts, and practices used in the preparation, delivery, evaluation, and research of verbal and visual messages.

### Required Courses

COMM 1105 *Systems and Theories of Communication*

COMM 1120 *Message Design*

## Phase II Applied Concentration

Phase II enables students to become involved with an in-depth investigation of an area in communications which is most closely aligned with individual talents and interests. Students must select and complete one concentration with the consent of their advisor. A minimum of five required courses must be taken within a concentration.

Note: For some concentration courses, students are expected to pay for supplies that may range in cost from \$100 to \$300 per course.

## Film/Video Production Concentration

### Required Courses

COMM 3505 *Introduction to Film and Video*

COMM 3580 *Studio Lighting and Production*

### Film Required Courses

COMM 3710 *Intermediate Film Production*

COMM 3720 *Advanced Film Production*

COMM 3740 *Digital Production for Film and Video*

### Video Required Courses

COMM 3520 *Intermediate Video Production*

COMM 3540 *Advanced Video Production*

COMM 3740 *Digital Production for Film and Video*

### Elective Courses

COMM 2320 *Script Writing*

COMM 3530 *Post-Production*

COMM 3550 *Production Management*

COMM 3560 *Sound Design*

COMM 3730 *Directing Video/Film*

## Graphic Design Concentration

### Required Courses

COMM 3810 *Graphic Design I*

COMM 3820 *Graphic Design II*

COMM 3890 *Computer Graphic Design*

COMM 4270 *Pre-Press Production  
Elective*

### Elective Courses

COMM 2330 *Color Theory*

COMM 3830 *Graphic Design III*

COMM 3840 *Graphic Management*

COMM 3850 *Publication Design*

COMM 3880 *Typography*

COMM 3900 *Graphic Design Photography*

COMM 3910 *Graphic Arts Production*

COMM 3920 *Advanced Computer Graphic Design*

## Photography Concentration

### Required Courses

COMM 3600 *Photography I*

COMM 3610 *Photography II*

COMM 3620 *Photography III*

COMM 3630 *Large Format Photography*

COMM 3645 *Digital Photography*

### Elective Courses

COMM 3640 *Color Photography*

COMM 3660 *Photo Management*

COMM 3690 *Photography Seminar*

## Technical Communication Concentration

### Required Courses

COMM 3304 *Multimedia Project Design*

COMM 3430 *Writing for Advertising*

COMM 3460 *Public Relations*

COMM 3470 *Technical Documentation*

COMM 3860 *Writing for Business and Technology*

### Elective Courses

COMM 2320 *Script Writing*

COMM 2800 *Journalism*

COMM 3870 *Feature and Magazine Writing*

Note: It is recommended that students take the history course related to their concentration as part of their Liberal Arts and Sciences program. These courses include History of Film I, History of Film II, History of TV, History of Graphic Design, and History of Photography.

### Phase III Advanced Electives

Following or concurrent with Phase II, students, in consultation with their advisor, select one of the following options:

- Four additional courses in the same concentration
- Four courses in other concentrations
- Four courses from a combination of concentrations, including additional theory, conceptual, or methodological courses
- Courses from the multimedia module:

COMM 3304 *Multimedia Project Design*  
COMM 3305 *Multimedia Tools and Techniques*  
COMM 3306 *Interactive Media*  
COMM 3307 *Multimedia Production*  
COMM 3308 *Multimedia Seminar*  
COMM 3890 *Computer Graphic Design*

### Phase IV Upper-Level Theory/Conceptual/Methodological Requirements

Students in their junior/senior year will take the following:

#### **Media Workplace Dynamics**

##### **Requirement**

COMM 4200 *Human Communications*

##### **Junior Writing Requirement (Select One)**

COMM 2800 *Journalism*  
COMM 3430 *Writing for Advertising*  
COMM 3460 *Public Relations*  
COMM 3470 *Technical Documentation*  
COMM 3860 *Writing for Business and Technology*  
COMM 4240 *Media Criticism*

##### **Electives (Select One)**

COMM 4210 *Instructional Training Design*  
COMM 4220 *Organizational Communication*  
COMM 4230 *Communications Law and Ethics*  
COMM 4240 *Media Criticism*  
(unless used for junior writing requirement)  
COMM 4250 *Research Seminar*  
COMM 4205 *Seminar in Communication Theory*

### Communications Studies Concentration

This concentration provides for advanced studies of the theoretical constructs necessary for strategic analysis, design, application, research, and evaluation of a variety of media systems. It provides foundational preparation for graduate studies in communications and a number of allied fields.

Requirements: Phase I and II, plus the following courses from Phases III and IV: COMM 4230, COMM 4240, COMM 4250, 2–3 electives, and Phase V.

### Phase V Integrated Studies

This required senior level phase provides an opportunity for students to apply their knowledge and skills in a professional environment.

#### **Required Course**

COMM 4880 *Internship (12 cr.)*

#### **Enrichment Courses (electives)**

COMM 4260 *Advanced Professional Study*  
COMM 4901 *Independent Study (1 cr.)*  
COMM 4902 *Independent Study (2 cr.)*  
COMM 4903 *Independent Study (3 cr.)*  
COMM 4906 *Independent Study (6 cr.)*  
COMM 4940 *Field Study (3 cr.)*  
COMM 4950 *Field Study (6 cr.)*

### VISIONS

VISIONS is an annual juried exhibition of the best work by Communications Media students during that year. VISIONS is held in late April of each year.

### Requirements for the Minor in Graphics

An interdisciplinary minor in graphics is offered in conjunction with the Computer Science and Industrial Technology Departments. See Graphics in this catalog for an explanation of program requirements.

## Computer Information Systems

### Chairperson

Nadimpalli Mahadev

### Program Objectives

The Computer Information Systems program offers the opportunity for students to develop knowledge and skills in analysis and design of business information systems, database development, software development, and networking. This program prepares the students for professional careers in the rapidly changing field of computer information systems. Students develop good communication skills and the ability for teamwork and leadership roles in their professional careers.

All CIS majors are encouraged to register for a minor in Business Administration.

### Requirements for the major in Computer Information Systems must include:

CSC	1000	Introduction to GUI Programming
CSC	1400	Computer Information Systems
CSC/		
MATH	1900	Discrete Mathematics
CSC	1500	Computer Science I
CSC	1550	Computer Science II
CSC	2400	Database Systems
CSC	2560	Systems Programming
CSC	2700	Business Programming
CSC	3450	Local Area Networks
BSAD	2010	Introduction to Financial Reporting
BSAD	3200	Principles of Management
BSAD	3300	Fundamentals of Marketing
BSAD	3710	Systems Analysis Methods
+BSAD	4700	Systems Design & Implementation
ECON	1000	Macroeconomics
ECON	1200	Microeconomics
*MATH	1250	Introduction to Functions
MATH	1800	Business Statistics
MATH	2200	Calculus for Business

Five additional CS electives at or above 3000 level

\* Pending placement exam results.

+ Course used to satisfy Junior/Senior Writing, and Speaking and Listening requirements. Computer Literacy requirement is satisfied by CS core.

## Computer Science

### Chairpersons

Nadimpalli Mahadev

### Associate Professors Assistant Professors

Frank Archambeault Brady Chen

Frits Lander Natasha Kourtonina

Nadimpalli Mahadev Kevin Austin

Stephen Taylor

### Objectives for the Program in Computer Science

The Computer Science Program offers the opportunity for students to develop a unique blend of knowledge and skills in the areas of computer software and computer hardware. The program provides sufficient theoretical background for continued learning. It also provides practical skills to prepare the students for professional careers in the rapidly changing field of computer science. Students develop good communication skills and the ability for teamwork and leadership roles in their professional careers.

### Requirements for the Major in Computer Science

The Degree of Bachelor of Science in Computer Science must include:

CSC	1500	Computer Science I
CSC	1550	Computer Science II
CSC	1600	Introduction to Electronics
CSC	1650	Digital Electronics
CSC	1900	Discrete Mathematics or
MATH	1900	Discrete Mathematics
CSC	2560	Systems Programming
CSC	2600	Computer Organization
CSC	3100	Operating Systems
CSC	3200	Programming Languages
CSC	3600	Microprocessors
CSC	3700	Algorithms and Data Structures
*CSC	4400	Software Engineering
+MATH	1300	Pre-Calculus
MATH	1800	Business Statistics
MATH	2300	Calculus I
MATH	2400	Calculus II
MATH	2600	Linear Algebra
PHYS	1300	General Physics I
PHYS	1400	General Physics II

Five CS electives at or above 3000 level.

+ Pending placement exam results

\*Course used to satisfy Junior/Senior Writing, and Speaking and Listening requirements. Computer Literacy requirement is satisfied by CS core.

### Requirements for the Minor in Computer Science

A minor in Computer Science consists of the following courses:

CSC	1500	Computer Science I
CSC	1550	Computer Science II
CSC	2560	Systems Programming
CSC	3200	Programming Languages
		2 Computer Science electives at or above the 2000 level

# Criminal Justice

## Chairpersons

John Hancock  
Michael Turk

## Coordinator

Fazal Ahmed

## Professor

Mary King

## Assistant Professor

Fazal Ahmed  
Jon Sorensen

## Objectives for the Major in Criminal Justice

The Criminal Justice Major provides students with courses which lead to a Bachelor of Science Degree that is interdisciplinary in nature, combining Criminal Justice, Human Services, Sociology, Psychology, and Political Science. The courses provide a foundation for employment in the Criminal Justice field and graduate work.

## Requirements for the LAS Criminal Justice Major:

As part of their Liberal Arts and Sciences requirements, all students in the Criminal Justice Track must complete:

PSY	1100	General Psychology
PSY	2200	Human Growth and Development
PSY	2350	Abnormal Psychology
CSC	1000	Introduction to GUI Programming <b>or</b>
CSC	1100	Computer Applications
MATH	1700	Applied Statistics

### Core Requirements (18 credits)

CJ	2000	Introduction to Criminal Justice*
CJ	2050	Principles and Practice of Law Enforcement
CJ	2650	Correctional Theory and Practice
CJ	2651	Ethics in Criminal Justice
POLS	2270	Introduction to Legal Process
SOC	1100	Introduction to Sociology
SOC	2750	Criminology
PSY	2110	Introduction to Research Methods <b>or</b>
SOC	3130	Basic Skills of Social Research
CJ	4000	Seminar in Criminal Justice**

\*This course is a prerequisite to all classes.

\*\*CJ 4000 satisfies the Jr./Sr. Writing Requirement.

### Capstone

CJ	3750	Colloquium (3 cr.) and additional 3 crs. Criminal <b>or</b> Justice course
CJ	4940	Internship (6 or 12 credits)

## Elective Courses (18 credits)

In conjunction with the Criminal Justice Core, each student will select 18 hours of criminal justice electives to complete the 45 semester hours required in the Criminal Justice Major. From the list below, each student, in consultation with his/her advisor, should select a minimum of one course from two of the disciplines (Criminal Justice, Human Services, Political Science, Psychology, and Sociology), with no more than three in any discipline.

### Criminal Justice

CJ	2450	Women in Criminal Justice
CJ	2500	Correctional Law
CJ	2550	Criminal Law
CJ	2600	Juvenile Justice
CJ	3300	Community Based Corrections

### Human Services

HMSV	2400	Crisis Intervention
HMSV	2500	Interviewing Techniques
HMSV	3500	Child Abuse and Neglect

### Political Science

POLS	2550	Sex, Race, and the Constitution
POLS	2700	Criminal Procedure: The Rights of the Accused
POLS	3500	Constitutional Law

### Psychology

PSY	2400	Psychology of Captivity
PSY	2500	Social Psychology
PSY	2570	Small Group Leadership

### Sociology

SOC	2500	Race and Ethnic Relations
SOC	2700	Social Problems
SOC	2760	Juvenile Delinquency
SOC	3500	Law and Society

Select topics course in these disciplines may be allowable with the permission of your advisor.

\* These courses require prior faculty approval. Students must pre-register with faculty members prior to registration.

\*\* Students have the option of selecting an Internship of 6 or 12 credits over one or two semesters. If a student chooses a 12-hour internship, 6 of those credit hours will count as free electives. All Internships shall be conducted in accordance with existing policies in the Department of Behavioral Sciences. While all Internships require approval of the CJRC, students seeking *direct service* Internships may have further prerequisites depending on the nature of the field placement (Field settings often have a preference for/require specific coursework. Students need to see their advisors for details and refer to the Field Placement Office for policies pertaining to field placements.)

**Free Electives** (to bring to a total of 120 credits fro graduation)

It is the student's responsibility to fulfill *accurately and completely* all Liberal Arts and Sciences and departmental requirements for the degree.

## Requirements for the Minor in Criminal Justice

An interdisciplinary minor in Criminal Justice is offered by the Departments of Behavioral Sciences and Social Sciences.

Students will complete the Criminal Justice Minor as they fulfill the responsibilities of an academic major. There are 9 semester hours of required courses and 9 semester hours of electives.

**Students are reminded that they may use no more than two of their major courses toward the minor.**

N.B.: Both POLS 2270 and SOC 3500 may be taken, in which case one counts as “Required” and the other as “Elective”.

### Required Courses (9 semester hours)

CJ	2000	Introduction to Criminal Justice
SOC	2750	Criminology and
POLS	2270	Introduction to the Legal Process <b>or</b>
SOC	3500	Law and Society

Note: If both POLS 2270 and SOC 3500 are taken, one counts as “Required” and the other as “Elective.”

### Electives (9 semester hours)

CJ	2450	Women in Criminal Justice
CJ	2500	Correctional Law
CJ	2550	Criminal Law
CJ	2600	Juvenile Justice
CJ	3300	Community Based Corrections
HMSV	2400	Crisis Intervention
HMSV	2500	Interviewing Techniques
HMSV	3500	The Abuse and Neglect of Children
POLS	2270	Introduction to the Legal Process
POLS	2550	Sex, Race, and Constitution
POLS	2700	Criminal Procedure: The Rights of the Accused
POLS	3500	Constitutional Law
PSY	2400	Psychology of Captivity
PSY	2500	Social Psychology
PSY	2570	Small Group Leadership
SOC	2500	Race and Ethnic Relations
SOC	2700	Social Problems
SOC	2760	Juvenile Delinquency
SOC	3500	Law and Society

Course descriptions can be found listed within the following disciplines: Human Services, Political Science, Psychology, and Sociology. Please refer to the course description section for more information.

## Economics

### Chairperson

Michael Turk

### Professor

Nancy Wiegiersma

### Associate Professors

Pirudas Lwamugira

Michael Turk

### Objectives for the Program in Economics

The Economics Program offers Liberal Arts and Sciences courses which focus on understanding the principles of economics for private enterprise market economies especially, the United States economy, as well as the workings of the global economy. The program offers both a major and a minor to students who are interested in a career in Economics or Business.

### Requirements for the Major in Economics

The degree of Bachelor of Science in Economics requires 36 credits:

ECON	1100	Principles of Macroeconomics
ECON	1200	Principles of Microeconomics
ECON	2400	Money and Banking
ECON	3000	History of Economic Thought*
ECON	3650	Intermediate Macroeconomics
ECON	3660	Intermediate Microeconomics
MATH	2200	Calculus for Business
MATH	1800	Business Statistics
SPCH	1000	Speech

Four courses selected from the following:

ECON	1300	Consumer Economics
ECON	2200	Comparative Economic Systems
ECON	2450	Human Resource Economics
ECON	2500	Economic Development
ECON	2550	Urban Economics
ECON	2600	Public Finance
ECON	3550	International Economics
ECON	3700	Econometrics
ECON	3750	Managerial Economics
ECON	4900	Independent Study in Economics
ECON	4940	Internship in Economics
ECON	5000	Topics in Economics
GEOG	3000	Economic Geography
BSAD	4230	Business Fluctuations and Forecasting

\*ECON 3000 satisfies the Jr./Sr. Writing Requirement.

### International Business and Economics

The International Business and Economics program provides students with an understanding of the rapidly changing global economy. It concentrates on explanations of the complexities of the business discipline in relationship to the theory of international trade and finance and the changing roles of international institutions (such as the World Trade Organization and the International Monetary Fund). The concentration provides the student with knowledge of the intricacies of doing business internationally. Students will study international marketing and the commerce, trade and investments of international business.

### LAS Requirements

BSAD	1700	Introduction to Computer Information Systems for Business
ECON	1100	Principles of Macroeconomics
ECON	1200	Principles of Microeconomics
ENGL	2400	World Literature I <b>or</b>
ENGL	2500	World Literature II
ENGL	3100	World Novel I <b>or</b>
ENGL	3110	World Novel II
IDIS	1200	Introduction to International Studies <b>or</b>
IDIS	1800	Global Issues
HIST	1150	World Civilizations III
MATH	1800	Business Statistics
MATH	2200	Calculus for Business
SPCH	1000	Speech

### Major Requirements in Business Administration and Economics

BSAD	2010	Introduction to Financial Reporting
BSAD	2020	Introduction to Managerial Accounting
BSAD	3200	Principles of Management
BSAD	3210	Human Resource Management
BSAD	3300	Fundamentals of Marketing
BSAD	3400	Basic Finance
BSAD	3500	Business Law I
BSAD	4330	International Marketing
BSAD	4880	International Business Management
BSAD	4890	Business Policy and Strategy
ECON	3550	International Economics
ECON	3600	International Finance Economics

### And either 2 courses from the following list of Macroeconomic courses:

ECON	2200	Comparative Economic Systems
ECON	2400	Money and Banking
ECON	2500	Economic Development
ECON	3650	Intermediate Macroeconomics Theory

### Or 2 courses from the following list of Microeconomics courses:

ECON	2300	Industrial Organization
ECON	2400	Money and Banking
ECON	3660	Intermediate Microeconomics Theory
ECON	3750	Managerial Economics

### Requirements for the Minor in Economics

A minor in Economics requires:

ECON	1000	Principles of Macroeconomics
ECON	1200	Principles of Microeconomics

Four courses selected from courses listed for the Economics major.

## Education

See "Teacher Preparation Programs"

## English

### Chairperson

Roberta Adams

### Professors

Janice Alberghene  
Judith Budz  
Arnold Gordonstein  
Nancy Kelly  
Thomas Murray

### Associate Professors

Roberta Adams  
Chola Chisunka  
Patrice Gray  
Richard McElvain  
Kelly Morgan  
Donelle Ruwe  
Robert Tapply

### Assistant Professors

Irene Martyniuk  
Lisa Gim  
Heather Hill-Vasquez  
Michael Hoberman  
Angele Nastasse-Carder  
Margarite Roumas  
Doris Schmidt  
Leon Weinmann

### Description of the Program

Through a variety of specialized programs, English majors can obtain a BA English-Literature, BA English-Professional Writing, BA English-Provisional Certification, BA English-Theater, and BS English-Literature, BS English-Professional Writing, BS English-Provisional Certification, and BS English-Theater.

### Objectives for the Program in English

The English program offers students a) knowledge of the broad field of literature in English, b) in-depth knowledge of its diverse aspects, c) the reading, writing, and research tools for exploring the field and its boundaries, and d) ample opportunity for hands-on experience in related fields.

### Requirements for the Major in English

Approaches to English Studies (ENGL 1999) provides an introduction to the discipline. All English majors and minors must satisfactorily complete the course by the end of their sophomore year. Transfer students must take ENGL 1999 during their first year at the college, unless exempted by the Department Chair, based on evaluation of transfer course work. English majors in all tracks must also successfully complete a Senior Portfolio. See individual tracks for specific requirements in addition to the above.

### Internship

The English Department, through its internship program, offers an opportunity for seniors and second-semester juniors to explore a profession for one full semester of work and credit. The internship enables students to apply theoretical knowledge and laboratory-developed skills in an actual professional setting. Students in the program have enjoyed an unusually high level of job-entry success.

English majors can experience a wide range of professional activity in fields such as radio, television, journalism, personnel work, library functions (school, public, or technical), public relations, law, government, human services, and technical productions. New internship positions are identified each semester. Department approval is required.

## Specializations for the Major in English

### **The Bachelor of Arts in English—Literature**

This program requires 36 hours in English.

- A course in speech or performance fulfills the speaking and listening requirements
- Second-year language proficiency is required
- Students keep a portfolio of 10 representative English papers for Senior review
- This program also provides preparation for Provisional Certification for Teaching Secondary School English

#### **Required Courses**

ENGL 1999 *Approaches to English Studies*  
 ENGL 2000 *American Literature I: Age of Exploration to the Civil War*  
 ENGL 2100 *American Literature II: Civil War to the Present*  
**or**  
*One post-Civil War American literature course*

One equivalent period course in English literature may be substituted for one survey among the following requirements:

#### **Required**

ENGL 2200 *English Literature I: Beowulf to Milton*

**Or** choose one of the following:

ENGL 3030 *The Middle Ages*

ENGL 4010 *Chaucer and His World*

#### **Required**

ENGL 2210 *English Literature II: Pepys to Shelley*

**Or** choose one of the following:

ENGL 4040 *Major English Writers of the 17th Century*

ENGL 4050 *The Novel in the 18th Century*

ENGL 4070 *From Classic to Romantic: 1750–1800*

ENGL 4080 *Romanticism*

#### **Required**

ENGL 2220 *English Literature III: Bronte to Rusldie*

**Or** choose one of the following:

ENGL 3040 *British Literature Since World War II*

ENGL 4090 *The 19th-Century English Novel*

ENGL 4095 *The Age of Dickens*

ENGL 4100 *Victorian Literature*

ENGL 4115 *British Modernism*

#### **Required**

ENGL 4020 *Shakespeare's Drama: Text and Performance* **or**

ENGL 4030 *Interpreting Shakespeare's Works*

ENGL 4400 *Seminar (for juniors or seniors)*

#### **Electives**

One elective in **World** or **Multicultural** literature and three electives in literature; at least one 4000-level literature course in addition to Shakespeare; and one 3000-level literature course.

### **Bachelor of Science Degree in English-Literature**

This program is available for students who choose not to fulfill the requirement for foreign language proficiency at the second-year level. All other requirements are the same as for the Bachelor of Arts in English-Literature.

### **Bachelor of Arts in English-Professional Writing**

This program requires 36 hours in English.

- A course in speech is required
- Students also keep a portfolio of ten representative course papers for Senior review

#### **Required Courses**

ENGL 1999 *Approaches to English Studies*  
 ENGL 2000 *American Literature I: Age of Exploration to the Civil War*  
 ENGL 2100 *American Literature II: Civil War to the Present*  
**or**  
*One post-Civil War American literature course*

Equivalent period courses in English Literature may be substituted for two surveys among the following requirements:

#### **Required**

ENGL 2200 *English Literature I: Beowulf to Milton*

**Or** choose one of the following:

ENGL 3030 *The Middle Ages*

ENGL 4010 *Chaucer and His World*

ENGL 4020 *Shakespeare's Drama: Text and Performance* **or**

ENGL 4030 *Interpreting Shakespeare's Works*

#### **Required**

ENGL 2210 *English Literature II: Pepys to Shelley*

**Or** choose one of the following:

ENGL 4040 *Major English Writers of the 17th Century*

ENGL 4050 *The Novel in the 18th Century*

ENGL 4070 *From Classic to Romantic: 1750–1800*

ENGL 4080 *Romanticism*

#### **Required**

ENGL 2220 *English Literature III: Bronte to Rusldie*

**Or** choose one of the following:

ENGL 3040 *British Literature Since World War II*

ENGL 4090 *The 19th-Century English Novel*

ENGL 4095 *The Age of Dickens*

ENGL 4100 *Victorian Literature*

ENGL 4115 *British Modernism*

#### **Electives**

One elective in **World** or **Multicultural** literature; at least one 4000-level literature course and one 3000-level literature course

#### **Required**

ENGL 2800 *Journalism*

ENGL 3890 *Advanced Expository Writing*

Nine hours from the following courses:

ENGL 3810 *Journalism Practicum I*

ENGL 3800 *Creative Writing*

ENGL 2810 *Editing and Publishing*

ENGL 3860 *Writing for Business and Technology*

ENGL 3870 *Feature and Magazine Writing*

ENGL 4260 *Journalist to Novelist*

#### **Recommended**

\*ENGL 4940 *Internship*

\*ENGL 4950 *Internship*

\*ENGL 4960 *Internship*

\* One of the Internships is recommended and requires Department approval.

### **Bachelor of Science Degree in English-Professional Writing**

This program is available for students who choose not to fulfill the requirement for foreign language proficiency at the second-year level. All other requirements are the same as for the Bachelor of Arts in English-Professional Writing.

### **Bachelor of Arts in English—Theater**

This program requires 36 hours of coursework.

- SPCH 2400 Voice and Articulation is required to fulfill the LAS&S speaking and listening requirement
- Second-year language proficiency is also required
- Students keep a portfolio of 10 representative papers from literature and theater course and/or fully prepared audition pieces. The audition pieces may substitute for one or more equivalent papers from literature and theater courses. The proportion of each should reflect the focus of the students. (e.g., performance, dramaturgy, education). It is reviewed in the senior year by the student's advisor and two other professors in the department. Transfer students should consult with the chair.

#### **Required Courses**

ENGL	1999	<i>Approaches to English Studies</i>
ENGL	2000	<i>American Literature I: Age of Exploration to the Civil War</i>
ENGL	2100	<i>American Literature II: Civil War to the Present</i>
		<b>or</b>
ENGL	3010	<i>American Drama</i>
ENGL	4020	<i>Shakespeare's Drama: Text and Performance</i> <b>or</b>
ENGL	4030	<i>Interpreting Shakespeare's Works</i>
ENGL	2200	<i>English Literature II: Pepys to Shelley</i> <b>or</b>
ENGL	4040	<i>Major English Writers of the 17th Century</i>
ENGL	2210	<i>English Literature III: Bronte to Rushdie</i> <b>or</b>
ENGL	3020	<i>Modern Drama</i>
THEA	2000	<i>Introduction to Theater</i>
THEA	2500	<i>Stage Movement</i>
THEA	2700	<i>Acting I</i>
THEA	2800	<i>Acting II</i>
THEA	3000	<i>Stagecraft and Theater Production</i>

#### **Electives**

Three hours from the following courses:

ENGL	4130	<i>20th-Century Irish Drama and Poetry</i>
THEA	2100	<i>Children's Theater</i>
THEA	4000	<i>Directing the Play</i>
PHED	4050	<i>Art of Dance</i>
PHED	4130	<i>Making Dances: Choreography and Composition</i>

Students are encouraged to explore all related elective courses above, as well as Technical Theater courses offered by Industrial Technology.

#### **Recommended**

*THEA	4940	<i>Internship</i>
*THEA	4950	<i>Internship</i>
*THEA	4960	<i>Internship</i>

\*One of these Internships is recommended and requires Department approval.

### **Bachelor of Science in English—Theater**

This program is available for students who choose not to fulfill the requirement for foreign language proficiency at the second-year level. All other requirements are the same as for the Bachelor of Arts in English-Theater.

### **Core Requirements for Initial Licensure**

For information about undergraduate requirements in teacher preparation, see the section titled: "Teacher Preparation Programs (Undergraduate)"

Students denied admission to the Practicum can appeal to the appropriate department chair.

The course requirements are those for the Bachelor of Arts/Literature or Bachelor of Science/Literature plus the following:

#### **Required**

ENGL	2910	<i>Literature for Young Adults</i>
ENGL	4600	<i>The Structure and Nature of Language</i>

#### **Core Courses**

ENGL	2860	<i>Introduction to Secondary School Teaching</i>
ENGL	4700	<i>Teaching Writing in Secondary Schools</i>
ENGL	4850	<i>Special Methods in English</i>
ENGL	4860/	<i>English Practicum in a Secondary School</i>
	4870	<i>(300 hours)</i>
SPED	3800	<i>Secondary Programs for Adolescents with Special Needs</i>

### **Double Majors**

Students with double majors in English and Early Childhood, Elementary, Middle School, or Special Education are working toward a BS degree and are exempt from foreign language proficiency requirement.

### **Requirements for the Minor in English**

The Minor in English has two tracks, each requiring 18 hours in English courses.

#### **Track A: Concentration in Literature**

ENGL	1999	<i>Approaches to English Studies</i>
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Six hours of survey from:

ENGL	2000	<i>American Literature I: Age of Exploration to the Civil War</i>
ENGL	2100	<i>American Literature II: Civil War to the Present</i>
ENGL	2200	<i>English Literature I: Beowulf to Milton</i>
ENGL	2210	<i>English Literature II: Pepys to Shelley</i>
ENGL	2220	<i>English Literature III: Bronte to Rushdie</i>
ENGL	2400	<i>World Literature I</i>
ENGL	2500	<i>World Literature II</i>

Nine hours in literature electives—six must be at the 3000 level or above

#### **Track B: Concentration in Professional Writing**

ENGL	1999	<i>Approaches to English Studies</i>
ENGL	3890	<i>Advanced Expository Writing</i>

Six hours of survey from:

ENGL	2000	<i>American Literature I: Age of Exploration to the Civil War</i>
ENGL	2100	<i>American Literature II: Civil War to the Present</i>
ENGL	2200	<i>English Literature I: Beowulf to Milton</i>
ENGL	2210	<i>English Literature II: Pepys to Shelley</i>
ENGL	2220	<i>English Literature III: Bronte to Rushdie</i>
ENGL	2400	<i>World Literature I</i>
ENGL	2500	<i>World Literature II</i>

Six semester hours in advanced writing courses selected from:

ENGL	2800	<i>Journalism</i>
ENGL	2810	<i>Editing and Publishing</i>
ENGL	3800	<i>Creative Writing</i>
ENGL	3810	<i>Journalism Practicum I</i>
ENGL	3820	<i>Journalism Practicum II</i>
ENGL	3860	<i>Writing for Business and Technology</i>
ENGL	3870	<i>Feature and Magazine Writing</i>
ENGL	4260	<i>Journalist to Novelist</i>

Note: Credit is not given for both: ENGL 2800 and COMM 2800; ENGL 3870 and COMM 3870; ENGL 3860 and COMM 3860.

## Environmental Science

### Chairpersons

George Babich  
James Barbato

### Professors

Da-hong Lu  
Daniel Robinson  
Howard Thomas

### Objectives for the Program in Environmental Science

The Environmental Science track combines Biology and Chemistry coursework as well as several courses designed specifically to address important concepts and issues in Environmental Science.

### Requirements for the BS in Biology/Environmental Science

*BIOL 1800	General Biology I
*BIOL 1900	General Biology II
CHEM 1300	General Chemistry I
CHEM 1400	General Chemistry II
PHYS 1300	General Physics I
PHYS 1400	General Physics II
*BIOL 2300	Ecology
*BIOL 2800	Genetics
*BIOL 3250	Cell Biology
*BIOL 3550	Developmental Biology
ENSC 1000	Introduction to Environmental Science
ENSC 2000	Field Techniques in Environmental Science I
ENSC 2001	Field Techniques in Environmental Science II
GEOG 2100	Geology
ENSC 3000	Elements of Physical Chemistry
GEOG 4600	Environmental Hydrology
ENSC 4100	Seminar in Environmental Science
ENSC 4950	Internship in Environmental Science

\*These core biology courses all involve student laboratory work to develop the skills of scientific inquiry. Students are introduced to computer applications for biological research in General Biology I and II, as part of their Computer Literacy requirement. These skills are utilized and expanded upon in their upper level biology courses. Students also develop scientific literacy through reading, writing, and talking about scientific concepts in these courses. In Developmental Biology, the capstone course of the biology core, students demonstrate their master of these skill as part of their Listening and Speaking and Jr./Sr. Writing requirements.

## Exercise and Sport Science

### Chairperson

David Antaya

### Professors

Thomas Battinelli

### Associate Professors

David Antaya

### Assistant Professors

Barbara Nole  
Lynn Champion  
Jeff Godin  
Susan Levine

### Objectives for the Exercise and Sport Science Program

Program objectives are threefold:

- to prepare students for professional careers in commercial, corporate, or hospital-based fitness industries, or for graduate education
- to prepare students professionally by supporting concentrations in Exercise Science for students in other majors who anticipate working in a related career
- to foster healthy and physically active lifestyles

### Description of the Major in Exercise and Sport Science

The Exercise and Sport Science major is designed with two career tracks: clinical exercise physiology and fitness management. The major is both multidisciplinary and interdisciplinary. It is multidisciplinary in that it is the integration of anatomy, physiology, physics, psychology, and learning theory to describe and explain responses and adaptations to exercise and training, and to apply that knowledge to enhance physical potential for health, for sport, and in rehabilitation. It is interdisciplinary in that it draws from biology and business administration to provide a foundation in these disciplines to support exercise science applications as well as to enhance career preparedness.

There is a common core of Exercise Science courses to ensure a solid foundation in the various disciplines that comprise this multidisciplinary field of study, and to ensure the ability to apply knowledge in a variety of practical experiences. There is an opportunity also to develop breadth and depth in the field of Exercise and Sport Science as each track has specific requirements, as well as free electives.

### Exercise and Sport Science Major Requirements

Prerequisites: The major requires prerequisites in Anatomy and Physiology I and II, and Pre-Biochemistry I. In addition, General Biology I and II are required for the Clinical Exercise Physiology Track. All students are required to complete the following common core courses.

EXSS 2040	Motor Learning and Physical Performance
EXSS 2050	Functional Anatomy
EXSS 2060	Exercise, Nutrition, and Heart Disease
EXSS 2070	Exercise Physiology
EXSS 2300	Nutrition in Exercise and Sport
EXSS 3020	Biomechanics
EXSS 3120	Scientific Foundations of Strength Training and Conditioning
EXSS 3300	Exercise Metabolism
EXSS 3450	Exercise Testing and Programming
EXSS 4200	Senior Seminar in Leadership and Professional Ethics

EXSS 4940 Internship/Apprenticeship

### **Clinical Exercise Physiology Track Requirements**

EXSS 2500 Human Motor Development

EXSS 3600 Exercise Response and Adaptations in Special Populations

EXSS 4045 Cardiovascular Physiology and Electrophysiology

### **Fitness Management Track Requirements**

EXSS 2400 Health Promotion

EXSS 4040 Fitness Management

### **Liberal Arts and Sciences Requirements**

Some of the prerequisites and courses in the major fulfill requirements in the Liberal Arts and Sciences. Additional requirements are:

PSY 1100 General Psychology

PSY 2200 Human Growth and Development

PSY 2400 Interpersonal Effectiveness

In addition to the required courses in Exercise and Sport Science, students in the Fitness Management Track are required to complete a minor in Business Administration. Courses for the minor are: Principles of Management, Fundamentals of Marketing, Introduction to Managerial Accounting, Microeconomics, Introduction to Financial Reporting, Business Law I, and CIS for Business.

## **Description of the Interdisciplinary Concentrations**

The Exercise and Sport Science department offers concentrations of study in the field of Exercise Science and Fitness Management to students in the Biology and Business Administration departments, respectively.

### **Biology/Exercise Science**

#### **Course Requirements**

EXSS 2040 Motor Learning and Physical Performance

EXSS 2070 Exercise Physiology

EXSS 3020 Biomechanics

EXSS 4950 Internship or BIOL4950 Internship **or**

EXSS 3450 Exercise Testing and Programming

### **Business Administration/Fitness Management**

#### **Course Requirements**

BIOL 1200 Anatomy and Physiology I

BIOL 1300 Anatomy and Physiology II

EXSS 1460 First Aid/Adult CPR

BIOL 1650 Nutrition **or**

EXSS 2060 Exercise, Nutrition and Heart Disease

EXSS 2070 Exercise Physiology

EXSS 3450 Exercise Testing and Programming

EXSS 4030 Physical Education, Fitness and Sport: An Overview

EXSS 4950 Internship

EXSS Physical Activity or Dance Elective

## **Description of the Health and Fitness requirement in Liberal Arts and Sciences**

Health and Fitness is a required component of the Liberal Arts and Sciences curriculum. All students must complete three\* credit hours in the areas of health, wellness, and/or exercise, and the department offers a variety of classes on health and fitness topics, in recreational sports and activities, and in dance that serve to fulfill this requirement.

The requirement may be met by the successful completion of one of the following three options, all of which include a physical activity component:

**Option I** - one course selected from Group I

**Option II** - three courses selected from Group II

**Option III** - two courses selected from Group II and one course selected from Group III

\* Nursing majors must satisfy a one-credit hour requirement that can be met by the successful completion of one course from Group II or from Group III. (Exceptions: Consumer Health and Standard First Aid) Honors students must satisfy a two-credit hour requirement. This may be met by the successful completion of Leadership in the Outdoors and Consumer Health.

## **Exercise and Sport Science courses as electives**

Students in any major may take most of the departmental courses for elective credit as long as prerequisites are met. Some students like to participate in a structured activity, and this is provided in the fitness, dance, and recreation courses. Other students have benefited careers or prepared for summer jobs by taking courses such as outdoor education, camp counseling, or coaching principles. There are many options available.

### **Dance Minor**

#### **Theory/History/Performance**

Select three courses:

EXSS 4050 Art of Dance

EXSS 4070 Introduction to Dance Movement Therapy

EXSS 4100 Movement Education

EXSS 4130 Making Dances: Choreography and Composition

EXSS 4900 Independent Study/Practicum

#### **Technique Courses**

Select three courses:

EXSS 1130 Dance Aerobics

EXSS 1210 Modern Jazz I

EXSS 1220 Modern Jazz II

EXSS 1230 Modern Jazz III

EXSS 1240 Yoga

EXSS 1310 African Jazz Dance

#### **Recommended Elective**

The additional three credits can be taken from any of the above courses or the following:

THEA 2100 Children's Theatre

THEA 2500 Stage Movement

THEA 3000 Stagecraft and the Theatre Production

## French

### **Chairperson**

Jane Fiske

### **Professor**

Jeanne Moore

### **Assistant Professor**

Keyvan Karbasioan

### **Objectives for the Program in French**

The French Program offers students the opportunity to begin the study of the French language and culture or to continue study at an intermediate or advanced level.

### **Requirements for the Minor in French**

The minor in French requires a minimum of 15 semester hours including the following:

#### **Required Courses**

FREN 2000 *Intermediate French I*

FREN 2100 *Intermediate French II*

#### **Electives**

Choose at least three of the following:

FREN 3000 *French Civilization*

FREN 3300 *French Literature I*

FREN 3400 *French Literature II*

FREN 3500 *French Conversation and Composition*

FREN 4903 *Independent Study*

## Geo/Physical Sciences

### **Chairperson**

James P. Barbato

### **Professors**

James P. Barbato

Robert F. Champlin

Robert J. Gardula

Esmail Valanejad

### **Associate Professor**

Lawrence R. Guth

Jiang Yu

### **Objectives for the Program in Geo/Physical Sciences**

The Geo/Physical Sciences department encompasses the disciplines of Earth Science, Geography, and Physics. A major track of study may be chosen in Earth Science or Geography. In both fields, successful students pursue courses of instruction and are supported in undertaking internship experiences which prepare them for entry into the job market or for acceptance to graduate school. Both fields also offer a minor. In addition, all three disciplines which make up the Geo/Physical Sciences offer courses which satisfy various requirements of the Liberal Arts and Sciences Program, as well as those of majors in other departments.

### **Requirements for the Major in Geography/Earth Science**

The degrees of Bachelor of Science and Bachelor of Arts in Geography or Earth Science each require a minimum of 36 semester hours of coursework.

#### **Core Requirements**

GEOG 1000 *Introduction to Geography*

GEOG 2100 *Geology*

GEOG 2800 *Map Use and Interpretation*

#### **Geography Majors**

##### **Additional Requirements**

GEOG 2400 *Computer Applications in Geography/Earth Science*

GEOG 3400 *Population Geography*

GEOG 3500 *Geographic Information Systems*

GEOG 4800 *Cartography I*

GEOG 4820 *Cartography II*

A course in regional geography as well as additional courses are chosen in consultation with the academic advisor.

## **Earth Science Majors**

### **Additional Requirements**

<i>GEOG</i>	2200	<i>Meteorology</i>
<i>GEOG</i>	2500	<i>Oceanography</i>
<i>GEOG</i>	3250	<i>Historical Geology</i>
<i>GEOG</i>	4200	<i>Geomorphology</i>
<i>GEOG</i>	4220	<i>Structural Geology</i>
<i>GEOG</i>	4500	<i>Remote Sensing of the Environment</i>
<i>GEOG</i>	4600	<i>Environmental Hydrogeology</i>
<i>PHYS</i>	2000	<i>Astronomy</i>
<i>BIOL</i>	2300	<i>Ecology</i>

Required cognate courses for Earth Science majors  
(to be taken as part of Liberal Arts and Sciences distribution and free electives):

*CHEM 1300 General Chemistry I*

*CHEM 1400 General Chemistry II*

*PHYS 2300 General Physics I or*

*PHYS 2400 General Physics II*

- 6 semester hours Mathematics
- 3 semester hours Computer Science

*\*Those students interested in graduate school should give strong consideration to summer field camp.*

### **Requirements for Initial Track Licensure:**

For information about undergraduate requirements in teacher preparation, see the section titled: “Teacher Preparation Programs (Undergraduate)”

Students denied admission to the Practicum can appeal to the appropriate department chair.

### **Core Courses for Initial Teacher Licensure in Earth Science**

<i>GEOG</i>	2860	<i>Introduction to Secondary School Teaching</i>
<i>ENGL</i>	4700	<i>Teaching Writing in Secondary Schools</i>
<i>GEOG</i>	4850	<i>Special Methods in Earth Science</i>
<i>GEOG</i>	4860	<i>Earth Science Practicum in a Secondary School I</i> (300 hrs.)
<i>GEOG</i>	4870	<i>Earth Science Practicum in a Secondary School II</i> (300 hrs.)
<i>SPED</i>	3800	<i>Secondary Programs for Adolescents with</i> <i>Special Needs</i>

### **Requirements for the Minor in Geography/Earth Science**

The Minor in Geography/Earth Science consists of GEOG 1000, Introduction to Geography, and five additional geography courses chosen in consultation with one of the geography/earth science faculty.

## **German**

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### **Chairperson**

*Jane Fiske*

### **Professors**

*Jeanne Moore*

### **Objectives for the Program in German**

The German program offers students the opportunity to begin the study of German language and culture. Intermediate and advanced work is available through independent study.

### **Requirements for the Minor in German**

The minor in German requires a minimum of 15 semester hours, including the following:

#### **Required Courses**

*GER 2000 Intermediate German I*

*GER 2100 Intermediate German II*

#### **Electives**

Choose at least three of the following:

*GER 2800 Modern German Literature in Translation*

*GER 2900 Modern German Culture: The Road to Hitler*

*GER 3500 German Conversation and Composition*

*GER 4903 Independent Study*

## Graphics

### Chairpersons

Stanley Bucholtz  
Nadimpalli Mahadev  
George Bohrer

### Requirements for the Minor in Graphics

The Interdisciplinary Graphics Minor develops an appreciation for all three areas of study while concentrating in one of the areas. Students gain a theoretical background in Computer Science, a design/applications background in Communications/Media, and a production background in Industrial Technology.

#### Required Courses

CSC 1000 Introduction to Programming **or**  
CSC 1500 Computer Science I  
COMM 3810 Graphic Design I  
ITEC 1500 Graphic Arts Processes **or**  
COMM 3910 Graphic Arts Production  
CSC/COMM/ITEC Interdisciplinary Graphics Seminar

A concentration (two courses) in one of the following areas:

#### Concentration in Computer Science

CSC 1550 Computer Science II  
CSC 2000 Computer Graphics

#### Concentration in Communications/Media

COMM 3820 Graphic Design II  
COMM 3890 Computer Graphic Design

#### Concentration in Industrial Technology

ITEC 1510 Typography I  
ITEC 2410 Computer Aided Drafting (CAD)  
ITEC 2500 Offset Lithography

Note: Students must select a concentration in a department outside their major field of study.

## History

### Chairperson

Michael Turk

### Professors

Edmund Thomas

### Associate Professors

Benjamin Lieberman  
John Paul  
Susan Williams

### Assistant Professors

Sean Goodlett  
Rene Reeves  
Teresa Thomas

### Instructor

Thomas Conroy

### Objectives for the Program in History

The History Program offers a variety of courses to all students providing a strong foundation in World and United States history. A major and minor in history, as well as provisional certification for teaching history are provided.

### Requirements for the Major in History

The Bachelor of Science and Bachelor of Arts in History requires 36 hours of course work. All BA and BS candidates must have a concentration (15 semester hours) in a subject area outside of history. The concentration is constructed with the approval of the student's departmental advisor. Recognized minors in other disciplines may be substituted for the concentration.

#### Required LAS Courses

SPCH 1000 Introduction to Speech **or**  
SPCH 1100 Argument and Debate  
CSC 1100 Computer Applications

#### Required Courses

HIST 1000 World Civilizations I  
HIST 1100 World Civilizations II  
HIST 1150 World Civilizations III  
HIST 1400 U.S. History I  
HIST 1500 U.S. History II  
HIST 4000 Writing History\*

- One upper-level elective from each of the following areas:  
European History, U.S. History, Non-Western (Asia, Africa, or Latin America)
- Nine semester hours of History electives
- The Bachelor of Arts also requires foreign language proficiency at the intermediate level

\* Jr./Sr. Writing Requirement

## Requirements for Initial Track Licensure:

For information about undergraduate requirements in teacher preparation, see the section titled: “Teacher Preparation Programs (Undergraduate)”

Students denied admission to the Practicum can appeal to the appropriate department chair.

### **Core Courses for Initial Teacher Licensure in History**

<i>PSY</i>	2230	<i>Adolescent Psychology</i>
<i>HIST</i>	2860	<i>Introduction to Secondary/School Teaching</i>
<i>SPED</i>	3800	<i>Secondary Program for Adolescent with Special Needs</i>
<i>ENGL</i>	4700	<i>Teaching Writing in Secondary Schools</i>
<i>HIST</i>	4850	<i>Special Methods in History</i>
<i>*HIST</i>	4860	<i>History Practicum in a Secondary School (300 hrs.)</i>
<i>*HIST</i>	4870	<i>History Practicum in a Secondary School (300 hrs.)</i>

*\*Students are responsible for their own transportation to and from prepracticum as well as practicum sites.*

## Requirements for the Minor in History

The minor in History consists of 18 semester hours with at least three courses at the 2000-level or above.

## Human Services

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### **Chairperson**

*John Hancock*

### **Coordinator**

*Robert J. Wellman*

### **Professors**

*David C. Maloney*

*Richard J. Spencer*

### **Associate Professors**

*John M. Hancock*

*Robert J. Wellman*

### **Assistant Professor**

*Lynne Kellner*

## Objectives for the Human Services Program

A major in Human Services leads to a Bachelor of Science degree. Administered by the Behavioral Sciences Department, this program allows students to develop the knowledge and skills necessary for entering a variety of human service professions.

## Description of the Major in Human Services

The Human Services Program is competency based. Through their course work students gain a theoretical and conceptual base, and develop generic helping skills. Students further develop and demonstrate their knowledge and skills within several community settings through course-related practice and an intensive capstone field work experience. These professionally supervised practicum and field work experiences integrate academic study with practical “hands-on, real-world” application, and constitute a special characteristic of the FSC program. Additionally, they give students a realistic basis for choosing careers while strengthening their ability to compete in the job market. Students are also encouraged to gain additional experiences through volunteer activities.

The Human Services Program produces generalists to work with diverse clients in many settings, and prepares students for graduate study. Course work may be designed for students to pursue interests in human services administration, aging and gerontology, criminal justice and/or juvenile justice, family and children’s services, mental health and mental retardation, dance and recreation, and other areas.

Students should meet with their Human Services advisors to learn about the recommended course work and career possibilities associated with their interests.

[See the section on Departmental Policies for information about the Human Services Program’s policies on admission, retention and dismissal, and Field Work eligibility.]

## Requirements for the Major in Human Services

### **A. Liberal Arts and Sciences Courses**

Human Services majors are required to take the following courses, which also meet LA & S requirements:

#### **Written and Oral Communication and Computer Literacy:**

*ENGL 1100 Writing I*

*ENGL 1200 Writing II*

*SPCH 1000 Introduction to Speech Communication, or*

*SPCH 1600 Public Speaking, and*

*CSC 1100 Computer Applications*

#### **Government Knowledge (Constitutional) Requirement**

May be satisfied by taking **one of the following**, or, with the consent of the Human Services advisor, additional Political Science courses focused on the Constitution and the structure of government:

POLS	1000	US Government
POLS	1500	State and Urban Government
POLS	2270	Introduction to the Legal Process
POLS	2550	Sex, Race & the Constitution
POLS	2600	The First Amendment
POLS	3500	Constitutional Law

**Basic Informational Courses in the Behavioral Sciences:**

PSY	1100	General Psychology
SOC	1100	Introduction to Sociology
PSY	2200	Human Growth & Development *
PSY	2350	Abnormal Psychology

\* With the documented approval of their Human Services advisor, students may substitute three courses in developmental psychology in place of Human Growth & Development. These courses **must include** PSY 2210 (Child Psychology) and PSY 2230 (Adolescent Psychology), **plus either** PSY 2240 (Adult Psychology) or PSY 2260 (Gerontology).

**B. The Human Services Core**

HMSV	1100	Introduction to Human Services
HMSV	2500	Interviewing Techniques
HMSV	2050	Research Methods in Human Service Practice
HMSV	2900	Group Work
HMSV	3700	Professional Issues in Human Services
HMSV	3600	Assessment and Intervention
HMSV	3800	Management of Case Process
HMSV	4870	Field Work in Human Services (12 credits) ** or
HMSV	4880	
HMSV	4890	

\*\* Two options exist for completing Field Work in Human Services: (1) a block placement involving 30 hours per week plus a two-hour seminar for one semester (Fall or Spring) (HMSV 4890 - 12 credits); (2) 15 hours weekly plus a two-hour seminar, beginning in the Fall and continuing until the end of the Spring semester (HMSV 4870 & HMSV 4880 - 6 credits each).

Admission to the Human Services Program does not guarantee entry into Field Work. Eligibility for Field Work is assessed by the Human Services Review Committee according to the criteria specified in Departmental Policies. Completion of all eligibility requirements at least one semester before undertaking Field Work and timely completion of the application process for eligibility are essential.

**C. Human Services and Behavioral Sciences Electives**

All Human Services majors must complete a minimum of 6 credits in Human Services electives and an additional 6 credits from any program in Behavioral Sciences (i.e., Criminal Justice, Human Services, Psychology, Sociology). **The 6 credits in Human Services must include one course (3 credits) from among the following:**

HMSV	2400	Crisis Intervention
HMSV	2950	Addictive Behaviors
HMSV	3500	Abuse and Neglect of Children

**Policy Regarding Liability Insurance**

Liability insurance is required of all students taking Human Services courses which involve a practicum experience. Upon enrolling in such courses, including Field Work in Human Services, students are automatically covered under a blanket policy purchased by the college.

## Industrial Technology

**Chairperson**

Stanley Bucholtz

**Professors**

Stanley Bucholtz  
Robert Kokernak

**Associate Professors**

Edward Martens  
Sanjay Kaul

**Assistant Professors**

James Alicata  
James Andrews  
Cap Corduan  
Steven Therrien

**Instructor**

David Keith Chenot

**Objectives for the Program in Industrial Technology**

The Industrial Technology Department is unique at Fitchburg State College in that it offers two major degree programs and seven concentrations, including:

- Bachelor of Science in Education, with a major in Technology Education (124 semester hours)
- Bachelor of Science in Industrial Technology (120-126 semester hours), with concentrations in Architectural Technology, Construction Technology, Electronics Engineering Technology, Energy Engineering Technology, Graphic Arts Technology, Manufacturing Engineering Technology, or Technical Theater Arts.

**Liberal Arts and Sciences Requirements**

**For students in the BS in Technology Education and the BS in Industrial Technology, all concentrations**

ENGL	1100	Writing I
ENGL	1200	Writing II
CHEM	1000	Industrial Chemistry
ITEC	1700	Evolution of Industrial Technology
ITEC	2700	Man Technology Society
MATH	1300	Pre-Calculus
PHED	1000	Health and Fitness
PHYS	1300	Physics I
PHYS	1400	Physics II

**Requirements for the Major in Technology Education (Grades 5-12) (124 Semester hours)**

The Technology Education Program prepares students for a teaching career. Successful completion of the 43 credit major enables the graduate to meet the initial licensure requirements of the Commonwealth of Massachusetts. Upon certification, the graduate is eligible to teach in the public schools (grades 5-12) in the common core cluster areas of:

- Communication
- Construction
- Manufacturing
- Power Energy and Transportation

Students complete two courses in each of the four clusters for a total of 24 semester hours. These required courses are designed to provide the individual with minimum technical competencies necessary to teach technology education at the public school level. Basic fundamental processes and safety techniques are presented. Additional technical electives enhance expertise in the Technology/Engineering field. Lastly, the professional sequence (15 semester hours) provides the students with a combination of theoretical and practical experiences in educational pedagogy.

## Requirements for Initial Track Licensure

For information about undergraduate requirements in teacher preparation, see the section titled: “Teacher Preparation Programs (Undergraduate)”

Students denied admission to the Practicum can appeal to the appropriate department chair.

### **Additional Required LAS Courses for Initial Licensure in Technology Education**

PSY	1100	General Psychology
PSY	2230	Adolescent Psychology
PHIL	2000	Philosophy of Education
SPCH	1000	Introduction to Speech

### **Initial Licensure Common Technical Core (30 semester hours)**

ITEC	1000	Electric Systems and Circuits
ITEC	1720	Computers in Industrial Technology

#### **Manufacturing Cluster**

ITEC	1200	Metal Fabrication Systems
ITEC	1300	Wood Fabrication Systems

#### **Communications Cluster**

ITEC	1400	Technical Drawing
ITEC	1500	Graphic Arts Processes

#### **Construction Cluster**

ITEC	1320	Construction Systems I
ITEC	2400	Architectural Drawing

#### **Power Energy and Transportation**

ITEC	1600	Energy Systems I
ITEC	2600	Energy Systems II

#### **Professional Sequence (19 semester hours)**

ITEC	3800	Methods in Teaching Technology Education.
ITEC	3810	Curriculum Development in Technology Education
ITEC	4840	Prepracticum Seminar
ITEC	4860/	
ITEC	4870	Practicum in Technology Education

## Requirements for the Major in Industrial Technology

The concentrations offered in the Industrial Technology Program were developed with the intention of providing a pool of highly skilled technologists who can sustain the needs of industry within the Commonwealth as we approach the 21st century.

The concentrations include:

- Architectural Technology
- Construction Technology
- Electronics Engineering Technology
- Energy Engineering Technology
- Graphic Arts Technology
- Manufacturing Engineering Technology
- Technical Theater Arts

### **Architectural Technology Concentration (126 Semester hours)**

The Architectural Technology Concentration is designed to develop the technical, analytical, and artistic abilities required to perform the design and planning activities involved in architectural projects and architectural related areas. The planned course sequence introduces architecture from a sound base in academic studies which is followed by a comprehensive study of design and its applications. The program continues with a study of technical systems in architecture, and ends with the development of professional practices. The learning activities throughout the program simulate the tasks that architectural professionals encounter.

#### **Additional Liberal Arts Requirements**

ART	1650	3-D Design
ART	3300	History of Architecture
ART	3500	History of Modern Architecture
MATH	2300	Calculus I

#### **Required courses (66 semester hours)**

ITEC	1000	Electric Systems and Circuits
ITEC	1310	Materials Testing
ITEC	1320	Construction Systems I
ITEC	1450	Architectural Graphics
ITEC	1500	Graphic Arts Processes
ITEC	1710	Technical Analysis
ITEC	1720	Computers in Industrial Technology
ITEC	2310	Construction Systems II
ITEC	2400	Architectural Drawing
ITEC	2410	CAD
ITEC	2450	Theory of Architecture
ITEC	2630	Power and Lighting
ITEC	3220	Product Modeling and Rendering
ITEC	3300	Estimating and Bidding
ITEC	3310	Mechanical and Plumbing Systems
ITEC	3340	Construction Systems III
ITEC	3410	Drafting Commercial Structures
ITEC	3430	Architectural Design I
ITEC	3460	Architectural Design II
ITEC	3930	Strength of Materials
ITEC	4350	Site Planning
ITEC	4470	Architectural Professional Practice

### **Construction Technology Concentration (123 Semester hours)**

The Construction Technology Concentration provides students with information essential for managerial personnel in the construction industry. Students are exposed to a planned sequence of courses preparing them for on-site construction related activities. These include the coordination of workers, materials, subcontractors, and local, state, and federal regulatory agencies.

#### **Required Courses (66 semester hours)**

ITEC	1000	Electric Systems and Circuits
ITEC	1200	Metal Fabrication Systems
ITEC	1300	Wood Fabrication Systems
ITEC	1320	Construction Systems I
ITEC	1450	Architectural Graphics
ITEC	1710	Technical Analysis
ITEC	1720	Computers in Industrial Technology
ITEC	2310	Construction Systems II
ITEC	2400	Architectural Drawing
ITEC	2710	Statics

ITEC 3300	<i>Estimating and Bidding</i>
ITEC 3310	<i>Mechanical and Plumbing Systems</i>
ITEC 3320	<i>Construction Supervision</i>
ITEC 3340	<i>Construction Systems III</i>
ITEC 3410	<i>Drafting Commercial Structures</i>
ITEC 3930	<i>Strength of Materials</i>
ITEC 4310	<i>Seminar in Construction</i>

An additional 15 semester hours of Industrial Technology or declared minor electives are required to complete the program.

**Electronics Engineering Technology Concentration (123 Semester hours)**

The Electronics Engineering Concentration prepares students for positions in the challenging field of electronics by developing the theoretical and practical skills required for this discipline. The skills students need are acquired through a planned sequence of courses involving classroom work in conjunction with hands-on experience utilizing the most modern testing and measuring equipment.

**Required Courses (63 semester hours)**

ITEC 1000	<i>Electric Systems and Circuits</i>
ITEC 1200	<i>Metal Fabrication Systems</i>
ITEC 1100	<i>Electronics I</i>
ITEC 1400	<i>Technical Drawing</i>
ITEC 1600	<i>Energy Systems I</i>
ITEC 1710	<i>Technical Analysis</i>
ITEC 1720	<i>Computers in Industrial Technology</i>
ITEC 2100	<i>Electronics II</i>
ITEC 2710	<i>Statics</i>
ITEC 2730	<i>Automated Manufacturing and Robotics</i>
ITEC 3100	<i>Electronics III</i>
ITEC 3110	<i>Digital Electronics</i>
ITEC 3120	<i>Control Theory</i>
ITEC 3910	<i>Engineering Experimentation</i>
ITEC 4100	<i>Industrial Electronics</i>
ITEC 4110	<i>Electronic Communication Systems</i>
ITEC 4120	<i>Microprocessor-Based Control</i>

An additional 12 semester hours of Industrial Technology or declared minor electives are required to complete the concentration.

**Energy Engineering Technology Concentration (120 Semester hours)**

The Energy Engineering Technology concentration enables students to develop expertise in the areas of power and energy utilization, conservation, auditing and energy engineering. Field and laboratory applications in the areas of electricity usage, heating, ventilation and air conditioning, solar energy, photovoltaic use wind generation, performance contracting and other areas are studied to understand energy utilization problems and solutions that can be applied in many industries. The concentration integrates formal classroom instruction with applied laboratory work, field practice and experience for a career in this discipline. The following technical courses (27 semester hours) are required in the concentration:

ITEC 1000	<i>Electric Systems and Circuits</i>
ITEC 1200	<i>Metal Fabrication Systems</i>
ITEC 1300	<i>Wood Fabrication Systems</i>
ITEC 1600	<i>Energy Systems I</i>
ITEC 1650	<i>Energy Resources and the Environment</i>

ITEC 1710	<i>Technical Analysis</i>
ITEC 1720	<i>Computers in Industrial Technology</i>
ITEC 2600	<i>Energy Systems II</i>
ITEC 2630	<i>Power and Lighting Systems</i>
ITEC 2740	<i>O.S.H.A.</i>
ITEC 3310	<i>Mechanical Plumbing Systems</i>
ITEC 3600	<i>Energy Conservation Principles</i>
ITEC 3650	<i>Co-Generation and Waste Recovery System</i>
ITEC 3910	<i>Engineering Experimentation</i>
ITEC 4600	<i>Performance Contracting for Energy Systems</i>

An additional 12 semester hours of Industrial Technology or declared minor electives are required to complete the program.

**Graphic Arts Technology Concentration (120 Semester hours)**

The Graphic Arts Concentration provides students with technical experience in the printing and publishing industry. Students learn up-to-date printing methods that insure high quality and appropriate expertise to coordinate the technical effects in a modern printing plant.

The following technical courses (36 semester hours) are among those required to develop within the student the skills necessary to function in the Graphics Industry:

ITEC 1000	<i>Electric Systems and Circuits</i>
ITEC 1310	<i>Materials Testing</i>
ITEC 1500	<i>Graphic Arts Processes</i>
ITEC 1510	<i>Typography</i>
ITEC 1710	<i>Technical Analysis</i>
ITEC 1720	<i>Computers in Industrial Technology</i>
ITEC 2500	<i>Offset Lithography</i>
ITEC 2520	<i>Graphic Design</i>
ITEC 2550	<i>Screen Printing</i>
ITEC 3510	<i>Production Printing</i>
ITEC 3520	<i>Printing Estimating and Production Control</i>
ITEC 4520	<i>Seminar in Graphic Arts</i>

An additional 24 semester hours of Industrial Technology or declared minor electives are required to complete the program.

**Manufacturing Engineering Technology Concentration (126 Semester hours)**

The concentration is designed to develop both technical and analytical competencies required of entry-level positions within manufacturing engineering support. Students are trained to become resourceful, technically competent people who can interface between engineering and other personnel within the manufacturing environment.

The competencies are acquired through a sequence of courses involving laboratory experiments and additional course work within the Math/Science curriculum. This combination provides the student with the practical knowledge of manufacturing processes, the ability to apply these processes, and the ability to plan, coordinate, and implement aspects of production projects.

**Required Courses (66 semester hours)**

ITEC 1000	<i>Electric Systems and Circuits</i>
ITEC 1200	<i>Metal Fabrication</i>
ITEC 1300	<i>Wood Fabrication</i>
ITEC 1310	<i>Materials Testing</i>
ITEC 1400	<i>Technical Drawing</i>
ITEC 1710	<i>Technical Analysis</i>
ITEC 1720	<i>Computers in Industrial Technology</i>
ITEC 2410	<i>Computer Aided Drafting</i>

ITEC	2710	Statics
ITEC	2730	Automated Manufacturing I
ITEC	2740	O.S.H.A.
ITEC	2750	Plastic Technology
ITEC	2900	Designing and Planning
ITEC	3700	Fluid Power Technology
ITEC	3710	Quality Control
ITEC	3730	Automated Manufacturing II
ITEC	3900	Production Planning and Control
ITEC	3910	Engineering Experimentation
ITEC	3930	Strength of Materials

An additional 9 semester hours of Industrial Technology or declared minor electives are required to complete the program. One option in this area are courses in plastic technology.

### **Technical Theater Track (123 Semester hours)**

The Technical Theater track is designed to develop a general base of technical, analytical, managerial, and creative competencies aimed toward entry positions in fields of theatrical production. Students are trained to become resourceful, imaginative, and technically competent people who can integrate engineering and artistic techniques with theatrical situations. Students will acquire these competencies through lectures, laboratories, and actual stage productions. These learning activities, accompanied by those of other course selections, provide for a general knowledge of theater, and the ability to apply these skills to theatrical situations.

Electives and internships provide flexibility through which individuals can pursue areas of special interest. The following courses (36 S.H.) are required in the concentration:

### **Required Courses (63 semester hours)**

ITEC	1000	Electric Systems and Circuits
ITEC	1200	Metal Fabrication
ITEC	1300	Wood Fabrication
ITEC	1400	Technical Drawing
ITEC	1500	Graphic Arts Processes
ITEC	1720	Computers in Industrial Technology
ITEC	2410	Computer Aided Drafting
ITEC	3900	Production Planning and Control
TETA	2100	Theatrical Design Skills
TETA	2300	Fundamentals of Stage Lighting Design
TETA	2400	Scene Design
TETA	2500	Costume Design
TETA	3300	Advanced Stage Lighting Design
TETA	3400	Advanced Scene Design
TETA	3500	Advanced Costume Design
TETA	3600	Stage Make Up
TETA	4100	Stage Management
TETA	4940	Theater Internship

An additional 9 semester hours of approved Industrial Technology or declared minor electives are required to complete the program.

### **Internships**

Senior status students in all concentrations are eligible to participate in the Internship Program. The Internship allows a student with an appropriate grade average to receive up to 12 academic credits for a one semester work experience.

## **The Minor in Industrial Technology**

### **(18 Semester hours)**

The minor in Industrial Technology offers a choice of five concentrations:

### **Manufacturing Technology**

ITEC	1310	Materials Testing
ITEC	2410	CAD
ITEC	2739	Automated Manufacturing I
ITEC	3730	Automated Manufacturing II
		Two approved electives

### **Construction Technology**

ITEC	1310	Construction Systems I
ITEC	2400	Architectural Drawing
ITEC	3300	Estimating and Bidding
ITEC	3320	Construction Supervision
		Two approved electives

### **Electronics Engineering Technology**

ITEC	1100	Electronics I*
ITEC	2100	Electronics II*
ITEC	3100	Electronics III*
		Three approved electives

\* Students with equivalent course may substitute technical elective.

### **Graphics Arts Technology**

ITEC	1500	Graphics Arts Processes
ITEC	2500	Offset Lithography
ITEC	2520	Graphic Design
ITEC	3520	Printing Estimating and Production Coordination
		Two approved electives

### **Industrial Training**

ITEC	1720	Computers in Industrial Technology
ITEC	3800	Methods of Teaching Technology Education
ITEC	3810	Curriculum Development in Technology Education
		Three approved electives

Prerequisites: Application and departmental approval; prerequisites may be waived based upon an individual's experience and background.

**For the Interdisciplinary Graphics Minor, see Graphics.**

## Industrial/Organizational Psychology

### Chairperson

John Hancock

### Objectives for the Program in Industrial/Organizational Psychology

The Program in Industrial/Organizational Psychology will provide students with the skills required for successful employment in the fields of management, supervision, and human resources. The minor in Industrial/Organizational Psychology will be especially useful for business majors who want to pursue careers in human resources or staff management.

### Requirements for the Minor in Industrial/Organizational Psychology

The minor in Industrial/Organizational Psychology will require a total of 19 semester hours and will include the following courses:

#### Required Courses

PSY	1100	General Psychology
PSY	2110	Research Methods
PSY	2370	Interpersonal Effectiveness Practicum in Industrial/Organizational Psychology (1 semester hour)

#### Electives

Choose three courses:

PSY	2610	Organizational Psychology
PSY	2620	Work and the Individual
PSY	2630	Human Factors/Ergonomics
PSY	2640	Performance Appraisal and Development
PSY	2650	Personnel Psychology

## Interdisciplinary Studies (formerly General Studies)

### Coordinators

George Bohrer

### Objectives for the Program in Interdisciplinary Studies

The Bachelor of Science and Bachelor of Arts in Interdisciplinary Studies degrees provide for individually designed, interdisciplinary majors, which allow students to work with faculty advisors to develop a course of study that responds to individual educational and professional goals. Additional objectives are:

- To enable students to explore multidisciplinary areas and to integrate them in a coherent and meaningful way
- To provide the opportunity for broadly-based Liberal Arts and Sciences majors
- To provide the opportunity for majors that combine Liberal Arts and Sciences courses with professional courses
- To provide the opportunity, for a part-time, individually paced education, which allows students to build their academic confidence and integrate their studies more easily into their lives

### Description of the Major in Interdisciplinary Studies

There are many possible combinations of course work available through this major, limited only by the breadth of courses offered through the day and evening divisions of the college. When creating a plan of study, a student must have a rationale for a thematic approach to their program.

### Criteria for Admissions

There is a formal application procedure for students who choose to major in Interdisciplinary Studies. The purpose of the application is to:

- Set forth the student's academic and professional goals and demonstrate why they are best achieved through the Interdisciplinary Studies Program
- Require students to outline their proposed program
- Stipulate any required independent exercise or internship
- Provide college-level courses and grades

**Deadlines**—The form, together with a preliminary plan of study, should be received by the Interdisciplinary Studies Coordinator no later than October 15th for entrance into the program in the following spring semester and February 15th for entrance in the following summer or fall semester.

The Interdisciplinary Studies Coordinator along with the Interdisciplinary Studies Committee reviews the application with the student and, if approved, they finalize the plan of study. The student's advisor is chosen and is responsible for filing a copy of the student's program with the college Registrar. Any subsequent changes in the student's program must be approved by the student's Interdisciplinary Studies Committee.

## Requirements for the Major in Interdisciplinary Studies

The Interdisciplinary Studies degree is normally awarded as a Bachelor of Science. A Bachelor of Arts is awarded if the student includes foreign language study through the second year of college-level work and concentrates his/her field of studies in the Liberal Arts and Sciences fields. Other requirements include:

- A rationale and a thematic organizing principle for each program
- A minimum of 36 semester hours of coursework for the major with a college-approved minor within one of the three fields
- A minimum of 9 semester hours in each of the other two fields
- A common core of three Liberal Arts and Sciences interdisciplinary courses:

<i>IDIS</i>	1800	<i>Global Issues</i>
<i>MUSC</i>	2000	<i>Commonwealth of the Arts</i> <b>or</b>
<i>MUSC</i>	2100	<i>Commonwealth of the Ancient Arts</i>
<i>PHIL</i>	1100	<i>Logic</i> <b>or</b>
<i>PHIL</i>	2600	<i>Philosophy of Human Nature</i> <b>or</b>
<i>PHIL</i>	3340	<i>Contemporary Philosophy</i> <b>or</b>
<i>PHIL</i>	4430	<i>Marxism</i>

- A senior-year “Capstone” course intended to help students to integrate the various fields of study. This may take the form of an independent study or an internship (3–15 semester hours)
- A minimum 30 semester hours of course work completed after the program of study is approved and filed with the registrar
- Students must be admitted to the major prior to their senior year

A student’s program must meet the approval of their Interdisciplinary Studies advisor and advisors from each of the chosen fields of study.

## Interdisciplinary Studies Major for Early Childhood, Elementary, and Special Education Majors

Students in Early Childhood, Elementary, and Special Education are required to select Interdisciplinary Studies as their Liberal Arts and Sciences major.

### Required

<i>IDIS</i>	1800	<i>Global Issues</i>
<i>IDIS</i>	4000	<i>Capstone with Seminar</i>
<i>MUSC</i>	2000	<i>Commonwealth of the Arts</i> <b>or</b>
<i>MUSC</i>	2100	<i>Ancient Arts</i>
<i>PHIL</i>	1100	<i>Logic</i>

Choose 3 Areas:

Students are required to have 2 college approved deemed appropriate by the advisor minor. This plan shows the English minor.

### English (Minor—18 credits)

<i>ENGL</i>	1999	<i>Approaches to English Studies</i>
<i>ENGL</i>	2000	<i>American Literature I</i> <b>or</b>
<i>ENGL</i>	2001	<i>American Literature II</i>
<i>ENGL</i>	2300	<i>Literature and Disability</i>
<i>ENGL</i>	2400	<i>World Literature I</i>
<i>ENGL</i>	2500	<i>World Literature II</i>
<i>ENGL</i>	2900	<i>Children’s Literature</i>
<i>ENGL</i>	3000+	<i>British Literature elective</i>

### History/Social Science (12 credits)

<i>HIST</i>	1000	<i>World Civilization I</i> <b>or</b>
<i>HIST</i>	1100	<i>World Civilization II</i>
<i>HIST</i>	1400	<i>US History I</i> <b>and</b>
<i>HIST</i>	1500	<i>US History II</i>
<i>ECON</i>	1250	<i>Introduction to Economics for Non-majors</i> <b>or</b>
<i>POLS</i>	1000	<i>US Government</i>

### Math (9 credits)

<i>MATH</i>	1250	<i>Functions</i>
<i>MATH</i>	1400	<i>Math Across the Curriculum</i>
<i>MATH</i>	1700	<i>Applied Statistics</i>
<i>MATH</i>	2000	<i>Informal Geometry</i>
<i>PHIL</i>	1100	<i>Logic</i>

### Science (9-10 credits)

<i>GEOG</i>	1000	<i>Intro to Geography</i>
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Choose 2 of the following:

<i>BIOL</i>	1000	<i>Life Science I</i> <b>or</b>
<i>BIOL</i>	1100	<i>Life Science II</i>
<i>BIOL</i>	1200	<i>Anatomy and Physiology I</i>
<i>GEOG</i>	1300	<i>Earth, Sea, and Air</i>
<i>PHYS</i>	1100	<i>Physical Science I</i> <b>or</b>
<i>PHYS</i>	1200	<i>Physical Science II</i>

## Interdisciplinary Studies Major for Middle School Education Majors

Students in Middle School Education who elect Interdisciplinary Studies as their second major are required to select two areas among English, Social Sciences, Mathematics or General Science (to include Biology, Geo-Physical Science, and Chemistry) as defined by Massachusetts Department of Education. Students will select the areas with the guidance of their advisor in Interdisciplinary Studies in order to remain in compliance with the Massachusetts Department of Education licensure requirements for Middle School Teacher.

Students will complete their capstone during student teaching. They will develop an Integrated Unit, which incorporates the 2 areas of study. The capstone will be approved by the Interdisciplinary Studies Chair and supervised by the faculty of the Early Childhood, Elementary, and Middle School Education Department and the cooperating teacher from the school where the student is student teaching.

### Required:

<i>IDIS</i>	<i>1800</i>	<i>Global Issues</i>
<i>IDIS</i>	<i>4000</i>	<i>Capstone with Seminar</i>
<i>MUSC</i>	<i>2000</i>	<i>Commonwealth of the Arts, or</i>
<i>MUSC</i>	<i>2100</i>	<i>Commonwealth of the Ancient Arts</i>
<i>PHIL</i>	<i>1100</i>	<i>Logic</i>

Students are required to have a college approved minor (18 semester hours) in Math, History, or English Literature and a minimum of 9 semester hours in each of 2 clusters in one other area. Students will select courses in each cluster with the guidance of their advisor in Interdisciplinary Studies to ensure they meet course prerequisite requirements and licensure content competencies. Additional semester hours within one of the areas may be needed to fulfill current content competencies and licensure requirements.

## Interdisciplinary Studies (Humanities)\*

### Chairperson

*Jane Fiske*

### Objectives for the Major

The Humanities Department offers an Interdisciplinary Studies major.

### Criteria for Admissions

Students interested in such a major should contact one of the designated faculty of the Humanities Department who assists the student in the choice and the design of the major from the disciplines listed below.\* The Humanities Department maintains the advising records, issues a progress report, and informs the registrar.

### Requirements for the BS in Interdisciplinary Studies

Students must fulfill the core LAS requirements and select one of the three tracks outlined below.

### Core LA&S Requirements for the BS in Interdisciplinary Studies

A common core of three Liberal Arts and Sciences interdisciplinary courses: *IDIS 1800, Global Issues*; *MUSC 2000, Commonwealth of the Arts* **or** *MUSC 2100, Commonwealth of the Ancient Arts*; and *PHIL 1100, Logic* **or** *PHIL 2600, Philosophy of Human Nature* **or** *PHIL 3340 Contemporary Philosophy* **or** *PHIL 4430 Marxism*.

### Track I

Choose a minimum of 36 semester hours of coursework for the major with a college-approved minor in Art, Music, History, or Philosophy, a minimum of 9 credits in each of the other fields, and the Seminar in the Humanities.

### A. Art

<i>*ART</i>	<i>1150</i>	<i>Survey of Art Forms I</i>
<i>*ART</i>	<i>1160</i>	<i>Survey of Art Forms II</i> <b>or</b>
<i>*ART</i>	<i>1400</i>	<i>Drawing</i>
<i>ART</i>	<i>1600</i>	<i>Design</i>
<i>ART</i>	<i>2200</i>	<i>Life Drawing</i>
<i>ART</i>	<i>2300</i>	<i>American Art</i>
<i>ART</i>	<i>1720</i>	<i>Contemporary Art</i>
<i>ART</i>	<i>2550</i>	<i>Art of the Renaissance</i> <b>or</b> <i>any other upper-level art courses</i>

### B. Music

<i>*MUSC</i>	<i>1000</i>	<i>Art of Music</i>
<i>MUSC</i>	<i>2000</i>	<i>Commonwealth of the Arts</i>
<i>*MUSC</i>	<i>2200</i>	<i>Basic Music Theory</i>
<i>MUSC</i>	<i>3100</i>	<i>Symphony</i>
<i>MUSC</i>	<i>3200</i>	<i>Opera</i>
<i>MUSC</i>	<i>3400</i>	<i>20th-Century Music</i>
<i>MUSC</i>	<i>3500</i>	<i>American Music</i>
<i>MUSC</i>	<i>4500</i>	<i>Harmony</i> <b>or</b> <i>any other upper-level music courses</i>

*\* Humanities Track*

### C. History

*HIST	1000	World Civilizations I
*HIST	1100	World Civilizations II
*HIST	1150	World Civilizations III
HIST	1400	U.S. History I
HIST	1500	U.S. History II
HIST	2000	Medieval Europe
HIST	2100	20th-Century Europe
HIST	2200	British History
HIST	2300	History of African America
HIST	2490	Women in U.S. History to 1870 <b>or</b> any other upper-level history courses

### D. Philosophy

*PHIL	1000	Introduction to Western Philosophy
PHIL	1100	Logic
PHIL	2000	Philosophy of Education
PHIL	2440	American Philosophy
PHIL	2600	Philosophy of Human Nature
PHIL	3310	Ancient and Medieval Philosophy
PHIL	4100	Philosophy of Art <b>or</b> any other upper-level philosophy courses
*IDIS	4000	Seminar in the Humanities for 3 credits.

### Track II

A second option in the Interdisciplinary Studies (Humanities) major combines courses in Language, Literature, and History. Choose a minimum of 36 semester hours for the major with a college-approved minor in French, German, or Spanish; a minimum of 9 credits each in Literature and History and the Seminar in Humanities.

#### E1. French

FREN	2000	Intermediate French I
FREN	2100	Intermediate French II
FREN	3000	French Civilization
FREN	3300	French Literature
FREN	3500	French Conversation and Composition
FREN	5000	Topics in French

#### E2. German

GER	2000	Intermediate German I
GER	2100	Intermediate German II
GER	2800	Modern German Literature
GER	3500	German Conversation and Composition
GER	5000	Topics in German

#### E3. Spanish

SPAN	2000	Intermediate Spanish I
SPAN	2100	Intermediate Spanish II
SPAN	2600	Hispanic Culture
SPAN	2700	Hispanic Literature
SPAN	3500	Spanish Conversation and Composition
SPAN	5000	Topics in Spanish

The above language programs also require courses in literature and history.

### Literature Requirements

Select 9 semester hours from the following courses:

ENGL	2000	American Literature from the Age of Exploration to the Civil War
ENGL	2100	American Literature from the Civil War to the Present
ENGL	2400	World Literature I
ENGL	2500	World Literature II
ENGL	3300	Women and Literature

### History

Select 9 semester hours from the following:

PHIL	1000	Introduction to Western Philosophy
HIST	1000	World Civilization I
IDIS	1100	Women in Latin America
HIST	1100	World Civilization II
HIST	1150	World Civilization III
HIST	1400	U.S. History I
HIST	1500	U.S. History II
HIST	2000	Medieval Europe
HIST	2100	20th-Century Europe
HIST	2700	History of Mexico, Central America, and the Caribbean
HIST	2750	History of South America
HIST	3300	Modern Russia
HIST	3350	20th Century Russia
*IDIS	4000	Seminar in the Humanities for 3 credits.

### Track III

In a third option in the Interdisciplinary Studies (Humanities) major students choose a college-approved minor in Music, Art, Dance, or Theater. In addition, students will take 9 semester hours in two other fields, as approved by their advisor, and the Seminar in the Humanities.

### Music

MUSC	1000	Art of Music
MUSC	2200	Basic Music Theory <b>or</b> Upper-Level Music History class
MUSC	4000	Choral Arts* <b>or</b>
MUSC	4100	Instrumental Arts <b>or</b>
MUSC	4200	Class Piano <b>or</b>
MUSC	4300	Class Voice

\*Three one-credit music studio courses.

### Art

ART	1100	Art Appreciation
ART	1150	Survey of Art Forms I <b>or</b>
ART	1160	Survey of Art Forms II <b>or</b> Upper-Level Art History class
ART	1400	Drawing <b>or</b>
ART	1450	Introductory Painting <b>or</b>
ART	1600	Design <b>or</b>
ART	1650	Three-Dimensional Design <b>or</b>
ART	1840	Sculpture I <b>or</b>
ART	2200	Life Drawing <b>or</b> any other Upper-Level Studio Art class

### Dance

PHED	4050	Art of Dance
PHED	4130	Making Dance: Choreography and Composition
THEA	2500	Stage Movement <b>or</b>
PHED	1210	Modern Jazz I <b>or</b>
PHED	1220	Modern Jazz II <b>or</b>
PHED	1230	Modern Jazz III <b>or</b>
PHED	1240	Yoga
PHED	1310	African Jazz Dance

\*Three one-credit dance studio courses.

### Literature/Theater

THEA	2000	Introduction to Theater
THEA	2700	Acting I
ENG	3000	World Drama <b>or</b>
ENG	3020	Modern Drama <b>or</b> any other Upper-Level Dramatic Literature class.
IDIS	4000	Seminar in the Humanities for 3 credits.

# International Studies

## Chairperson

Michael Turk

## Objectives for the International Studies Program

The International Studies Program provides students in all majors with the opportunity to examine international historical and current issues to increase their global awareness and their abilities to interact with peoples from diverse cultures. A minor in International Studies is offered by the program. For more information, please contact the Social Science Department or the International Education Office.

## Requirements for the Minor in International Studies

The minor in International Studies has several options. Students should consult an advisor to select the option best suited to their interests. A total of 18-credits is required for the minor.

### Required

IDIS 1200 Introduction to International Studies

At least three courses in the minor must be at the 2000 level or above

At least one course must be selected in three of the following categories:

- History, Political Science and Anthropology
- Business and Economics
- Art, Music or Dance
- Language, Literature, Culture or Philosophy

### A. History, Political Science and Anthropology

The following is a list of courses which can be used for the minor:

HIST	1000	World Civilization I
HIST	1100	World Civilization II
HIST	1500	World Civilization III
HIST	2000	Medieval Europe
HIST	2100	Twentieth Century Europe
HIST	2150	Twentieth Century Germany
HIST	2160	Holocaust
HIST	2700	History of Mexico, Central America, and Caribbean
HIST	2800	Far East before 1800
HIST	2850	Modern Far East
HIST	2900	Middle East History to 1500
HIST	2920	Middle East History Since 1500
HIST	3200	History of India Since 1500
HIST	3300	Modern Russia
HIST	3350	Twentieth Century Russia
HIST	3450	Women in Europe History *ENGL 1100/1200; HIST 1000 or HIST 1150 or intermediate European History elective
HIST	3950	Contemporary Latin America
IDIS	1100	Women in Latin America
IDIS	1800	Global Issues
IDIS	2400	Caribbean Cultures
IDIS	2500	Culture and Society of India
POLS	2200	Contemporary International Relations
POLS	2500	Political Systems of the Modern World
SOC	2250	Cultural Anthropology

### B. Business and Economics

The following is a list of courses which can be used for the minor:

BSAD	4330	International Marketing *BSAD 3300
BSAD	4350	International Business Management *BSAD 3300
ECON	3550	International Economics *ECON 1000, 1200
ECON	2200	Comparative Economics Systems *ECON 1000
ECON	2500	Economic Development *ECON 1000

### C. Art, Music, or Dance

The following is a list of courses which can be used for the minor:

ART	1000	Survey of Art Forms I
ART	1200	Survey of Art Forms II
ART	1300	The History of Architecture
ART	1810	Nineteenth Century Art
ART	1815	Early Twentieth Century Art
MUSC	2000	Commonwealth of the Arts
MUSC	3300	Twentieth Century Music
MUSC	3700	Nineteenth Century Music
PHED	4050	Art of Dance

### D. Language, Literature, Culture and Philosophy

The following is a list of courses which can be used for the minor:

FREN	2000	Intermediate French I *FREN 1100 or permission
FREN	2100	Intermediate French II *FREN 2000 or permission
GER	2000	Intermediate German I *GER 1100 or permission
GER	2100	Intermediate German I *GER 2000 or permission
SPAN	2000	Intermediate Spanish I *SPAN 1000 or permission
SPAN	2100	Intermediate Spanish II *SPAN 2000 or permission
EDUC	2920	Caribbean Cultures
ENGL	2400	World Literature I
ENGL	2500	World Literature II
ENGL	2650	Other Voices
ENGL	3000	World Drama
ENGL	3100	The World Novel to 1914
ENGL	3110	The World Novel Since 1914
FREN	2600	French Civilization *FREN 2100 or permission
FREN	2700	French Literature I *FREN 2100 or permission
FREN	2800	French Literature II *FREN 2100 or permission
IDIS	1100	Women in Latin America
IDIS	2400	Caribbean Cultures

# Leadership Academy (Honors Program)

**Director: Dr. Stanley J. Bucholtz**

## Objectives for the Leadership Academy

The Leadership Academy provides an enriched, stimulating set of courses for the best-prepared and most qualified students.

Students will be admitted to the program in the freshman year or may apply to transfer into it in the sophomore or junior years.

Students who complete the program do so in lieu of the Liberal Arts and Sciences requirements. Students who cannot or do not wish to finish the entire program may complete a Leadership minor; those students will also need to complete the LA&S requirements, not satisfied by completed LEAD courses.

The goal of the Leadership Academy is to educate leaders for the 21<sup>st</sup> century. In order to accomplish this task, the program has established an integrated set of courses, which incorporate six themes (globalization, communication, computerization, science and technology, ethics and diversity) are taught over a four-year sequence. Students must have a high level of proficiency in research, writing and computer skills; must be effective team members; and must be able to present their ideas in formal and informal settings. They are expected to apply their learning in both the college and the larger community through a series of extra curricular activities, volunteer positions and service learning, co-curricular activities. A GPA of 3.3 must be maintained to continue in the academy.

## Criteria of Invitation to Leadership Academy

Freshmen students are invited to join the Leadership Academy based on their high school preparation, SAT scores, and documented evidence of leadership potential. Upperclass applications will also be considered based on GPA and evidence of leadership potential.

## Curriculum for the Leadership Academy

The Leadership Academy curriculum creates a solid foundation of leadership knowledge and skills in the first year and builds on this base in each of the succeeding years. A minimum of 6-8 credits must be taken per semester.

### First Year Curriculum (22 credits)

LEAD 1000	Colloquium on Community	1 credit
LEAD 1005	Foundations of Leadership I	3 credits
LEAD 1010	Foundations of Leadership II	3 credits
LEAD 1025	Service Learning Project	1 credit
LEAD 1050	Honors English I	3 credits
LEAD 1140	Leadership in the Outdoors	1 credit
*LEAD 1150	Changing World I (19 <sup>th</sup> century)	3 credits
LEAD 1200	Honors English II	3 credits
*LEAD 1250	Changing World II (20 <sup>th</sup> century)	3 credits
LEAD 2030	Consumer Health	1 credit

### Second Year Curriculum (8 credits)

*LEAD 2000	Leaders in the Humanities I (19 <sup>th</sup> Century)	3 credit
LEAD 2001	Leaders in the Humanities I Colloquium	1 credit
*LEAD 2050	Leader in the Humanities II (20 <sup>th</sup> Century)	3 credits
LEAD 2051	Leader in the Humanities II Colloquium	1 credit

### Third Year Curriculum (9 credits)

*LEAD 3000	Physics, Mathematics, and Technology	4 credits
*LEAD 3050	Biology, Mathematics, and Technology	4 credits
LEAD 3051	Biology/Mathematics/Ethics Colloquium	1 credit

### Fourth Year Curriculum

Senior Thesis/Project/Research and Writing	6 credits
**Language Requirement	12 credits

\*\*All students in the Leadership Academy will also demonstrate proficiency in a foreign language at the intermediate level. This requirement can be met through examination or coursework.

\*A student may take the Changing World, Leaders in the Humanities, or Physics/Mathematics/Technology-Biology/Mathematics/Technology in years other than those specified. Colloquia that complement these courses should be taken concurrently.

## Leadership Minor

Students who enter the program as sophomores or juniors, or students who choose to leave the program before completion, may elect to complete a Leadership Minor. A minimum of 6-8 credits must be taken per semester. The minor will consist of the following courses:

### Required

LEAD 1005	Foundations of Leadership I	3 credits
LEAD 1010	Foundations of Leadership II	3 credits

Select **one or two** of the following year-long course sequences:

LEAD 1050	Honors English I <b>and</b>	
LEAD 1200	Honors English II	6 credits
LEAD 1150	Changing World I <b>and</b>	
LEAD 1250	Changing World II	6 credits
LEAD 2000	Leaders in the Humanities (19 <sup>th</sup> century) <b>and</b>	
LEAD 2050	Leaders in the Humanities (20 <sup>th</sup> century)	6 credits
LEAD 3000	Physics, Mathematics, and Technology <b>and</b>	
LEAD 3050	Biology, Mathematics, and Technology	8 credits
LEAD 4990	Senior Thesis/Project	6 credits

If only one of the above course groups is chosen, students will use the senior project as part of the minor(6). Students should consult with the Leadership Academy Director and their major advisors if they wish to use this option.

Two colloquia; 2 credits

These will be the colloquia which are taught concurrently with the courses the student has chosen as part of his/her minor:

LEAD 1000	Our Many Communities	1 credit
LEAD 2001	Leaders in the Humanities I Colloquium	1 credit
LEAD 2051	Leader in the Humanities II Colloquium	1 credit
LEAD 3051	Biology/Mathematics/Ethics	1 credit
LEAD 1025	Service Learning Project	1 credit
LEAD 1140	Leadership in the Outdoors	1 credit

## Leadership Academy Club

All students in the Leadership Academy are also members of the Leadership Academy Club. The club is active in campus life and sponsors speakers and performers for the campus as well as trips to cultural sites and performances.

# Mathematics

## Chairperson

Barry Light

## Professors

Christine Cosgrove

Claire McAndrew

Barry Light

## Associate Professors

Gerald Higdon

Mark Snyder

Abdulkeni Zekeria

## Assistant Professors

MaryAnn Barbato

Robert Bentley

Milatovic Ognjen

## Objectives for the Program in Mathematics

The Department of Mathematics serves all students at the college. Mathematics majors receive a comprehensive foundation in abstract and applied mathematics as preparation for graduate school or a professional career. Minors in Mathematics receive the mathematical foundation needed for advanced work in their major field.

The department also provides non-majors with courses for their major or with courses for their Liberal Arts and Sciences Program.

## Requirements for the Major in Mathematics

The Bachelor of Science and the Bachelor of Arts in Mathematics is comprised of 42 credit hours of course work, including the following requirements:

MATH	2300	Calculus I
MATH	2400	Calculus II
MATH	2500	Introduction to Mathematical Thought
MATH	2600	Linear Algebra
MATH	3300	Calculus III
MATH	3400	Calculus IV
MATH	4300	Abstract Algebra
MATH	3900	Mathematics Seminar

At least 15 additional semester hours of advanced mathematics (3000 or 4000 level, nine of which must be at the 4000 level

One course in Computer Science at the level of CSC 1500 or higher

*Note: MATH 4850, MATH 4860, and MATH 4870 are not advanced mathematics courses.*

Graduate courses may be substituted for 4000 level courses. The Bachelor of Arts degree requires foreign language proficiency at the second year level.

Mathematics majors fulfill the Listening and Speaking requirements of the Liberal Arts and Sciences program by successfully completing one of the following three courses:

SPCH	1000	Introduction to Speech Communication
SPCH	1100	Argumentation and Debate
SPCH	1200	Business and Career Communication

## Requirements for Initial Track Licensure:

For information about undergraduate requirements in teacher preparation, see the section titled: "Teacher Preparation Programs (Undergraduate)"

Students denied admission to the Practicum can appeal to the appropriate department chair.

## Core Courses for Initial Licensure in Mathematics

PSY	2230	Adolescent Psychology
MATH	2860	Introduction to Secondary School Teaching
MATH	3000	Geometry
ENGL	4700	Teaching Writing in Secondary Schools
MATH	4200	Probability and Statistics
MATH	4850	Special Methods in Mathematics
MATH	4860	Mathematics Practicum in Secondary School (150 hrs.)
MATH	4870	Mathematics Practicum in Secondary School (150 hrs.)

## Requirements for the Minor in Mathematics

A minor in Mathematics is comprised of 23 semester hours:

- Eleven semester hours of Calculus I, II, and III
- Either Abstract or Linear Algebra
- Three elective courses chosen from Discrete Mathematics, Introduction to Mathematical Thought or any mathematics course at the 3000 or 4000 level. At least one of the three electives must be at the 4000 level.

# Music

## **Chairperson**

Jane Fiske

## **Professor**

Robin Dinda

## **Associate Professors Assistant Professors**

Jane Fiske

James Leve

Michele Caniato

Marjorie Ness

## Objectives for the Program in Music

The Program in Music provides students with the opportunity to actively engage in music through instrumental or choral work. Courses are designed to fulfill the arts requirement in the Liberal Arts and Sciences Program and to study the history of music at different times across many cultures. A minor is also available.

## Requirements for the Minor in Music

The minor in Music requires 18 semester hours of course work. Students must take the following:

MUSC 1000 Art of Music **or**  
MUSC 2000 Commonwealth of the Arts  
MUSC 2200 Basic Music Theory  
MUSC 4500 Harmony I  
MUSC 4000 Choral Arts **or**  
MUSC 4100 Instrumental Arts (3 credits)

The remaining 6 semester hours may be taken from approved music electives.

# Nursing

## **Chairperson**

Andrea Wallen

## **Professors**

Barbara Cammuso

Sheila Fredette

A. Lynne Wagner

Andrea Wallen

Jean Worfolk

## **Associate Professors Assistant Professors**

Barbara May

Elizabeth May

Linda McKay

Ann Scannell

Anne Bateman

Magda Bechar

Robert Dumas

Patricia Duynstee

Robin Klar

Barbara Powers

Elizabeth Shaw

Richard Trifilo

## **Instructor**

Rachel Boersma

Christine Devine

## **Part-Time Instructors**

Jean Kressy

Gail Liston

Tara Mariolis

## Objectives for the Program in Nursing

The degree offered is the Bachelor of Science with a major in nursing. The purpose of the program in nursing is to prepare practitioners of professional nursing who can assume responsibility for planning and providing health care to individuals, families, and groups in a variety of settings in collaboration with other professionals. The program also provides a solid foundation for graduate study in nursing.

## Description of the Program in Nursing

As the first Department of Nursing in the State College System, the Nursing Program has a long and proud history. It is:

- Approved by the Board of Registration in Nursing
- Accredited by the Commission on Collegiate Nursing Education (CCNE)
- Supporting a chapter of Sigma Theta Tau, the International Nursing Honor Society
- Supporting of a chapter of the National Student Nurses Association

It provides well equipped laboratories for on-campus practice of clinical skills with computer and audiovisual support, and a wide variety of client care opportunities in affiliated health care agencies. All senior students participate in a 24 hour/week preceptorship capstone clinical experience. Its graduates are in great demand in the professional job market, and many have earned advanced degrees and have progressed to leadership positions in practice, administration, research, and education.

## Criteria for Admissions and Retention

The majority of departmental admissions are freshmen selected from qualified high school graduates. One year of high school chemistry is required for admission into the nursing major. The department also admits transfer students, who are not licensed nurses, but who meet the prerequisites for the sophomore year courses, as well as registered nurses who meet the prerequisites of the alternative junior year.

Registered nurses are provided with a variety of opportunities to achieve advanced placement in Liberal Arts and Sciences courses and in nursing via the CLEP program, College examinations, Nursing Mobility Profile II examinations, and a Portfolio Review Process.

As a professional preparation program, successful progress in the major necessitates requirements in addition to those common to all college students. These include:

- 2.00 or better in Anatomy and Physiology I and II, Pre-Biochemistry I and Elements of Human Biochemistry and Organic Chemistry and Survey of Micro Organisms
- 2.00 or better in all required nursing courses. Students may repeat a nursing course one time in which a grade of less than 2.0 is received. Failure to achieve a 2.00 when a course is repeated will result in dismissal from the major.
- 2.0 or better in all required nursing courses with an overall nursing GPA of 2.5 in order to progress to junior/senior level clinical courses. Graduation from the major requires a 2.5 nursing GPA.
- Only one course may be repeated for clinical failure or withdrawal due to clinical difficulty. A maximum of 12 nursing credits may be repeated.
- Students are responsible for providing their own transportation to clinical practice sites.
- Annually, prior to participation in any clinical nursing course, students must present evidence to the Department of Nursing of: Hepatitis B and other immunizations, CPR certification/recertification at the professional level, a physical examination, and Massachusetts nursing licensure (if applicable). Commonwealth of Massachusetts regulations regarding health records for students enrolled in the health sciences must be met through the campus Health Service office.
- A Criminal Offense Record Investigation (CORI) and/or sexual Offense Record Investigation (SORI) may be required by multiple clinical agencies. this may involve additional student costs.

### Requirements for the Major in Nursing

Graduation requires a minimum of 124 semester hours of credit comprised of:

- 64 credit hours of nursing
- 37 hours of required core courses in Liberal Arts and Sciences
- 23 hours of elective Liberal Arts and Sciences credits

Each semester of nursing after the pre-nursing freshman year includes a clinical/laboratory component as well as classroom theory. A variety of inpatient and community agencies in central and eastern Massachusetts offer practice opportunities to assist students toward professional competency.

To provide majors with assistance to meet the progression requirements and achieve success in the program, the department uses individual academic and personal advising by nursing faculty, referrals to campus services, and internal departmental resources. All senior students select an area of nursing practice for concentrated study in accordance with individualized learning objectives.

Part-time study is available to majors in lower division course work and to registered nurse students.

### Requirements for the Major in Nursing

This curriculum applies to students who entered the program in 2001 or 2002:

NURS 2300	Health Assessment
NURS 2500	Pathopharmacology I
NURS 2500	Pathopharmacology II
NURS 2700	Foundations of Nursing
NURS 2900	Medical-Surgical Nursing I
NURS 3200	Mental Health Nursing
NURS 3300	Maternal-Newborn Nursing
NURS 3400	Medical-Surgical Nursing II
NURS 3900	Pediatric Nursing
NURS 4000	Nursing Research
NURS 4400	Community Health Nursing
NURS 4750	Chronic Illness
NURS 4800	Selective Practicum
NURS 4850	Nursing Leadership and Management

### Requirements for the Major in Nursing

This curriculum applies to students who entered the program through 2000:

NURS 1010	Introduction to Nursing
NURS 2000	Scientific Foundations for Nursing Intervention I
NURS 2100	Scientific Foundations for Nursing Intervention II
NURS 2200	Nutritional Foundations for Nursing Interventions
NURS 2700	Nursing Process with the Well Client I
NURS 2800	Nursing Process with the Well Client II
NURS 3100	Pharmacological Basic for Nursing Interventions
NURS 3700	Nursing Process with Clients Experiencing Health Alterations I
NURS 3800	Nursing Process with Clients Experiencing Health Alterations II
NURS 4000	Nursing Research
NURS 4700	Nursing Process with Families, Group in Community
NURS 4750	Nursing Process in Home Health Care
NURS 4800	Nursing Process in a Selective Practicum
NURS 4850	Leadership and Management Concepts for Nursing Practica

### RN Students

NURS 2000	Scientific Foundations for Nursing Intervention I
NURS 2100	Scientific Foundations for Nursing Intervention II
NURS 2200	Nutritional Foundations for Nursing Interventions
NURS 2910	Nursing Care of the Child Bearing Family
NURS 3100	Pharmacological Basis for Nursing Interventions
NURS 3500	Concepts of Nursing I
NURS 3600	Concepts of Nursing II
NURS 4000	Nursing Research
NURS 4700	Nursing Process with Families, Group in Community
NURS 4750	Nursing Process in Home Health Care
NURS 4800	Nursing Process in a Selective Practicum
NURS 4850	Leadership and Management Concepts for Nursing Practica

In addition, successful completion of the Nursing Mobility Profile Examination II, articulation or the following:

NURS 3910 *Nursing Care of Mentally Ill Client*  
NURS 3920 *Nursing Care of the Child*  
NURS 3930 *Nursing Care of the Adult*

**Liberal Arts Requirements**

BIOL 1200 *Anatomy and Physiology I*  
BIOL 1300 *Anatomy and Physiology II*  
BIOL 1650 *Nutrition\**  
BIOL 2700 *Survey of Microorganism*  
CHEM 1100 *Pre Biochemistry I*  
CHEM 1200 *Elements of Human Biology and Organic Chemistry*  
  
ENGL 1100 *Writing I*  
ENGL 1200 *Writing II*  
MATH 1700 *Applied Statistics*  
PSY 1000 *General Psychology*  
PSY 2200 *Human Growth and Development*  
SOC 1100 *Introduction to Sociology*

\*This requirement begins in 2003.

## Philosophy

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**Chairperson**

Jane Fiske

**Professors**

James Colbert

Ali Errishi

Walter Jeffko

### Objectives for the Program in Philosophy

The Philosophy program provides a variety of courses which fulfill requirements in the Liberal Arts and Sciences Program. These courses explore philosophical inquiry from its beginnings to the present, reviewing the history of ideas and the development of ethical systems. A minor is also available.

### Requirements for the Minor in Philosophy

The Philosophy Minor requires 15 semester hours. There is a prerequisite of PHIL 1000 or PHIL 1100. Courses for the minor must include:

PHIL 3310 *Ancient and Medieval Philosophy*  
PHIL 3330 *Renaissance and Modern Philosophy* **or**  
PHIL 3340 *Contemporary Philosophy*

At least one course from the following:

PHIL 2500 *Contemporary Ethical Problems*  
PHIL 2550 *Contemporary Ethical Systems*  
PHIL 2600 *Philosophy of Human Nature*  
PHIL 2660 *Man and Nature II*  
PHIL 3600 *Philosophy of Religion*  
PHIL 4500 *Philosophy of Love*

*Two additional Philosophy courses*

# Physics

## **Chairperson**

James Barbato

## **Professor**

Ali Errishi

Esmail Valanejad

## **Associate Professor**

Lawrence Guth

Jiang Yu

## **Objectives for the Physics Program**

The Physics Program offers a variety of courses which fulfill the laboratory science requirement for all students.

PHYS 1100, 1200, 2000, are for non-science majors and are strongly recommended for satisfying the Liberal Arts and Sciences requirements.

PHYS 1300 and 1400 are the standard non-calculus General Physics courses offered at most baccalaureate institutions. The sequence is taken by chemistry, biology, computer sciences, mathematics, and most industrial technology majors. They are also appropriate to the non-science major interested in applying mathematical problem-solving techniques to physical settings.

PHYS 2100, 2200, 3100, 3200, 4100, and 4200 are all advanced courses that are offered from time to time in the form of free electives to those students who have had PHYS 1300 and 1400 and have shown keen interest in physics and mathematics.

# Political Science

## **Chairperson**

Michael Turk

## **Assistant Professors Associate Professor**

Rod Christy

Paul Weizer

Eric Budd

## **Objectives for the Program in Political Science**

Courses in Political Science are intended for any student with a general interest in politics and government. They are also designed to provide a proper background for students interested in pursuing graduate study or a career in law, public administration, or government and political science.

## **Requirements for the Major in Political Science**

The Bachelor of Science and Bachelor of Arts in Political Science require 36 hours of course work. All BA and BS candidates will pick an area of concentration after consulting with their faculty advisor.

## **Required Courses**

CSC	1100	Computer Applications
PHIL	4200	Political and Social Philosophy
POLS	1000	U.S. Government
POLS	1100	Introduction to Political Science
POLS	2200	Contemporary International Relations
SOC	3130*	Basic Skills of Social Research
SPCH	1000	Introduction to Speech <b>or</b>
SPCH	1100	Argument and Debate

\*SOC 1000 Introductory to Sociology is a prerequisite for this course.

## **Concentrations**

With the assistance of their academic advisor, students will select an area of concentration in American Government/Law **or** International Politics. Select four courses from:

### **American Government /Law**

POLS	1500	State and Urban Government
POLS	2270	Introduction to the Legal Process
POLS	2550	Sex, Race and Constitution
POLS	2600	The First Amendment
POLS	2700	Criminal Procedure: Rights of the Accused
POLS	3000	Public Policy Analysis: Case Studies in American Politics
POLS	3500	Constitutional Law

**or**

### **International Politics**

IDIS	1800	Global Issues
POLS	2500	Political Systems of the Modern World
POLS	3700	Asian Politics and Culture
POLS	3800	Third World Politics, Economics and Society

## **Capstone**

Each student must select one of the following:

- Internships in Political Science
- Legal Internship
- Senior Seminar in Political Science

## Requirements for the Minor in Political Science

The Minor in Political Science includes:

### Required Courses

*POLS 1000 U.S. Government*

*POLS 1100 Introduction to Political Science*

### Electives

Choose four courses from at least two of the following three sub-fields: American Government, International Politics, and Public Policy/Public Administration.

## Psychology

### Chairperson

*John Hancock*

### Coordinator

*Cheryl Armstrong*

### Professors

*Alan Bernstein*

*G. Jefferson Breen*

*Carol Globiana*

*Paul Girling*

*Peter Hogan*

*David Maloney*

*Richard Spencer*

### Associate Professors

*John Hancock*

*Robert Wellman*

### Assistant Professors

*Cheryl Armstrong*

*Michael Bloomfield*

*Cheryl Goldman*

*Sara Levine*

*Thomas Schilling*

*John Solin*

## Objectives for the Program in Psychology

The goal of the Psychology Program is to educate students in the scientific study of human behavior. The program combines theoretical, methodological, and applied topics enabling students to acquire knowledge and skills that enrich their personal lives and work careers.

The Psychology Program is a component of the Behavioral Sciences Department. It serves majors and minors in the discipline and offers supportive courses for a variety of other programs in the college.

## Requirements for the Psychology Major

The degrees of Bachelor of Arts and Bachelor of Science in Psychology require a minimum of 37 semester hours of course work in Psychology, beyond the course in General Psychology. (The Bachelor of Arts degree requires foreign language proficiency at the second year college level.)

The program is divided into three groups of courses:

- Required courses
- Area electives
- Integrated or pre-professional courses

### Group I—Required Courses

*MATH 1700 Applied Statistics*

*PSY 1100 General Psychology (not counted toward major)*

*PSY 2110 Introduction to Research Methods*

*PSY 2120 Psychological Statistics*

*PSY 3410 Experimental Psychology*

*PSY 3480 History and Systems in Psychology*

### Group II—Area Electives

Choose at least one course required from each area:

#### Area 1—Developmental

*PSY 2210 Child Psychology*

*PSY 2230 Adolescent Psychology*

*PSY 2240 Adult Development*

*PSY 2250 Psychology of Women*

*PSY 2260 Gerontology*

*PSY 2280 Psychology of Human Sexuality*

*PSY 2320 Psychology of Death and Dying*

#### Area 2—Adaptive

*PSY 2160 The Psychology of Speech and Communication*

*PSY 2300 Psychology of Personality*

*PSY 2330 Psychology of Intimacy*

*PSY 2350 Abnormal Psychology*

*PSY 2370 Interpersonal Effectiveness*

*PSY 2400 Psychology of Captivity*

*PSY 2500 Social Psychology*

- PSY 2550 *Group Dynamics*  
 PSY 2570 *Small Group Leadership*  
 PSY 2620 *Work and the Individual*

**Area 3—Basic Processes**

- PSY 3420 *Physiological Psychology*  
 PSY 3430 *Perception*  
 PSY 3500 *Psychology of Learning*  
 PSY 3530 *Motivation*  
 PSY 3550 *Cognition*

**Area 4—Applied Studies**

- PSY 2450 *Psychological Testing*  
 PSY 2610 *Organizational Psychology*  
 PSY 2630 *Human Factors/Ergonomics*  
 PSY 2640 *Performance Appraisal and Development*  
 PSY 2650 *Personnel Psychology*  
 PSY 2710 *Learning Theory and Its Application*  
 PSY 2770 *Principles of Guidance*

Topics in Psychology, when offered, may serve as a required elective for the appropriate Group II area.

**Group III—Integrative or Pre-Professional Courses**

At least one course is required:

- PSY 3220 *Advanced Child Psychology*  
 PSY 4800 *Teaching Practicum*  
 PSY 4803 *Teaching Practicum*  
 PSY 4810 *Practicum in Psychology*  
 PSY 4820 *Practicum in Psychology*  
 PSY 4900 *Independent Study*  
 PSY 4920 *Advanced Psychology Seminar*  
 PSY 4940 *Internship in Psychology*  
 PSY 4950 *Internship in Psychology*  
 PSY 4960 *Internship in Psychology*

The remainder of the nine credits in Psychology may be earned by taking additional courses from Groups II and III.

**Listening and Speaking**

- PSY 2160 *Psychology of Speech and Communication*  
 PSY 2370 *Interpersonal Effectiveness*  
 PSY 2550 *Group Dynamics*  
 PSY 2570 *Small Group Leadership*  
 HMSV 2550 *Interviewing Techniques*

**Requirements for Concentrations in Psychology**

Any students majoring or minoring in Psychology may choose to develop special expertise in one of two areas: Developmental Psychology or Industrial/Organizational Psychology. In either case, students should consult the Psychology Student Handbook for guidelines.

**Concentration in Industrial and Organizational Psychology**

This concentration is designed to prepare students to enter a wide range of occupations in business and industry. It is particularly appropriate for students who want to pursue careers in personnel or human resource functions.

The concentration requires students to take 12 semester hours of course work from the courses listed below:

- PSY 2610 *Organizational Psychology (required)*  
 PSY 2620 *Work and the Individual*  
 PSY 2630 *Human Factors/Ergonomics*

- PSY 2640 *Performance Appraisal and Development*  
 PSY 2650 *Personnel Psychology*  
 PSY 5000 *Topics in Psychology (when applicable)*

Internships in Industrial and Organizational settings are available and strongly recommended for students taking this concentration.

**Concentration in Developmental Psychology**

This concentration is appropriate for students who plan to undertake advanced work in developmental psychology or who seek future employment in related fields.

Students must take at least 12 semester hours of course work from two groups of courses:

- Courses in Group I provide an introduction to various topics in developmental psychology
- Courses in Group II provide opportunities for in-depth exploration of issues through basic research and special projects

**Group I**

Choose three of the following courses:

- PSY 2230 *Adolescent Psychology*  
 PSY 2240 *Adult Development*  
 PSY 2250 *Psychology of Women*  
 PSY 2260 *Gerontology: The Psychology of Growing Old*  
 PSY 5000 *Topics in Psychology (where applicable)*

**Group III**

Choose one of the following courses:

- PSY 3220 *Advanced Child Psychology*  
 PSY 4810 *Practicum in Psychology*  
 PSY 4820 *Practicum in Psychology*  
 PSY 4950 *Internship in Psychology*  
 PSY 4960 *Internship in Psychology*  
 PSY 4900 *Independent Study (when applicable)*

**Requirements for the Minor in Psychology**

The minor in Psychology requires a minimum of 18 semester hours of course work beyond the course General Psychology. The Psychology minor is designed to enable the student to:

- Understand and evaluate psychological research and literature
- Choose courses which complement and relate to the major field of study
- Explore a particular interest in psychology in some depth

Accordingly, the following course organization is required:

**Group I**

Two courses are required.

- PSY 1100 *General Psychology*  
*(prerequisite; not counted towards minor)*  
 PSY 2110 *Introduction to Research Methods*

**Group II**

At least one course is to be taken from **each** of any three of the four areas described under the major: Adaptive, Applied Studies, Basic Processes, and Developmental.

The remaining required courses may be selected from either the integrative courses (Group III) or any one of the above mentioned areas. Courses may also include:

- PSY 2220 *Human Growth and Development*  
 PSY 2750 *Tests and Measurements*

## Public Service Management

### Chairpersons

John Hancock  
Michael Turk  
James Noonan

### Objectives for the Program in Public Service Management

The program in Public Service Management is an interdisciplinary Minor from disciplines of Human Services, Business Administration, Political Science, Psychology, Sociology, and Computer Science.

The minor in Public Service Management focuses on the policies and management practices of public service organizations in order to strengthen the knowledge base and skills set of the student interested in a career in those fields serving the public needs.

### Requirements for the Minor in Public Service Management

#### Required Courses (9 semester hours)

HMSV 3580 *Social Welfare Policy* **or**  
POLS 3000 *Public Policy Analysis*  
HMSV 3000 *Human Services Management* **or**  
*Public Administration*  
POLS 3000 *Public Policy Analysis*  
HMSV 1150 *Community Resources*

#### Elective Courses (9 semester hours)

CSC 1100 *Computer Applications Programming I*  
PSY 2370 *Interpersonal Effectiveness*  
PSY 2620 *Work and the Individual*  
SOC 2650 *Sociology of the Organization*  
BSAD 3210 *Human Resources Management*  
HMSV 3400 *Community Organization*  
BSAD 3500 *Business Law I*  
BSAD 4210 *Social and Political Environments of Business*  
BSAD 4250 *Ethical Decisions in Business*

## Sociology

### Chairperson

John Hancock

### Professors

Augustine Aryee  
Margot Kempers

### Coordinator

Margot Kempers

### Associate Professors

Kimberly Faust  
Patricia Hayes  
Jason Nwankwo

### Objectives for the Program in Sociology

The sociology major was designed to provide students with refined approaches and methods of research and a broad understanding of the world.

The curriculum has been developed to provide the theoretical background and research skills essential for work concerned with human behavior. Graduates of the program are prepared for immediate entry into a wide variety of occupations in business, education, industry, social service, and public service settings. In addition, many graduates continue formal study by enrolling in advanced degree programs in sociology and related fields.

### Requirements for the Major in Sociology

The major requires 36 semester hours of course work in Sociology. This total includes 12 semester hours of core courses and 24 semester hours of electives. Majors are encouraged to take advantage of relevant courses from the other two majors in the Behavioral Sciences Department.

#### Core Required Courses

SOC 1100 *Introduction to Sociology*  
(prerequisite for all other Sociology courses)  
SOC 2250 *Cultural Anthropology*  
SOC 3130 *Basic Skills of Social Research*  
SOC 3160 *Social Theory*

#### Speech Requirement

Choose one course  
SPCH 1000 *Introduction to Speech Communication*  
SPCH 1600 *Public Speaking*  
PSY 2160 *Psychology of Speech and Communication*

#### State and Federal Constitution Proficiency Requirement

Can be fulfilled by completing one of the following courses:  
POLS 1000 *United States Government*  
POLS 1500 *State and Urban Government*  
POLS 2270 *Introduction to the Legal Process*  
POLS 3600 *Civil Rights and Civil Liberties in the United States*  
HIST 1400 *United States History I*  
HIST 1500 *United States History II*

### Requirements for the Minor In Sociology

The minor in sociology consists of 18 semester hours in Sociology.

There is a core of 9 semester hours including:

SOC 1100 *Introduction to Sociology*  
SOC 3130 *Basic Skills in Social Research*  
SOC 3160 *Social Theory*

The remaining 9 semester hours may be selected according to student needs and interests from Sociology electives.

## Spanish

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### **Chairperson**

Jane Fiske

### **Professor**

Maria Jaramillo

### **Assistant Professor**

Keyvan Karbasioun

### **Objectives for the Program in Spanish**

The Spanish Program offers students the opportunity to begin the study of Spanish language and culture or to continue study at an intermediate or advanced level.

### **Placement Exam**

Students who have taken more than one year of Spanish in high school, but have not yet taken a Spanish course at Fitchburg State College, and students who speak Spanish at home are required to take a Placement Exam if they wish to register for a Spanish course at the college level.

### **Requirements for the Minor in Spanish**

The minor in Spanish requires a minimum of 15 semester hours, including the following:

#### **Required Courses**

SPAN 2200 *Intermediate Spanish I*

SPAN 2300 *Intermediate Spanish II*

#### **Electives**

Choose at least three from the following:

SPAN 2600 *Hispanic Culture*

SPAN 2700 *Hispanic Literature I*

SPAN 3500 *Spanish Conversation and Composition*

SPAN 4903 *Independent Study*

## Speech

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### **Chairperson**

Roberta Adams

### **Assistant Professor**

Angela Nastasee-Carder

### **Objectives for the Program in Speech**

The Speech Program offers a number of courses to students which meet the Speaking/Listening requirement in the Liberal Arts and Sciences Program for many disciplines. Specific speech courses are integral to many majors. Students should check program requirements and with their advisors to see which courses are recommended.

# Teacher Preparation Programs (Undergraduate)

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## **Associate Dean of Education**

*Michael G. Caruso, Ph.D.*

### **Programs**

- Early Childhood
- Elementary Education
- Middle School Education
- Secondary Education
  - Biology
  - Earth Science
  - English
  - History
  - Mathematics
  - Technology Education

#### Special Education

- Teacher of Students with Moderate Disabilities (PreK-8)
- Teacher of Students with Severe Disabilities (All Levels)
- Teacher of Students with Moderate Disabilities (5-12)
- Elementary Teacher (1-6)

The professional education programs at Fitchburg State College are under the broad coordination of an Education Unit that includes the following licensures and degree areas:

- Undergraduate and Graduate Teacher Preparation Programs
- Graduate Guidance Counseling Program
- Graduate Educational Leadership and Management Programs.

Numerous partnerships with schools, educational organizations and the private sector are a hallmark of the College's commitment to supporting the preparation of school professionals. For more detailed information about educational partnerships, contact the Office of the Associate Dean of Education at 978-665-3239.

### **Formal Admission Process**

Students interested in graduating with a degree in education (Early Childhood, Elementary, Middle School, Secondary Education and Special Education) from Fitchburg State College must complete a comprehensive preparation program, followed by a two-stage review process. This program of study is designed to assure student readiness to meet professional licensure requirements and success in the schools where you teach.

#### ***The Pre-Education Stage First Stage Review***

All students interested in becoming teachers must be formally admitted to the teacher education program of their choice, usually at the end of the sophomore year. At Fitchburg State, we prepare future teachers in the context of a liberal arts and sciences education. Students begin their career at Fitchburg State College, indicating their interest in becoming a teacher and selecting majors that will provide the appropriate foundation for meeting the rigorous standards required for success.

The first 44 credits of one's undergraduate program is devoted to acquiring a broad understanding of subject matter across the liberal arts and sciences, and demonstrating a command of rigorous content in the language arts, mathematics, sciences and social sciences. Students must have a minimum GPA of 3.0 to progress from the pre-education stage to the first stage described below.

Students interested in teaching at all levels (i.e., Early Childhood, Elementary, Middle School, Secondary, and/or Special Education) are formally admitted to a teacher education program only after they have successfully completed the following items. These requirements are completed by the end of the sophomore year.

- 44 credits of specified content and subject area courses, usually completed in two full-time years of academic work;
- A minimum GPA of 2.5.
- Enrollment in or completion of the appropriate introductory professional education courses;
- A pre-practicum internship;
- A passing score on the Communication and Literacy subtests of the Massachusetts Test for Educator Licensure;
- Recognition of a list of requirements to be completed prior to student teaching, including a criminal background check; and
- The recommendation of a student's advisor or other full-time faculty member in education.

These front-end requirements are designed to assure academic and pre-professional success.

Students denied formal admission to a teacher preparation program can appeal to the appropriate department chair, the Associate Dean of Education and the Dean of Undergraduate Studies.

### **Admission to the Practicum (Student Teaching)**

#### ***The Second Stage Review***

Students seeking to enroll in student teaching, the last stage of the teacher education program, must successfully complete the following prior to the completion of the junior year (75 credits):

- A review of their performance in course work; Cumulative GPA of 2.75 and a GPA of 3.0 in the major field of study;
- A pre-practicum internship;
- A Personal Characteristics Checklist;
- A passing score on the appropriate subject area subtests of the Massachusetts Educators Test for Licensure (MTEL);
- The recommendation of their faculty advisor or other full-time faculty member in education; and
- Successful completion of the tuberculin (Mantoux TB) screening test.

At Fitchburg State College, students are provided extensive support and advisement to assure their success at each stage of their educational progression. So many changes have occurred in teacher preparation in the last few years that it is not always easy to decipher how to approach the high expectations and standards required today. Know that the rigorous standards are necessary to help all children and youth achieve. The faculty and staff are dedicated to helping students meet their potential in education and exceed the standards set forth by the federal, and state, governments.

Transfer students are required to have taken 12 semester hours from at least three different Fitchburg State College professors within their teacher preparation program prior to student teaching.

Technology Education students are required to have successfully completed PSY 1100, PSY 2230 and PHIL 2000.

A student denied formal admission to a practicum can appeal to the appropriate department chair, the Associate Dean of Education and the Dean of Undergraduate Studies.

### Application for Practicum (Student Teaching) Site

In October (for spring semester) and March (for fall semester), the Placement Coordinator holds meetings to explain the site-selection process to students who have been approved to participate in the Practicum.

Students select sites (school and level) from a list of cooperating practitioners who indicated their interest in accepting Practicum students (student teachers). Cooperating practitioners must have professional status, be certified at the appropriate level and area, and be recommended by their principal and/or superintendent. Students do not make contact with school systems or teachers at this time. Student selections are submitted to the appropriate teacher preparation program for approval. Contracts then are sent selected schools confirming the Practicum student's assignment. Once a student is confirmed, she or he must contact the cooperating teacher for an interview. If the cooperating teacher approves the Practicum student's assignment, the student is notified by the Certification Office. If the cooperating teacher objects to the assignment, the Certification Office, in consultation with the student's chairperson, helps the student make a second selection. During the Practicum, the student is required to follow the school system's schedule, not the Fitchburg State College schedule.

### Application for Initial Licensure in Massachusetts

In November and March, the Associate Dean of Education, relevant faculty and certification office staff hold meetings to explain application procedures and distribute Massachusetts Department of Education forms.

Candidates for licensure must:

- Complete the application
- Provide a copy of the Practicum Report Form for each practicum experience
- Request a completed transcript(s) from the registrar which will verify successful completion of a teacher preparation major and a Liberal Arts and Science major

Students should submit all application materials to the Office of the Associate Dean of Education and Certification Coordinator for bulk mailing to the Massachusetts Department of Education.

Candidates are discouraged from sending materials on their own.

Upon satisfactory completion of a teacher preparation program and all requisite requirements, the student receives Fitchburg State College endorsement. To be endorsed for licensure, students must pass the appropriate subject test of the Massachusetts Test for Educator Licensure.

# Early Childhood, Elementary, and Middle School Education

## Chairperson

Daniel Nomishan

## Professors

Ronald Colbert  
Rona Flippo  
Charles Hetzel  
George Miller  
Daniel Nomishan

## Associate Professors

Diana Suskind

## Assistant Professors

David Harris  
Pamela Hill  
Laurie DeRosa  
Glenda Ouellette

## Objectives for the Programs in Early Childhood, Elementary and Middle School

The Early Childhood, Elementary, Middle School, and Education Programs integrate a grounding in the Liberal Arts and Sciences with a comprehensive foundation in pedagogy that results in preparation of highly competent teachers. The department's strength rests in its underlying philosophy that supports the development of educators who are reflective, person-centered practitioners able to effectively construct, articulate, and apply educational theory and research so as to be responsive to current and future educational needs of the individuals and families they serve.

The department prepares its graduates to be Teachers of Early Childhood (grades P-2), Teachers of Elementary (grades 1-6), and Teachers of Middle School (grades 5-8).

## Description of the Program

All teacher education majors graduate with a dual major in Education and in Liberal Arts and Sciences. The Liberal Arts and Science major is required of all future teachers by the state of Massachusetts and Fitchburg State College.

Teacher education majors (Early Childhood, Elementary, and Middle School) place emphasis on college coursework that honors cultural, racial, linguistic and social diversity. No less than 36 semester hours of coursework is integrated with a variety of field-based experiences in schools. Student field-based experiences begin early in the majors and are enhanced by strong departmental collaboration with exemplary schools and practitioners in the region. Many students enjoy opportunities to foster attitudes and skills for creative, collegial teaching in the diverse and changing environment of our McKay Campus School.

The Early Childhood Club, Education Club and Kappa Delta Pi Honor Society offer students the opportunity to grow professionally while meeting with students of similar interests.

## Requirements for the Major in Early Childhood, Elementary, and Middle School Education Majors

Majors in Early Childhood, Elementary, and Middle School Education also require a major in the Liberal Arts and Sciences. See the IDIS major for Middle School Education.

## Requirements for Initial Track Licensure

For information about undergraduate requirements in teacher preparation, see the section titled: "Teacher Preparation Programs (Undergraduate)".

A student denied admission to the Practicum can appeal to the appropriate department chair.

## Early Childhood Education (P-2)

### Required Courses

EDUC 1100	Early Childhood Foundations
EDUC 1600	Behavioral Science in Early Childhood
EDUC 2100	Reading in Early Childhood Education
EDUC 2200	Language Arts in Early Childhood Education
EDUC 2400	Fine Arts in Early Childhood Education
EDUC 2700	Parent, Child, Relationships
EDUC 3100	Science, Math, and Social Studies in Early Childhood Education
EDUC 4050	Senior Seminar in Early Childhood Education
EDUC 4862	Practicum in Early Childhood Education I
EDUC 4863	Practicum in Early Childhood Education II

### External Requirements

Liberal Arts and Sciences Distribution which includes:

BIOL 1000	Life Science I <b>or</b>
BIOL 1100	Life Science II
HIST 1000	World Civilization I <b>or</b>
HIST 1100	World Civilization II <b>or</b>
HIST 1150	World Civilization III
HIST 1400	US History I <b>or</b>
HIST 1500	US History II
PHYS 1100	Physical Science I <b>or</b>
PHYS 1200	Physical Science II
PSY 1100	General Psychology

Liberal Arts and Sciences or Interdisciplinary Studies Major

## Elementary Education (1-6)

### Required Courses

EDUC 2710	Principles and Practices in Education
EDUC 2750	Science in Education
EDUC 3020	Teaching Mathematics
EDUC 3030	Reading in Education
EDUC 3500	Creative Arts in Elementary Education
EDUC 3600	Social Studies in Education
EDUC 3640	Reading in the Content Areas
EDUC 4010	Foundations Seminar
EDUC 4100	Language Arts in Education
EDUC 4882	Practicum in Elementary I
EDUC 4883	Practicum in Elementary II

### External Requirements

Liberal Arts and Sciences Distribution which includes:

BIOL	1000	Life Science I <b>or</b>
BIOL	1100	Life Science II
HIST	1000	World Civilization I <b>or</b>
HIST	1100	World Civilization II <b>or</b>
HIST	1150	World Civilization III
HIST	1400	US History I <b>or</b>
HIST	1500	US History II
MATH	1400	Mathematics Across the Curriculum
PHYS	1100	Physical Science I <b>or</b>
PHYS	1200	Physical Science II
PSY	1100	General Psychology
PSY	2210	Child Psychology
		Liberal Arts <b>or</b> Sciences <b>or</b> Interdisciplinary Studies Major

### Middle School Education (5-8)

#### Required Courses

EDUC	2710	Principles and Practices in Education
EDUC	3070	Middle School Concept
EDUC	3300	Curriculum and Instruction in the Middle School
EDUC	3400	Reading in the Middle School
EDUC	3640	Reading in the Content Areas
EDUC	4010	Seminar: Foundations in Education
EDUC	4100	Language Arts in Education
EDUC/	4700	Teaching Writing in Middle and Secondary Schools
ENGL		
EDUC	4885	Practicum in Middle School I
EDUC	4886	Practicum in Middle School II

2 of the following, consistent with Interdisciplinary Track

EDUC	3020	Teaching Mathematics
EDUC	2750	Science in Education
EDUC	3600	Social Studies in Education
EDUC	4100	Language Arts in Education

### External Requirements

Liberal Arts and Sciences Distribution which includes:

BIOL	1000	Life Science I <b>or</b>
BIOL	1100	Life Science II
HIST	1000	World Civilization I <b>or</b>
HIST	1100	World Civilization II <b>or</b>
HIST	1150	World Civilization III
HIST	1400	US History I <b>or</b>
HIST	1500	US History II
MATH	1400	Mathematics Across the Curriculum (Majors who elect Math as a content area for their Interdisciplinary Major may elect another math course to substitute for Math Across the Curriculum.
PHYS	1100	Physical Science I <b>or</b>
PHYS	1200	Physical Science II
PSY	1100	General Psychology
PSY	2230	Adolescent Psychology
		Liberal Arts <b>or</b> Sciences Major <b>or</b> Interdisciplinary Studies Major in 2 content areas consistent with Middle School Teacher Licensure sought.

## Secondary Education (8-12)

### Clinical Professors

Christopher Cratsley  
Mark Snyder  
Robert Tapply  
Steven Therrien  
Teresa Thomas

### Objectives for the Program in Secondary Education

A Secondary Education Program is offered for students seeking provisional teaching certification in the following disciplines:

- Biology
- Earth Science
- English
- History
- Mathematics
- Technology Education

### Requirements for Initial Track Licensure:

For information about undergraduate requirements in teacher preparation, see the section titled: "Teacher Preparation Programs (Undergraduate)"

The secondary Teacher Licensure Programs are housed in the academic department of Biology, Earth Science, English, History, Mathematics, and Technology Education. The programs in Biology, Earth Science, English, History, and Mathematics programs share a core of education courses:

BIOL	2860/	Introduction to Secondary School Teaching
ESCI	2860/	
ENGL	2860/	
HIST	2860/	
MATH	2860	
ENGL	4700	Teaching Writing in Secondary Schools
BIOL	4850	Special Methods in Teaching in Biology
ESCI	4850	Special Methods in Teaching in Earth Science
ENGL	4850	Special Methods in Teaching in English
HIST	4850	Special Methods in Teaching in History
MATH	4850	Special Methods in Teaching in Math
BIOL	4860/	Practicum in Secondary School I
ESCI	4860/	
ENGL	4860/	
HIST	4860/	
MATH	4860	
BIOL	4870/	Practicum in Secondary School II
ESCI	4870/	
ENGL	4870/	
HIST	4870/	
MATH	4870	
SPED	3800	Adolescents with Special Needs

See the listing for each Academic Department for additional requirements for each program.

### **Major—Technology Education**

The Technology Education major requires the following core courses:

#### **Initial Licensure Common Technical Core (30 semester hours)**

Manufacturing Cluster

*ITEC 1200 Metal Fabrication Systems*

*ITEC 1300 Wood Fabrication Systems*

Communications Cluster

*ITEC 1400 Technical Drawing*

*ITEC 1500 Graphic Arts Processes*

Construction Cluster

*ITEC 1320 Construction Systems I*

*ITEC 2400 Architectural Drawing*

Power Energy and Transportation

*ITEC 2600 Energy Systems II*

*ITEC 3600 Energy Conservation Principles*

#### **Professional Sequence (19 semester hours)**

*ITEC 3800 Methods in Teaching Technology Education*

*ITEC 3810 Curriculum Development in Technology Education*

*ITEC 4840 Prepracticum Seminar*

*ITEC 4860 Practicum in Technology Education*

*ITEC 4870 Practicum in Technology Education*

## Special Education

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### **Chairperson**

*Shari Stokes*

### **Professors**

*Michael Fiorentino*

*Elaine Francis*

*Rosemarie Giovino*

*Anne Howard*

*Shari Stokes*

### **Assistant Professor**

*Denise O'Connell*

### **Instructors**

*Jill Pellegrini*

### **Objectives for the Major in Special Education**

The Special Education Department at Fitchburg State College offers the oldest and most comprehensive state program in the Commonwealth of Massachusetts. In this program, emphasis is on theory, content, and the ability to use strategies and resources in working with children and adults who have disabilities in the least restrictive or inclusive environment.

This program prepares graduates to be Teachers of Students with Moderate Disabilities (PreK-8) and Elementary Teacher (Gr. 1-6), and Teacher of Students with Moderate Disabilities (5-12), Teacher of Students with Severe Disabilities with or without Elementary Licensure.

### **Description of the Major in Special Education**

The program has been developed with an underlying belief in the potential of individuals with disabilities. Students are involved early in their program with field-based experiences and academic classes to help clarify career decisions and to develop the knowledge, skills and dispositions to be effective special educators.

Special Education Majors in the licensure tracks of Moderate Disabilities (PreK-8) and Severe Disabilities (All Levels) graduate with a double major in Special Education and Interdisciplinary Studies. Special Education Majors in the licensure track Moderate Disabilities (5-12) graduate with a double major in Special Education and a Major in a Liberal Arts and Science content area or in Interdisciplinary Studies.

In addition, Special Education Majors, Moderate Disabilities (PreK-8) receive dual licensure in Special Education and Elementary Education (Gr. 1-6). Teacher candidates complete a practicum in the elementary grades (1-6) and in a special education setting (PreK-8).

Special Education Majors, Moderate Disabilities (5-12) receive licensure for Special Education, 5-12. Teacher candidates complete a practicum in an inclusive classroom (5-12) and complete the Special Education practicum (5-12).

Special Education Majors, Severe Disabilities (All Levels) have two options. Teacher candidates can elect to receive dual licensure in Severe Disabilities (All Levels) and Elementary Licensure (gr. 1-6). For this track teacher candidates complete two practicum placements: one working with students with severe disabilities and one as an elementary teacher (Gr. 1-6) in the general education classroom. The second option is completing the Licensure in Severe Disabilities (All Levels) only. Teacher candidates complete two practicum placements working with students with severe disabilities.

In keeping with the Commonwealth of Massachusetts Licensure requirements, graduates of the program are eligible for Initial Licenses. Teacher candidates earn Professional License after three years of employment in Massachusetts as an Initial Licensed teacher.

All Licensure candidates must satisfy the constitution requirements of the Commonwealth of Massachusetts (See “Common Graduate Requirements”).

### Professional Opportunities With the Major

The Special Education Club, a student chapter of the professional organization, Council for Exceptional Children, offers students the opportunity to grow professionally while meeting college students with similar interests.

### Requirements for Initial Track Licensures

For information about undergraduate requirements in teacher preparation, see the section titled: “Teacher Preparation Programs (Undergraduate)”.

### Teacher of Students with Moderate Disabilities (PreK-8), or Teacher of Students with Severe Disabilities (All Levels), each with Elementary Licensure:

The Moderate Disabilities program prepares Special Educators to teach individuals with cognitive, social, language and academic problems who are included in general education classrooms or are in a variety of special education settings. Teacher candidates in this program are prepared to meet the licensure requirements of the Massachusetts Department of Education for the Elementary Teacher (Gr. 1-6) and for Teacher of Students with Moderate Disabilities (PreK-8).

The Severe Disabilities program addresses the needs of individuals who have severe disabilities, often with accompanying emotional and behavioral disorders. Curricula focuses on teaching life skills, so that individuals with severe disabilities can live as independently as possible in home, school and community environments. Teacher candidates are also prepared in the Elementary curriculum and complete a practicum in a severe placement and in an elementary classroom. Teacher candidates in this program meet the Licensure Standards of the Massachusetts Department of Education for Teacher of Students with Severe Disabilities and can also meet the Licensure Standards for Elementary Teacher (Gr. 1-6).

### Teacher of Students with Severe Disabilities (All Levels) without Elementary Licensure

The Severe Disabilities program (without Elementary licensure) focuses courses and field experience on addressing the learning needs of individuals with severe disabilities who are in inclusive and separate settings. A minimum of 75 hours is spent in general education. Student teaching is completed in two different placements that serve individuals with severe disabilities.

#### Required Courses

SPED	2100	<i>Foundations in Special Education</i>
SPED	2150	<i>Introduction to Individuals with Disabilities</i>
SPED	2522	<i>Language Arts: Teaching and Adapting Instruction</i>
SPED	2530	<i>Math/Science/Social Studies for the Inclusive Classroom</i>
SPED	3401	<i>Language Development and Speech</i>
SPED	3420	<i>Math/Science/Social Studies for Students with Disabilities (for Elementary/Moderate Disabilities Licensure only)</i>
SPED	3440	<i>Reading/Learning Problems</i>
SPED	2510	<i>Students with Physical and Health Care Needs (for Severe Disabilities Licensure only)</i>
SPED	3550	<i>Reading in Special Education (for Moderate and Severe with Elementary Licensure)</i>
SPED	2200	<i>Program Development for Students with Severe Disabilities (for Severe Licensure only)</i>

### Integrated Professional Pre-Practicum/Practicum (IPP—12 total credits)

The Integrated Professional Pre-Practicum/Practicum is a unique experience that fosters the continuous integration of theory and application. It involves a 12 credit block of theoretical courses and teaching in a public school setting (1/2 days, 4 days a week). Teacher Candidates teach in the role of the Elementary Teacher (Gr. 1-6) for 1/2 the semester and in the role of Teacher of Students with Moderate Disabilities for 1/2 the semester.

Teacher Candidates who are in the Severe Disabilities program with or without Elementary Licensure complete 1/2 semester in the role of the Elementary Teacher (Gr. 1-6) and 1/2 of the semester in the role of Teacher of Students with Severe Disabilities (All Levels). Even though some Teacher Candidates may opt to complete the Severe Disabilities Licensure only, teaching in the general education classroom is required for a pre-practicum experience.

Throughout the semester Teacher Candidates receive supervised support by college faculty and cooperating teachers. One day a week Teacher Candidates return to campus for curriculum work (see below) that links theoretical content to teaching strategies.

#### Moderate Disabilities (PreK-8) Licensure/Elementary Licensure IPP Curriculum: Moderate Disabilities

(classes one day per week)

SPED	3500	<i>Behavior Management</i>
SPED	3550	<i>Reading in Special Education</i>

#### IPP Pre-Practicum/Practicum: Moderate Disabilities (4 half days a week)

SPED	3665	<i>IPP Pre-Practicum/Practicum—Elementary (Gr. 1-6) (half the semester)</i>
SPED	3675	<i>IPP Pre-Practicum/Practicum—Moderate Disabilities (PreK-8) (half the semester)</i>

#### Severe Disabilities (All Levels) Licensure/Elementary Licensure IPP Curriculum: Severe Disabilities with Elementary Licensure

(classes one day per week)

SPED	3500	<i>Behavior Management</i>
SPED	3550	<i>Reading in Special Education</i>

### IPP Pre-Practicum/Practicum: Severe Disabilities with Elementary Licensure

(4 half days/week)

SPED 3665 IPP Pre-Practicum/Practicum—Elementary (Gr. 1-6) (half the semester)

SPED 3765 IPP Pre-Practicum/Practicum—Severe Disabilities (All Levels) (half the semester)

### Severe Disabilities (All Levels) Licensure without Elementary Licensure

#### IPP Curriculum: Severe Disabilities without Elementary Licensure

(classes one day per week)

SPED 3500 Behavior Management

SPED 2510 Students with Physical and Health Care Needs

#### IPP Pre-Practicum/Practicum: Severe Disabilities without Elementary Licensure

(4 half days per week)

SPED 3665 IPP Pre-Practicum/Practicum—Elementary (Gr. 1-6) (half the semester)

SPED 3765 IPP Pre-Practicum/Practicum—Severe Disabilities (All Levels) (half the semester)

### Student Teaching (Practicum): Teacher of Students with Moderate Disabilities (PreK-8), Elementary Teacher (Gr. 1-6), and Teacher of Students with Severe Disabilities (All Levels)

Teacher Candidates in all licensure programs complete 2 practica, Monday through Friday, 4 1/2 days in the schools. The practica are taken in conjunction with specified courses stated below:

#### Practica

SPED 3860 Practicum: Elementary (Gr. 1-6) 6 cr.

SPED 3870 Practicum: Moderate Disabilities (PreK-8) 6 cr.

SPED 3840 Practicum: Severe Disabilities (All Levels) 6 cr.

SPED 3845 Practicum: Severe Disabilities II (All Levels) 6 cr.

#### Moderate Disabilities Course

SPED 4001 Assessment of Students with Moderate Disabilities 3 cr.

#### Severe Disabilities Course

SPED 2200 Program Development for Students with Severe Disabilities 3 cr.

#### External Requirements

Teacher Candidates address both the speaking and listening requirements through the extensive training and feedback during the prepracticum and practicum experience.

#### Liberal Arts and Science distribution

ENGL 2900 Children's Literature (PreK-8) Elementary

GEOG 1000 Introduction to Geography

PSY 1100 General Psychology

PSY 2100 Child Psychology

PSY 2710 Learning Theory and Its Application

Teacher Candidates must meet the Constitution Requirement by completing:

POLS 1000 or POLS 1500 or HIST 1400 or HIST 1500

An Interdisciplinary Major is also required for Licensure for Moderate Disabilities (PreK-8) and for Severe Disabilities.

### Teacher of Students with Moderate Disabilities (5-12)

This program addresses the cognitive, emotional, social, language and academic problems of individuals in grades 5-12 who are included in general education classrooms and who are in special education settings. Teacher Candidates who complete this licensure major in Special Education and in a Liberal Arts and Science Major or Interdisciplinary Major.

#### Required Courses

SPED 2100 Foundations in Special Education

SPED 2150 Introduction to Individuals with Disabilities

SPED 2522 Language Arts: Teaching and Adapting Instruction

SPED 2530 Math/Science/Social Studies for the Inclusive Classroom

SPED 3401 Language Development and Speech

SPED 3420 Math/Science/Social Studies for Students with Disabilities

SPED 3440 Reading/Learning Problems

SPED 3500 Behavior Management

SPED 3575 Strategies for Secondary Students with Disabilities

SPED 3550 Reading in Special Education

SPED 3875 Practicum: Moderate Disabilities (5-12)

SPED 3878 Practicum in the Inclusive Classroom (5-12)

SPED 4001 Assessment of Students with Disabilities

### Student Teaching (Practicum): Teacher of Students with Moderate Disabilities (5-12)

Teacher Candidates in Moderate Disabilities (5-12) complete 2 practica. Teacher Candidates are in the schools 4 1/2 days a week.

SPED 3878 Practicum: Moderate Disabilities (5-12) Inclusive Classroom (half the semester) 6 cr.

SPED 3875 Practicum: Moderate Disabilities (5-12) (half the semester) 6 cr.

#### Course

SPED 4001 Assessment of Students with Moderate Disabilities 3 cr.

#### External Requirements

Teacher Candidates address the speaking and listening requirements through the extensive training and feedback during the pre-practicum and practicum experience.

#### Liberal Arts and Science distribution

ENGL 2910 Literature for Young Adults

GEOG 1000 Introduction to Geography

PSY 1100 General Psychology

PSY 2230 Adolescent Psychology

PSY 2710 Learning Theory and Its Application

Teacher Candidates must meet the Constitution Requirement by completing:

POLS 1000 or POLS 1500 or HIST 1400 or HIST 1500

A Liberal Arts and Science Major or an Interdisciplinary Major is also required for Licensure for Moderate Disabilities (5-12).

## Theater

### **Chairperson**

Roberta Adams

### **Associate Professors Assistant Professor**

Richard McElvain Sarah Levine

Kelly Morgan

### **Objectives for the Program in Theater**

The Theater Program serves all students by offering courses that study the history and literature of theater as well as performing arts skills in acting, directing and stagecraft production. Opportunities to perform annual productions are also available. An interdisciplinary major or minor is also available. See minor in Theater.

### **Requirements for the Major in English/Theater**

The courses required in the major are described under the English major on page 86.

### **Requirements for the Major in Technical Theater**

The courses required for Technical Theater are described under the Industrial Technology major on page 99.

### **The Minor in Theater**

The Theater Minor requires a minimum of 15 semester hours, including Introduction to Theater (THEA 2000), Directing the Play (THEA 4000), and at least 2 of the following courses:

THEA 3000 Stagecraft and Theater Production

THEA 2500 Stage Movement **or**

PHED 4050 Art of Dance

THEA 2700 Acting **or**

PHED 4130 Making Dances

and at least one of the following courses:

ENGL 3000 World Drama

ENGL 3010 American Drama

ENGL 3020 Modern Drama

ENGL 4020 Shakespeare's Drama: Text and Performance **or**

ENGL 4030 Interpreting Shakespeare's Works

Three hours of Theater internship may also count toward the minor.

## Women's Studies

### **Chairpersons**

John Hancock

Michael Turk

Roberta Adams

### **Coordinators**

Nancy Kelly

Margot Kempers

Susan Williams

### **Objectives for the Women's Studies Program**

The program in Women's Studies provides multicultural and interdisciplinary courses which examine women's roles, history, and issues. These courses satisfy requirements in the Liberal Arts and Sciences Program and also can be counted toward an inter-departmental minor.

### **Requirements for the Minor in Women's Studies**

The minor in Women's Studies includes the Introduction to Women's Studies and five other courses including independent study, selected from the following courses:

#### **Required Course**

IDIS 1000 Introduction to Women's Studies

#### **Electives**

Choose five from the following:

IDIS 1100 Women in Latin America

PSY 2250 Psychology of Women

IDIS 2340 Contemporary Issues in Women's Health

HIST 2450 History of U.S. Women to 1870

HIST 2500 History of U.S. Women from 1870 to the Present

ENG 3300 Women and Literature

HIST 3450 Women in European History since 1700

ART 3700 Women, Art, and Society

SOC 3770 Women in American Society

MUSC 3900 Women, Music and Society

IDIS 4903 Independent Study in Women's Studies

# Undergraduate Evening Programs



**T**he Office of Graduate and Continuing Education provides undergraduate degree programs in selected fields along with a variety of life-long learning opportunities and an array of liberal arts courses open to degree-seeking and non-degree students. With its commitment to affordable and accessible high-quality education, GCE offers its undergraduate courses on campus locations and via distance-education modes, including the Internet. Courses are offered at times, including summer and winter sessions, convenient to non-traditional and traditional-age students.

### Administration

Graduate and Continuing Education is administered by the Office of Academic Affairs. Degree specializations originate in the appropriate academic department of the college. Where there are no corresponding academic departments, committees perform the appropriate functions. GCE is responsible, in cooperation with the appropriate academic departments, for:

- Maintaining the quality of degree programs
- Scheduling courses
- Advising students

### Faculty

Courses offered through Graduate and Continuing Education are taught by FSC faculty and other qualified individuals brought into the program as Adjunct Faculty.

## Degree Majors, Minors, and Certificate Programs

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### Bachelor's Degrees

BS in Business Administration

Accounting

Finance

Fitness Management

Management

Marketing

BS in Computer Science

BS in Computer Information Systems

BA/BS in Interdisciplinary Studies

BS in Occupational/Vocational Education

### Minors

English

Psychology

### Certificate Programs

Applied Programming

Business

Computer Hardware

Computer Use and Applications

Database Systems

High Level Languages

Java Programming

Microsoft Foundation Classes

Office Administration

Plastics Technology

(Offered off-campus at NYPRO Inc. in Clinton only)

Software Engineering

Web Development

### Approval Programs

Vocational Technical Teacher Approval Program

# BS in Business Administration

**Chairperson**      **Program Manager**  
*James Noonan*      *Sylvia Charland*

## Program Objectives

Students who graduate from the Business Administration Program are equipped with a knowledge of business theories, policies, and procedures and are prepared to take a responsible position within the world of business. The program refines a student's commitment to personal values and moral excellence as well as professional competence.

## Program of Study

The degree offered by the Business Administration Department is the Bachelor of Science degree. The curriculum is based in the Liberal Arts, coupled with a sufficient mix of professional courses and a variety of practical business experiences.

### BS in Business Administration Concentrations

- Accounting
- Fitness Management
- Finance (only offered at night)
- Management
- Marketing

### Liberal Arts and Sciences Requirements

BSAD	1700	Introduction to Computer Information Systems for Business	3 S.H.
ENGL	1100	Writing I	3 S.H.
ENGL	1200	Writing II	3 S.H.
PHED	1000	Health and Fitness	3 S.H.
MATH	1800	Business Statistics	3 S.H.
MATH	2200	Calculus for Business	3 S.H.
ECON	1100	Principles of Economics I (Macro)	3 S.H.
ECON	1200	Principles of Economics II (Micro)	3 S.H.
SPCH	1000	Introduction to Speech Communications	3 S.H.
		Additional Liberal Arts and Sciences requirements	33 S.H.
		Subtotal of Liberal Arts and Sciences	60 S.H.

### Core Curriculum

For All Business Administration Concentrations:

BSAD	2010	Introduction to Financial Reporting	3 S.H.
BSAD	2020	Introduction to Managerial Accounting	3 S.H.
BSAD	3200	Principles of Management	3 S.H.
BSAD	3300	Fundamentals of Marketing	3 S.H.
BSAD	3400	Basic Finance	3 S.H.
BSAD	3500	Business Law I	3 S.H.
BSAD	4890	Business Policy and Strategy	3 S.H.
		Subtotal Core Curriculum	21 S.H.

## Specializations for the Major in Business Administration

### Accounting

#### Required Courses

BSAD	3010	Financial Reporting Theory and Practice I	3 S.H.
BSAD	3020	Financial Reporting Theory and Practice II	3 S.H.
BSAD	3120	Cost Accounting I	3 S.H.
BSAD	4010	Financial Reporting Theory and Practice III	3 S.H.
BSAD	4110	International Accounting and Taxation	3 S.H.
BSAD	4120	Individual Taxation	3 S.H.
BSAD	4140	Auditing	3 S.H.
BSAD	4500	Business Law II	3 S.H.
		Electives	15 S.H.

#### Directed Advanced Elective

Choose any one of the following:

BSAD	4100	Consolidation and Mergers	3 S.H.
BSAD	4130	Corporate, Estate, and Gift Taxation	3 S.H.
BSAD	4160	Not-for-Profit Accounting	3 S.H.

### Finance

#### Required Courses

BSAD	3410	Investments	3 S.H.
BSAD	3460	Real Estate Investment and Management	3 S.H.
BSAD	4230	Business Fluctuations and Forecasting	3 S.H.
BSAD	4400	Financial Management of Corporations	3 S.H.
BSAD	4500	Business Law II	3 S.H.
BSAD	4880	International Business Management	3 S.H.
BSAD	5000	Topics in Business	3 S.H.
ECON	2400	Money and Banking	3 S.H.
		Electives	15 S.H.

### Management

#### Required Courses

BSAD	3210	Human Resources Management	3 S.H.
BSAD	3220	Production Management	3 S.H.
BSAD	4200	Organizational Behavior and Theory	3 S.H.
BSAD	4210	Social and Political Environment of Business	3 S.H.
BSAD	4230	Business Fluctuations and Forecasting	3 S.H.
BSAD	4880	International Business Management	3 S.H.
		Electives	21 S.H.

## Marketing

### Required Courses

BSAD	3310	Consumer Behavior	3 S.H.
BSAD	3320	Market Research	3 S.H.
BSAD	3330	Advertising	3 S.H.
BSAD	4880	International Business Management	3 S.H.

Choose any three of the following:

BSAD	3340	Small Business Management	3 S.H.
BSAD	3350	Total Quality Management	3 S.H.
BSAD	4300	Sales Management	3 S.H.
BSAD	4310	Retail Marketing	3 S.H.
BSAD	4320	Industrial Marketing	3 S.H.
BSAD	4330	International Marketing	3 S.H.
BSAD	4340	Developing Marketing Strategies	3 S.H.
		Electives	18 S.H.
		Subtotal of Major and Electives	39 S.H.

### Business/Fitness Management

(See Exercise and Sport Science.)

BIOL	1200	Anatomy and Physiology I	3 S.H.
BIOL	1300	Anatomy and Physiology II	3 S.H.
BIOL	1650	Nutrition	3 S.H.
EXSS	2060	Exercise, Nutrition and Heart Disease	3 S.H.
EXSS	2090	Standard First Aid/CPR	3 S.H.
EXSS	3070	Exercise Physiology	3 S.H.
EXSS	3450	Exercise Testing and Programming	3 S.H.
EXSS	4030	Physical Education Fitness and Sport: An Overview	3 S.H.
EXSS	4950	Internship Fitness Management Physical Activity or Dance Elective	3 S.H.
		<b>Total for Degree</b>	<b>120 S.H.</b>

## BS in Computer Science

### Chairperson

Nadimpalli Mahadev

### Program Objectives

The Computer Science program offers the opportunity for students to develop a unique blend of knowledge and skills in the areas of computer software and computer hardware. The program provides sufficient theoretical background for continued learning. It also provides practical skills to prepare the students for professional careers in the rapidly changing field of computer science. Students develop good communication skills and the ability for teamwork and leadership roles in their professional careers.

### Program of Study

#### Liberal Arts and Sciences Requirements

ENGL	1100	Writing I	3 S.H.
ENGL	1200	Writing II	3 S.H.
PHED	1000	Health & Fitness	3 S.H.
PHYS	1300	General Physics I	4 S.H.
PHYS	1400	General Physics II	4 S.H.
+MATH	1300	Precalculus	3 S.H.
MATH	1800	Business Statistics	3 S.H.
MATH	2300	Calculus I	4 S.H.
MATH	2400	Calculus II	4 S.H.
MATH	2600	Linear Algebra	3 S.H.
		Additional Liberal Arts and Science Requirements	27 S.H.
		Subtotal for Liberal Arts and Science	64 S.H.

#### Required for Major

CSC	1500	Computer Science I	3 S.H.
CSC	1550	Computer Science II	3 S.H.
CSC/			
MATH	1900	Discrete Mathematics	3 S.H.
CSC	2560	Systems Programming	3 S.H.
CSC	3100	Operating Systems	3 S.H.
CSC	3200	Programming Languages	3 S.H.
CSC	3700	Algorithms & Data Structures	3 S.H.
*CSC	4400	Software Engineering	3 S.H.
CSC	1600	Introduction to Electronics	4 S.H.
CSC	1650	Digital Electronics	4 S.H.
CSC	2600	Computer Organization	4 S.H.
CSC	3600	Microprocessors	4 S.H.
		Five additional CS electives at or above 3000 level	15 S.H.
		Subtotal for Major	52 S.H.
		Free Electives from any area	4 S.H.
		<b>Total for degree</b>	<b>120 S.H.</b>

+ Pending placement exam results

\* Course used to satisfy Junior/Senior Writing, and Speaking and Listening requirements. Computer Literacy requirement is satisfied by CS core.

# BS in Computer Information Systems

## Chairperson

Nadimpalli Mahadev

## Program Objectives

The Computer Information Systems program offers the opportunity for students to develop knowledge and skills in analysis and design of business information systems, database development, software development, and networking. This program prepares the students for professional careers in the rapidly changing field of computer information systems. Students develop good communication skills and the ability for teamwork and leadership roles in their professional careers.

All CIS majors are encouraged to register for a minor in Business Administration.

## Program of Study

### Liberal Arts and Sciences Requirements

ENGL	1100	Writing I	3 S.H.
ENGL	1200	Writing II	3 S.H.
PHED	1000	Health & Fitness	3 S.H.
CSC	1000	Introduction to GUI Programming	3 S.H.
CSC	1400	Computer Information Systems	3 S.H.
CSC/			
MATH	1900	Discrete Mathematics	3 S.H.
ECON	1000	Macroeconomics	3 S.H.
ECON	1200	Microeconomics	3 S.H.
+MATH	1250	Introduction to Functions	3 S.H.
MATH	1800	Business Statistics	3 S.H.
MATH	2200	Calculus for Business	3 S.H.
		Additional Liberal Arts and Science Requirements	28 S.H.
		Subtotal for Liberal Arts and Science	61 S.H.

### Required for Major

BSAD	2010	Introduction to Financial Reporting	3 S.H.
BSAD	3200	Principles of Management	3 S.H.
BSAD	3300	Fundamentals of Marketing	3 S.H.
BSAD	3710	Systems Analysis Methods	3 S.H.
*BSAD	4700	Systems Design & Implementation	3 S.H.
CSC	1500	Computer Science I	3 S.H.
CSC	1550	Computer Science II	3 S.H.
CSC	2400	Database Systems	3 S.H.
CSC	2560	Systems Programming	3 S.H.
CSC	2700	Business Programming	3 S.H.
CSC	3450	Local Area Networks	3 S.H.
		Five additional CS electives at or above 3000 level	15 S.H.
		Subtotal for Major	48 S.H.
		Free Electives from any area	11 S.H.
		<b>Total for degree</b>	<b>120 S.H.</b>

\* Course used to satisfy Junior/Senior Writing, and Speaking and Listening requirements. Computer Literacy requirement is satisfied by CS core.

+ Pending Placement Exam results.

# BA/BS in Interdisciplinary Studies (formerly General Studies)

## Program Manager

George Bohrer

## Program Objectives

The Bachelor of Science and Bachelor of Arts in Interdisciplinary Studies degrees provide for individually-designed, interdisciplinary majors, which allow students to work with faculty advisors to develop a plan of study that responds to individual educational and professional goals. The programs are particularly well-suited to adult learners, because they provide the opportunity for part-time, individually-paced education which allows students to build their academic confidence and integrate their studies into their lives.

## Admission Standards and Criteria

There is a formal application procedure for students who choose to major in Interdisciplinary Studies. However, before the application is submitted to the Interdisciplinary Studies Coordinator, a student must have completed at least four semesters of college level work. The purpose of the application is to:

- Set forth the student's academic and professional goals and demonstrate why they are best achieved through the Interdisciplinary Studies Program
- Require students to outline their proposed program
- Stipulate any required independent exercise or internship
- Provide college-level courses and grades

The Interdisciplinary Studies Coordinator along with the Interdisciplinary Studies Committee reviews the application with the student and, if approved, finalize the plan of study. The student's advisor is chosen and will be responsible for filing a copy of the student's program with the Registrar. Any subsequent changes in the student's program must be approved by the student's Interdisciplinary Studies Committee.

## Breakdown of Requirements for Major

- A minimum of 36 semester hours of course work for the major with a college-approved minor within one of the three fields
- A minimum of 9 semester hours in each of the other two fields of study (defined by disciplines, not department or tracks)
- A common core of three Liberal Arts and Sciences interdisciplinary courses: IDIS 1800, Global Issues; MUSC 2000, Commonwealth of the Arts **or** MUSC 2100, Commonwealth of the Ancient Arts; and PHIL 1100, Logic **or** PHIL 2600, Philosophy of Human Nature **or** PHIL 3340 Contemporary Philosophy **or** PHIL 4430 Marxism.
- A senior-year “Capstone” course intended to help students to integrate the various fields of study  
This may take the form of an independent study or an internship (3-15 semester hours)
- A minimum 30 semester hours of course work completed after the program of study is approved and filed with the registrar

A student’s program must meet the approval of their Interdisciplinary Studies’ advisor and advisors from each of the chosen fields of study.

## Program of Study

The Interdisciplinary Studies degree is typically awarded as a Bachelor of Science. A Bachelor of Arts is awarded if the student includes foreign language study through the second year of college level work and concentrates his/her field of studies in the Liberal Arts and Sciences fields.

There are many possible combinations of course work available through this major, limited only by the breadth of courses offered through the day and evening divisions of the college. When creating a plan of study, a student must have a rationale for a thematic approach to their program. Students must meet the following requirements for the major:

### Liberal Arts and Sciences Requirements

*LA&S Requirements (may go up to 63, depending upon whether science courses taken are 3 or 4 S.H.)* **60 S.H.**

### Major Required Courses

*Major Courses including the required core (three or four fields of study)* **36 S.H.**

### Capstone

*Capstone Course, Project, or Internship in Major* **3-15 S.H.**

### Electives

*Electives (may be fewer depending upon credits taken in above two categories.)* **21 S.H.**

**Total for Degree 120 S.H.**

## BS in Occupational/Vocational Education

### Chairperson

James Andrews

### Program Manager

James Alicata

## Program Objectives

The college’s undergraduate Occupational Education Degree program provides students with a blend of academic, vocational technical teaching, and elective learning opportunities. The program is committed to educating participants in comprehensive personnel development, which responds to specific occupational updating, professional growth and enhancement, and state-of-the-art information sharing for and with vocational technical educators. The program advocates a teaching approach, which brings about desired changes in the knowledge, skills, attitudes, and appreciation level of those in training.

## Program of Study

The Occupational/Vocational Education degree is a Bachelor of Science Degree. A significant component of the program is the availability to students at off-campus vocational technical school sites located across Massachusetts.

Job relevance and valid, reliable, vocational technical practice is attained through participatory planning and affiliation with industry, vocational technical school practitioners, professional associations, and representatives of the college.

The program offers up to twelve credits in recognition of the work experiences of the participating students. Candidates may apply for the trade experience credit after completing eighty credits in the program.

### Principal Sites where the Program is Offered

#### North

Greater Lowell Regional Vocational Technical High School

#### Central

Assabet Valley Regional Vocational High School

Montachusett Regional Vocational Technical High School

#### South

Bristol-Plymouth Regional Vocational High School

Diman Regional Vocational Technical High School

### General Education or Liberal Arts and Sciences Requirements

<i>CSC</i>	<i>1100</i>	<i>Computer Application Programming</i>	<i>3 S.H.</i>
<i>ENGL</i>	<i>1100</i>	<i>Writing I</i>	<i>3 S.H.</i>
<i>ENGL</i>	<i>1200</i>	<i>Writing II</i>	<i>3 S.H.</i>
<i>HIST</i>	<i>1400</i>	<i>US History I or</i>	<i>3 S.H.</i>
<i>HIST</i>	<i>1500</i>	<i>US History II</i>	<i>3 S.H.</i>
<i>PHED</i>	<i>1000</i>	<i>Health and Fitness</i>	<i>3 S.H.</i>
<i>PHIL</i>	<i>1000</i>	<i>Introduction to Western Philosophy</i>	<i>3 S.H.</i>
<i>PHIL</i>	<i>2000</i>	<i>Philosophy of Education</i>	<i>3 S.H.</i>
<i>PSY</i>	<i>1100</i>	<i>General Psychology</i>	<i>3 S.H.</i>
<i>PSY</i>	<i>2230</i>	<i>Adolescent Psychology</i>	<i>3 S.H.</i>
<i>SPCH</i>	<i>1000</i>	<i>Introduction to Speech Communications</i>	<i>3 S.H.</i>
		<i>Additional Liberal Arts and Sciences Requirements</i>	<i>33 S.H.</i>
		<b>Subtotal</b>	<b>60 S.H.</b>

### **Vocational Education Requirements**

OCED	2515	Teaching Methods: Instructional Strategies in Vocational Technical Education	3 S.H.
OCED	2516	Teaching Methods: Educating the Vocational Technical Learner	3 S.H.
OCED	2518	Management of the Vocational Technical Education Environment	3 S.H.
OCED	2523	Students with Special Needs in Vocational Technical Education	3 S.H.
OCED	2529	Competency Based Vocational Technical Curriculum Development	3 S.H.
OCED	2539	Implementing a Competency Based Curriculum	3 S.H.
OCED	2547	Brain Compatibility: Teaching and Learning	3 S.H.
OCED	3517	Fundamentals of Vocational Technical Education	3 S.H.
OCED	3545	Computerized Vocational Technical Curriculum Management	3 S.H.
OCED	3546	Integrated Vocational Technical and Academic Curriculum	3 S.H.
OCED	3549	Assessment Standards and Evaluation	3 S.H.
OCED	4534	Supervised Practicum in Vocational Education	3 S.H.
		Requirements Subtotal	36 S.H.
		*Trade Experience	0-12 S.H.
		*Free Electives	0-24 S.H.
		<b>Total for Degree</b>	<b>120 S.H.</b>

\* A total of 24 semester hours is required between trade experience and free electives.

## Minor in English

### **Chairperson**

Roberta Adams

### **Program Manager**

Margarite Roumas

### **Program Objectives**

The minor in English allows students of other disciplines to add a concentration in literature to their plan of study. The minor provides a wide range of courses in literature that enhance a student's critical thinking and appreciation for the masters of the written word.

### **Program of Study**

The Literature Concentration requires 18 semester hours of study. The following courses, offered in the evening and during summer sessions, satisfy the requirements as approved by the English Department:

ENGL	1999	Approaches to English Studies	3 S.H.
Six hours of survey selected from:			
ENGL	2000	American Literature from the Age of Exploration to the Civil War	3 S.H.
ENGL	2100	American Literature from the Civil War to the Present	3 S.H.
ENGL	2200	English Literature from Beowulf to Milton	3 S.H.
ENGL	2210	English Literature from Pepys to Shelley	3 S.H.
ENGL	2220	English Literature from Bronte to Rushdie	3 S.H.
ENGL	2400	World Literature I	3 S.H.
ENGL	2500	World Literature II	3 S.H.

Nine additional hours in literature electives selected from the remainder of the above and/or the following (six must be at the 3000 level or above):

ENGL	2300	Literature and Disability	3 S.H.
ENGL	2620	Classical Mythology	3 S.H.
ENGL	2700	The Short Story	3 S.H.
ENGL	2750	Detective Fiction	3 S.H.
ENGL	2900	Children's Literature	3 S.H.
ENGL	3020	Modern Drama	3 S.H.
ENGL	3210	Major American Authors of 20th Century	3 S.H.
ENGL	3220	American Novel to 1950	3 S.H.
ENGL	4095	The Age of Dickens	3 S.H.
ENGL	4120	20th Century Irish Literature <b>or</b>	3 S.H.
ENGL	4140	Modern Poetry	3 S.H.
ENGL	4260	Journalist to Novelist	3 S.H.

Other English electives as approved by the English Department

**Total for English Minor 18 S.H.**

## Minor in Psychology

### Chairperson

John Hancock

### Program Objective

The minor in Psychology is particularly useful for students who wish to complement their chosen major with psychology courses relevant to their area of study, as well as for students who wish to gain a general knowledge of Psychology for application to their own lives.

### Program of Study

The minor is designed to enable the student:

- To understand and evaluate psychological research and literature
- To choose courses which complement and relate to the major field of study
- To explore a particular interest in Psychology in depth

Accordingly, the following course organization is required:

#### Group I

Two courses are required:

PSY	1100	General Psychology (prerequisite not counted towards minor)
PSY	2110	Introduction to Research Methods

#### Group II

At least one course is to be taken from **each** of any three of the four areas (Adaptive, Applied Studies, Basic Processes, and Developmental) described under the psychology major described in the section titled "Undergraduate Day Programs."

The remaining required courses may be selected from either the integrative courses (Group III) or any one of the above mentioned areas. Courses may also include:

PSY	2200	Human Growth and Development
PSY	2750	Tests and Measurements
		<b>Total for Psychology Minor</b>
		<b>18 S.H.</b>

## Certificate Programs in Business

### Program Manager

Sylvia Charland

### Certificate in Business

The Certificate in Business allows students with or without a college degree to learn the fundamentals of Business Administration. The credit earned for the certificate can be applied to an undergraduate degree in Business or can serve as prerequisites for an MBA or Management Science Program.

#### Requirements

BSAD	2010	Introduction to Financial Reporting	3 S.H.
BSAD	2020	Introduction to Managerial Accounting	3 S.H.
BSAD	3200	Principles of Management	3 S.H.
BSAD	3300	Fundamentals of Marketing	3 S.H.
BSAD	3400	Basic Finance	3 S.H.
BSAD	3500	Business Law I	3 S.H.
<b>Total for Certificate</b>			<b>18 S.H.</b>

- At least three of the six courses must be completed at Fitchburg State College, including the last two courses
- Students must maintain a cumulative Grade Point Average of 2.0 or better

### Office Administration Certificate

There are two phases of course work to attain the Certificate of Office Administration. Phase I can be completed independently of Phase II, but Phase II requires completion of Phase I.

#### Phase I

##### Requirements

CSC	1050	Internet Communications	3 S.H.
CSC	1100	Computer Applications Programming I	3 S.H.
CSC	1200	Introduction to Microsoft Windows and Word Processing	3 S.H.
BSAD	3200	Principles of Management	3 S.H.
BSAD	2010	Introduction to Financial Reporting	3 S.H.
ENGL	1100	Writing I	3 S.H.
Subtotal Phase I			18 S.H.

#### Phase II

##### Requirements

CSC	1300	Introduction to Spreadsheets and Databases	3 S.H.
BSAD	2020	Introduction to Managerial Accounting	3 S.H.
BSAD	3210	Human Resources Management	3 S.H.
BSAD	3500	Business Law I	3 S.H.
Subtotal Phase II			12 S.H.
<b>Total for Certificate</b>			<b>30 S.H.</b>

- At least eight of the ten courses must be completed at Fitchburg State College, including the last two courses
- Students must maintain a cumulative GPA of 2.0 or better

# Certificate Programs in Computer Science

## Program Manager

Nadimpalli Mahadev

The certificate programs in Computer Science are designed for those who work with computers at their workplace and wish to sharpen their skills in specific areas. All the courses are part of the undergraduate curriculum. In order to earn a certificate, a minimum grade point average of 3.0 must be maintained within the program. At least 50% of the courses must be completed at Fitchburg State College. The department must approve all other courses.

### Computer Use and Applications Certificate

This certificate provides basic computer literacy skills in the usage of Internet, e-mail and a popular operating system. In addition, word processing, spreadsheets, databases and presentation graphics are studied in detail.

CSC	1050	Internet Communications	3 S.H.
CSC	1100	Computer Applications	3 S.H.
CSC	1200	Intro. to Windows and Word Processing	3 S.H.
CSC	1300	Intro. to Spreadsheets and Databases	3 S.H.
<b>Total for Certificate</b>			<b>12 S.H.</b>

### Web Development Certificate

The Internet plays a crucial role in the information revolution. It is used increasingly for personal and business communications, for commerce and exchange of ideas, and as a source of information and entertainment. This certificate provides the knowledge and skills needed to make the best use of what Internet can offer and to create professional quality web pages.

CSC	1050	Internet Communications	3 S.H.
CSC	1150	Basics of Web Design	3 S.H.
CSC	2150	Advanced Web Design with Scripting	3 S.H.
CSC	3250	Advanced Topics in Web Development	3 S.H.
<b>Total for Certificate</b>			<b>12 S.H.</b>

### Applied Programming Certificate

This certificate introduces the programming languages that are used to program small and large businesses applications.

CSC	1000	Intro. to GUI Programming	3 S.H.
CSC	1500	Computer Science I	3 S.H.
CSC	1550	Computer Science II	3 S.H.
CSC	2700	Business Programming	3 S.H.
<b>Total for Certificate</b>			<b>12 S.H.</b>

### High Level Languages Certificate

This certificate introduces the high level programming languages, at the assembler level, at the structured programming level and at the object-oriented programming level.

CSC	1500	Computer Science I	3 S.H.
CSC	1550	Computer Science II	3 S.H.
CSC/			
MATH	1900	Discrete Mathematics	3 S.H.
CSC	2500	Assembly Language	3 S.H.
CSC	2560	Systems Programming	3 S.H.
<b>Total for Certificate</b>			<b>15 S.H.</b>

### Java Programming Certificate

Java is a very elegant and popular object oriented programming language. In addition, it is platform independent and simplifies programming for the Internet, distributed networking, database access, embedded systems and client/server computing. This certificate provides for building programming skills from very basic to advanced web programming with Java.

CSC	1500	Computer Science I	3 S.H.
CSC	1550	Computer Science II	3 S.H.
CSC/			
MATH	1900	Discrete Mathematics	3 S.H.
CSC	2400	Database Systems	3 S.H.
CSC	2560	Systems Programming	3 S.H.
CSC	3050	Web Programming with Java	3 S.H.
<b>Total for Certificate</b>			<b>18 S.H.</b>

### Microsoft Foundation Classes Certificate

Microsoft Foundation Classes (MFC) provides the Application Programming Interface (API) for creating applications for Win32 platforms. This certificate provides the knowledge and skills needed for creating Windows applications.

CSC	1500	Computer Science I	3 S.H.
CSC	1550	Computer Science II	3 S.H.
CSC/			
MATH	1900	Discrete Mathematics	3 S.H.
CSC	2560	Systems Programming	3 S.H.
CSC	3500	Object Oriented Programming	3 S.H.
CSC	3550	Windows Programming with MFC	3 S.H.
<b>Total for Certificate</b>			<b>18 S.H.</b>

### Database Systems Certificate

Database systems have evolved for managing large-scale information securely and efficiently. This certificate provides in-depth knowledge of how databases work, where they are used and how to program databases for information storage and retrieval.

CSC	1000	Intro. to GUI Programming	3 S.H.
CSC	1400	Computer Information Systems	3 S.H.
CSC	1500	Computer Science I	3 S.H.
CSC	1550	Computer Science II	3 S.H.
CSC/			
MATH	1900	Discrete Mathematics	3 S.H.
CSC	2400	Database Systems	3 S.H.
CSC	4550	Database Programming	3 S.H.
<b>Total for Certificate</b>			<b>21 S.H.</b>

### Computer Hardware Certificate

This certificate provides the theoretical background in computer hardware needed for more advanced topics such as Data Communications, Digital Signal Processing and Embedded Systems.

MATH	1300	Precalculus	3 S.H.
CSC	1600	Intro. to Electronics	4 S.H.
CSC	1650	Digital Electronics	4 S.H.
CSC	2500	Assembly Language	3 S.H.
CSC	2600	Computer Organization	4 S.H.
CSC	3600	Microprocessors	4 S.H.
<b>Total for Certificate</b>			<b>22 S.H.</b>

### Software Engineering Certificate

Software Engineering is one of the fastest growing professions as we move from the Industrial Revolution to the era of Information Technology Revolution. The graduates of this certificate not only acquire good programming skills, but also understand the life cycle of a software product and how to design software for efficiency, maintenance and upgrades.

CSC	1500	Computer Science I	3 S.H.
CSC	1550	Computer Science II	3 S.H.
CSC/			
MATH	1900	Discrete Mathematics	3 S.H.
CSC	2560	Systems Programming	3 S.H.
CSC	3200	Programming Languages	3 S.H.
CSC	3500	Object Oriented Programming	3 S.H.
CSC	3700	Algorithms and Data Structures	3 S.H.
CSC	4400	Software Design	3 S.H.
<b>Total for Certificate</b>			<b>24 S.H.</b>

## Certificate Program in Plastics Technology

### Program Manager

Steven Therrien

In cooperation with NYPRO, Inc., the college offers a certificate program in Plastics Technology. Located in Clinton, MA, NYPRO is a world-class leader in injection molding. The program is open both to NYPRO employees and to any other student desiring to learn about injection molding and the manufacturing process involving conversion of raw material into finished parts and products. Course instructors, approved by Fitchburg State College, have extensive backgrounds in the plastics industry.

### Requirements

Many of the courses include a laboratory component wherein students utilize actual injection mold machines. These activities are designed to enhance the learning experience.

The courses are held in the evenings each fall and spring semester in the modern classroom facilities of the NYPRO Institute in Clinton, MA. Students must maintain a cumulative GPA of 2.0 in order to earn the certificate.

### Required Courses

PLAS	1010	Blueprint Reading	3 S.H.
PLAS	1030	Industrial Electrical Maintenance	3 S.H.
PLAS	2020	Mold Design	3 S.H.
PLAS	2040	Hydraulics/Pneumatics	3 S.H.
PLAS	2050	Injection Molding	3 S.H.
PLAS	2070	Principles of Supervision	3 S.H.
PLAS	3060	Polymeric Materials, Design and Application	3 S.H.
PLAS	3080	Statistical Process Control	3 S.H.
<b>Total for Certificate</b>			<b>24 S.H.</b>

## Approval Programs

### Program Manager

James Alicata

## Vocational Technical Teacher Approval Program

Candidates seeking credentials as approved vocational technical instructors must successfully complete a thirty-six semester hour competency based training program. This training program provides the candidate with the curriculum, organizational and delivery skills, along with the methodological and pedagogical competencies needed to become an effective vocational technical instructor or pursue a baccalaureate program.

### Part I

OCED	2515	Teaching Methods: Instructional Strategies in Vocational Technical Education	3 S.H.
OCED	2516	Teaching Methods: Educating the Vocational Technical Learner	3 S.H.
OCED	2518	Management of Vocational Technical Education Environment	3 S.H.
OCED	2523	Students with Special Needs in Vocational Technical Education	3 S.H.
OCED	2529	Competency Based Vocational Technical Curriculum Development	3 S.H.
OCED	2539	Implementing a Competency Based Curriculum	3 S.H.
OCED	2547	Brain Compatibility: Teaching and Learning	3 S.H.
OCED	4534	Supervised Practicum in Vocational Education	3 S.H.
		<b>Subtotal Part I</b>	<b>24 S.H.</b>

### Part II

OCED	3517	Fundamentals of Vocational Technical Education	3 S.H.
OCED	3545	Computerized Vocational Technical Curriculum Management	3 S.H.
OCED	3546	Integrated Vocational Technical and Academic Curriculum	3 S.H.
OCED	3549	Assessment Standards and Evaluation	3 S.H.
		<b>Subtotal Part II</b>	<b>12 S.H.</b>
		<b>Total for Program</b>	<b>36 S.H.</b>

## Post-Baccalaureate Certificate Program in Clinical Laboratory Sciences

### Program Objectives

This 12 month program provides students who have a B.S. degree in biology or a related area, with the professional and clinical courses in Clinical Lab Sciences (Medical Technology). Upon successful completion, students are awarded a certificate and are eligible to sit for one of the national certifying examinations in medical technology. The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS [www.naacls.org](http://www.naacls.org)).

### Program Description

The program consists of 14 courses (40 credits) taken in a required sequence with a short internship at the end. Internship sites are selected by the faculty and have prior contractual relationships with the college. All courses must have advisor approval prior to registration.

### Admissions Standards and Criteria

To apply for enrollment in the CLS certificate program, a student must submit documents outlined in the graduate admission section as well as:

- Completed courses in Genetics, General Microbiology with lab and Immunology
- MAT/GRE/GMAT exams not required

### Program of Study

CLS	2000	Basic Hematology	3 S.H.
CLS	2100	Basic Lab Skills	4 S.H.
CLS	3200	Immunoassay/Clinical Virology	3 S.H.
CLS	3400	Parasitology/Mycology	3 S.H.
CLS	4000/50	Clinical Hematology I/II	7 S.H.
CLS	4200/50	Clinical Chemistry I/II	8 S.H.
CLS	4400/50	Clinical Microbiology I/II	6 S.H.
CLS	4600/50	Immunohematology I/II	4 S.H.
CLS	4800/50	Clinical Correlations I/II	2 S.H.
		<b>Total for Certificate</b>	<b>40 S.H.</b>

### Certificate and Eligibility for Certification

Upon completion of the program, students receive a certificate and are eligible to take one of the national certifying exams: either the Board of Registry exam sponsored by American Society for Clinical Pathology (A.S.C.P.) or the National Credentialing Agency for Laboratory Personnel (NCA).



# Undergraduate Course Descriptions



# African-American Studies

## Key to Course Offerings

- Q: designates courses in the Quantitative Scientific Cluster  
I: the Ideas and Events Cluster  
B: the Human Behavior Cluster  
L: the Literature, Language and Arts Cluster  
C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

- \* Asterisk indicates that the course may be offered less than once every two years.

- ▲ Undergraduate Day School  
● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

## Introduction to African-American Studies **AAST 1000** 3 cr. 3 hr. ▲

This introductory course defines the origins and scope of African-American studies. It provides a survey of the social, economic, religious, and cultural expressions of African-Americans as they followed the tangled path from Africa through slavery, emancipation into the 20th century. I, L, C, IDIS

## African-American History ▲

(See HIST 2300) I, C

## Modern African History ▲

(See HIST 2930) I, C

## History of African-American Women ▲

(See HIST 2520) I, L, C, IDIS

## 20th Century African-American Literature ▲

(See ENGL 2670) L, C

## Other Voices ▲

(See ENGL 2650) L, C

## Peoples and Cultures of Africa ▲

(See SOC 2510) B, C

## History of Jazz ▲

(See MUSC 3800) L, C

## African Jazz Dance ▲

(See PHED 1310)  
I, L, C, IDIS

## Independent Study in African-American Studies ▲

**AAST 4901-4903** 1-3 cr.

## Directed Studies in African-American Studies ▲

**AAST 4975**

# Art

## Key to Course Offerings

- Q: designates courses in the Quantitative Scientific Cluster  
I: the Ideas and Events Cluster  
B: the Human Behavior Cluster  
L: the Literature, Language and Arts Cluster  
C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

- \* Asterisk indicates that the course may be offered less than once every two years.

- ▲ Undergraduate Day School  
● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

## Art Appreciation

**ART 1100** 3 cr. 3 hr. ▲ ●

The course presents a condensed survey of art history from prehistoric art to the present emphasizing the historical relationship of style and content. The Greek, Roman, Renaissance, Impressionist, and Modern art periods are emphasized. Women artists featured are Artemisia Gentileschi, Elizabeth Vigee-Lebrun, Mary Cassatt, Berthe Morisot, Georgia O’Keeffe, Elizabeth Murray, and many others. Minority artists included in the survey are Henry Ossawa Tanner, Diego Rivera, Jacob Lawrence, Romare Bearden, Martin Puryear, and many others. L, C

## Survey of Art Forms I

**ART 1150** 3 cr. 3 hr. ▲

A study of architecture, sculpture, and painting from ancient Egyptian times to the Renaissance in Europe. Asian and other non-western or ethnographic cultures may be included. Emphasis is placed on understanding style in these various art forms. L, C

## Survey of Art Forms II

**ART 1160** 3 cr. 3 hr. ▲

This survey of significant styles in the architecture and painting of the Western World depicts art from the year 1400 to the present with emphasis upon the special nature of the visual experience. L, C

## Introduction to Studio Art: Drawing, Painting, and Sculpture

**ART 1300** 3 cr. 3 hr.

This course provides a hands-on introduction to drawing, painting, and sculpture. The course will emphasize the fundamentals of each studio discipline, but even as students work on developing observational and technical skills, they will also be exploring the expressive potential of visual art: the way that the various elements of drawing, painting, and sculpture can be used to embody very different feelings and ideas, depending on how they are handled.

## Drawing

**ART 1400** 3 cr. 6 hr. ▲ ●

A studio course that introduces students to the practice of drawing with emphasis on the description of form through means of line, shade, and perspective. An investigation of a variety of media as well as of basic stylistic alternatives is encouraged. L, C

## Introductory Painting

**ART 1450** 3 cr. 6 hr. ▲

The course studies the basic problems of form, color, and texture as understood in oil paintings. Consideration is also given to the nature and use of the oil painting materials themselves. L

## Design

**ART 1600** 3 cr. 3 hr. ▲ ●

In this course the basic elements and principles of design are analyzed and applied to the creation of two-dimensional form. Topics covered include the effect of black and white, color, mixed media, scale, and texture on form. Lectures, slides, film, and visual presentations are included in the course program. L

## Three-Dimensional Design

**ART 1650** 3 cr. 3 hr. ▲

This course explores three-dimensional design concepts as they have been applied historically. Topics covered include form, space, structure, scale, line, and color. Lectures, slides, film, and visual presentations are included in the course program. L

## Contemporary Art

**ART 1720** 3 cr. 3 hr. ▲

The course presents a study of recent and contemporary trends in American and international art from 1945 to the present. The course consists of active student participation in slide discussions and museum trips. L, C

## Sculpture I

**ART 1840** 3 cr. 6 hr. ▲

This introductory studio course encourages students to explore their ideas and to transform them into sculpture. Students combine creativity, exciting materials, and basic sculpture techniques to create unique works of art. L

## Life Drawing

**ART 2200** 3 cr. 6 hr. ▲

The basic problems in form and anatomy are studied while drawing from the nude and costumed model. Various techniques and tools are explored, including a study of some of the great masters' drawings. L

## Intermediate Drawing

**ART 2250** 3 cr. 6 hr. ▲ ●

The course is an advanced study of pictorial technique in dry media, including but not limited to charcoal, pencil, conte, and pastel. Emphasis is placed on the developing of a student's own style through a variety of subjects and media. L

*Prerequisite:* ART 1400 or permission of instructor.

## American Art

**ART 2300** 3 cr. 3 hr. ▲

The course is a survey of significant stylistic developments in visual arts from the earliest colonial times to the present. L

## Sculpture II

**\*ART 2400** 3 cr. 6 hr. ▲

This advanced studio course is an expansion upon the basic principles of sculpture. Sculpture projects are geared toward the individual interests and requirements of the advanced student. L

*Prerequisite:* ART 1840 or permission of instructor.

## Water-Based Media

**ART 2450** 3 cr. 4 hr. ▲ ●

The course explores the principles, materials, techniques, and history of transparent watercolor. This course deals primarily with transparent watercolors, but opaque aqueous media is touched upon. Basic knowledge and skills are developed so that the student may acquire rudiments for visual expression through this media. Although Basic Drawing is desirable, it is not required. L

## Art of the Renaissance

**ART 2550** 3 cr. 3 hr. ▲

The course studies the development of painting, sculpture, and architecture in Italy from 1250 to 1550, the age of Michelangelo, and the Northern Europe Renaissance from 1400 to 1600. L

## Intermediate Painting

**\*ART 2600** 3 cr. 6 hr. ▲

The course provides an advanced study of pictorial techniques with an emphasis on personal expression in oil, acrylic, or water based media. The class may be repeated for credit. L

*Prerequisite:* ART 1450, 2450 or permission of instructor.

## Nineteenth Century Art

**ART 2900** 3 cr. 3 hr. ▲

This survey is comprised of art from French Neo-Classicism through Post-Impressionism, including the movements of Romanticism, Realism, and Impressionism. Emphasis is placed on French, British, and German art, with pertinent comparisons to American, Japanese, African, and ethnographic art. Students study women and minority artists including Berthe Morisot, Mary Cassatt, Rosa Bonheur, Suzanne Valadon, Henry Osawa Tanner, and others. L

## Art Criticism

**ART 3100** 3 cr. 3 hr. ▲

The course is a study of the development of modern art criticism. The course begins by examining traditional art criticism as established by Panofsky, Woefflin, and others. It then concentrates on contemporary art and criticism, commencing with Clement Greenberg in the 1940s and concluding with Postmodern criticism of the 1980s and 1990s. L, IDIS

*Prerequisite:* one Art History course or Music 2000.

## Early Twentieth Century Art

**ART 3150** 3 cr. 3 hr. ▲

The course is a survey of multicultural art from 1890 to 1945 in Europe and the United States. Periods covered include French Post Impressionism, Fauvism, and Cubism; German Expressionism; Spanish and French Surrealism; Early American Modernism, the Harlem Renaissance, and Regionalism. Students study women and minority artists including Suzanne Valadon, Kathe Kollwitz, Gabriel Munter, Frida Kahlo, Emily Carr, Georgia O'Keefe, Henry Ossawa Tanner, Jacob Lawrence, Romare Bearden, Horace Pippin, Bob Thompson, Diego Rivera, and others. L, C

### History of Architecture

**ART 3300** 3 cr. 3 hr. ▲

This course presents a condensed survey of architectural history from ancient art to the present. Periods studied include Greek, Roman, Romanesque, Gothic, Renaissance, and Baroque architecture. Non-Western architecture includes the culture of Japan, Pre-Columbian Mexico, India, and Islam. I, L, IDIS, C

### History of Modern Architecture

**ART 3500** 3 cr. 3 hr. ▲

A study of architecture with a concentration upon the nineteenth and twentieth centuries. Periods begin with early American architecture and continue through the various revivals of the nineteenth century, include Art Nouveau and the Chicago School, and conclude with the modern skyscrapers and post-modern architecture. Some concentration will be placed upon the works of Richardson, Sullivan, and Frank Lloyd Wright. L, IDIS

### Women, Art, and Society

**ART 3700** 3 cr. 3 hr. ▲ ●

This course introduces the student to the place and roles of women in the world of visual and fine arts from the middle ages to the present. L, C

### Independent Study in Art

**ART 4901-4903** 1-3 cr. ▲ ●

The independent study is for selected students who have approval of both the department head and their advising Instructor.

### Museum Internship

**\*ART 4950** 3 cr. 6 hr. ▲

In conjunction with Fitchburg State College, the Fitchburg Art Museum offers a multi-faceted learning experience coupled with practical application conducted in the Fitchburg Art Museum and in elementary school classrooms of Fitchburg and surrounding towns. Student Instructors are trained to give instructional lectures about the ancient cultures of Egypt, Mesopotamia, and Mesa Verde, to school children both in the Museum galleries and in the classroom.

### Directed Study

**ART 4975** 1-6 cr. ▲ ●

## Biology

### Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

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C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as "Topics" courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

### Introduction to Life Science I

**BIOL 1000** 3 cr. 4 hr. ▲ ●

*Offered in the fall semester for day students.*

The course focuses on the history, philosophy, and content of biology as a science. Laboratory work includes experiences that emphasize problem solving by the student. Q

### Introduction to Life Science II

**BIOL 1100** 3 cr. 4 hr. ▲ ●

*Offered in the spring semester for day students.*

Continuation of BIOL 1000. Q

### Anatomy and Physiology I

**BIOL 1200** 4 cr. 5 hr. ▲ ●

*Offered in the fall semester for day students.*

The course explores the structure and function of the human organism on the cellular, tissue, organ, and system levels. Cellular metabolism, histology, and the following systems: skeletal, muscular, and nervous (including the special senses) are examined. The laboratory emphasizes both physiology and the dissection of preserved mammalian specimens. (Not open to students who have completed BIOL 1700, Human Biology or BIOL 2420, Human Physiology.) Q

### Anatomy and Physiology II

**BIOL 1300** 4 cr. 5 hr. ▲ ●

*Offered in the spring semester for day students.*

This course is a continuation of BIOL 1200. The following systems are covered: circulatory, respiratory, digestive, excretory, endocrine, and reproductive.

(Not open to students who have completed BIOL 1700, Human Biology or BIOL 2420, Human Physiology.) Q

*Prerequisite: BIOL 1200 or permission of Instructor.*

### Adaptations

**BIOL 1350** 3 cr. 3 hr. ▲

The human organism is examined in terms of its adaptation to acute and chronic stress. Physiological responses to such stressors as exercise, heat, darkness, altitude, and nutrition are studied theoretically and in a laboratory setting. Q, IDIS

### General Botany

**\*BIOL 1400** 3 cr. 4 hr. ▲ ●

The course focuses on the biology of bryophytes, ferns, gymnosperms, and angiosperms. The relationship of plant biology to agriculture and medicine is also discussed. The laboratory involves the study of live and preserved plant materials, simple physiological experiments, and a plant growth project. The class is not open for majors or minors in Biology. Q

### Seminar in Modern Biology

**\*BIOL 1500** 1 cr. 1 hr. ▲

The seminar evolves around the discussion of current topics in basic and applied biological research based on readings of original scientific reports. Each student is expected to prepare one brief presentation on a topic of his or her choice.

### Nutrition

**BIOL 1650** 3 cr. 3 hr. ▲ ●

The course involves an examination of nutrients in foods and their metabolic role in normal nutrition. Emphasis is on energy sources and utilization, vitamins and minerals, nutritional requirements in relation to the changing demands of life, and the effect of food handling and processing on the nutrient content of food. Course material is facilitated by lectures, discussions, and personal nutrition projects. Q

## Human Biology

**BIOL 1700** 3 cr. 3 hr. ▲

Students learn the anatomy and physiology of the cells, tissues, organs, and organ systems of the human organism as well as their functional inter-relationships. (The class is not open to students who have completed BIOL 1200, 1300.) Unless permission of instructor is granted. Q

## General Biology I

**BIOL 1800** 4 cr. 6 hr. ▲ ●

The course examines principles of molecular, cellular, and organismal biology. Topics include biomolecules, cell structure and function, and information processing and inheritance. The laboratory emphasizes the scientific method through experimentation. Q

## General Biology II

**BIOL 1900** 4 cr. 6 hr. ▲ ●

The class is a continuation of BIOL 1800. The course examines principles of organismal, population and community biology. Topics include comparative anatomy and physiology, evolution and ecology. The laboratory emphasizes hypothesis formation and testing as well as data gathering and analysis. Q

## Biology of Drugs

**BIOL 2000** 3 cr. 3 hr. ▲

A study of the biological effects of drugs at the cellular level. Emphasis is placed on the more popular psychoactive drugs. *Prerequisite: one year of Biology, Chemistry, or permission of Instructor.*

## Introductory Ecology

**BIOL 2300** 3 cr. 4 hr. ▲

*Offered in the fall semester for day students.* The course is a survey of major ecological concepts and methodology as a basis for further investigations of the dynamic relationship between organisms and their environment. Field and laboratory work emphasize problem identification, formulation of hypotheses, data collection, and analysis and interpretation of results in terms of their biological implications. *Prerequisite: BIOL 1000, or 1100, or 1800, or 1900 or permission of Instructor.*

## Environmental Health

**\*BIOL 2400** 3 cr. 3 hr. ▲

Students conduct investigations into public health with emphasis on forms of life, chemical substances, environmental conditions, and other environmental forces that exert an influence on human health and well-being. *Prerequisite: BIOL 1100 or equivalent or permission of Instructor.*

## Human Physiology

**BIOL 2420** 3 cr. 3 hr. ▲

This course is an intensive study of the functional operation of human organ systems and the interrelationships of these systems. (Intended for students who are majoring in Biology or Clinical Lab Science.) Q

*Prerequisite: Not open to students who have taken BIOL 1200/1300 unless permission of Instructor is granted.*

## Histology

**\*BIOL 2500** 3 cr. 4 hr. ▲

The course starts with a systematic survey of basic animal cell and tissue types, followed by in-depth microscopic study of the major organ systems. Practical work includes histological microtechnique on normal and pathological specimens.

*Prerequisites: BIOL 1800 or BIOL 2420 or BIOL 1200, 1300 or permission of Instructor.*

## Survey of Micro-organisms

**BIOL 2700** 3 cr. 4 hr. ▲

*Offered in the spring semester for day students 3 hrs. lecture, 2 hrs. lab per week plus some additional time.*

The course serves as an introduction to the biology of major groups of micro-organisms including bacteria, viruses, protozoa, and fungi. Emphasis is placed on their role in nature and their relationship to man as agents of infectious diseases. In the laboratory principles and practices of aseptic techniques and diagnostic identification and culture of disease entities are explored.

*Prerequisites: BIOL 1300 and CHEM 1200 or permission of Instructor.*

## Genetics

**BIOL 2800** 4 cr. 6 hr. ▲ ●

*Offered in the spring semester for day students.* Basic principles of biological information processing are examined including Mendelian inheritance, sex determination, chromosome cytogenetics, linkage, recombination and genetic mapping, mutagenesis, molecular genetics and gene-enzyme relationships, and quantitative inheritance. Laboratory work includes study of mutational effects and recombinational analysis in maize, Drosophila, bacteria, and viruses.

*Prerequisite: 3 semester hours of Introductory Biology or equivalent.*

## Introduction to Secondary Teaching

**BIOL 2860** 3 cr. 3 hr. ▲

This course is required of all students preparing for initial license at the secondary level. It is a sophomore level course for full-time undergraduates and the first course taken by transfer students. It is taught at the local high school and is a clinical laboratory experience. This course includes a 25 hour pre-practicum requirement and is a prerequisite for other certification course requirements. Students become familiar with the complexities of secondary school teaching and its demands. The course gives faculty the opportunity to screen students and gives students the opportunity to test their commitment to teaching.

## Marine Biology

**\*BIOL 2900** 3 cr. 4 hr. ▲

*Offered in the fall semester for day students.*

In this course students investigate the distribution of the dominant animals and plants in a salt marsh, sand beach, tide pool, and rocky intertidal area. Data on physical and chemical factors of these habitats is correlated with the composition, behavior, and physiology of the flora and fauna of each habitat.

*Prerequisites: BIOL 1800, 1900 or permission of Instructor.*

## Parasitology

**\*BIOL 3000** 3 cr. 4 hr. ▲

The morphology and diagnostic identification of representative groups of parasitic protozoa, helminths, and arthropods are studied along with their functional life cycles and pathogenic relationships to animal and human hosts. Emphasis is placed on epidemiology, pathology, control, and treatment of important parasitic diseases.

*Prerequisite: BIOL 1900.*

## Plant Physiology

**\*BIOL 3200** 3 cr. 4 hr. ▲

*Offered in the fall semester for day students.*

Individually paced instruction is offered to study the integration of plant structure and function, emphasizing physiology of the integrated plant-water relations, transpiration and translocation, mineral nutrition, photosynthesis, respiration, growth hormones, differentiation, and morphogenesis.

*Prerequisite: BIOL 1900 or BIOL 1400.*

### Cell Biology

**BIOL 3250** 3 cr. 4 hr. ▲

Offered in the fall semester for day students. Cell and subcellular structure and function are covered in this course. Membranes, cell organelles, bioenergetics, photosynthesis, DNA and RNA structure, function and replication, protein synthesis, and gene regulation are the major areas considered. Laboratory includes absorption spectrophotometry, cell fractionation, organelle isolation, DNA isolation, and electrophoresis.  
*Prerequisites:* BIOL 2800 and CHEM 2100 or permission of Instructor.

### Entomology

**\*BIOL 3300** 3 cr. 4 hr. ▲

Offered in the fall semester for day students. Students learn anatomy, habits, life histories, and identification of insects and some related arthropods. Laboratory work includes preparation of a representative collection of adult and larval forms from terrestrial and aquatic environments with emphasis on techniques for identification of these forms.  
*Prerequisite:* BIOL 1900 or permission of Instructor.

### Limnology

**\*BIOL 3400** 3 cr. 4 hr. ▲

Offered in the fall semester for day students. The course offers a study of fresh waters and their inhabitants. Class work surveys protists, invertebrates, vertebrates, and plants collected from local waters and emphasizes their ecological interrelationships as determined by biological, physical, and chemical parameters.  
*Prerequisites:* BIOL 1900 and BIOL 2300 or permission of Instructor.

### Biochemistry

**BIOL 3450** 4 cr. 6 hr. ▲

Offered in the fall semester for day students. The course is a study of the chemistry of biologically important molecules and macromolecules, including metabolism and regulation, water, proteins, enzymes, lipids, carbohydrates, and nucleic acids. Laboratory emphasizes manual and instrumented techniques for isolation, qualitative and quantitative analysis of macromolecules, and the kinetics and induction of enzymes.  
*Prerequisite:* BIOL 2800, CHEM 2100 or permission of Instructor.

### Plant Taxonomy

**\*BIOL 3500** 3 cr. 5 hr. ▲

Offered in the fall semester for day students. The course examines the classification of higher plants in accordance with evolutionary principles and trends. Laboratory is devoted to the techniques of plant identification with emphasis on the terminology and use of botanical keys. Field trips are taken for collecting representative elements of the local flora and preparation of an herbarium.  
*Prerequisite:* BIOL 1800 or 1900 or permission of Instructor.

### Developmental Biology

**BIOL 3550** 4 cr. 6 hr. ▲

Offered in the spring semester for day students. The course examines a detailed survey of developing embryos from the fertilized egg through the various stages leading to the adult organism. Current theories regarding the molecular mechanisms underlying cell differentiation and other classic developmental processes are also themes of this course. Other topics covered in the survey include regeneration, metamorphosis, aging, and cancer. Laboratory involves the study of development in live sea urchins, birds, frogs, and ferns as well as work with prepared slides.  
*Prerequisites:* BIOL 1800, BIOL 1900, BIOL 2800, BIOL 3250, or permission of Instructor.

### Biology of Algae

**\*BIOL 3600** 3 cr. 4 hr. ▲

Students collect and identify common algae found in the New England area. Emphasis is on freshwater forms, but some study of marine algae is conducted as well. Distribution of algal species is correlated with physical and chemical factors in their habitats. Laboratory includes a study of algal physiology and reproduction as well as techniques for cultivation.  
*Prerequisite:* BIOL 1400 or BIOL 1900.

### Vertebrate Biology

**BIOL 3800** 4 cr. 6 hr. ▲

This course provides students with a thorough introduction into the biology of vertebrate animals. Lecture topics include anatomy, physiology, ecology, and evolution of the four classes of vertebrates. Laboratories emphasize the mastery of skills needed to collect and identify vertebrates.  
*Prerequisite:* BIOL 1900 or permission of Instructor.

### General Microbiology

**BIOL 3900** 4 cr. 6 hr. ▲

Offered in the fall semester for day students. The structure, nutrition, and growth of bacteria is examined in this course as well as characterization of representative bacteria, fungi, viruses and protozoa. Their genetic and metabolic peculiarities, immunological techniques, and the immune response in man is studied. Laboratory work includes aseptic technique, isolation and cultivation of microbes, staining techniques and diagnostic metabolic reactions.  
*Prerequisites:* Organic Chemistry and BIOL 2800 or permission of Instructor.

### Endocrinology

**\*BIOL 4250** 3 cr. 3 hr. ▲

The course covers chemical integration of physiological processes by hormones and related agents. Discussions include structure and function of vertebrate and other animal endocrine systems, neuroendocrine relationships, and other topics of current interest.  
*Prerequisites:* BIOL 1200/1300, or BIOL 1800/1900 and one year of Chemistry, or permission of Instructor.

### Molecular Biology

**\*BIOL 4500** 4 cr. 6 hr. ▲

The course offers studies of restriction enzymes, plasmids, gene cloning, recombinant DNA, DNA sequencing, oncogenes, and other topics of current interest. Laboratory work includes restriction enzyme digests and mapping, gene cloning, bacterial transformation, blue/white color selection, minipreps, PCR, blotting techniques and introduction to Bioinformatics.  
*Prerequisites:* BIOL 2800 and BIOL 3250 or BIOL 3450.

### Evolution

**\*BIOL 4600** 3 cr. 3 hr. ▲

The course is an introduction to the principles and processes governing the evolution of living organisms. Emphasis is placed on the ways by which various other biological disciplines relate to evolutionary studies. A survey of paleontological evidence is given to demonstrate how evolutionary principles have affected life.  
*Prerequisites:* BIOL 1900, 2300, and 2800 or permission of Instructor.

## Neurobiology

**\*BIOL 4800** 3 cr. 3 hr. ▲

A survey is conducted of neural activity and the neural bases of behavior as illustrated by simpler invertebrate and vertebrate nervous systems. Topics covered in the class include structure and function of neurons, neurodevelopment, cellular basis of behavior (sensory and motor systems), neuropharmacology, and neural plasticity. The class is facilitated by lectures and laboratory.

*Prerequisites: BIOL 1200/1300, or BIOL 1800/1900 and one year of Chemistry, or permission of Instructor.*

## Immunology

**BIOL 4810** 3 cr. 3 hr. ▲

*Offered in the spring semester for day students.*

The course consists of a survey of immune response, antibody formation and function, immunosuppression, blood group antigens and antibody-antigen reactions. The principles of complement activity, hypersensitivity, and autoallergic reactions are discussed.

*Prerequisites: BIOL 2800, BIOL 3250, or permission of Instructor.*

## Biology Teaching Methods

**BIOL 4850** 3 cr. 3 hr. ▲

The course examines the methods for teaching modern Biology, includes a 25 hour pre-practicum, and is a prerequisite for student teaching. Topics include methods for teaching scientific inquiry, bioethical decision-making, and critical thinking as well as research on alternative assessment, classroom management, and technology in the classroom. Students who plan to student teach should see "Teacher Preparation Programs (Undergraduate)" for additional requirements.

*Prerequisites: BIOL 1800/1900 and permission of Instructor.*

## Independent Study

**BIOL 4901-4903** 1 to 3 credits ▲ ●

*Offered in the fall and spring semesters for day students.*

In the Independent Study participants fulfill laboratory or other independent research under the guidance and supervision of one or more faculty members. A comprehensive term paper and an oral presentation are required for successful completion of the project. Independent Study may be repeated for credit to a maximum of 9 semester hours.

*Prerequisites: junior or senior standing, 15 credits of Biology and special permission of the Departmental Curriculum Committee.*

## Biology Practicum in a Secondary School I and II

**BIOL 4860, 4870** 6 cr. 6 hr. ▲

Students are assigned to cooperating secondary schools for a semester of student teaching.

## Internship

**BIOL 4950, 4960** 3 or 6 cr. ▲

*Offered in the fall and spring semester for day students.*

The Internship involves off-campus laboratory or field experience in conjunction with established research programs at cooperating governmental, industrial, or private facilities. Supervision is shared by program directors and faculty members at Fitchburg State College.

Assignments are contingent upon students' abilities and acceptance by the cooperating institution. One or two full days of work per week may be expected. A comprehensive term paper and an oral presentation are required after each semester of Internship work for successful completion of the project. An Internship course may be repeated for up to a maximum of 12 semester hours.

*Prerequisites: junior or senior standing and approval of the Biology Department.*

## Directed Study

**BIOL 4975** 1-6 cr.

# Business Administration

## Key to Course Offerings

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## Introduction to Computer Information Systems for Business

**BSAD 1700** 3 cr. 3 hr. ▲ ●

This course introduces the student to computer information science and its applications. The student develops literacy in the computer and its uses. The laboratory work includes an introduction to Word Processing, Spreadsheets, Databases, and the fundamentals of programming with BASIC. No previous knowledge of computers is required or presumed. Credit is not awarded for both BSAD 1700, Introduction to Computer Information Systems for Business and CSC 1100, Computer Applications. See Business Administration Department Chair for alternate course selections. Q  
*Prerequisite: Basic Math II.*

### Introduction to Business

**BSAD 1850** 3 cr. 3 hr. ▲ ●

Introduction to Business is a college-level survey course in business that explores the nature of the American free enterprise system and its business organizations. This course examines the role played by business in American society, as well as its purpose and responsibilities. Furthermore, it introduces the student to the practical operations that must exist if businesses are to create goods and services, and it highlights some of the major problems faced by managers in planning, organizing, directing, and controlling these areas. Therefore, this course is intended to give the student a broad overview of the functions, institutions, principles, and practices of business.

### Introduction to Financial Reporting

**BSAD 2010** 3 cr. 3 hr. ▲ ●

This course provides an overview of financial accounting/reporting in its role as an information system within the socioeconomic environment of business. Financial reporting concepts and practices are presented from a decision perspective in which the content of financial statements and the analysis, interpretation, and application of this information in making rational business decisions are examined. Relationships between business events and elements of the financial statements are analyzed. Coverage of accounting procedures is presented to the extent that they are necessary to understand the substance of financial statement information. Internal control of accounting systems will be considered. A base of analytical tools will be provided for interpretation of financial information. Specific financial accounting issues related to current and long-term operational assets, current liabilities, debt instruments, and equity are discussed.  
*Prerequisites: sophomore status. BSAD 1700, MATH 0200.*

### Introduction to Managerial Accounting

**BSAD 2020** 3 cr. 3 hr. ▲ ●

This course stresses the usefulness of accounting data as it relates to the managerial decision making process relative to planning, control, and analysis. Among the multifaceted areas of study are cost volume, profit analysis, budgeting, performance analysis, and organizational planning and control.  
*Prerequisites: BSAD 2010, ECON 1200, MATH 1250.*

### Business Problem Solving with Microcomputers

**BSAD 2700** 3 cr. 3 hr. ▲ ●

This course uses the computer as a tool to solve business problems. Problem definition, analysis of problem, solution design, and implementation are phases leading toward the development of a business application system.  
*Prerequisite: BSAD 1700.*

### Financial Reporting Theory and Practice I (formerly Intermediate Accounting I)

**BSAD 3010** 3 cr. 3 hr. ▲ ●

This course is designed to provide a strong conceptual, analytical, and procedural foundation for the study of financial reporting and practice. The historical development of accounting thought and the role of financial accounting in today's economy are investigated. Socioeconomic, political, legal, and ethical influences on financial reporting are considered. A discussion of the following issues: procedures to record, summarize, and report results of business events, content and presentation of financial statements; and specific reporting issues related to cash and receivable. An overview of financial statement analysis is also presented. International issues are addressed as appropriate.  
*Prerequisite: BSAD 2020.*

### Financial Reporting Theory and Practice II (formerly Intermediate Accounting II)

**BSAD 3020** 3 cr. 3 hr. ▲ ●

In this course, in-depth discussion of financial reporting theory and practice is continued with respect to: inventories; concurrent operational assets; current and contingent liabilities; long-term debt; and owners' equity. Financial statement analysis of these financial statement elements is also continued. Ethical and international issues are addressed throughout the semester.  
*Prerequisite: BSAD 3010.*

### Cost Accounting

**BSAD 3120** 3 cr. 3 hr. ▲ ●

This course discusses job and process costing, managerial decision making using cost estimation and cost-volume-profit analysis, flexible budgeting, transfer pricing, and capital investment decisions.  
*Prerequisites: BSAD 2020.*

### Principles of Management

**BSAD 3200** 3 cr. 3 hr. ▲ ●

This is an introductory course in basic management concepts and practices. This course covers principles and techniques as they relate to planning, organizing, leading, and controlling business enterprises.

### Human Resources Management

**BSAD 3210** 3 cr. 3 hr. ▲ ●

This is an introductory course which surveys human resources practices and procedures involved with recruiting, employment, training and development, job evaluation, compensation, health and safety, labor relations, and workplace law. Special topics of student interest are also covered.  
*Prerequisite: BSAD 3200.*

### Production Management

**BSAD 3220** 3 cr. 3 hr. ▲ ●

This course provides an overview of business operations. In light of selected production improvement techniques (automation, incentive wage system, etc.), students review the role of selected staff departments (purchasing, production planning, etc.) that support the line organization. In the process, students become familiar with a variety of control systems (quality control, inventory control, etc.), which are fundamental in any business—whether product or service oriented.  
*Prerequisite: BSAD 3200.*

### Fundamentals of Marketing

**BSAD 3300** 3 cr. 3 hr. ▲ ●

This course discusses the role of marketing in our economic and social structure. It includes the planning, distribution, pricing, and promotion of goods and services to consumer and industrial markets in the context of internal activities of the firm and environmental forces.

### Consumer Behavior

**BSAD 3310** 3 cr. 3 hr. ▲ ●

This course familiarizes the student with the consumer decision making processes. It utilizes the concepts of the social and behavioral sciences in order to provide an understanding of consumer buying behavior.  
*Prerequisites: BSAD 3300.*

## Market Research

**BSAD 3320** 3 cr. 3 hr. ▲ ●

This course emphasizes the importance of research in marketing planning and decision making. Instruction includes the basics of scientific investigation, the search for information, sampling, data collection, data analysis, interpretation, and reporting.  
*Prerequisites:* BSAD 3300.

## Advertising

**BSAD 3330** 3 cr. 3 hr. ▲ ●

In this course students become knowledgeable about the preparation and use of advertising. Topics include the functions of advertising, planning an advertising campaign, copy, artwork, and media selection.  
*Prerequisites:* BSAD 2020, 3200, 3300, 3500.

## Small Business Management

**BSAD 3340** 3 cr. 3 hr. ▲

This course provides the students with an understanding of the unique characteristics required of the successful small business entrepreneur and the specifics relative to the start-up, financing and management of a small business. Emphasis is on a full spectrum of business functions as applied to small firms, including proprietorships, partnerships, corporations, and franchised outlets.

*Prerequisites:* BSAD 3200, 3300.

## TQM (Total Quality Management)

**BSAD 3350** 3 cr. 3 hr. ▲ ●

This course studies the concepts, practices, and methods of contemporary quality management in both manufacturing and service-related industries. Topics may include quality management, customer service, leadership, measuring quality, statistical process, and teamwork.

*Prerequisite:* BSAD 3200.

## Basic Finance

**BSAD 3400** 3 cr. 3 hr. ▲ ●

This course studies the forms and sources of financing business firms, large and small, corporate and noncorporate. The emphasis is on financial planning and financial problem solving.

*Prerequisite:* BSAD 2020.

## Investments

**BSAD 3410** 3 cr. 3 hr. ▲ ●

The course analyzes stocks, corporate and governmental bonds, and other investment media, and studies the secondary stock market mechanism. Students review various investment vehicles and security evolution. Research of individual companies and industries is required. The course is primarily facilitated by lectures and problem solving.

*Prerequisites:* BSAD 2020, 3200, 3300.

## Real Estate Principles and Practices

**BSAD 3440** 3 cr. 3 hr. ▲ ●

Using a business perspective this course explores real estate use, ownership, and development as well as its social impact and business constraints. The effect of home ownership on executive transfers and company costs is examined. Current terminology in the field is defined, including property rights, ownership, financing, planning for the future, property evaluation, and property management.

*Prerequisite:* BSAD 3200.

## Real Estate Investment and Management

**BSAD 3460** 3 cr. 3 hr. ▲ ●

The course looks at the business decisions involved in the investment, financing, and management of real estate. This course focuses on real estate as a popular investment vehicle because of the number of income-producing characteristics it possesses. Students learn the principles of cash flow, changing property values, equity investor, decision-making, risk and return, and market research in light of current real estate trends.

*Prerequisites:* BSAD 2020, 3200, 3300, 3400.

## Business Law I

**BSAD 3500** 3 cr. 3 hr. ▲ ●

This course is an introduction to the study of business law, its nature and classification, the court systems, and their procedures. Contract law, the law of sales, and personal property are considered comprehensively.

## Systems Analysis Methods

**BSAD 3710** 3 cr. 3 hr. ▲ ●

As an overview of the system development life cycle, this course introduces the student to the fundamental concepts and techniques of systems analysis. Classical and structured methods of systems documentation are explored as well as information gathering and reporting activities.

*Prerequisite:* CSC 2700

## Computer Concepts and Programming Techniques

**BSAD 3720** 3 cr. 3 hr. ▲

This course is a survey of technical topics related to computer systems with emphasis on the relationship between computer architecture, system software, and applications software.

*Prerequisites:* BSAD 3710, CSC 2700.

## Financial Reporting Theory and Practice III

**BSAD 4010** ▲ ●

In this course, in-depth discussion of financial reporting theory and practices continued with respect to: inventories; concurrent operational assets; current and contingent liabilities; long-term debt; and owners' equity. Financial statement analysis of these financial statement elements is also continued. Ethical and international issues are addressed throughout the semester.

*Prerequisite:* BSAD 3020, MATH 1800.

## Consolidations and Mergers

**BSAD 4100** 3 cr. 3 hr. ▲ ●

This course includes accounting problems involved in the preparation of consolidated financial statements and in home and branch office relationships. The accounting concepts of purchasing and pooling of interests are stressed.

*Prerequisites:* BSAD 3020, including all related prerequisites.

## International Accounting and Taxation

**BSAD 4110** 3 cr. 3 hr. ▲ ●

This course will provide an understanding of the International Accounting standards and the International Taxation rules within the accounting profession. U.S. accounting practices and foreign accounting practices in selected countries will be discussed. Taxation issues will center on U.S. taxes, both corporate and individual, for outbound and inbound transactions.

*Prerequisites:* BSAD 3020.

## Individual Taxation

**BSAD 4120** 3 cr. 3 hr. ▲ ●

This course studies the Federal Income Tax Laws, as they apply to individuals, in compliance and tax planning opportunities.

*Prerequisites:* BSAD 3020. *Financial Reporting Theory and Practice II (including all related prerequisites).*

### Corporate, Estate, and Gift Taxation (formerly Advanced Taxation)

**BSAD 4130** 3 cr. 3 hr. ▲ ●

This course studies the Federal Income Tax Laws and regulations in both compliance and tax planning opportunities applicable to partnerships, corporations, fiduciaries, and gift and estate taxes.

*Prerequisite: BSAD 4120.*

### Auditing

**BSAD 4140** 3 cr. 3 hr. ▲ ●

The basic concepts of auditing and control are examined in this course. It emphasizes internal control, audit problems, and professional responsibilities of the CPA to the auditing requirements.

*Prerequisite: BSAD 4010.*

### Not For Profit Accounting

**\*BSAD 4160** 3 cr. 3 hr. ▲ ●

This course examines the accounting and reporting principles, standards, and procedures as they apply to governmental and not-for-profit entities, such as governmental organizations, hospitals, colleges, and universities.

*Prerequisites: BSAD 3020, including all related prerequisites.*

### Organizational Behavior and Theory

**BSAD 4200** 3 cr. 3 hr. ▲ ●

This course is a general descriptive and analytical study of organizations from the behavioral science point of view. It includes problems of motivation, leadership, morale, social structure, group networks, communications, hierarchy, and control in complex organizations. The interaction between technology and human behavior is discussed. Alternative theoretical models are considered.

*Prerequisites: BSAD 3200.*

### Social and Political Environment of Business

**BSAD 4210** 3 cr. 3 hr. ▲ ●

This course is a study of the evolution of American business in the context of its changing political and social environment. Analysis of the origins of the American business creed, the concept of social responsibility of business, and the expanding role of the corporation is included.

*Prerequisites: BSAD 3200.*

### Business Fluctuations and Forecasting

**BSAD 4230** 3 cr. 3 hr. ▲ ●

The analysis of public and business policies which are necessary as a result of business fluctuations within our capitalist free enterprise system often require technical forecasting. This course will emphasize this technical forecasting aspect.

*Prerequisites: ECON 1200, MATH 1800.*

### Ethical Decisions in Business

**BSAD 4250** 3 cr. 3 hr. ▲ ●

This course is designed to explore, discuss, and analyze the values and methods that can be used by our future business managers to make ethical decisions in live business situations. It provides a basis for considering the type of corporate policy and environment essential for minimizing the conflict between "right" and "the end justifies the means."

### Sales Management

**BSAD 4300** 3 cr. 3 hr. ▲ ●

This course enhances the students' understanding of and skills for managing the selling function. The emphasis of the course work is on personal selling as an element in the marketing mix.

*Prerequisites: BSAD 3300.*

### Retail Marketing

**BSAD 4310** 3 cr. 3 hr. ▲ ●

This course introduces the student to the nature and scope of retail marketing and management. The course includes the structure of retailing, merchandising, buying, pricing, promotion, organization, as well as management of the retail firm.

*Prerequisites: BSAD 3300.*

### Industrial Marketing

**BSAD 4320** 3 cr. 3 hr. ▲ ●

This course centers on the marketing of goods to industrial firms, governmental agencies, and other organizations included within the industrial market. The areas covered in the course include distribution channels, pricing policies, product planning, and market strategy.

*Prerequisites: BSAD 3200.*

### International Marketing

**BSAD 4330** 3 cr. 3 hr. ▲ ●

This course concentrates on the marketing activities of firms operating in an international market. It provides the student with an understanding of the factors that influence the selling of products in international markets. The planning, organizing, and controlling of international marketing is explored along with its law, history, and economics.

*Prerequisites: BSAD 3300.*

### Developing Marketing Strategies

**BSAD 4340** 3 cr. 3 hr. ▲ ●

Through the use of case studies and, where possible, cooperating businesses and nonprofit organizations, students identify pertinent marketing problems and opportunities, assess the organization's resources, and develop viable marketing programs. The course includes new product development and management strategies for effective marketing policies over the course of the entire product life cycle.

*Prerequisites: BSAD 3300.*

### Financial Management of Corporations

**BSAD 4440** 3 cr. 3 hr. ▲ ●

This course covers the analysis and management of the flow of funds through an enterprise. Cash management, source, and application of funds, as well as term loans and types and sources of long term capital are examined. As an introduction to capital markets, the class explores capital budgeting, cost of capital, and financial structure.

*Prerequisite: BSAD 3400.*

### Business Law II

**BSAD 4500** 3 cr. 3 hr. ▲ ●

This course is a continuation of Introduction to Business Law and deals with the law of agency, commercial paper, credit, and the various forms of business.

*Prerequisite: BSAD 3500.*

### Systems Design & Implementation

**BSAD 4700** 3 cr. 3 hr. ▲ ●

This capstone course will emphasize the design and implementation phases of the system development life cycle using case studies. A problem solving approach will be used for students to learn strategy and techniques for dealing with complexities in Information Systems Development.

*Prerequisite: BSAD 3710*

### Data Base Management Systems

**\*BSAD 4720** 3 cr. 3 hr. ▲ ●

This course provides an introduction to the concepts of data base processing with emphasis on application programming in a database environment. Physical and logical organization of data, data relationships, and operational requirements of a database management system are also discussed.

*Prerequisites: BSAD 3710, CSC 2700.*

### Applied Software Development

**BSAD 4730** 3 cr. 3 hr. ▲

As the capstone course in the MIS concentration, this course requires the student to apply concepts, principles, and problem solving techniques, as well as strategies and tools learned in previous MIS and business courses to the development of a realistic computer-based information system of medium complexity.

*Prerequisite:* BSAD 3720.

### International Business Management

**BSAD 4880** 3 cr. 3 hr. ▲

The course provides an analysis of the complexities of doing business overseas. Emphasis is on commerce, trade, and investments. Topics include cultural differences, market barriers, business practices, product/market strategies, distribution and organization for small firms and multinational corporations.

*Prerequisite:* senior status in Business Administration or permission of Department Chairperson.

### Business Policy and Strategy

**BSAD 4890** 3 cr. 3 hr. ▲ ●

This course integrates all organic management functions. Cases are used as subjects for analysis and systematic decision making practice.

*Prerequisite:* senior status in Business Administration or permission of Department Chairperson.

### Independent Study—Management

**BSAD 4903** 3 cr. ▲ ●

### Independent Study—Accounting

**BSAD 4913** 3 cr. ▲ ●

### Independent Study—Marketing

**BSAD 4923** 3 cr. ▲ ●

### Independent Study—CIS

**BSAD 4933** 3 cr. ▲ ●

To study specific, advanced topics in the Business Administration area, students must have the approval of supervising instructor and the department.

### Independent Study—Management

**BSAD 4902** 2 cr. ▲ ●

### Independent Study—Accounting

**BSAD 4914** 2 cr. ▲ ●

### Independent Study—Marketing

**BSAD 4934** 2 cr. ▲ ●

### Independent Study—Management

**BSAD 4915** 1 cr. ▲ ●

### Independent Study—Accounting

**BSAD 4925** 1 cr. ▲ ●

### Independent Study—Marketing

**BSAD 4935** 1 cr. ▲ ●

### Independent Study—CIS

**BSAD 4945** 1 cr. ▲ ●

### Internship: Business Laboratory

**BSAD 4910** 1 cr. ▲ ●

**BSAD 4920** 2 cr. ▲ ●

**BSAD 4930** 3 cr. ▲ ●

The (1,2,3 credit) Business Laboratory Internships operate within the Business and Technology Training Center. The Business laboratory is a learning laboratory that allows students to work on various projects. Students will participate in developing and operating their own consulting firm in the laboratory. They will develop outreach to large, medium, and small businesses, organizations, institutions, and enterprises. Students may earn up to 6 credits throughout their four years of college.

**BSAD 4950** 6 cr. ▲ ●

This course is a part time (18 hr. week) internship in either the private or public sector. The purpose of the course is to allow the student the opportunity to synthesize the theoretical learning of the classroom with a practical work situation.

*Prerequisite:* approval by Internship Director.

### Internship

**BSAD 4970** 12 cr. ▲ ●

This course is a full semester (36 hr. week) Internship in either the private or public sector. The purpose of the course is to allow the student the opportunity to synthesize the theoretical learning of the classroom with a practical work situation.

*Prerequisite:* approval by Internship Director.

### Internal Departmental Practicums (Business Laboratories)

**BSAD 4915, 4925, 4935 (see Independent Studies)** ▲

Students will participate in a series of Learning Laboratories, including a student-run consulting firm. The Business Administration Department offers students opportunities to receive up to six credits by working on actual business projects on campus and in the community.

*Prerequisite:* permission of Department Chairperson.

### Directed Study

**BSAD 4975** 1-6 cr. ▲ ●

## Chemistry

### Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as "Topics" courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

### Industrial Chemistry

**CHEM 1000** 4 cr. 6 hr. ▲

This introduction to chemistry includes a study of the periodic table, atomic structure, electrochemistry, thermochemistry, chemical bonding, kinetics, oxidation-reduction, acids-bases, thermodynamics, and a brief introduction to organic compounds. Q

*Prerequisite:* MATH 1300.

### Pre-Biochemistry

**CHEM 1100** 4 cr. 5 hr. ▲ ●

This course provides the fundamentals of chemistry for non-science majors. Material is limited to basic concepts in general chemistry that are necessary for understanding the principles of organic and biochemistry. This course replaces Chemistry I and is required for Nursing Majors. Q

### Elements of Human Biochemistry and Organic Chemistry

**CHEM 1200** 4 cr. 5 hr. ▲ ●

This course is a continuation of Pre-Biochemistry I or the equivalent. The course material also includes a study of organic chemistry and human biochemistry. This course replaces Chemistry II and is required for Nursing Majors. Q

*Prerequisite:* CHEM 1100.

### General Chemistry I

**CHEM 1300** 4 cr. 6 hr. ▲ ●

The course explores the fundamental laws and theories of chemistry such as atomic structure, the periodic table, electrochemistry, descriptive inorganic chemistry, the gas laws, solutions, equilibrium calculations, and chemical bonding. Chemical calculations are emphasized. Q

### General Chemistry II

**CHEM 1400** 4 cr. 6 hr. ▲ ●

This course is a continuation of General Chemistry I. Topics included are chemical, acid/base, and solubility equilibria, and chemical kinetics. Q

*Prerequisite:* CHEM 1300.

### Organic Chemistry I and II

**CHEM 2000** 4 cr. 6 hr. ▲ ●

Properties of organic compounds are discussed in terms of their molecular structures and reaction mechanisms. This course is recommended for those who need for a solid theoretical foundation in chemistry, especially those contemplating graduate study in science or medicine. Q

*Prerequisites:* CHEM 1400.

### Organic Chemistry II

**CHEM 2100** 4 cr. 6 hr. ▲ ●

This course is a continuation of CHEM 2000. Q

*Prerequisite:* CHEM 2000.

### Analytical Chemistry I

**CHEM 3000** 4 cr. 6 hr. ▲

The course emphasizes theory and application of Quantitative Analysis. The lectures stress chemical equilibrium, solubility product, complexometric formation, oxidation-reduction, and stoichiometric calculations.

*Prerequisites:* CHEM 1300, 1400, 2000, 2100 or the equivalent.

### Physical Chemistry I

**CHEM 3200** 4 cr. 6 hr. ▲

The course explores the underlying principles of chemistry from a physical chemistry standpoint. Topics of discussion include kinetic theory, theories of the structure of matter, theory of solutions, electrochemistry, thermodynamics, spectroscopy, and kinetics.

*Prerequisite:* CHEM 2100 or the equivalent.

### Physical Chemistry II

**CHEM 3300** 4 cr. 6 hr. ▲

The course is a continuation of Physical Chemistry I.

*Prerequisite:* CHEM 3200.

### Analytical Chemistry II

**CHEM 3500** 4 cr. 6 hr. ▲

The course studies Instrumental Analysis. Laboratory experiments include spectrophotometric, conductometric, potentiometric, and chromatographic analyses.

*Prerequisites:* CHEM 2100 and CHEM 3000 or the equivalent.

### Advanced Topics

Student and faculty availability determine the following course offerings.

### Advanced Inorganic Chemistry

**\*CHEM 3600** 3 cr. 3 hr. ▲

The course studies bonding theories, acid-base theories, reactions in non-aqueous solvents, complexation and chelation, reactivity, and physical measurements.

*Prerequisite:* CHEM 1400 or the equivalent.

### Natural Products

**\*CHEM 4000** 3 cr. 3 hr. ▲

This course examines chemistry isolation, purification, and identification of pure compounds from a variety of naturally occurring substances. Special techniques are introduced whenever feasible.

*Prerequisites:* CHEM 2000 and 2100.

### Biochemistry (See BIOL 3450).

**CHEM 4100** 4 cr. 6 hr. ▲

*Prerequisite:* CHEM 2100.

### Polymer Chemistry

**\*CHEM 4200** 4 cr. 6 hr. ▲

This introduction to the synthesis and properties of macromolecules also serves as an application of chemical principles to this interesting and important group of materials.

*Prerequisites:* CHEM 2000 and 2100 or the equivalent.

### Radiation Chemistry

**CHEM 4300** 4 cr. 4 hr. ▲

The fundamentals of radiation chemistry are explored, including radioactivity, atomic nuclei, nuclear reactions, decay systematics, reactors, and radiation detection and measurement. Emphasis is placed on the use of radioactive materials in chemical applications.

*Prerequisites:* CHEM 1400, PHYS 1400.

### Forensic Chemistry

**CHEM 4400** 3 cr. 3 hr. ▲

This course studies forensic detection of crimes by examining physical evidence, such as hair, fibers, paint, drugs, DNA, fingerprints, firearms, and tool marks, as well as toxicology, arson, explosion, serology, rape victims, document, and voice examination.

### Independent Study in Chemistry

**CHEM 4900** 1 to 3 cr. ▲

This independent study facilitates laboratory research under the guidance of the Chemistry staff.

*Prerequisite:* permission of the Instructor.

### Internship

**CHEM 4940** 3 cr. ▲

The Internship gives the student an opportunity to work in an industrial, government, or private research laboratory to gain experience relevant to their major.

### Internship

**CHEM 4950** 6 cr. ▲

The Internship gives the student an opportunity to work in an industrial, government, or private research laboratory to gain experience relevant to their major.

### Directed Study

**CHEM 4975** 1-6 cr. ▲

# Clinical Laboratory Sciences

## Key to Course Offerings

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

## Introduction to Clinical Laboratory Sciences

**CLS 1000** 1 cr. 2 hr. ▲

An integrated lecture-laboratory course designed to acquaint the student with the role and duties of technologists, including employment opportunities and educational requirements for the profession. The Laboratory portion of the class includes: introduction to techniques in hematology, clinical chemistry, immunohematology, and clinical microbiology.

## Clinical Laboratory Techniques

**CLS 1400** 3 cr. 5 hr. ▲

The course studies the clinical laboratory’s role in assessing the kidney in health and disease. The microscopic and chemical analysis of urine is taught with emphasis on correlation of test data to disease diagnosis. Techniques and theory of phlebotomy studied.

*Prerequisite: BIOL 2420 or the permission of Instructor.*

## Basic Hematology

**CLS 2000** 3 cr. 5 hr. ▲

This course is an introduction to the composition and formation of blood and blood cells. Laboratory exercises include routine procedures used in the hematology laboratory such as staining, cell counting and identification, selected manual methods and application of quality control procedures.

*Prerequisite: BIOL 1800, CLS 2100 or permission of Instructor.*

## Basic Laboratory Skills

**CLS 2100** 4 cr. 6 hr. ▲

Through lecture and laboratory sessions, students will review basic principles of chemistry, laboratory math, and statistics as they learn to accurately measure, calculate, and quantify analytes. Quality control principles are also examined. The basic standards, theory and terminology associated with phlebotomy are introduced with laboratory practice in venipuncture and fingerstick techniques. Q

*Prerequisite: MATH 1700; CHEM 1300 and 1400, or permission of instructor.*

## Professional Issues in Clinical Laboratory Science

**CLS 3000** 3 cr. 3 hr. ▲

The course explores economic, political, and social issues pertinent to health care delivery. Professional and personal ethics, interpersonal communication skills, interview techniques, career options for laboratory personnel, basic education, and management strategies are emphasized.

*Prerequisite: CLS 1000 or permission of Instructor.*

## Human Biochemistry I

**CLS 3100** 4 cr. 6 hr. ▲

The study of the biochemical properties of carbohydrates, amino acids, proteins and lipids specifically related to the human body. Major metabolic pathways of glucose metabolism in the liver and body cells, mechanisms of enzyme action and bioenergetics will be discussed. Physiological topics related to the gastrointestinal tract, nutrition, liver, nerve and muscle function are discussed. Laboratory sessions complement lecture. Q  
*Prerequisite: CHEM 1300, 1400, 2000, and 2100.*

## Human Biochemistry II

**CLS 3150** 4 cr. 6 hr. ▲

Continuation of CLS 3100. Topics include the biochemical properties of RNA, DNA, fatty acid and amino acid metabolism. Physiological topics related to renal and endocrine function, skeletal and mineral metabolism, and water balance are discussed. Laboratory sessions complement lecture and include urinalysis. Q

*Prerequisite: CLS 3100.*

## Immunoassay/Clinical Virology

**CLS 3200** 3 cr. 5 hr. ▲

The course studies in vitro antigen-antibody reactions and theory of serological reactions. The practical application of theory to clinical laboratory testing, enzyme assays, immunoelectrophoresis, agglutination and precipitation tests is studied and performed. An overview of viral structure, oncogenesis, and viral infections of man is given.

*Prerequisite: BIOL 3900.*

## Parasitology/Mycology

**CLS 3400** 3 cr. 4 hr. ▲

Life cycles, identification, and clinical pathology of parasites in humans are studied in this course along with common mycotic infections of humans and methods of identification.

*Prerequisite: BIOL 3900.*

## Clinical Hematology I

**CLS 4000** 4 cr. 6 hr. ▲

This course focuses on an examination of red cells and white cells and the laboratory testing used in the detection of anemias and leukemias. Students study the pathophysiology of bone marrow and peripheral blood while performing routine and special procedures used in the clinical Hematology lab.

*Prerequisite: CLS 2000. Open to senior CLS majors only and permission of Instructor.*

## Clinical Hematology II

**CLS 4050** 3 cr. 5 hr. ▲

The course is a continuation of Hematology I with special emphasis on Hematology Instrumentation, Quality Control principles and Body Fluid Analysis. In addition, the course includes the study of Hemostasis and tests related to the detection of bleeding and thrombotic problems. A clinical practicum at an affiliated laboratory is performed at the conclusion of the course.

*Prerequisite: CLS 4000. Open to senior CLS majors only and permission of Instructor.*

## Issues in Clinical Microbiology I

**CLS 4100** 2 cr. 2 hr. ▲

Students will perform an in-depth investigation of concepts, theories, or problems that are of importance to clinical microbiologists. Students will become skilled at searching the current literature and will enhance their verbal communication skills as they discuss their findings with the group.

*Co-requisite: CLS 4400. S/U grading only.*

## Issues in Clinical Microbiology II

**CLS 4150** 2 cr. 2 hr. ▲

Continuation of CLS 4100.  
*Co-requisite: CLS 4450. S/U grading only.*

## Clinical Chemistry I

**CLS 4200** 4 cr. 6 hr. ▲

The course provides a detailed study of the biochemical processes associated with health and disease. Students learn about the measurement of constituents in the blood and body fluids to monitor health and facilitate the diagnosis of disease. Emphasis is placed on interpretation, disease correlation, problem solving, and quantitative techniques.

*Prerequisites: CLS 3100 and 3150. Open to senior CLS majors only and permission of Instructor.*

## Clinical Chemistry II

**CLS 4250** 4 cr. 6 hr. ▲

This course is a continuation of CLS 4200. A clinical practicum is performed at an affiliated laboratory at the conclusion of the class.

*Prerequisites: CLS 4200. Open to senior CLS majors only and permission of Instructor.*

## Issues in Clinical Chemistry I

**CLS 4300** 2 cr. 2 hr. ▲

Students will perform an in-depth investigation of concepts, theories, or problems that are of importance to clinical chemists. Students will become skilled at searching the current literature and will enhance their verbal communication skills as they discuss their findings with the group.

*Co-requisite: CLS 4200. S/U grading only.*

## Issues in Clinical Chemistry II

**CLS 4350** 2 cr. 2 hr. ▲

Continuation of CLS 4300.  
*Prerequisite: CLS 4300; Co-requisite: CLS 4250. S/U grading only.*

## Clinical Microbiology I

**CLS 4400** 3 cr. 5 hr. ▲

Students learn techniques for the isolation and identification of common human pathogenic bacteria and methods for susceptibility testing. Instruction includes techniques used in the diagnostic microbiology laboratory.

*Prerequisites: BIOL 3900, CLS 3400. Open to senior CLS majors only and permission of Instructor.*

## Clinical Microbiology II

**CLS 4450** 3 cr. 5 hr. ▲

Techniques used to diagnose human infectious disease are covered in this class. The isolation and identification of uncommon human pathogenic bacteria is studied along with antibiotic structure and function. A clinical practicum is performed at affiliated laboratory at the conclusion of the class.

*Prerequisites: CLS 4400. Open to senior CLS majors only and permission of Instructor.*

## Immunohematology I

**CLS 4600** 3 cr. 5 hr. ▲

The theory and laboratory techniques involved in blood banking are examined in this course. Areas of study include common blood types, screening and preparation of donors, crossmatching, antigen-antibody reactions, and serological procedures.

*Prerequisites: BIOL 2800, 4810. Open to senior CLS majors only and permission of Instructor.*

## Immunohematology II

**CLS 4650** 1 cr. 2 hr. ▲

The course is a continuation of CLS 4600. It includes a short practicum in an affiliated blood bank laboratory.

*Prerequisites: CLS 4600. Open to senior CLS majors only and permission of Instructor.*

## Clinical Correlations I

**CLS 4800** 1 cr. 2 hr. ▲

This Seminar is designed to demonstrate the interrelationships between clinical laboratory disciplines. A case study approach is utilized to help students integrate laboratory information.

*Corerequisites: CLS 4000, 4200, 4400, 4600. Open to senior CLS majors only and permission of Instructor. S/U grading only.*

## Clinical Correlations II

**CLS 4850** 1 cr. 2 hr. ▲

The course is a continuation of CLS 4800 using the seminar and case study approach.  
*Corerequisites: CLS 4050, 4250, 4450, 4650. Open to senior CLS majors only and permission of Instructor. S/U grading only.*

## Independent Study

**CLS 4901, 2, 3** 1, 2, 3 cr. ▲

Open to students who have permission of supervising Instructor and department. The course of study, meetings, and project presentation are arranged upon approval.

## Internship

**CLS 4940** ▲

## Directed Study

**CLS 4975** 1-6 cr.

# Communications Media

## Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

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## Systems and Theories of Communication

**COMM 1105** 3 cr. 3 hr. ▲

An introductory course that explores the ways in which communication is studied and discussed in both academic and professional arenas. The course covers the process and social implications of communication. It examines the history and current structure of several media, including print, graphic design, photography, film, television, and sound recording. It also examines the technological and social systems that are associated with the field.

## Message Design

**COMM 1120** 3 cr. 3 hr. ▲

The course introduces visual communication for the development of visual literacy. Students become involved with a variety of activities in previsualization, planning, designing, making, and evaluating visual messages. This course specifically relates to the communications concentrations taught in Phase II, including technical writing, television, photography, film, interactive, and graphic design.

### Script Writing

**COMM 2320** 3 cr. 3 hr. ▲

Students are instructed in the basics of script writing for film, television, and multi-image productions, including preparation of proposals, treatments, storyboards, and scripts. Script formats covered in the class include documentary, educational, corporate, and dramatic film/video writing. See also ENGL 2320.

### Color Theory

**COMM 2330** 3 cr. 3 hr. ▲

Students work on projects developed to enhance their understanding of the basic principles of color as they relate to graphics, film, photography and the moving image. Emphasis is given to the physical, psychological, and perceptual aspects of color. Students are responsible for all graphic supplies.

### History of Photography

**COMM 2400** 3 cr. 3 hr. ▲

The course presents a survey of the development of photography to the present day. L

### History of Film I

**COMM 2405** 3 cr. 3 hr. ▲ ●

An examination of the major and influential works, artists, movements, cultures and industries in world cinema from its beginnings to the 1950s, as well as the field's historiography and modes of inquiry. L, C

### History of Film II

**COMM 2415** 3 cr. 3 hr. ▲ ●

An examination of the major and influential works, artists, movements, cultures and industries in world cinema from the 1950s to the present, as well as the field's historiography and modes of inquiry. Fulfills computer literacy requirement. L, C

### History of TV

**\*COMM 2420** 3 cr. 3 hr. ▲

The course provides a comprehensive analysis of television broadcasting from its inception to the present. Programming, social, and technological aspects of the medium are presented and examined in a lecture and seminar format. Particular emphasis is placed on television's sociological influence and impact on the communication process. I

### History of Graphic Design

**\*COMM 2430** 3 cr. 3 hr. ▲

This course presents the history of typography and its pertinence to graphic design from the beginning of written history to the late 1980s. Emphasis is placed on various movement of avant garde typography of the early twentieth century and its influence on present day graphic design. L

### Journalism

**COMM 2800** 3 cr. 3 hr. ▲

The course studies the press with emphasis on ethics in news, treatment of contemporary issues, and structuring the news story. Students write individualized assignments. (Credit is not given for both COMM 2800 and ENGL 2800.)  
*Prerequisites: ENGL 1100, ENGL 1200.*

### Multimedia Project Design

**COMM 3304** 3 cr. 3 hr. ▲

The course provides an introduction to the history, theory, and practice of designing communications for interactive/multimedia environments. Special attention is paid to flowcharting, branching, hierarchy structures, screen design, storyboards, scripting, and all aspects of user interface design. Students also consider the roles of learning theory and instructional design as they create design documents for course projects.  
*Prerequisite: one course in a concentration.*

### Multimedia Tools and Techniques

**COMM 3305** 3 cr. 3 hr. ▲

By using an interactive application students explore the use of digital audio, video, stills, presentation software, and elementary authoring. Students work with advanced features of the computer operating system and common software resources, such as databases and communications.  
*Prerequisite: COMM 3304.*

### Interactive Media

**COMM 3306** 3 cr. 3 hr. ▲

The course studies authoring tools and the logic structures that various design tools offer the producer/developer and the production team. Students integrate audio, still imagery, video, and hypertext into course projects.  
*Prerequisite: COMM 3305.*

### Multimedia Production

**COMM 3307** 3 cr. 3 hr. ▲

A study of advanced techniques of authoring, design, and production that students apply in sponsored projects. Working in groups of three or four, students simulate a professional design team's production regimen in order to complete an advanced multimedia production of professional portfolio quality.  
*Prerequisite: COMM 3306.*

### Multimedia Seminar

**COMM 3308** 3 cr. 3 hr. ▲

This seminar provides an opportunity to study advanced topics of multimedia design and development. Subjects covered in the seminar include design and application of game theory, computerized animation, morphing techniques, and virtual reality.  
*Prerequisite: permission of the Instructor.*

### Writing for Advertising

**COMM 3430** 3 cr. 3 hr. ▲

The course provides an introduction to the principles, strategies, and ethical issues in writing advertising for various media. Students create written copy for individual unified media campaigns.

### Public Relations

**COMM 3460** 3 cr. 3 hr. ▲

The focus in this course is on the role of managed communications in public relations unique to industry, human services, and educational institutions. Definitions and concepts, history, potential careers, and research methods are examined.

### Technical Documentation

**COMM 3470** 3 cr. 3 hr. ▲ ●

This course gives students the opportunity to study and write the basic forms of technical documentation found in business and industry, including end-user manuals and training guides. Examination of graphics, typography, and desktop publishing is considered as they apply to hardcopy production. (See also ENGL 3470.)

### Introduction to Film and Video

**COMM 3505** 3 cr. 3 hr. ▲

This is the foundation course for the Video/Film concentration. Students are introduced to the basics of production and post-production in the two media. Topics include: understanding and using visual language; film and video camera operation; understanding the film and video production process; basic film and video nonlinear editing; production crew

structure; and interpersonal communication. Students shoot super 8 film and video tape and then edit both the film and video. Student are required to purchase film and video tape as well as pay for processing.

### Audio Production for Film and Video

**COMM 3510** 3 cr. 3 hr. ▲

This course covers audio production basics—field, studio and booth audio acquisition, logging, mastering and archiving—with an emphasis on audio’s role in film and video production. By the end of the course, the student will be able to capture the highest quality audio in the manner most effective for integration during film or video post-production.

*Prerequisite:* COMM 3505.

### Intermediate Video Production

**COMM 3520** 3 cr. 3 hr. ▲

The course focuses on the development of the skills necessary for single-camera video production, including shooting and recording with directed video equipment, location sound recording, location lighting, directing, nonlinear editing, and other post-production techniques. The student is required to purchase videotape.

Note: the department recommends that this course be taken at the same time as COMM 3580.

*Prerequisite:* COMM 3505.

### Post-Production

**COMM 3530** 3 cr. 3 hr. ▲

This is an intensive course in film and video editing, as well as other post-production techniques. Course work includes practice in editing theory, sound effects recording, narration recording, and multi-track sound mixing. The course is based on the use of AVID non-linear editors. Students are required to provide their own video tapes.

*Prerequisite:* COMM 3540 or COMM 3740 or permission of the Instructor.

### Advanced Video Production

**COMM 3540** 3 cr. 3 hr. ▲

An upper-level production oriented course provides the opportunity for students to produce work of professional quality. This course draws on the skills of all previous courses in production. Working in production groups, students write, shoot, and begin editing a high-quality video program. Students may choose documentary, experimental, corporate, or dramatic subjects for this production. The final edit is completed on non-linear AVID systems. Student are required to purchase all production materials.

*Prerequisite:* COMM 3520 and COMM 3740.

### Production Management

**COMM 3550** 3 cr. 3 hr. ▲

The course provides an examination of the fundamentals of production management. Topics covered in the class are: production budgets, production scheduling, contracts and agreements, union regulations for actors and crew members, shooting permits, legal implications and financial structures.

*Prerequisite:* COMM 3520 or COMM 3720.

### Sound Design

**COMM 3560** 3 cr. 3 hr. ▲

This course examines the elements of post-production sound design within the context of film and video production. This course blends the artistic and the technical.

Students will use nonlinear editors, digital audio work stations and digital recording equipment to design soundtracks for their film and video productions. All materials are the responsibility of the student.

*Prerequisite:* COMM 3520 or COMM 3710.

### Lighting

**COMM 3580** 3 cr. 3 hr. ▲

The course provides an introduction to the techniques of lighting, both on location and in the studio. Topics covered in the class include: the use of lighting instruments; lighting control media and devices; location lighting techniques; studio lighting techniques; camera movement; composition; metering; the use of lenses; electrical and safety considerations; grip techniques and equipment. Students are required to purchase video tape.

Note: The department recommends that students take this course simultaneously with either COMM 3520 or COMM 3710.

*Prerequisite:* COMM 3505.

### Photography I

**COMM 3600** 3 cr. 3 hr. ▲

The course introduces technical and aesthetic aspects of photography, such as exposure techniques, film, paper, and basic 35 mm camera work. Students are responsible for all paper, film, supplies, and mounting materials.

### Photography II

**COMM 3610** 3 cr. 3 hr. ▲

The course is a continuation and refinement of the material covered in COMM 3600. Editing and sequencing along with filters, flash, fill-flash, and an introduction to the studio is covered.

*Prerequisite:* COMM 3600.

### Photography III

**COMM 3620** 3 cr. 3 hr. ▲

The course introduces medium format photography. Lighting, portraiture, and commercial photography are explored in professionally designed studios. Students are responsible for all paper, film, and chrome processing.

*Prerequisite:* COMM 3610.

### Large Format Photography

**COMM 3630** 3 cr. 3 hr. ▲

The course specializes in 4 x 5 photography and the use of the Zone System for exposure and development. Students are responsible for all paper and film supplies.

*Prerequisite:* COMM 3610.

### Color Photography

**COMM 3640** 3 cr. 3 hr. ▲

The course introduces the basic theory of color photography. Printing is emphasized and all work is C-prints and chromes.

*Prerequisite:* COMM 3610.

### Digital Photography

**COMM 3645** 3 cr. 3 hr. ▲

The course studies the fundamentals of digital image acquisition, scanning, image manipulation, and various output devices.

*Prerequisite:* COMM 3620 or 3640 or permission of Instructor. Fulfills computer literacy requirement.

### Photo Management

**COMM 3660** 3 cr. 3 hr. ▲

The course studies photographic space design for private, commercial, and educational use. The class promotes an understanding of flow, function, equipment inventory, record keeping, and budget control.

*Prerequisite:* COMM 3610.

### Photography Seminar

**\*COMM 3690** 3 cr. 3 hr. ▲

The seminar provides an opportunity for advanced study in the medium. Students are responsible for all paper and film supplies.

*Prerequisites:* COMM 3620, 3630, or 3640.

### Intermediate Film Production

**COMM 3710** 3 cr. 3 hr. ▲

Intermediate Film Production introduces the tools of professional motion picture production. Topics include: 16mm sync camera operation, lens and filter differentiations, camera support, shooting tests of several film emulsions, film laboratory procedures, use of sync sound equipment (Nagra and DAT) and AVID nonlinear editing.

Note: the department recommends that this course be taken at the same time as COMM 3580.

*Prerequisite:* COMM 3505.

### Advanced Film Production

**COMM 3720** 3 cr. 3 hr. ▲

The course provides an advanced examination of professional 16mm production and AVID nonlinear post-production techniques. Topics covered in the class include: location shooting, sound recording and editing, film editing, negative matching, and interlock mixing. Students produce a professional 16mm film during the course. Film and processing costs are shared by all students.

*Prerequisite:* COMM 3710 and COMM 3740.

### Directing Video/Film

**\*COMM 3730** 3 cr. 3 hr. ▲

This course examines the role of the director. Topics covered in the class include: script analysis and breakdowns, casting, blocking the camera and the actors, acting, and directing actors. The class focuses on the relationships between the director and producer, actor, writer, and editor as well as between the director and the cinematographer. The role of the assistant director is defined, and unions, talent agencies, schedule planning, and interpersonal communications are explored. Students are responsible for all materials.

*Prerequisites:* COMM 3510 or COMM 3710 and COMM 3580.

### Digital Production for Film and Video

**COMM 3740** 3 cr. 3 hr. ▲

In this course students may shoot 16mm film, video, or digital formats. Topics covered in the class include: techniques for shooting film for video; telecine techniques; resolving sound to video tape; time code fundamentals; editing video tape; understanding paintbox, digital effects, and other post-production techniques; and preparing to edit non-linear on the AVID system. Students are required to purchase film and video tape, as well as processing telecine services.

*Prerequisite:* COMM 3710 or 3520. *Fulfills computer literacy requirements.*

### Graphic Design I

**COMM 3810** 3 cr. 3 hr. ▲

The course provides a basic introduction to the design process and the principles of design. Emphasis will be placed on problem solving and relating graphic design to communication. Students will be introduced to tools and equipment used in the field while working on layout and creative conceptualization. Students are responsible for all graphic supplies. (Credit is not given for both COMM 3810 and IT 2520.)

### Graphic Design II

**COMM 3820** 3 cr. 3 hr. ▲

By using a problem solving approach to graphic design, students learn advanced graphic design principles. Students design and prepare highly finished comprehensive layouts. Projects include Marker Layout, Typography, Publication Design, Poster Design, and Corporate Identity. Problems are approached and solutions reached through teamwork. Projects are evaluated through joint critique. Students are responsible for all graphic supplies.

*Prerequisite:* COMM 3810.

### Graphic Design III

**COMM 3830** 3 cr. 3 hr. ▲

By concentrating on technical and creative illustration, students have an opportunity for advanced study in graphic design. Students work in various media, including pen and ink, water color, marker, and colored pencil. Students are responsible for all illustration supplies.

*Prerequisite:* COMM 3820.

### Graphic Management

**COMM 3840** 3 cr. 3 hr. ▲

The course studies the practices of advertising, sales, and marketing management in business, industry, and education. Emphasis is placed on the graphic designer in the role of creative art director, production manager, and designer illustrator. Topics of study include careers in graphic design and portfolio design and preparation.

*Prerequisite:* COMM 3820.

### Publication Design

**COMM 3850** 3 cr. 3 hr. ▲

The course examines all aspects of publication design including designing with type, layout, combining photography and illustration with text, and print production. Students employ these skills in the design of newsletters, booklets, magazines, book and web page design. Portfolio quality pieces are produced in this advanced level course. Students are responsible for all graphic supplies.

*Prerequisites:* COMM 3820, 3890.

### Writing for Business and Technology

**COMM 3860** 3 cr. 3 hr. ▲ ●

The course is for students interested in writing in the business, industry, and management context. Topics covered in the class are: business correspondence, description of process and mechanisms, sets of instructions, proposals, abstracts, and reports. (Credit is not given for both COMM 3860 and ENGL 3860.)

### Feature and Magazine Writing

**COMM 3870** 3 cr. 3 hr. ▲

The course examines writing feature articles for newspapers, magazines, and trade journals. (Credit is not given for both COMM 3870 and ENGL 3870.)

### Typography

**COMM 3880** 3 cr. 3 hr. ▲

The course is designed to teach the fundamentals of typography. Students will create projects that will enhance their knowledge of professional layout and design programs while paying special attention to the subtleties of typography. Comparison will be made between preparing simple and complex files for print. Students are responsible for all graphic supplies.

*Prerequisite:* COMM 3820, 3890.

### Computer Graphic Design

**COMM 3890** 3 cr. 3 hr. ▲

The course introduces the techniques and tools utilized in electronic media to create, manipulate, and organize the graphic image. This course demonstrates present and future applications of electronically generated images as they relate to the graphic designer. Students have hands-on experience with computer graphics and electronic publishing hardware and software. Students are responsible for all supplies.

*Prerequisite:* COMM 3820. *Fulfills computer literacy requirements.*

### Graphic Design Photography

**COMM 3900** 3 cr. 3 hr. ▲

The course covers the commercial applications of photography, including product presentation, advertising, illustration, promotion, and publication photography. Students learn the role of the designer as a photographer who solves assigned problems using various techniques including digital photo and image manipulation. Students are responsible for all graphic supplies.

*Prerequisites:* COMM 3600, 3820.

### Graphic Arts Production

**COMM 3910** 3 cr. 3 hr. ▲

The course examines the skills necessary to produce printed products. Students complete projects with electronic page layout programs, operate process cameras, prepare printing plates, precisely match ink colors, and print their projects. The very important relationship between the designer and the commercial printer is emphasized. (Credit is not given for both COMM 3910 and ITEC 1500.)

*Prerequisite:* COMM 3810 or permission of Instructor.

### Advanced Computer Graphic Design

**COMM 3920** 3 cr. 3 hr. ▲

This is an advanced course in computer graphics covering application of electronically generated images as they relate to the graphic designer and the use of computer graphics work stations. Topics of study include: digital typography, illustration, electronic publishing, and digital photography. Students are responsible for all supplies.

*Prerequisites:* COMM 3820, 3890 or permission of the Instructor.

### Two-Dimensional Motion Graphics

**COMM 3940** 3 cr. 3 hr. ▲

This course investigates the processes involved in choreographing and producing animated two-dimensional images and typography. Students demonstrate a variety of techniques including frame-by-frame animation, keyframe interpolation and animation compositing using Adobe and Macromedia software. Assignments explore storyboarding, “four-dimensional” typography, vector-based animation, animated illustration and digital video for multimedia and World Wide Web presentation.

*Prerequisites:* COMM 3810, 3890.

### Human Communications

**COMM 4200** 3 cr. 3 hr. ▲

The course provides for the study of human communication theories, concepts, contexts, and skills with the intent of developing an understanding of everyday interaction. Through the study of human communication theory, students will develop the vocabulary and concepts to evaluate communication practices. The class pays particular attention to achieving self-presentation and relational skills that apply to a variety of social contexts students encounter. Class discussion, activities, and assignments are designed to develop both knowledge and competencies necessary to understand the relationship between communication patterns and social order.

*Prerequisite:* junior status.

### Instructional Training Design

**COMM 4210** 3 cr. 3 hr. ▲

The course examines instructional communications as they apply to selected learning theories and various instructional approaches or methods. Strong emphasis is given to the application of learning theories to interactive technologies.

*Prerequisite:* junior status.

### Organizational Communication

**COMM 4220** 3 cr. 3 hr. ▲

This course is designed to introduce students to contemporary concepts about organizational communication functions, the structure of organizational communication systems and organizational levels at which communication occurs. Student research and field study will consist of a communications audit of a selected organization and the analysis at the related human, hardware, and software interfacing.

*Prerequisite:* junior status.

### Communications Law and Ethics

**COMM 4230** 3 cr. 3 hr. ▲

The course provides an introduction to communications law and media ethics that raise important issues for all students in the Communications/Media department. Topics discussed in the class are: copyright law, libel, censorship, cable and broadcast law, privacy, and the U.S. legal process.

*Prerequisite:* junior status.

### Media Criticism

**COMM 4240** 3 cr. 3 hr. ▲

In the context of film and video work, students examine several approaches to evaluating media, including political, cultural, social, genre, and feminist.

*Prerequisite:* junior status.

### Research Seminar

**COMM 4250** 3 cr. 3 hr. ▲

The seminar provides an opportunity to explore and learn various research methodologies, such as archival research, content analysis, and field study. The seminar is offered with various focuses, depending upon student and Instructor need and interest.

*Prerequisite:* junior status.

### Advanced Professional Study

**\*COMM 4260** 3 cr. 3 hr. ▲

This interdisciplinary production course combines the talents of students from two or more concentrations. Students learn to work in a production team with a client to produce professional quality video, film, slide-tape, print, graphic, and/or interactive materials.

*Prerequisite:* completion of five courses within a concentration.

### Pre-Press Production

**COMM 4270** 3 cr. 3 hr. ▲

Students need a bridge between design and the complex world of printing. File preparation for print reproduction will be stressed in this comprehensive, advanced level course. Printing terminology, job specification, file formatting, bid writing, color proofing, trouble shooting electronic documents, and mechanical press related problems are studied.

*Prerequisite:* COMM 3820, 3890.

### Seminar in Communication Theory

**COMM 4205** 3 cr. 3 hr. ▲

The seminar provides detailed and extensive study of communication theories, particularly interpersonal and mass communication theories.

### Internship

**COMM 4880** 12 cr. 36 hr. ▲ ●

This full semester on- or off-campus Internship requires fifteen thirty-six-hour weeks of work. Communications/Media majors apply their knowledge and skills to the practical solution of communications problems.

*Prerequisites: completion of all preceding Communications/Media Phases with a cumulative Communications/Media Grade Point Average of 2.5 or better at the time the Application for Internship is due. Approval by Communications/Media Interview Committee and Department Chairperson. Students must complete an internship program in the semester prior to a planned internship. This program includes the student's presentation of a portfolio of work to be evaluated and approved by the Internship Committee.*

### Independent Study

**COMM 4901** 1 cr. 3 hr. ▲  
**COMM 4902** 2 cr. 6 hr. ▲  
**COMM 4903** 3 cr. 9 hr. ▲  
**COMM 4906** 6 cr. 18 hr. ▲

The Independent Study provides an opportunity for highly self-motivated students to explore areas of Communications/Media not provided within the departmental curriculum. Research methodology is to be used and a written monograph is to be presented to the faculty sponsor. Approval of a faculty sponsor, consent of the advisor, and permission of the Chairperson is required.

### Field Study

**COMM 4940** 3 cr. 9 hr. ▲  
**COMM 4950** 6 cr. 18 hr. ▲

The Field Study provides an experience that permits students to develop the knowledge and skills acquired in the classroom. A portfolio of the work completed is to be presented to the faculty sponsor. Approval of a faculty sponsor, sanction of a site supervisor, consent of the advisor, and permission of the Chairperson is required.

### Directed Study

**COMM 4975** 1-6 cr. ▲

## Computer Information Systems

See course offerings under  
**Business or Computer Science.**

## Computer Science

### Key to Course Offerings

- Q: designates courses in the Quantitative Scientific Cluster  
I: the Ideas and Events Cluster  
B: the Human Behavior Cluster  
L: the Literature, Language and Arts Cluster  
C: Multicultural

IDIS: Interdisciplinary courses  
*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

- ▲ Undergraduate Day School  
● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as "Topics" courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

**All Computer Science Electives must be at or above CSC 3000 level.**

### Introduction to GUI Programming

**CSC 1000** 3 cr. 3 hr. ▲ ●

This course provides an opportunity to learn a higher-level language, to gain experience in the design, coding and utilization of computer programs, and to develop simple applications using a graphical user interface. Q

*Co-requisite: Passing the Math placement exam or Math 0200.*

### Internet Communications

**CSC 1050** 3 cr. 3 hr. ▲ ●

The Internet plays a crucial role in the information revolution. It is used increasingly for personal and business communications, for commerce and exchange of ideas, and as a source of information and entertainment. This course introduces the student to various components of the Internet such as the web, email, discussion groups, ftp, telnet etc. Tools and techniques for efficient web browsing will be taught. Security issues involved in using the Internet will be discussed. Students will design simple web pages and publish them on the Internet.

### Computer Applications

**CSC 1100** 3 cr. 3 hr. ▲ ●

This is an introductory level study of the computer and application software techniques. This course introduces microcomputer concepts, common operating system functions, Internet, email and an integrated package of application software, including word processing, spreadsheet, database and presentation development. The student learns how to construct and edit a document, spreadsheet, database and presentation using the proper tools. Q  
*Co-requisite: Passing the Math placement exam or Math 0200.*

### Basics of Web Design

**CSC 1150** 3 cr. 3 hr. ▲ ●

This course is about creating web pages using the latest version of HTML. The course covers the basics of HTML code. Students will learn to work directly with HTML tags to create forms, frames and cascading sheets, and to embed music and other multimedia.

*Prerequisite: CSC 1050 or permission from department.*

### Introduction to Windows and Word-processing

**CSC 1200** ▲ ●

This course introduces the student to personal computers using Operating Systems. Students also learn word processing. The student becomes proficient in the use of Windows and advanced concepts in word processing.

### Introduction to Spreadsheets and Databases

**CSC 1300** 3 cr. 3 hr. ▲ ●

This course introduces the student to spreadsheets and databases. The student becomes proficient in the use of spreadsheets and databases as well as in the use of built-in functions for business, family etc. Q

*Co-requisite: Passing the Math placement exam or Math 0200.*

### Computer Information Systems

**CSC 1400** 3 cr. 3 hr. ▲ ●

This course is an introduction to concepts in computer information systems. Students learn how information technology is used in business. Topics covered include use of information systems in business, basics of hardware, software, networks and data management, use of productivity software, security and ethical use of information systems, business decision systems, and developing and managing information systems. A working knowledge of word processing, spreadsheet, and presentation software is required. Q

*Co-requisite: Passing the Math placement exam or Math 0200, and CSC 1100 or BSAD 1700 or equivalent knowledge.*

### Computer Science I

**CSC 1500** 3 cr. 3 hr. ▲ ●

This course introduces Computer Science by using a high-level programming language. Students will be taught to design programs and implement them using object-oriented programming techniques. This course provides a solid background for further studies in Computer Science by preparing students to enroll in the more specialized high-level software courses. Q

*Prerequisite: Passing the Math placement exam or Math 0200.*

### Computer Science II

**CSC 1550** 3 cr. 3 hr. ▲ ●

This course builds on the concepts covered in Computer Science I. Topics covered include inheritance, polymorphism, recursion, advanced GUI programming, exception handling, and input/output handling. Students use integrated development environment to create, compile, run and debug programs. Q

*Prerequisite: CSC 1500.*

### Introduction to Electronics

**CSC 1600** 4 cr. 5 hr. ▲ ●

This course provides an introduction to analog circuits and modern solid-state devices, including diode rectifiers, power supply design, OP amps, and oscillator circuits. Extensive laboratory work illustrates the operation and behavior of circuits, as well as the use of modern laboratory test equipment. Topics covered in the class include basic circuit analysis, semiconductor principles, diodes, power supply design, bipolar and FET transistor applications, OP AMP circuits and applications, oscillators, and linear integrated circuits. Students registering for this course must also register for the accompanying Lab course.

*Prerequisite: Math 1300.*

### Digital Electronics

**CSC 1650** 4 cr. 5 hr. ▲ ●

This course provides a study of the design and application of both asynchronous and synchronous electronic logic circuits. Counters, registers, serial and parallel adders, and arithmetic units are included. Topics covered are: Boolean algebraic simplifications, Karnaugh maps, Quine McCluskey method, combinational logic circuits, sequential logic circuits, comparison of TTL, MOS, ECL logic families, the arithmetic unit, coding and decoding, parity detection and generators, multiplexers and programmable logic devices. Extensive laboratory work supplements the topics studied. Students registering for this course must also register for the accompanying Lab course.

*Prerequisite: CSC 1600.*

### Discrete Mathematics

**CSC 1900** 3 cr. 3 hr. ▲ ●

This course introduces discrete mathematics as applied to computer science. Topics covered include Boolean logic, elementary set theory, functions, relations, enumeration, proof techniques, number systems and trees. Q (Credit is not given for both CSC 1900 and MATH 1900.)

*Prerequisite: Math 1250 or Math 1300 or equivalent knowledge.*

### Computer Graphics

**CSC 2000** 3 cr. 3 hr. ▲

Algorithms for picture generation, manipulation and rendering are presented. Students will write programs to implement the algorithms.

*Prerequisites: CSC 1000 or CSC 1500, and CSC 1900 or MATH 1900.*

### Advanced Web Design with Scripting

**CSC 2150** 3 cr. 3 hr. ●

Scripting is used to add programming capabilities to HTML code and to create dynamic and more interactive web pages. Students will learn JavaScript as a scripting tool for creating web pages. Operators, statements, functions, event handling and objects of this language will be studied. Students will learn the document, form and window objects in detail.

*Prerequisite: CSC 1150 or equivalent knowledge.*

### Database Systems

**CSC 2400** 3 cr. 3 hr. ▲

This course is about design and implementation of database systems. Evolution of various database models including hierarchical, relational and object-oriented models and the advantages of different models are studied. Use of Structured Query Language (SQL) in relational databases is explained and applied. Students design databases applying E-R modeling and normalization techniques.

*Prerequisites: CSC 1550, and CSC 1900 or MATH 1900.*

### Assembly Language

**CSC 2500** 3 cr. 3 hr. ▲ ●

Assembly language provides the means for programming a computer at the most basic machine level. In this course, we explore the fundamental operations of a modern computer system using software tools. Topics examined include numerical and character representations, microprocessor register usage, machine instructions, addressing modes, input/output processing, parameter passing, interrupt processing and simple data structure realizations on the Intel 80x86 processor. Q

*Prerequisite: CSC 1550 or permission from the department.*

### Systems Programming

**CSC 2560** 3 cr. 3 hr. ▲ ●

This course provides the student with the fundamentals of structured programming at the systems level. UNIX is used as a base for this course. Students obtain a thorough knowledge of the C language, comfort in using the UNIX operating system and an appreciation for a systems approach to low-level programming tasks. Q

*Prerequisites: CSC 1550 and CSC 1900 or MATH 1900.*

## Computer Organization

**CSC 2600** 4 cr. 5 hr. ▲ ●

The purpose of this course is to provide a thorough discussion of the fundamentals of computer organization and architecture, and to relate these to contemporary computer design issues. After a brief review of the basic digital components used, the steps that a designer would go through in the design of an elementary systems are covered followed by a discussion of the organization and design of the central processing unit (CPU) and various control system implementations. The input/output and memory subsystems are included as is a brief discussion of multiprocessing systems, pipelining, and virtual memory. Students registering for this course must also register for the accompanying Lab course

*Prerequisite:* CSC 1650.

## Business Programming

**CSC 2700** 3 cr. 3 hr. ▲

This course provides students with experience in the design and coding of programs using a business oriented language. Topics covered include structured programming techniques; data, record and file design; sorting and merging of files; table handling; variable-length records; indexed sequential access methods. File creation, updating and reporting is given special attention.

*Prerequisite:* CSC 1550

## Web Programming with Java

**CSC 3050** 3 cr. 3 hr. ▲ ●

There are three aspects to Web Programming: Front-end GUI programming, back-end Web or database server programming and the network programming to connect the two. In this course, students learn to use Java classes for creating applets, for server programming and for interfacing with a database. The course also reviews advanced concepts of object oriented programming, Java's exception handling, and multithreading.

*Prerequisite:* CSC 2560.

## Operating Systems

**CSC 3100** 3 cr. 3 hr. ▲ ●

This course examines the internal structure and operation of operating systems with an emphasis on their design criteria and approaches. Topics covered include: process management, scheduling, deadlock, memory management, virtual memory, protection and security and distributed systems. A working knowledge of a higher-level system programming language and computer data structures is assumed.

*Prerequisites:* CSC 2560 and CSC 2600.

## Programming Languages

**CSC 3200** 3 cr. 3 hr. ▲ ●

This course studies the hierarchy of programming languages starting with Assembly Language. It covers general principles of languages within imperative, object oriented and functional paradigms as well as logic programming. Students have an opportunity to learn the basic concepts and constructs of various programming frameworks and practice software design skills in languages like Ada, Lisp and/or Prolog.

*Prerequisite:* CSC 2560

## Advanced Topics in Web Development

**CSC 3250** 3 cr. 3 hr. ▲ ●

State of the art tools and technologies used in developing and deploying web pages will be studied. Server-side programming for database access will be studied. Students will create model applications used in e-commerce.

*Prerequisite:* CSC 2150.

## Data Communications & Networking

**CSC 3400** 3 cr. 3 hr. ▲ ●

This course investigates the means by which data is exchanged by two digital devices. Topics include the history of data communications, the public switching network (PSTN), standards bodies (OSI, IEEE, etc), serial synchronous/asynchronous data flow, channel characteristics (bandwidth, noise, capacity, physical implementations), modulation techniques (modems and standards), circuit and packet switching (Asynchronous Transfer Mode (ATM)), multiplexers, Integrated Service Digital Network (ISDN), Digital Subscriber Lines (DSL), etc. An introduction to Wide Area Networks (WAN) is included.

*Prerequisites:* CSC 2560 and CSC 2600.

## Local Area Networks

**CSC 3450** 3 cr. 3 hr. ▲ ●

This course examines local area network (LAN) technology and architecture both through general concepts and practical hands-on experience. All networking fundamentals are presented based on the modular approach of the ISO standards. Topics covered include file servers, configurations and protocols, installation and management of server hardware and software, system monitoring, maintenance and troubleshooting. Due to its importance, the TCP/IP protocol will be stressed.

*Prerequisite:* CSC 2560.

## Object Oriented Programming

**CSC 3500** 3 cr. 3 hr. ▲ ●

This course covers the fundamental principles of Object Oriented Paradigm. It studies the concepts of Procedural and Data Abstraction, Classes, Inheritance, Polymorphism, Virtual Functions, Templates, Exception Handling, File Manipulations. Students learn the main tools of a popular language supporting the object-oriented framework and various techniques of object-oriented design.

*Prerequisite:* CSC 2560.

## Windows Programming with MFC

**CSC 3550** 3 cr. 3 hr. ▲

This course is about developing Win32 applications using Microsoft Foundations Classes and Windows API. Topics include Menus, Controls, Dialog Boxes, Property Sheets and Document/View Architecture.

*Prerequisites:* CSC 3500.

## Microprocessors

**CSC 3600** 4 cr. 5 hr. ▲ ●

The course provides a detailed study of the microprocessor and its applications. Emphasis is placed on a current microprocessor, its hardware and software and its associated family of integrated circuits. Students design a microprocessor system, configuring the random access memory, the read-only memory, and peripheral devices using peripheral interface adapters. Students reinforce theory with extensive laboratory work. Students registering for this course must also register for the accompanying Lab course.

*Prerequisite:* CSC 2600.

## Algorithms and Data Structures

**CSC 3700** 3 cr. 3 hr. ▲ ●

This course provides an introduction to modern study of computer algorithms and complex data structures. It explores the logic of algorithmic analysis and design as well as practical utility and implementation techniques. The basic ideas from Complexity Theory will help students understand the concept of efficiency of algorithms and its role in the design of algorithms. The analysis of data structures is focused on the concepts of linked list, queues, stacks and trees. Various programming techniques such as divide and conquer; dynamic programming and backtracking are presented.

*Prerequisite:* CSC 2560.

## Compiler Construction

**CSC 4200** 3 cr. 3 hr. ▲

The course studies the techniques involved in the analysis of source language code and the generation of efficient object code. The focus is more on the front end of the compiler (analyzer) than it is on the back end (generator). By working in small project teams students modify an existing compiler. Topics covered in the class include: language definition; lexical, syntactic, and semantic analysis; and code generation.

*Prerequisite:* CSC 2600.

## Software Engineering

**CSC 4400** 3 cr. 3 hr. ▲ ●

This course examines main features of software life cycle. It covers the main issues in design creation, principles of programs verification, system testing and evaluation criteria. This course provides students with an opportunity to obtain practical experience in software design using CASE tools. Students work in project teams and apply principles of software design, verification, testing and coding toward the solutions of assigned problems.

*Prerequisite:* CSC 2560.

## Database Programming

**CSC 4550** 3 cr. 3 hr. ▲ ●

Many businesses, small and large, utilize user-interfaces to access databases to provide security as well as multiple user access to the databases. This course will introduce the student to software components designed for database programming in a higher-level language. Each student works on a project of applied nature that involves documenting the requirements of a database, creating the database, and designing the user-interface to access the database. Working knowledge of the host language is required.

*Prerequisites:* CSC 2400 and permission from the Instructor.

## Independent Study

**CSC 4901, 4902, 4903 1, 2, 3 cr.** ▲ ●

The independent study provides an opportunity for highly motivated students to explore advanced areas of computer science not provided within the departmental curriculum. Approval of the faculty sponsor, consent of the advisor and permission of the Chairperson are required.

*Prerequisite:* Completion of all the required 2000 level core courses with a Grade Point Average of 2.5 or more in those courses.

## Internship

**CSC 4940, 4950** 3, 6 cr. ▲ ●

A 3-credit on- or off-campus internship requires 12 hours of work each week for fifteen weeks. Students apply their knowledge and skills to develop practical solutions to computer science or computer information systems problems. Approval by Department Chairperson is needed to register for this course. A written report on the work done in the format specified by departmental policy must be submitted to the chairperson to receive a grade.

*Prerequisite:* Completion of all the required 2000 level core courses with a Grade Point Average of 2.5 or more in those courses.

## Directed Study

**CSC 4975** 1-6 cr. ▲ ●

A course in the departmental curriculum may be offered as directed study subject to the college policies and departmental policies. Approval of the faculty sponsor, consent of the advisor and permission of the Chairperson are required.

*Prerequisite:* Completion of all the required 2000 level core courses with a Grade Point Average of 2.5 or more in those courses.

# Criminal Justice

## Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as "Topics" courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

Additional courses for the Criminal Justice major can be found in Human Services, Political Science, Psychology, and Sociology.

## Introduction to Criminal Justice

**CJ 2000** 3 cr. 3 hr.

This course provides the student with an overview of the structure and organization of the criminal justice system. Emphasis is placed on the examination of the functions and decision processes of those agencies that deal with the management and control of crime and criminal offenders. The course includes didactic presentations, assigned readings, class discussions, visiting practitioner lecturers, and small group discussions.

## Women in Criminal Justice

**CJ 2450** 3 cr. 3 hr.

This course will examine the involvement of females in the criminal justice system, as victims, offenders, workers and professionals. Female criminality will be explored from varied perspectives. Students will undertake a systematic examination of the issues, biases and problems affecting the girls and women involved in this system, with attention focused on the effects of these factors on them, their relationships and their families.

## Juvenile Justice

**\*CJ 2600** 3 cr. 3 hr.

The course is designed to develop student awareness of past and contemporary philosophies, practices, and paradoxes of juvenile justice. The course examines the programmatic efforts designed for juveniles “in trouble with the law” and focuses on the relationships between the components of this system of justice. The content of the course is supplemented by current journal research, lectures, and panel discussions by practicing professionals, and a field-based class. A supervised practicum (20 hours per semester) is encouraged.

*Prerequisite:* CJ 2000.

## Ethics in Criminal Justice

**CJ 2651** 3 cr. 3 hr.

This course will acquaint the student with the theoretical foundations essential to ethical decision making by introducing students to ethical theory, major ethical belief systems, and ethical issues in criminal justice. Students will develop awareness of and explore the major ethical issues/questions specific to each of the criminal justice subsystems; in addition, the student will become familiar with and examine the ethical challenges and dilemmas that confront criminal justice professionals across the US system of justice. Strategies for responding to situations are considered and models of ethical decision making are examined.

## Criminal Law

**CJ 2550** 3 cr. 3 hr.

The focus of this course is the study of the general principles of criminal law. The approach adopted in this course involves the use of the text to explain general principles and their application to specific crimes followed by cases that apply the general principles to the facts of the specific cases. The students will be encouraged to formulate their own views regarding the application made by the court its opinion on the one hand and, on the other, they will also be encouraged to understand the principles and definitions in order to apply them. Students will be required to act as legislators, judges, juries, defense attorneys and prosecutors in order to see the principles and definitions from all perspectives. I

## Community Based Corrections

**CJ/HMSV 3300** 3 cr. 3 hr.

This course examines the philosophy of community-based corrections from historical, legal, social, and psychological perspectives. The essence of probation and parole and their administration are considered in conjunction with criminal justice issues and practices that affect the court’s decision to allow community sanctions and supervision in lieu of incarceration. Contemporary trends and alternatives to traditional supervision are explored as well. A supervised practicum (20 hours per semester) is encouraged.

*Prerequisite:* CJ 2000.

## Internship in Criminal Justice

**CJ 4970** 6 cr.  
**CJ 4990** 12 cr.

Internship is the structured academic experience that allows Senior CJ students who have successfully met eligibility criteria, to integrate and apply the skills and theory of the discipline in a field-based setting. Such an experience helps the student develop an understanding of the effects of administrative practices and governing policies on the ability to carry out the responsibilities of his/her field placement.

Students participate in Internship the supervision of qualified professionals in CJ organizations.

In addition to the field experience, students participate in a weekly seminar held by the college’s supervising professor. Here, students share their experiences and develop a heightened awareness of their roles in the organizations in which they are functioning.

Students must have completed their prerequisites at least one semester before taking Internship and must pre-register with the Field Placement office in the beginning of the semester prior to the semester before they plan to enter an agency, (for example, students planning a fall placement must have completed their prerequisites by the end of the previous fall semester and pre-register with the Instructor early in the previous spring.)

Students must meet CJ Internship eligibility requirement as determined by the Department of Behavioral Sciences.

# Early Childhood, Elementary, and Middle School Education

## Key to Course Offerings

\* Asterisk indicates that the course may be offered less than once every two years.

- ▲ Undergraduate Day School
- Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

## Personal Reading Improvement

**EDUC 1000** 1 cr. 3 hr. ▲

Individualized reading programs are tailored to meet the particular needs of each student. Students experiencing difficulty in understanding what they read engage in programs stressing comprehension skills. Students with good comprehension but with slow reading rates receive assistance in acquiring skills to at least double their speed. Additionally, all students are given instruction in reading at different rates for different purposes.

## Personal Reading Improvement II

**EDUC 1010** 1 cr. 3 hr. ▲

This course is a continuation of Personal Reading Improvement I.

## Early Childhood Foundations

**EDUC 1100** 4 cr. 5 hr. ▲

This course gives a brief orientation on the developmental philosophy and goals of early childhood education. Students consider educational procedures used in facilitating the development of the child. They also explore the role of the teacher, the environment, and the appropriate instructional strategies to use with young children. The course is required of all Early Childhood majors. A pre-practicum is required.

### Behavioral Science in Early Childhood: Child Development and Observation

**EDUC 1600** 4 cr. 5 hr. ▲

This course includes a study of principles, patterns, and theories of human development and learning as well as principles and techniques of naturalistic and standardized child study. Observation, recording, synthesis, and interpretation of the behavior of young children occurs within a pre-practicum setting. Written case studies are required. This course is a requirement for Early Childhood majors.

*Prerequisite: General Psychology or Introduction to Psychology. Required for EDUC 3110.*

### Reading in Early Childhood Education

**EDUC 2100** 3 cr. 5 hr. ▲

The reading process and factors influencing the development of reading are examined. Pre-reading and reading skills are identified, and techniques for assessment of skills are presented. Methods and materials for teaching primary reading are discussed and illustrated. A pre-practicum is required.

*Prerequisite: EDUC 1600.*

### Language Arts in Early Childhood Education

**EDUC 2200** 3 cr. 5 hr. ▲

This course presents a timely and concise summary of important issues confronting the teacher and learner when developing a mastery of language arts in the Early Childhood Setting. The focus is on methodology related to the teaching of listening, speaking, reading, and writing. A pre-practicum is required.

### Fine Arts in Early Childhood Education

**EDUC 2400** 4 cr. 5 hr. ▲

This course studies the integration of art, music, and movement into curricula for young children by using an interdisciplinary approach. Investigation of the objectives, methods, and materials in the fine arts is conducted.

*Prerequisite: EDUC 1100.*

### Pre-Kindergarten Clinical

**EDUC 2500** 4 cr. 5 hr. ▲

This course is designed for the student of Early Childhood Education who is interested in exploring early childhood prior to the Kindergarten and public school experience. The students investigate a variety of models and curriculum programs designed for infants, toddlers, and preschool-aged children. Further the student experiences a wide variety of pre-Kindergarten settings and explores the systems designed to create, administer, and evaluate such programs.

### Parent-Child Relations in Education

**EDUC 2700** 3 cr. 5 hr. ▲

This course explores the role of the parent in the development of the child and how the parent relates to the educational system. This course stresses awareness of how parents stimulate the growth of behavioral trends in their children and how they can be useful as resources to improve the child's educational environment.

*Prerequisite: EDUC 1600 or PSY 2210.*

### Principles and Practices in Education

**EDUC 2710** 3 cr. 3 hr. ▲

This course includes an examination of the theoretical and practical knowledge of the teaching/learning process. Students demonstrate competencies in the areas of planning, curriculum design, and evaluation. Focus is placed on the needs and learning styles of the elementary school and middle school child and the instructional strategies used to meet those needs effectively. In addition, classroom management skills and techniques are emphasized. A pre-practicum is required. A portfolio assessment process is introduced in this course.

*Prerequisite: PSY 2210 or PSY 2230.*

### Science in Education

**EDUC 2750** 3 cr. 3 hr. ▲

In this course contemporary elementary and middle school science methods, materials, courses of study and science texts are examined. Science teaching units are developed and demonstrated. A pre-practicum is required.

### Integrated Creative Arts Teacher Education Program

**\*EDUC 2800** 15 cr. 45 hr. ▲

This is a full-semester experience which includes five weeks of classroom instruction and training in creative work in visual arts, language arts, movement, music, and integrating art forms. Subsequent to the initial training period, students are placed in field stations for classroom experiences for the remainder of the semester. While in the field stations, students assist teacher-specialists in one or more of the art form areas. They also develop and implement programs for the specific classroom and its pupils so as to foster the pupils' personal expression through creation in the arts. A weekly seminar on Wednesday afternoons from 1 p.m. to 3 p.m. is held at the College for the purpose of workshop experiences and problem solving. Students are visited and evaluated regularly by College faculty as well as by cooperating teacher-specialists in the schools. Students are expected to be present in the school throughout the semester.

### Caring for Infants and Toddlers

**EDUC 2900** 4 cr. 6 hr. ▲

This course assists students in the development of attitudes, knowledge, and skills important to understanding and supporting the interactions of infants and toddlers.

### Language Arts in Education

**EDUC 3010** 3 cr. 3 hr. ▲

This course provides students with an introduction to the nature of language and language growth. Emphasis is placed on the meaning and importance of language arts as well as on the characteristics of elementary and middle school age children, which affect and are affected by the language arts program. Elements of writing, speaking, listening, and reading are stressed. A pre-practicum is required.

*Prerequisite: EDUC 2710.*

### Teaching Mathematics

**EDUC 3020** 3 cr. 3 hr. ▲

Contemporary elementary and middle school mathematics standards, methods, and materials are examined in this course. Developmentally appropriate lessons and learning devices are refined and demonstrated. A pre-practicum is required.

*Prerequisite: Math competency Passing Score or Basic Math II.*

### Reading in Education

**EDUC 3030** 3 cr. 3 hr. ▲

This course includes an examination of the reading process with emphasis on methods of evaluation and strategies for reading. Reading skills and procedures for developing these skills are examined, and current approaches to the teaching of reading are evaluated. The student is made cognizant of methods of grouping and evaluation procedures. A pre-practicum is required.

*Prerequisites:* PSY 2210, EDUC 2710.

### Reading Diagnosis and Remediation

**\*EDUC 3050** 3 cr. 3 hr. ▲

This course provides students with the competencies necessary to diagnose reading abilities and to develop reading proficiency in their future classrooms. Students are taught the skills needed to administer, score, and analyze Informal Reading Inventories. The student tests a child, plans a program of instruction for that child, and instructs the child based on the diagnosis and instructional plan. Emphasis is also placed on the development and utilization of assessment strategies, instructional techniques, and instructional activities specific to the needs and interests of the child.

*Prerequisites:* EDUC 2100 and EDUC 3030.

### Methods and Materials in Early Childhood Education

**\*EDUC 3060** 3 cr. 3 hr. ▲

This course includes a hands-on workshop and exploration of all areas of the early childhood curriculum. As part of the exploration, students research and prepare games and devices appropriate to an early childhood classroom. This course serves as an elective for all education majors.

### Middle School Concept

**\*EDUC 3070** 3 cr. 3 hr. ▲

This course introduces students to the historical development, philosophy, and the competencies needed to teach in the Middle School. Pre-practicum required.

*Prerequisite:* PSY 2210 or PSY 2230.

### Science, Math, and Social Studies in Early Childhood Education

**EDUC 3100** 4 cr. 5 hr. ▲

This course emphasizes the development and demonstration of instructional techniques and materials in science, math, and social studies, which are appropriate for heterogeneous groups of young children. A pre-practicum is required.

### Behavioral Science in Early Childhood II: Learning and Assessment

**EDUC 3110** 4 cr. 5 hr. ▲

This course is a continuation of EDUC 2110. (EDUC 2110 and EDUC 3110 cannot be taken simultaneously.)

### Curriculum and Instruction in the Middle School

**\*EDUC 3300** 3 cr. 3 hr. ▲

This course introduces students to curriculum development, instructional competencies, and appropriate goals and objectives for the Middle School. A pre-practicum is required.

*Prerequisite:* EDUC 3070.

### Reading in the Middle School

**\*EDUC 3400** 3 cr. 3 hr. ▲

This course imparts appropriate knowledge and competencies for reading at the Middle School level.

### Creative Arts in Education

**EDUC 3500** 3 cr. 3 hr. ▲

The course explores materials and processes of children's perception and behavior with emphasis aimed at encouraging the development of their critical and creative potential.

*Prerequisite:* EDUC 2710.

### Social Studies in Education

**EDUC 3600** 3 cr. 3 hr. ▲

This course equips the future teacher with the knowledge, teaching strategies, and sequential course development necessary to teach Social Studies at the elementary and middle school level. A pre-practicum is required.

*Prerequisites:* EDUC 2710, EDUC 3030.

### Reading in the Content Areas

**EDUC 3640** 3 cr. 3 hr. ▲

This course includes discussion of the role of content reading in elementary and middle school classrooms; textbook evaluation and quantitative/qualitative evaluation procedures; reflections on being a content learner; and the development and practice of strategies for learning from textbooks, including vocabulary, comprehension, and study skills.

*Prerequisite:* EDUC 3010 or EDUC 3030 (for Elementary and Middle School majors).

### Using Computers in Classrooms

**EDUC 3700** 3 cr. 3 hr. ▲

Students examine the philosophy, theory, and application of computers in classrooms. A significant portion of class time is devoted to "hands on" experiences with computers. These experiences include programming in text and graphics mode, introducing and using LOGO, using printers, using the Internet for research, integrating computers and other technologies in teaching content area subjects, developing programs designed to enhance the learning abilities of children, and evaluating educational software. Prior experience using computers is not assumed. Q

### Analysis of Reading Problems

**EDUC 4000** 3 cr. 3 hr. ▲

The course examines the correlates of reading problems. Students learn to identify principles of diagnosis, and analyze, administer, and interpret formal diagnostic tests. Students demonstrate competency in preparing a case study report.

*Prerequisite:* EDUC 2100 or EDUC 3030.

### Foundations Seminar

**EDUC 4010** 3 cr. 3 hr. ▲

This course covers an examination of the historical perspectives and philosophical orientation in the field of elementary and middle school education. Specific attention is given to an analysis of current issues and programs in social foundation, legal foundation, curricular patterns, and pluralism in Education.

*Prerequisite:* EDUC 2710.

### Senior Seminar in Early Childhood

**EDUC 4050** 3 cr. 5 hr. ▲

This course covers an examination of the historical perspectives and philosophical orientations in the field of early childhood education. Specific attention is given to an analysis of current issues and programs. For senior practicum students only.

### Introduction to Bilingual Education

**EDUC 4150** 3 cr. 3 hr. ▲

This course provides an overview of the theory, research and practice of bilingual education. Historical constructs, current theories, and the philosophy of bilingual biculturalism will be emphasized. Basic concepts of bilingualism, state, and nation initiatives, politics and legislative mandates regarding bilingual education will be discussed. Familial, cultural, developmental and diverse learning abilities as they relate to the bilingual children will also be explored.

### Theories of Language and Second Language Acquisition

**EDUC 4200** 3 cr. 3 hr. ▲

The course introduces current theoretical models of language acquisition focusing on literacy development and developing language skills. It is designed to provide students with an overall understanding of the importance of language development and language acquisition as seen in the education environment. Issues regarding first and second language development will be addressed. Students will focus on how theory and research relate to language instruction.

### Bilingual Teaching Methods and Strategies

**EDUC 4300** 3 cr. 3 hr. ▲

This course introduces students to the various theories and methods of teaching children from diverse linguistic backgrounds. The emphasis will be placed on approaches and methodologies in teaching both English and the child's native language. Teaching strategies for supporting language skills, assessment approaches and evaluation procedures to determine the needs of bilingual students will be provided. Children with diverse learning abilities within the bilingual setting will also be emphasized.

### Assessment and Evaluation of Bilingual Programs

**EDUC 4400** 3 cr. 3 hr. ▲

This course is designed to explore the assessment and evaluation systems in bilingual education programs. The focus will be on the federal, state, and local educational policies and assessment practices of students in terms of language acquisition, language skills, content knowledge, as well as the evaluation of curriculum materials and teaching methods. Student progress, monitoring, developing and designing authentic assessment approaches, creating portfolios, as well as previewing, analyzing, and evaluating current bilingual assessment instruments will be included.

### Bilingual Practicum

**EDUC 4500** 3 cr. 3 hr. ▲

The practicum is designed for student teachers preparing for their certification, Teacher of Transitional Bilingual Education, Elementary Provisional with Advanced Standing. The students will be placed in bilingual classrooms at various grade levels (K-third grade) where they will be observing, assisting, and teaching under the supervision of a cooperating teacher. The students will also be attending, with their college supervisor regularly scheduled seminars (see Bilingual seminar) in which both Spanish and English will be presented.

### Bilingual Seminar

**EDUC 4600** 1 cr. 1 hr. ▲

The Bilingual Seminar is a complement and supplement to the Student Teaching Practicum in the bilingual classroom setting. Students will investigate the diversity of bilingual classroom settings, learning environments, curriculum approaches, teaching methodologies and teaching strategies as they relate to the bilingual child. Observation, journal writing and curriculum presentations and evaluations will be required.

### Teaching Writing in Middle and Secondary Schools

**EDUC 4700/ENGL 4700**

This course provides practice and research in alternatives for teaching writing in secondary schools. Different approaches are explored through experiments for the teacher and opportunities to test these approaches are available in prepracticum experiences. A prepracticum is required.

### Introduction to Learning Disabilities

**\*EDUC 4780** 3 cr. 3 hr. ▲

This course includes a study of some of the causes of school learning disabilities at the Elementary level. Specific techniques and remediation exercises are discussed.

### Practicum I and II in Early Childhood Education

**EDUC 4862, 4863** 6 cr. ▲

For the Student Teaching Practicum in Early Childhood, students are assigned to cooperating schools for a semester of student teaching.

### Practicum in Elementary Education I and II

**EDUC 4882, 4883** 6 cr. ▲

Students are assigned to cooperating elementary schools for a semester of student teaching.

### Practicum in Middle School Education I and II

**EDUC 4885, 4886** 6 cr. ▲

Students are assigned to cooperating middle schools for a semester of student teaching.

### Independent Study in Education

**EDUC 4903** 3 cr. ▲

This course provides students in early childhood, elementary, and secondary education with the opportunity to do research with staff guidance in a problem in education. The course is limited to juniors and seniors.

*Prerequisite: permission of Department.*

### Directed Study

**EDUC 4975** 1-6 cr. ▲

# Economics

## Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

## Introduction to Economics for Non-majors

**ECON 1050** 3 cr. 3 hr. ▲

This course surveys the field of economics without the technical sophistication of a principles course. The emphasis is on real problems of competition and growth with examples of concepts drawn primarily from the experience of the U.S. economy in global perspective. I

## Principles of Economics: Macroeconomics

**ECON 1100** 3 cr. 3 hr. ▲ ●

This course is a study of the theory of employment, income, and growth. Stabilization policy and current problems in American capitalism are emphasized. I  
*Prerequisite: satisfactory completion of the College Mathematical Readiness requirement.*

## Principles of Economics: Microeconomics

**ECON 1200** 3 cr. 3 hr. ▲ ●

Students examine the theory of the consumer and the business firm in this course. Efficiency in the allocation of resources is examined in four different market structures: pure competition, pure monopoly, monopolistic competition, and oligopoly. I

*Prerequisite: satisfactory completion of the College Math Readiness requirement.*

## Consumer Economics

**ECON 1300** 3 cr. 3 hr. ▲

This course emphasizes theories of consumption and economic functioning with emphasis on demand, consumer problems, standards of living, policies for protecting consumers, and expanding consumption. I

## Comparative Economic Systems

**ECON 2200** 3 cr. 3 hr. ▲

This course studies the different economic systems operational in the world today. Emphasis is on differences between the various types of market capitalist and planning systems. I  
*Prerequisite: ECON 1000.*

## Industrial Organization

**ECON 2300** 3 cr. 3 hr. ▲

This course integrates theory, empirical studies, and case studies to analyze the effects of government regulations on the structure and organization of US business firms. Several cases of antitrust legislation are studied. In addition the course shows how political and economic issues affect industrial organization. I

*Prerequisites: satisfactory completion of the College Mathematical Readiness requirement and ECON 1200.*

## Money and Banking

**ECON 2400** 3 cr. 3 hr. ▲ ●

This course focuses on the role of money, credit, and banking in the American economy. Special emphasis is placed on the applicability of monetary policy to the problems of economic stability. I  
*Prerequisite: ECON 1000.*

## Human Resource Economics

**ECON 2450** 3 cr. 3 hr. ▲

Labor market and employment analysis are the focus of this course, which covers the structure of labor markets, the education and training of the labor force, and manpower programs. The serious problems of unemployment, underemployment, discrimination, and barriers to job entry are also discussed.  
*Prerequisites: ECON 1200 or ECON 1250.*

## Economic Development

**ECON 2500** 3 cr. 3 hr. ▲

This course examines the problems of less developed countries. Topics of discussion include population, income growth, capital formation, unemployment, foreign investment and aid, the role of government, and international economics. I, C  
*Prerequisite: ECON 1000.*

## Urban Economics

**ECON 2550** 3 cr. 3 hr. ▲

This course is a historical and economic explanation of the growth of cities as well as a theoretical analysis of their location, form, and economic structure. Current urban problems are also discussed.  
*Prerequisites: ECON 1000, ECON 1200 or ECON 1250.*

## Public Finance

**ECON 2600** 3 cr. 3 hr. ▲

This course studies the principle of governmental expenditures and revenues. Attention is also devoted to the problems of public debt, fiscal policy, and inter-governmental fiscal relations particularly in reference to the United States. I  
*Prerequisites: ECON 1200.*

## History of Economic Thought

**ECON 3000** 3 cr. 3 hr. ▲

Within the framework of understanding the relationship between history and economic thought, this course covers the work of the great economists. Starting with the roots of economic thought in the works of the mercantilists and physiocrats, the course turns to the giants in political economy, including Adam Smith, David Ricardo, Karl Marx, Alfred Marshall, and J. M. Keynes.  
*Prerequisites: ECON 1000 and ECON 1200.*

## International Economics

**ECON 3550** 3 cr. 3 hr. ▲

This course explores the theories of international trade and their links to theories of economic development and growth. Major current topics in the international economy, including economic competition among countries, debt problems in the Third World, and North-South relations, are treated as practical issues against which the theories can be tested. I  
*Prerequisites: ECON 1000, ECON 1200.*

## International Finance

**ECON 3600** 3 cr. 3 hr. ▲

The course considers the theory and practice of financial management by governments, corporations, and individuals in a changing international monetary environment. The course also discusses the influence of central governments, central banks, and international monetary institutions on interest rates, exchange rates, capital flows and financial stability. I

## Intermediate Macroeconomics

**ECON 3650** 3 cr. 3 hr. ▲

As a second course and more advanced treatment of macroeconomics, this course provides a detailed examination of major topics in macroeconomics. Topics of discussion include theories of consumption, investment, and growth recession, as well as efforts by the government to stabilize the economy through fiscal, monetary, or other measures. This course introduces the Keynesian, neo-classical, and Marxian models of the macroeconomy. I  
*Prerequisites: ECON 1000, ECON 1200.*

### Intermediate Microeconomics

**ECON 3660** 3 cr. 3 hr. ▲

This course analyzes consumer and producer equilibrium in a market economy. The behavior of firms in the four market structures and the behavior of firms and individuals in input markets is examined. Applications of economic theory to concrete economic problems are emphasized. I  
*Prerequisites: satisfactory completion of the College Mathematical Readiness requirement, ECON 1200.*

### Econometrics

**ECON 3700** 3 cr. 3 hr. ▲

This course is an introduction to econometric methods, statistical inferences, and testing hypotheses. Model building techniques and their theoretical justifications are presented and evaluated in terms of their performance. Q  
*Prerequisites: ECON 1000, ECON 1200, MATH 2200, MATH 2800 or permission of Instructor.*

### Managerial Economics

**ECON 3750** 3 cr. 3 hr. ▲

Applied microeconomics or the application of economic theory and methodology to the practice of managerial decision making is the focus of this course. Case studies are emphasized in instruction. I  
*Prerequisites: ECON 1000, ECON 1200, MATH 2200, MATH 2800 or permission of Instructor.*

### Independent Study in Economics

**ECON 4900** 3 cr. 3 hr. ▲

The Independent Study is open to students who have the permission of the supervising instructor and the department. Course of study, meetings, and credit are arranged with approval.

### Internship in Economics

**ECON 4940** 12 cr. 3 hr. ▲

The Internship provides work experiences in private or public firms. Students acquire skills useful to professional economists.  
*Prerequisites: junior or senior standing, 3.00 Econ. cum, or permission of internship coordinator.*

### Directed Study

**ECON 4975** 1-6 cr. ▲

## English

### Key to Course Offerings

- O: designates courses in the Quantitative Scientific Cluster
- I: the Ideas and Events Cluster
- B: the Human Behavior Cluster
- L: the Literature, Language and Arts Cluster
- C: Multicultural

IDIS: Interdisciplinary courses  
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### Basic College Writing

**ENGL 0100** 3 inst. cr. 3 hr. ▲

This course studies the process of writing as well as sentence arrangements and punctuation patterns in Edited American English. Credits do not count towards graduation.

### Writing Skills Workshop

**ENGL 1000** 1 cr. 3 hr. ▲

An intensive study of the basic writing skills. This course cannot be taken simultaneously with Basic College Writing (ENGL 0100), Writing I or II (ENGL 1100, 1200). The class may be taken 3 times for 1 credit per semester.

### Writing I

**ENGL 1100** 3 cr. 3 hr. ▲ ●

This course explores writing as process and product. Practice, both oral and written, in expressing ideas with precision, clarity, and economy, the development of research skills, and critical reading are emphasized.

### Writing II

**ENGL 1200** 3 cr. 3 hr. ▲ ●

This course is a continuation of ENGL 1100 with an emphasis on writing as a thinking and learning process. Careful reading, critical and creative thinking, and writing, using analysis and synthesis, is promoted with the assignment of five writing projects on a range of subjects. A research essay is required. Course options incorporate various styles and formats related to different situations and audiences.

### PREREQUISITE FOR ALL ENGLISH ELECTIVES: ENGL 1100 Writing I and ENGL 1200 Writing II

### Approaches to English Studies

**ENGL 1999** 3 cr. 3 hr. ▲ ●

An introduction to the academic study of English and the different ways readers can connect to, think about, and experience literature. The course provides an overview of the discipline's issues and theories and gives students experience in writing practical criticism and using research tools and methods. L

### American Literature I: Age of Exploration to the Civil War

**ENGL 2000** 3 cr. 3 hr. ▲ ●

This course surveys recurring themes and images in early American literature. From Columbian narratives to Civil War texts, we trace the development of new forms of fiction and poetry as well as experiments with traditional forms. L

### American Literature II: Civil War to the Present

**ENGL 2100** 3 cr. 3 hr. ▲ ●

This course surveys all genres of American writing from 1865 to the present, tracing the effects of social, economic, scientific and artistic turmoil on authors and their works. We explore the interconnections between succeeding eras of American literature: Realism, Modernism and Post-Modernism. L

### English Literature I: Beowulf to Milton

**ENGL 2200** 3 cr. 3 hr. ▲ ●

This course surveys English literature from the first extant manuscript materials through the early 17th century. We trace themes, images, and literary forms that concerned British writers for half a millennium. L

### English Literature II: Pepys to Shelley

**ENGL 2210** 3 cr. 3 hr. ▲

This course explores the changing faces of English literature during the most tumultuous period of English history, encompassing the Civil Wars and leading up to the Industrial Revolution. Selections may include Swift's satiric prose, Pope's caustic poetry, Gay's *The Beggar's Opera*, Behn's comedies, Equiano's narrative of escape from slavery, Mary Shelley's *Frankenstein*, and the romantic poets including Byron, creator of the Byronic hero. L

### English Literature III: Bronte to Rushdie

**ENGL 2220** 3 cr. 3 hr. ▲

This course surveys British writers from the Victorian era to the present, tracing their responses to the revolutionary changes in art, music, science, and social and economic classes. Representative authors include Dickens, Eliot, Trollope, Barrett-Browning, Wilde, Shaw, Woolf, Joyce, and Beckett, authors whose depiction of human nature challenged contemporary concepts of self and society. L

### Literature and Disability

**\*ENGL 2300** 3 cr. 3 hr. ▲ ●

This course examines individual, family, and societal images of disability through autobiography, biography, fiction, poetry, and children's literature. Students will explore themes around the disability experience using reflective writings, class discussions and activities. L, B, IDIS

### Script Writing

**ENGL 2320** 3 cr. 3 hr. ▲

This basic course in script writing for film, television, and multi-image productions includes information on the preparation of proposals, treatments, storyboards, and scripts. Script formats include documentary, educational, corporate, and dramatic film/video writing.

*(Credit is not given for both ENGL 2320 and COMM 2320.)*

### Literature and Film

**ENGL 2330** 3 cr. 3 hr. ▲ ●

This course involves the critical study of literature and film as means to convey narratives. The conventions of various literary genres and types of films will be considered. Special attention is paid to the adaptation of novels and stories for the screen. Students study a dozen or more motion pictures in depth and compose six to eight critical essays. L, IDIS

### World Literature I

**ENGL 2400** 3 cr. 3 hr. ▲ ●

This course examines masterpieces from the ancient world through the middle of the 17th century. L, C

### World Literature II

**ENGL 2500** 3 cr. 3 hr. ▲ ●

This course examines masterpieces from the mid-17th century to the present. L, C

### The Bible as Literature

**ENGL 2600** 3 cr. 3 hr. ▲ ●

The course examines the style, narrative techniques, symbols, and historical setting of the Old and New Testament writers. L, C

### Classical Mythology

**ENGL 2620** 3 cr. 3 hr. ▲ ●

This course examines pre-Homeric stirrings of symbol and story then moves on to study Virgil and Ovid and Roman traditions. L, C

### Other Voices

**ENGL 2650** 3 cr. 3 hr. ▲

This course presents works by significant ethnic writers, such as James Baldwin, Maxine Hong Kingston, Zora Neale Hurston, M. Scott Momaday, Toni Morrison, and Leslie Marmon Silko. L, C

### 19th-Century African American Literature

**ENGL 2660** 3 cr. 3 hr. ▲ ●

This course is an introduction to the literature, thought, and literary practice of African-American writers throughout the nineteenth century. Close reading and analysis of such representative authors as Frederick Douglass, Frances E.W. Harper, Harriet Jacobs, and Sojourner Truth. L, C

### 20th-Century African American Literature

**ENGL 2670** 3 cr. 3 hr. ▲ ●

This course is an introduction to the literature, thought and literary practice of African American writers from the turn of the century to the present. L, C

### The Short Story

**ENGL 2700** 3 cr. 3 hr. ▲ ●

Significant stories by some of the world's great writers are read and analyzed to show the evolution of the short story form. L

### Poetry and Self-Identity

**ENGL 2720** 3 cr. 3 hr. ▲ ●

Students read, write, edit, and study poetry about self-identity—who we are and how we establish ourselves in relation to our ethnic, racial, and cultural experiences. This workshop teaches students to express themselves through poetry and examines autobiographical poems by authors such as Lucille Clifton, Li-Young Lee, Joy Harjo, Rita Dove, Leslie Marmon Silko, Michael Harper, and Cathy Song. L, C

### Detective Fiction

**ENGL 2750** 3 cr. 3 hr. ▲ ●

The mystery novel/crime story genre is explored through a range of authors and time periods, including stories from Poe to Conan Doyle, classic British fiction, and its distinctively American counterparts, and significant contemporary works. L

### Journalism

**ENGL 2800** 3 cr. 3 hr. ▲

This course studies the press through individualized writing assignments. Emphasis is placed on ethics in news, treatment of contemporary issues, and structuring the news story.

*(Credit is not given for both ENGL 2800 and COMM 2800)*

### Editing and Publishing

**\*ENGL 2810** 3 cr. 3 hr. ▲

This class explores the mechanics of editing, issues of attribution, use of sources, balanced coverage and libel laws. In addition, the relationship between editor and writer with reference to agents, the submission and selection process, and collaborating is explored. Students also gain an understanding of writing for special markets, such as education or medicine, and getting a track record.

### Introduction to Secondary School Teaching

**ENGL 2860** 3 cr. 3 hr. ▲

This course is required of all students preparing for the initial license at the secondary level. A sophomore level course for full-time undergraduates and a first course for transfer students, it is taught at the local high school and is a clinical laboratory experience. The course includes a 25-hour prepracticum requirement and is a prerequisite for other certification courses. Students become familiar with the complexities of secondary school teaching and its demands. The course gives faculty the opportunity to screen students and gives students the opportunity to test their commitment to teaching.

### Storytelling and the Oral Tradition

**ENGL 2890** 3 cr. 3 hr. ▲ ●

The course studies the oral tradition in European and non-Western contexts. Students examine the oral tradition in classic works as well as its continuance in fairy tales, popular music, story theater and "performance art." Students will consider the structure and presentation of traditional, individually composed and "family" narratives. Each student will give at least two oral presentations before an audience. L, C

### Children's Literature

**ENGL 2900** 3 cr. 3 hr. ▲ ●

The course serves as an introductory survey of both classic and contemporary children's literature. Texts are studied from a variety of perspectives in the contexts of both childhood and society. L

### Literature for Young Adults

**ENGL 2910** 3 cr. 3 hr. ▲ ●

A survey of current books written for readers ages 12 to 18. The emphasis is on the best new books available in paperback. Students develop skill in evaluating young adult books in terms of literary quality, reader interest, and social or political perspective. Realistic fiction, YA classics, historical novels, science fiction, and poetry are some types of books examined. L

### Survey of English Grammar

**ENGL 2950** 1 cr. 1 hr. ▲

The course studies traditional and transformational systems of English grammar as a basis for understanding conventions of English usage.

### World Drama

**ENGL 3000** 3 cr. 3 hr. ▲

The course examines significant and representative plays from the beginning to the modern period. L, C

### American Drama

**ENGL 3010** 3 cr. 3 hr. ▲

A survey of American Dramatic Literature from its beginnings in the prerevolutionary British Colonies to the present. The course involves critical reading of dramatic texts. Students will attend productions of plays on and off campus studied in the class. Students will engage in active discussion and analysis of these plays and be required to write papers on particular authors. L

### Modern Drama

**ENGL 3020** 3 cr. 3 hr. ▲

The course examines the works of such playwrights as Ibsen, Chekhov, Sartre, Brecht, Ionesco, Beckett, and Pinter. L, C

### The Middle Ages

**ENGL 3030** 3 cr. 3 hr. ▲

The course examines literature of the British Isles and Europe to 1500. L

### British Literature Since World War II

**ENGL 3040** 3 cr. 3 hr. ▲ ●

This course examines fiction, drama, and poetry written in Britain and her former Commonwealth since World War II. Special emphasis is placed on the role imperialism and decolonization has had in literature. Authors examined include A.S. Byatt, Derek Walcott, Wole Soyinka, Salman Rushdie, and Michael Ondaatje. L

### The World Novel to 1914

**ENGL 3100** 3 cr. 3 hr. ▲

The course investigates significant novels such as *Madame Bovary* and *Anna Karenina* representing various countries and periods as well as stages in the development of this literary form. L, C

### The World Novel Since 1914

**ENGL 3110** 3 cr. 3 hr. ▲

Students read and discuss modern novels both as aesthetic artifacts and as human documents. Representative authors include Kafka, Kundera, Naipaul, Marquez. L, C

### Major American Writers of the 20th Century

**ENGL 3210** 3 cr. 3 hr. ▲

The varied creativity of American writers in this century is explored through the study of fiction, drama, poetry, criticism, and the essay. L

### American Novel to 1950

**\*ENGL 3220** 3 cr. 3 hr. ▲

This course provides a close examination of several representative works by major American novelists between 1800-1950. L

### Women and Literature

**ENGL 3300** 3 cr. 3 hr. ▲

Literature by and about women is examined in light of their roles in society, at work, and in relationships. L

### Technical Documentation

**ENGL 3470** 3 cr. 3 hr. ▲ ●

This course gives students the opportunity to study and write the basic forms of technical documentation found in business and industry, including end-user manuals and training guides. Examination of graphics, typography, and desktop publishing is considered as they apply to hardcopy production. (Credit is not given for both ENGL 3470 and COMM 3470.)

### Creative Writing

**ENGL 3800** 3 cr. 3 hr. ▲ ●

Students write and edit fiction and poetry in a workshop setting. Junior standing or approval of the instructor is required to enroll in this class. L

### Journalism Practicum: I and II

**ENGL 3810 and 3820** 3 cr. 3 hr. ▲

These Practica are open to members of the *Point* and other students interested in obtaining hands-on training in journalism with the goal of having works published in student and community newspapers. (P1 and P2 may be taken separately for a total of 6 credits).  
*Prerequisite: ENGL or COMM 2800.*

### The American Magazine

**\*ENGL 3840** 3 cr. 3 hr. ▲

This course provides a close study of significant American magazines with emphasis on the editorial policies and requirements, audience slant, advertisements, and visual layouts.

### Writing for Business and Technology

**ENGL 3860** 3 cr. 3 hr. ▲ ●

The course is for students interested in writing in the business, industry, and management context. Topics covered: business correspondence, description of process and mechanisms, sets of instructions, proposals, abstracts, and reports. (Credit is not given for both ENGL 3860 and COMM 3860.)

### Feature and Magazine Writing

**ENGL 3870** 3 cr. 3 hr. ▲

This course explores writing feature articles for newspapers, magazines, and trade journals. (Credit is not given for both ENGL 3870 and COMM 3870.)

*Prerequisite: ENGL or COMM 2800.*

### Advanced Expository Writing

**ENGL 3890** 3 cr. 3 hr. ▲

With a focus on nonfiction writing genres, the course investigates the social, linguistic, and rhetorical conventions underlying the creation of traditional forms. Topics of discussion include classical and modern rhetorical theory and related grammatical, linguistic, and philosophical questions. L

### Chaucer and His World

**ENGL 4010** 3 cr. 3 hr. ▲

This course emphasizes the *Canterbury Tales* in their medieval context. L

### Shakespeare's Drama: Text and Performance

**ENGL 4020** 3 cr. 3 hr. ▲

This course studies several of Shakespeare's dramas with a focus on the thematic issues raised by the plays in the texts and in performance. Examination involves not only reading and critical interpretation, but also attention to performance traditions and recent interpretations/adaptation of these works on stage and screen. L

### Interpreting Shakespeare's Work

**ENGL 4030** 3 cr. 3 hr. ▲

This course will study selected poems and plays from Shakespeare's canon, examining particularly his treatment of power, love, gender, and "the other". We will consider: Who and what is "Shakespeare"? Why is Shakespeare considered the "world's greatest author"? To what purposes have "Shakespeare" and Shakespeare's texts been put, in literary, historical, ideological, education, and cultural terms? How do contemporary readings, films, and production of Shakespeare (re)present Shakespeare? L

### Major English Writers of the 17th Century

**\*ENGL 4040** 3 cr. 3 hr. ▲

This course will survey one or more genres, for example, the dramas of Jonson, Webster, Behn, and Congreve; the poetry of Milton, Donne, Herbert, Herrick, Marvell, Dryden, Wroth, and Phillips; prose work by Browne, Fell, Astell, and Pepys. L

### The Novel in the 18th Century

**ENGL 4050** 3 cr. 3 hr. ▲

This course studies the origins of the novel in England as it reflects the tastes of a rising middle class. Readings include Defoe, Richardson, Fielding, Burney, Johnson, Austen, Edgeworth, Heywood, and others. L

### From Classic to Romantic: 1750-1800

**ENGL 4070** 3 cr. 3 hr. ▲

This course explores the revolution in manners, philosophy, science, and gender as reflected in literature, art, and music from the late 18th century. Major genres include drama, poetry, fiction, prose, paintings, and engravings. L

### Romanticism

**ENGL 4080** 3 cr. 3 hr. ▲

The poetry, prose, and art representative of the political, social, and artistic upheaval called "Romanticism" is considered. Readings include Romanticism's outcasts, alternative voices, and anti Romantic writers. L

### The 19th-Century English Novel

**ENGL 4090** 3 cr. 3 hr. ▲

Significant novels demonstrating the changing cultural milieu and varying approaches of the genre during this period are examined and discussed. L

### The Age of Dickens

**\*ENGL 4095** 3 cr. 3 hr. ▲ ●

Students read and study the works of Dickens—the literary craftsman, the reporter of his age, the social reformer—as a foundation for examining the nineteenth century in prose, poetry, and/or drama. L

### Victorian Literature

**ENGL 4100** 3 cr. 3 hr. ▲

The individual's relationship to a changing society in the face of nineteenth-century industrialization and scientific progress is studied through the major writers of the period. L

### British Modernism

**ENGL 4115** 3 cr. 3 hr. ▲ ●

This course examines the major texts and trends of what is now called High Modernism. Authors studied include Ford Madox Ford, James Joyce, Virginia Woolf, and T.S. Eliot. L

### 20th-Century Irish Fiction

**ENGL 4120** 3 cr. 3 hr. ▲ ●

All study of Irish fiction from James Joyce through Brian Moore, including O'Faolain, O'Connor, O'Brien, O'Flaherty, and McGahem. L, C

### 20th-Century Irish Drama and Poetry

**ENGL 4130** 3 cr. 3 hr. ▲

Students read and discuss Irish poets, from Yeats through Montague and Heaney, and Irish playwrights, from Synge and O'Casey through Beckett and Friel. L, C

### Modern Poetry

**ENGL 4140** 3 cr. 3 hr. ▲ ●

Chief modern poets of America and England are introduced and close reading is encouraged in the lyric form of writers such as Eliot through Lowell, Plath and other end-of-century writers. Emphasis is on these creators as precursors in a tradition. L

### Mark Twain and American Humor

**ENGL 4150** 3 cr. 3 hr. ▲

This course explores the writings and career of Mark Twain, and humorists who share the Twain legacy, including American film comedy and stand-up comics. L

### The Romantic Movement in U.S. Literature 1810-1860

**\*ENGL 4200** 3 cr. 3 hr. ▲

This course explores concepts of nature, idealism, and community in the works of Hawthorne, Poe, and others. L

### American Novel Since World War II

**ENGL 4230** 3 cr. 3 hr. ▲

The class provides a close analysis of seven or eight major novels. L

### Journalist to Novelist

**\*ENGL 4260** 3 cr. 3 hr. ▲

This class explores the stylistic and professional development of distinguished American writers who began their careers as reporters. L

### Seminar

**ENGL 4400** 3 cr. 3 hr. ▲

The seminar examines topics for literary analysis and research as selected by the instructor. The seminar is required for English majors taking the literature track. Others are admitted by permission of the instructor.

### Literary Criticism

**\*ENGL 4500** 3 cr. 3 hr. ▲

Theories about literature are examined, and their practical application in the classroom and in one's own reading is discussed. Approaches to different forms of literature as well as a survey of changing historical perspectives are also explored.

### The Structure and the Nature of Language

**ENGL 4600** 3 cr. 3 hr. ▲

This course studies language systems and grammatical theories, including the history of the English language, theories of language acquisition, and psycholinguistic and sociolinguistic topics. L

### Teaching Writing in Middle and Secondary Schools

**ENGL 4700/EDUC 4700** 3 cr. 3 hr. ▲

This course provides practice and research in alternatives for teaching writing in secondary schools. Different approaches are explored through experiments for the teacher and opportunities to test these approaches are available in prepracticum experiences. A prepracticum is required.

### Special Methods in English

**ENGL 4850** 3 cr. 3 hr. ▲

The final course in the Certification Program for Secondary Teachers of English. The approach to teaching English is holistic, emphasizing the interrelatedness of all language abilities: speaking, listening, reading, and writing. We experiment with and evaluate a variety of teaching strategies for creating responsive, reflective, and responsible readers, writers, and speakers as well as methods for the assessment of student performance. A prepracticum is required.

### English Practicum in a Secondary School I and II

**ENGL 4860, 4870** 6 cr. ▲

In the student teaching practicum students are assigned to cooperating schools for a semester of student teaching.

### Independent Study

**ENGL 4903** 3 cr. ▲ ●

The Independent Study is for English majors excelling in scholarship and can be taken upon approval of both department chair and advising instructor. Course of study, meetings, and credit are arranged with advisor.

### Internship

**ENGL 4940, 4950, 4960** 3, 6, 9 cr. ▲

### Internship

**ENGL 4970** 12 cr. ▲

The Internship provides an opportunity to gain valuable on-the-job experience for college credit by spending one semester (full-time) in business or industry. Students select field placement where they can use their abilities as communicators, learn new skills, and sample a potential job market. The Internship is a recommended component of the English Department Writing Track. Department approval and junior/senior standing required.

### Directed Study

**ENGL 4975** 1-6 cr. ▲ ●

## Environmental Science

### Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as "Topics" courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

### Introduction to Environmental Science

**ENSC 1000** 4 cr. 6 hr. ▲ ●

The goal of Introduction to Environmental Science is to provide students with the scientific principles, concepts, and methodologies required to understand interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. Q

### Field Techniques in Environmental Science I

**ENSC 2000** 3 cr. 4 hr. ▲ ●

This course will provide an introduction to the mode of thinking as well as the scientific techniques to performing data gathering appropriate for work in the field. As such it is appropriate for both environmental science and biology students. The focus of the field techniques will be ecological/biological. This course is independent of ENSC 2100 Field Techniques in Environmental Science II.

### Field Techniques in Environmental Science II

**ENSC 2100** 3 cr. 4 hr. ▲ ●

This course will provide an introduction to the mode of thinking as well as the scientific techniques to performing data gathering appropriate for work in the field. As such it is appropriate for both environmental science and biology students. The focus of the field techniques will be physical/biological. This course is independent of ENSC 2000 Field Techniques in Environmental Science I.

### Elements of Physical Chemistry

**ENSC 3000** 4 cr. 6 hr. ▲ ●

An introductory course in physical chemistry covering: thermodynamics, mass-transport, solutions, etc. It is designed to provide students with the ability to think critically and utilize physical parameters in chemical systems, to perform numerical calculations involving these systems, and use this understanding when viewing environmental problems and risks.

### Environmental Analysis

**ENSC 4000** 4 cr. 6 hr. ▲ ●

Students will conduct chemical analyses of air, soil, and water for metals, inorganic ions, volatile and semi-volatile organic parameters. Participants will be required to collect samples, prepare documentation, prepare standards and samples, perform calculations and prepare reports detailing procedure, results, and an interpretation of the results.

### Seminar in Environmental Science

**ENSC 4100** 3 cr. 4 hr. ▲ ●

This course will be required of all environmental science students. It shall be taken in the student's final year. The course will consist of a series of presentations of actual environmental problems. The course will include attending local conservation and/or planning commission meetings.

### Internship in Environmental Science

**ENSC 4950** 4-6 cr. ▲ ●

The internships experience is for senior environmental science majors. These internships are to be completed at a participating federal, state, local, or private environmental organization. A 3.00+ cumulative average in the major and cognate departments is required to enroll.

### Directed Study

**ENSC 4975** 1-6 cr.

# Exercise and Sport Science

## Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

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\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

The courses that satisfy the Health and Fitness requirement are identified below as Group I, II, and III. To meet the three-credit requirement, select one of the following options:

One course from Group I, three courses from Group II, two courses from Group II and one course from Group III.

## Group I

### Health and Fitness

**EXSS 1000** 3 cr. 3 hr. ▲ ●

The course provides a basic survey of the effects of diet, exercise, and selected environmental agents on the mental and physical health of humans. Topics may include body build and body composition, fitness evaluation and programming, nutritional considerations, psychological correlates of health, chemical alterations, human sexuality, and personal and public health.

### Leadership in the Outdoors

**LEAD 1480** 1 cr. 1 hr. ▲

This course is part of the Leadership Academy and partially satisfies the Health and Fitness requirement for the Academy students. Using adventure activities, students will have an opportunity to identify their leadership skills, experiment with new leadership strategies and identify one or two areas for future development of their leadership skills. Also, students will develop a sense of comradery and discover that outdoor adventure activities are an enjoyable part of a healthy lifestyle.

### Exercise, Nutrition, and Heart Disease

**EXSS 2060** 3 cr. 3 hr. ▲ ●

This course is designed to examine the integrative relationships inherent in the study of exercise, nutrition, and heart disease. Body build and body composition assessments are made, exercise prescriptions and programs are developed, and prevalent controversies in the areas of obesity, dietary goals, guidelines and plans, atherosclerosis, and heart disease are discussed.

### Exercise Physiology

**EXSS 2070** 3 cr.

In this course, human systemic response and adaptation to exercise and exercise training is studied in-depth. Topics included are epidemiology and physiology in health and disease, homeostasis and exercise metabolism, bioenergetics, nutrition, exercise and performance, exercise prescriptions for health, training, exercise and the environment, and factors limiting performance. Laboratory experiences provide practical assessment skills as well as application of the scientific method to problems and issues in this field.

**This course satisfies the Health and Fitness requirement for Biology/Exercise Science and Fitness Management majors.**

*Prerequisite: Anatomy and Physiology I and II or Human Biology and Human Physiology*

### Adaptations

**EXSS 3050** 3 cr. 3 hr. ▲

The course is designed to integrate the natural and exercise sciences from the standpoint that survival of the organism depends upon its ability to adapt to a given environment. The acute and chronic effects of several stressors found within the environment such as oxygen, light/dark, exercise, heat/cold, emotion/stress, altitude, nutrition and evolution are studied in the classroom and the laboratory. Q, IDIS

## Group II

### Jogging: Theory and Practice

**EXSS 1400** 1 cr. 2 hr. ▲

The theories and practices of cardiovascular conditioning using jogging as the activity mode are presented. Pre-post cardiovascular and body composition evaluations are made and program prescriptions are designed. Topics covered include training principles and programs, energy sources, aerobic and anaerobic processes, nutrition, exercise and weight control, exercise training effects, psychological considerations, environmental conditions, injuries, and running.

### Body Shaping

**EXSS 1440** 1 cr. 2 hr. ▲

The theory of weight training and diet in relation to body shaping is discussed. Each student undergoes physique, body composition, aerobic fitness, and muscular strength evaluations before and after a weight training program.

### Weight Training for Athletes

**EXSS 1450** 1 cr. 2 hr. ▲

The course examines theory for the development of muscular strength for specific athletic activities. Anthropometric, body composition, and muscular strength evaluations are assessed prior to and following an individually developed weight training program.

### Standard First Aid/Adult CPR

**EXSS 1460** 1 cr. 2 hr. ▲ ●

A behaviorally oriented course structured for those responsible for the safety and protection of others. Standard First Aid and Adult CPR certificates are issued if the student satisfies all the American Red Cross requirements.

### Techniques of Road Racing

**EXSS 1470** 1 cr. 2 hr. ▲

The purpose of the course is to acquaint the student with various topics of running long distance road races. Topics covered include the physiology of running, training strategies, injury care and prevention, nutritional aspects and methods of assessing running ability. Each student undertakes a training program, and participates in three road races.

### Stress Management

**EXSS 1490** 1 cr. 1 hr. ▲

This course is a multifaceted and holistic approach to the understanding and control of stress in a wellness context. Topics covered include stress psychophysiology, the relationship between stress and illness, life situation and perception interventions, time management, and bioecological stressors. Also, the study and implementation of specific relaxation techniques such as diaphragmatic breathing, progressive relaxation, exercise, autogenics, and mediation will be covered.

### Consumer Health

**EXSS 1510** 1 cr. 1 hr. ▲

This course is designed to help the student evaluate health and fitness information critically, and select products and services wisely. The areas of quackery, alternative medicine, nutrition, personal fitness and consumer protection are studied. The course is a requirement of Leadership Academy students.

### Diet, Exercise, and Weight Control

**EXSS 1520** 1 cr. 2 hr. ▲

The course is designed for those interested in weight loss or weight maintenance through the medium of diet and exercise. After an initial assessment of body composition, aerobic fitness, muscular fitness, and the establishment of dietary goals, each student works toward body weight goals through actual programs of exercise and diet.

### Exercise Testing and Prescription

**EXSS 3450** 3 cr.

Theory and practice for evaluating and prescribing exercise for the enhancement of the functional capacity of the cardiopulmonary, metabolic, and musculoskeletal systems in health and disease. Basic topics include: review of scientific bases for testing and prescription, human behavior and motivation, basic electrocardiology, risk factors in exercise and exercise testing, health appraisal and fitness testing, exercise programming, nutrition and weight management, and program administration. This course is based on the knowledge required for certification as a Health/Fitness Instructor by the American College of Sports Medicine.

*Prerequisites: Exercise Physiology or POI*

### Group III

Activity courses are taught on a semester basis. Each semester carries two clock hours per week and one credit.

- EXSS 1010** Basketball
- EXSS 1020** Volleyball
- EXSS 1040** Tennis
- EXSS 1050** Advanced Tennis
- EXSS 1060** Badminton
- EXSS 1070** Karate
- EXSS 1080** Judo
- EXSS 1120** Aerobics
- EXSS 1130** Dance Aerobics
- EXSS 1150** Canoeing
- EXSS 1170** Introduction to Mountain Hiking
- EXSS 1180** Backpacking
- EXSS 1190** Downhill Skiing
- EXSS 1200** Cross Country Skiing
- EXSS 1210** Modern Jazz I
- EXSS 1220** Modern Jazz II
- EXSS 1230** Modern Jazz III
- EXSS 1240** Yoga
- EXSS 1250** Bicycle Touring
- EXSS 1280** Orienteering
- EXSS 1300** Recreational Sports
- EXSS 1310** African Jazz Dance
- EXSS 1410** Beginning Swimming
- EXSS 1420** Intermediate Swimming
- EXSS 1430** Introduction to Water Aerobics

### Professional Courses

#### Lifeguarding

**EXSS 1500** 3 cr. 3 hr. ▲

The Lifeguarding course is designed to teach lifeguards the skills and knowledge needed to prevent and respond to aquatic emergencies. Upon successful completion of the course, students can earn American Red Cross certification in Lifeguard Training, First Aid and CPR for the Professional Rescuer.

*Prerequisites: Swim 500 yards continuously, using each of the following strokes for 100 yards each: crawl stroke, breast stroke, side stroke and remaining 200 yards participants may choose any combination of strokes. Also, the student has to tread water for 2 minutes and retrieve a 10 pound brick from a depth of ten feet.*

#### Motor Learning and Physical Performance

**EXSS 2040** 3 cr. 3 hr. ▲

This course is designed to provide students with an overview of the study of motor learning and physical performance. Selected motor learning theories and the factors of skill acquisition are covered relative to the physical performance parameters of practice and the applied processes of instruction.

### Motor Control and Performance

**EXSS 2045** 3 cr. 3 hr. ▲

A study of the neurophysiological basis for motor control and performance. Brain control of movement in daily living, in sport, and in motor deficits are among the topics studied.

*Prerequisite: EXSS 4040, 24 credits completed.*

### Functional Anatomy

**EXSS 2050** 3 cr. 3 hr. ▲

This course is a study of anatomical structure and its function in human motion. Topics include: the anatomy of the musculoskeletal systems, primary musculature involved in specific motions, the anatomy of force production, range of motion and movement planes. Considerable practical experience in the analysis of motion from a functional anatomical basis is given.

*Prerequisite: BIOL 1200.*

### Nutrition in Exercise and Sport

**EXSS 2300** 3 cr. 3 hr. ▲

This course involves a thorough discussion of the principles of general nutrition. Emphasis is placed on the examination of specialized diets for training, weight control and body enhancement, and on the use of ergogenic aids during exercise and exercise training. Course material is enhanced by researching current trends, and by personal nutrition projects.

*Prerequisites: 24 credits completed.*

### Health Promotion

**EXSS 2400** 3 cr. 3 hr. ▲

This course involves the design and marketing of wellness programs to the health care industry to the private sector. Program design includes stress management, time management, smoking cessation, exercise prescription, nutrition and other health-related topics. Marketing applications, including materials production, are considered.

### Human Motor Development

**EXSS 2500** 3 cr. 3 hr. ▲

This course focuses on human development processes, especially with regard to response and adaptation to exercise in children and the elderly, motor control, and decline of function with aging.

*Prerequisite: 24 credits completed.*

## Biomechanics

**EXSS 3020** 3 cr. ▲

This course involves the study of the mechanical aspects that underlie human motion. Mechanical considerations include describing motion in terms of levers, linear and angular acceleration, velocity, and projectiles, and the determination of motion by studying force, inertia, mass, momentum, impulse, drag, lift, buoyancy, center of gravity, and stability. Application of anatomical and mechanical principles is related to the improvement of performance in selected sports.

*Prerequisite: EXSS 2700*

## Scientific Foundations of Strength Training and Conditioning

**EXSS 3120** 3 cr. 3 hr. ▲

The course combines the theoretical and practical aspects of strength training and conditioning. Topics covered include exercise and fitness-related principles and practices of physiology, neuromotor control, biochemistry, anatomy, biomechanics, and endocrinology. The development of state-of-the-art, safe, and effective strength and cardiorespiratory endurance training programs are presented.

## Apprenticeship

**EXSS 3130** 1-3 cr. ▲

These one-credit on-campus experiences are designed to enhance theory through cogent work in a specific area, such as exercise testing, strength training, fitness management, and research skills. Students apply for apprenticeships with specific professor in the semester prior to the semester in which the work will be done.

*Prerequisite: Junior or senior standing.*

## Exercise Metabolism

**EXSS 3300** 3 cr. 4 hr. ▲

An in-depth study of human physiological principles as applied to physical activity and sport. Focus will be on acute and chronic responses to exercise from various perspectives. Students will study topics concerned with bioenergetics during exercise, including: substrate utilization, oxygen use, anaerobic threshold, chemo-mechanical coupling, electrolyte imbalance, and hormonal control of metabolism.

*Prerequisite: EXSS 3070, CHEM 1100.*

## Exercise Response and Adaptations in Special Populations

**EXSS 3600** 3 cr. 4 hr. ▲

This course focuses on the modification of testing and the development of individualized prescriptive exercise programming with regard to cardiovascular disease, diabetes, arthritis, obesity, and respiratory disorders.

*Prerequisite: EXSS 3450*

## Fundamentals of Coaching

**EXSS 4000** 3 cr. 3 hr. ▲

An analysis of the principles and practices of coaching in various sports is presented for the prospective teacher/coach.

## Recreational Leadership

**EXSS 4010** 3 cr. 3 hr. ▲

The organization and administration of recreational activities are presented in reference to the development of the principles and practices in both school and community programs.

## Camp Counseling

**\*EXSS 4020** 3 cr. 3 hr. ▲

Course content provides an opportunity to study some of the problems in the field of camping. Emphasis is placed on acquiring essential skills for camp life, developing various leadership styles as a camp counselor, and addressing the individual and group needs of campers.

## Physical Education, Fitness and Sport: An Overview

**EXSS 4030** 3 cr. 3 hr. ▲

This course is designed to provide the student with an overview of the philosophic history, administrative/management patterns, and current professional and academic disciplinary program approaches in physical education, fitness, and sport. Emphasis will be directed towards the new and changing nature of physical education relative to career perspectives.

## Fitness Management

**EXSS 4040** 3 cr. 3 hr. ▲

The focus of this course is the planning and implementation of fitness programs in the commercial and corporate settings. Topics include: organization management, staff management, strategic planning, risk management, program promotion and marketing, and sales.

*Prerequisites: BSAD 3200, BSAD 3300.*

## Cardiovascular Physiology and Electro Physiology

**EXSS 4045** 3 cr. 4 hr. ▲

Cardiovascular dynamics is studied through the anatomy, electro physiology, and pathology of the cardiovascular systems. Description of the ECG variations and the underlying mechanisms forms the foundation for practical experience in clinical interpretation of the ECG.

*Prerequisite: EXSS 3070*

## Art of Dance (Arts Credit)

**EXSS 4050** 3 cr. 3 hr. ▲ ●

This course offers students the opportunity to experience dance aesthetically, kinesthetically, and intellectually. Representative styles from tribal through contemporary dance are covered. Videotapes, movement labs, papers, presentations, concert attendance, and performance are included. Teaching in the After School Movement Program at McKay is an option. L, C

*Prerequisite: Junior or senior standing or permission.*

## Outdoor Education

**EXSS 4060** 3 cr. 3 hr. ▲

This course is designed to explore and experience the use of the outdoors as a medium in the educational process. Topics covered include introduction to outdoor education, teaching methodology, basic principles of high adventure activities, school camping, and outdoor education programs. Students participate in a number of outdoor adventure activities.

## Physical Education in the Elementary School

**EXSS 4080** 1 cr. 2 hr. ▲

This theory and practice course is designed to guide the classroom teacher in organizing a comprehensive program of physical education and recreational activities.

## Movement Education

**EXSS 4100** 3 cr. 3 hr. ▲

Movement Education is a theoretical and an experiential course designed for working with the creative process in an interdisciplinary manner. The relationship of movement in developmental processes is explored. Movement experiences, group leadership, curriculum development, and evaluation are covered. Teaching in the After School Movement Program at McKay is an option.

### Programs in Recreation

**EXSS 4110** 3 cr. 3 hr. ▲

This course is designed to acquaint students with different types of programs in the recreation field. The development of traditional and innovative programs are explored and evaluated in the classroom and through field trips. Topics covered include program foundations, traditional and innovative curricula, program planning, implementation, and evaluation.

### Making Dances: Choreography and Composition

**EXSS 4130** 3 cr. 3 hr. ▲ ●

Opportunities to develop and analyze the structure and imagery of dances and music are offered. Each participant works improvisationally as choreographer and dancer in the development of solo performances as well as small and large group works. This course includes concert attendance, performance, reading and written assignments. L

*Prerequisite: Junior or senior standing or permission.*

### Psychology of Sport

**EXSS 4160** 1 cr. 2 hr. ▲

The course provides a basic overview of the psychological impact of sport upon participants and spectators. The areas of motivation, winning and losing, competition, behavior modification, and aggression are explored.

### Senior Seminar in Leadership and Professional Ethics

**EXSS 4200** 3 cr. 3 hr. ▲

Using a case study approach in various professional topics, this capstone course focuses on the leadership skills needed in the fitness industry and the clinical environment. It also emphasizes ethical practice. Students will study pertinent literature, and write a paper on current issues.

*Prerequisite: senior standing.*

### Independent Study

**EXSS 4900** 1-3 cr. ▲ ●

The Independent Study is open to students who have permission of the supervising instructor and the department. Course of study, meetings, and credit are arranged upon approval.

### Internship

**EXSS 4950** 6 cr.

Students gain 120 hours of field experience at an outside agency related either to the fitness industry or clinical physiology. Assignments are contingent upon the student's abilities, interests, career goals, and acceptance by the cooperating institution. One or two full days during the week may be required. Three on-campus meetings are required, as is a critical incidents journal, an informational interview, a comprehensive paper and an oral presentation. A minimum of six credits is required.

*Prerequisites: senior standing, a 2.75 in EXSS courses, and approval of the Exercise and Sport Science department*

### Directed Study

**EXSS 4975** 1-6 cr.

## French

### Key to Course Offerings

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I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis of courses being taught on an experimental basis can be taught as "Topics" courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

### French for Beginners I

**FREN 1000** 3 cr. 3 hr. ▲ ●

The correct pronunciation, reading ability, and fundamentals of grammar and syntax are taught in this class. Over the semester French gradually becomes the working classroom language. The class is designed for students with no language experience or less than two years of French at a high school level.

Note: Students with two or more years of language instruction are not admitted without permission of Instructor. L, C

### French for Beginners II

**FREN 1100** 3 cr. 3 hr. ▲ ●

This class serves as a continuation of FREN 1000. L, C

### Intermediate French I

**FREN 2000** 3 cr. 3 hr. ▲

This course includes practice in conversation practice as well as readings stressing life, customs, and culture of France. L, C

*Prerequisite: two years of high school, French II and/or permission of Instructor.*

### Intermediate French II

**FREN 2100** 3 cr. 3 hr. ▲

This course serves as a continuation of FREN 2000. L, C

### Methods for Teaching French in the Elementary School

**\*FREN 2400** 3 cr. 3 hr. ▲

The course provides techniques and materials for use in teaching French at an elementary school level. The course is required for foreign language specialization. A minimum of twelve semester hours of French or its equivalent and Instructor's permission is required to enroll.

### French Civilization

**FREN 3000** 3 cr. 3 hr. ▲

The course covers the history, geography, fine arts, and literature of the French people from the earliest times through today. Course work includes extensive readings in French. I, L, C, IDIS

*Prerequisite: FREN 2100 or permission of Instructor.*

### French Literature

**FREN 3300** 3 cr. 3 hr. ▲

This course will present a cultural, historical and sociological study of France as mirrored in selected works of French writers and thinkers. The time period is from the Medieval ages through and including the 20th century. L, C

*Prerequisite: FREN 2100 or permission of Instructor.*

### French Conversation and Composition

**FREN 3500** 3 cr. 3 hr. ▲

This course is recommended for students who desire greater fluency in speech and writing as well as for students taking civilization and literature courses. L, C

*Prerequisite: FREN 2100 or permission of Instructor.*

### Independent Study

**FREN 4901** 1 cr. 1 hr. ▲

### Advanced French Independent Study

**FREN 4903** 3 cr. 3 hr. ▲

*Prerequisite: minimum of 12 semester hours, 2.0 grade-average in French, and permission of Instructor, Department Chairman.*

### Directed Study

**FREN 4975** 1-6 cr. ▲

## Interdisciplinary (General Studies) Capstone

**IDIS 4803, 4805, 4806,  
4809, 4812, 4815** 3-12 cr.

The culminating course for the IDIS major. It can be an internship, a special project, or in independent research program. Course is proposed by the student on a special form provided by the Coordinator of Interdisciplinary Studies and approved by the advising committee. The content of this course should demonstrate the integration of the student's fields of study. Contact the Coordinator of Interdisciplinary Studies for further instruction.

## Geo/Physical Sciences

### Key to Course Offerings

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I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as "Topics" courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

### Introduction to Geography

**GEOG 1000** 3 cr. 3 hr. ▲ ●

This course explores the complex interrelationships between the earth's physical features and human activity. Topics include earth/sun relationships, mapping techniques, atmospheric processes that produce clouds, precipitation and storms (including tornadoes, hurricanes and mid-latitude cyclones), global climate/vegetation/soils, rocks, earthquakes, mountain building, volcanoes, glaciers, river systems and plate tectonics/continental drift. Human impacts on the environment such as the ozone issue, global warming/climatic change, groundwater contamination, disease, population and global food supply are discussed. I, IDIS

### Principles of Human Geography

**GEOG 1100** 3 cr. 3 hr. ▲ ●

The course introduces the elements and processes underlying economic, social, and political geographic patterns, with applications to actual case studies and situations. I

### Earth, Sea, and Air

**GEOG 1300** 3 cr. 4 hr. ▲ ●

The course is comprised of selected topics from the earth sciences. Laboratory required. Q

## Geology

**GEOG 2100** 3 cr. 4 hr. ▲ ●

The course is an introductory survey of the basic elements of physical and historical geology. The class is open to all students. A laboratory is required. GEOG 1000 is strongly suggested. Q

## Atmospheres I—Meteorology

**GEOG 2200** 3 cr. 4 hr. ▲ ●

The fundamental principles of weather systems are introduced. Emphasis is on mid-latitude phenomena and weather forecasting techniques using data from sites on the Internet. Topics in tropical meteorology and severe storm phenomena are also discussed. Laboratory is required. Q

## Atmospheres II—Climatology

**\*GEOG 2300** 3 cr. 3 hr. ▲

The course explains the regional differentiation of the climatic zones of the major land and ocean areas of the world. Special attention is given to urban climatology and the energy and moisture climatology of the earth.

*Prerequisite: GEOG 2200 Meteorology or permission of the Instructor.*

## Computer Applications in Geography/Earth Science

**GEOG 2400** 3 cr. 3 hr. ▲ ●

Introduction to four spheres of relevance to the Geosciences: the Internet as a source of data, educational software, computer mapping, and overview of Geographic Information Systems.

*Prerequisite: GEOG 1000 and permission of the Instructor.*

## Oceanography

**GEOG 2500** 3 cr. 4 hr. ▲ ●

The course studies the physical and chemical properties of sea water, atmosphere interaction with the sea surface, and currents and volume flow. In addition the energy budget of the oceans and the submarine geology of the ocean basins are explored. Students participate in a thorough discussion of ocean floor spreading and coastal processes. Laboratory is required. Q

## Map Use

**GEOG 2800** 3 cr. 3 hr. ▲ ●

This course considers the nature and role of maps in communicating aspects of the earth's natural and human environments. Skills learned include map reading, relating map symbols to real world features; map analysis, extracting information from maps; and map interpretation. I

## Introduction to Secondary School Teaching

**GEOG 2860** 3 cr. 3 hr. ▲

This course is required of all students preparing for initial license at the secondary level. It is a sophomore level course for full-time undergraduates and the first course taken by transfer students. It is taught at the local high school and is a clinical laboratory experience. This course includes a 25-hour prepracticum requirement and is a prerequisite for other certification course requirements. Students become familiar with the complexities of secondary school teaching and its demands. The course gives faculty the opportunity to screen students and give students the opportunity to test their commitment to teaching.

## Geographic Economic System

**\*GEOG 3000** 3 cr. 3 hr. ▲

The course analyzes factors underlying the spatial distribution of primary, secondary, and tertiary economic activities, with emphasis on locational processes in commercial economies. I, C, IDIS

## Political Geography

**\*GEOG 3100** 3 cr. 3 hr. ▲

The course examines dependent and independent political units, boundary disputes, strategic areas, buffer zones, and the function of international organizations.

## U.S. and Canada

**\*GEOG 3200** 3 cr. 3 hr. ▲ ●

The course includes U.S. and Foreign Area Studies. Students conduct regional and systematic analysis based upon geographic elements influencing domestic evolution and international relations.

*Prerequisite: GEOG 1000.*

## Introduction to Historical Geology

**GEOG 3250** 3 cr. 4 hr. ▲

This course studies the physical history of the earth based on evidence from the rock and fossil records from the early Paleozoic Era through the present. The evolution of life forms, subjective and absolute dating methods, fossil identification, and fossil evidence supporting plate tectonics theory are some of the topics studied. Laboratory is required.

*Prerequisite: GEOG 2100 or permission of Instructor.*

## Common Rocks and Minerals

**GEOG 3270** 3 cr. 4 hr. ▲

Major rock and mineral types are studied. Considerable time is spent on field and laboratory identification techniques. Mineral crystal systems and rock and mineral forming processes are also studied. Laboratory is required.

*Prerequisite: GEOG 2100, CHEM 1300.*

## Population Geography

**GEOG 3400** 3 cr. 3 hr. ▲

The course addresses population processes and characteristics relative to resources in both economically developed and underdeveloped countries and regions. Course material provides both a systematic and regional view of world population problems. I

## Geographic Information Systems

**GEOG 3500** 3 cr. 3 hr. ▲ ●

Characteristics and applications of GIS in a computerized, desktop mapping environment. Focus on gaining competence in the use of a particular GIS program, namely, ArcView, Idrisi.

*Prerequisite: GEOG 1000.*

## Atmospheres III—Planetary Atmospheres

**\*GEOG 4110** 3 cr. 3 hr. ▲

This course seeks to explain the similarities and differences between the earth's atmosphere and the atmospheres of the planets and moons in our solar system. Each atmosphere is studied to determine its chemical composition, thermal structure, energy budget, pressure, wind systems, clouds, precipitation, and other pertinent meteorological phenomena.

*Prerequisite: GEOG 2200.*

## Geomorphology

**GEOG 4200** 3 cr. 4 hr. ▲

The course provides a comprehensive study of land forms and their origins. Laboratory is required.

*Prerequisite: GEOG 2100, Geology or permission of the Instructor.*

## Structural Geology

**GEOG 4220** 3 cr. 4 hr. ▲

*Offered in the fall semester in even years for day students.*

This course studies rock structures developed by the application of deformational forces. Topics covered include the elementary concepts of stress and strain and the geometry of joints, faults, folds, foliations and lineations. Q

*Prerequisites: GEOG 2100, PHYS 2300, MATH 1300 or permission of the Instructor.*

## Urban Geography

**\*GEOG 4400** 3 cr. 3 hr. ▲

The course analyzes the external relationships and internal structure of cities. Emphasis is placed on the spatial attributes of contemporary urban qualities and problems in America. Classroom activities are supplemented by applied studies in the greater Fitchburg-Leominster area.

## Remote Sensing of the Environment

**GEOG 4500** 3 cr. 4 hr. ▲

Techniques in the use of satellite and aerial imagery as applied to landscape analysis and resource management are studied. Laboratory is required.

*Prerequisite: GEOG 2100.*

## Environmental Hydrogeology

**GEOG 4600** 3 cr. 4 hr. ▲

A case study approach is used to apply basic principles of geology to environmental problems caused by flooding, groundwater contamination, pollution due to human activity, and landslides, among other topics. Laboratory is required.

*Prerequisite: GEOG 2100 or GEOG 4200, CHEM 1300, MATH 1300, PHYS 1300 or permission of Instructor.*

## Geographic Perspectives on Conservation

**\*GEOG 4700** 3 cr. 3 hr. ▲

The course provides an analysis of natural resources problems arising from changes in technology, population pressure, and concern with the quality of environment.

*Prerequisite: GEOG 1000.*

## Cartography I

**GEOG 4800** 3 cr. 3 hr. ▲

The course treats the principal aspects of cartography as a communication process. Taken into consideration are the nature and purpose of mappable information, elements of map design, and methods involved in map construction.

## Cartography II

**\*GEOG 4820** 3 cr. 3 hr. ▲

Emphasis is on the compilation, layout, and design of maps. Students are involved in the construction of maps using traditional as well as computerized methods.

*Prerequisite: GEOG 4800.*

## Special Methods in Teaching Earth Science

**GEOG 4850** 3 cr. 3 hr. ▲

The course reviews lesson planning, selection of materials, curriculum development, and relevant research.

*Prerequisites: ENGL 4700 and EDUC 3010.*

## Earth Science Practicum in a Secondary School I and II

**GEOG 4860, 4870** 12 cr. ▲

For the Teaching Practicum in earth science, students are assigned to cooperating schools for a semester of student teaching.

## Independent Study in Geography

**GEOG 4900** 1, 2, 3 cr. ▲ ●

The Independent Study provides exceptional students with the opportunity to do research with faculty guidance in a subject or problems of geographic significance.

*Prerequisites: 12 hrs. of Geography and permission of Instructor. Hours and credit by arrangement.*

## Internship in Geography

**GEOG 4940, 4950, 4960** 3, 6, 12 cr. ▲

The Internship provides work experiences in private and governmental concerns. Assignments depend on the needs of the participating agency and interests and vocational objectives of the student.

*Prerequisites: junior or senior standing and permission of Internship Coordinator.*

## Directed Study

**GEOG 4975** 1-6 cr. ▲ ●

# German

## Key to Course Offerings

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IDIS: Interdisciplinary courses

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\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as "Topics" courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

## German for Beginners I

**GER 1000** 3 cr. 3 hr. ▲ ●

The correct pronunciation, reading ability, and fundamentals of grammar and syntax are taught in this class. Over the semester German gradually becomes the working classroom language. Student use German language films, cassettes, and Apfedeutsch, a computer course for German, as part of their instruction. Students with two or more years of German are not admitted without permission of the Instructor. L, C

## German for Beginners II

**GER 1100** 3 cr. 3 hr. ▲ ●

This class is a continuation of GER 1000. L, C

## Intermediate German I

**GER 2000** 3 cr. 3 hr. ▲

This course includes practice in conversation as well as readings stressing life, customs, and culture of Germany. L, C  
*Prerequisites: two years of high school German or GER 1000 and GER 1100.*

## Intermediate German II

**GER 2100** 3 cr. 3 hr. ▲

This class is a continuation of GER 2000. L, C

### Modern German Literature in Translation

**\*GER 2800** 3 cr. 3 hr. ▲

The course introduces the varied creativity of German writers of fiction, drama, and poetry of the 20th century. The German film contribution of the 1920's with feature-length films is included. Readings are in translation and the course is conducted in English.

### Modern German Culture: "The Road to Hitler"

**\*GER 2900** 3 cr. 3 hr. ▲

The course examines the cultural factors in music, art, literature, and film, which illuminate the events leading to National Socialism. Readings focus on translated materials, especially in literature, which help to explain why the Germans embraced Adolph Hitler. The class includes a significant audio-visual component and is given in English. I

### German Conversation and Composition

**\*GER 3500** 3 cr. 3 hr. ▲

This course is designed to increase the student's ability to write and speak German. Students are expected to write compositions on topics developed orally in class.

*Prerequisite: GER 2100 or permission of Instructor.*

### Independent Study in German

**GER 4901** 1 cr. 1 hr. ▲ ●

### Independent Study in German

**GER 4903** 3 cr. 3 hr. ▲ ●

The Independent Study is open to students studying German with the permission of the supervising Instructor and the Department Chairman. Meeting times and credit are arranged with approval.

### Directed Study

**GER 4975** 1-6 cr. ▲

## Graphics

### Key to Course Offerings

\* Asterisk indicates that the course may be offered less than once every two years.

- ▲ Undergraduate Day School
- Undergraduate Evening School

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### Interdisciplinary Graphics Seminar

Through lectures, presentations by speakers, and projects, students study advanced topics in graphics. The topics are chosen to emphasize state-of-the-art technologies in graphics. The course is administered by faculty from the Graphics Center and the material varies from semester to semester to meet the needs and interests of the participants.

## History

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- Undergraduate Evening School

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**Note: All history courses at or above the 2000 level have as a prerequisite, Writing II (ENGL 1200)**

### World Civilizations I

**HIST 1000** 3 cr. 3 hr. ▲ ●

This course covers the beginnings of humanity to 1350. It investigates ancient empires and the development of the great world religions. The interdependence of Eurasia is stressed while the independent existence of the Amerindian and African empires is also explored. I, C

### World Civilizations II

**HIST 1100** 3 cr. 3 hr. ▲ ●

This course investigates the period 1350-1815. The rise of Europe, the resurgence of Islam, the alteration of the Americas, and the continued independent existence of Asiatic and African empires is studied. Additional emphasis is placed on worldwide interdependence. I, C

### World Civilizations III

**HIST 1150** 3 cr. 3 hr. ▲

This course studies the major wars as well as the social, economic, and political changes in the world from 1815 to the present. Major themes covered are nationalism, global interdependence, and the effects of technology upon peoples. I, C

### United States History I

**HIST 1400** 3 cr. 3 hr. ▲ ●

The course is a survey of United States History beginning with colonial times and continuing through the era of Reconstruction following the Civil War. I

### United States History II

**HIST 1500** 3 cr. 3 hr. ▲ ●

The course is a survey of the United States from 1877 to the present. I

### Judaism and Early Christianity

**HIST 2050** 3 cr. 3 hr. ▲

The course is a survey of major developments within Judaism and Christianity between 300 B.C.E. and 500 C.E. Using both primary and secondary sources, it explores historically and thematically the socio-economic and political conditions of the period. I

### Twentieth-Century Europe

**HIST 2100** 3 cr. 3 hr. ▲

This course studies culture, science, and social developments as well as domestic and international politics from the first World War to the present. I

### Twentieth-Century Germany

**HIST 2150** 3 cr. 3 hr. ▲

This course surveys the history of modern Germany from the origins of the Weimar Republic and National Socialism through German reunification. I

### Nazi Germany: Hitler's Rise and Fall

**HIST 2155** 3 cr. 3 hr. ▲ ●

A detailed inquiry into the rise and fall of Nazi Germany. Examining the Weimar Republic, the course will analyze how Hitler and the Nazis gained power. Analysis of the Nazi dictatorship will focus on how Hitler maintained power, how the Nazi years shaped German society, Nazi wars of aggression and the total defeat of Nazi Germany. I

### Holocaust

**HIST 2160** 3 cr. 3 hr. ▲

This course surveys the Holocaust, examining the experience of victims, perpetrators "bystanders," and survivors. I

### British History to 1688

**HIST 2200** 3 cr. 3 hr. ▲

The course studies the development of English government and culture from the earliest times to the Glorious Revolution of 1688. I

### British History Since 1688

**HIST 2250** 3 cr. 3 hr. ▲

The course studies the industrial and agricultural revolutions as well as the evolution of the British Empire and Commonwealth. The position of Britain in the world today is also discussed. I

### African-American History

**HIST 2300** 3 cr. 3 hr. ▲

The course is an investigation of the African Americans in the United States from their African origins to the present. Emphasis is placed on the role African Americans played in the economic, political, and social life of the United States. I, C

### Eastern Amerindian History

**HIST 2370** 3 cr. 3 hr. ▲

This course includes the study of major cultures of Amerindians of Eastern North America and Caribbean from prehistoric times through contacts with European colonizers. Course work includes the use of archaeological, anthropological, literary, and historical records. I, C

### Western Amerindian History

**HIST 2380** 3 cr. 3 hr. ▲

The course studies the major cultures of Amerindians West of Mississippi River and Meso America from prehistoric times through contacts with European colonizers. Course work includes the use of archaeological, anthropological, literary, and historical records. I, C

### Massachusetts History

**HIST 2400** 3 cr. 3 hr. ▲

The course studies the political, social, and economic trends of the Bay State from Plymouth Rock to the Kennedy clan. I

### Women in U.S. History to 1870

**HIST 2490** 3 cr. 3 hr. ▲

The course is a multicultural examination of women of all roles and classes in the pre-colonial era through 1870. The "lady and the mill-girl" polarity in the antebellum era, the emergence of the women's rights movement, and women in Victorian culture are covered. I, C

### Women in U.S. History: 1870 to the Present

**HIST 2500** 3 cr. 3 hr. ▲

The course studies women in America, including the struggle against discrimination and for the ballot as well as the history of various women's groups. Emphasis is placed on women of all roles, classes, and ethnicity. I, C

### African-American Women's History

**HIST 2520** 3 cr. 3 hr. ▲

A study of African-American women's history from slavery through the Civil Rights Movement (1860–1964), this course focuses on the effects of race, class and gender on the interactions of these women among themselves, as well as interactions with white women and men and African-American men. I, C

### U.S. Military Experience

**HIST 2600** 3 cr. 3 hr. ▲

The class surveys the American wars from the Revolution until today. Course work stresses the changing roles of infantry, cavalry, and artillery over time and also examines the concept of national security at various historical times and under varying conditions. I

### Mexico, Central America, and Caribbean History

**HIST 2700** 3 cr. 3 hr. ▲

Both HIST 2700 and 2750 survey pre-Columbian and Colonial backgrounds. The clash and fusion of cultures and the evolution of today's Latin American civilizations as they relate to specific geographical areas is covered. I, C, IDIS

### Latin American Revolutions

**HIST 2725** 3 cr. 3 hr. ▲ ●

This course will address the following questions through survey of twentieth-century Latin American revolutions: What is revolution? What are its causes? Why do some revolutions succeed, while others fail? What do the revolutions of twentieth-century Latin America tell us about the specific countries in which they occurred, and about the region as a whole? I, C, IDIS

### South American History

**HIST 2750** 3 cr. 3 hr. ▲

See HIST 2700. I, C, IDIS

### Far East before 1800

**HIST 2800** 3 cr. 3 hr. ▲

The class examines the development of Chinese, Japanese, Korean, and South East Asian Civilization from the earliest time until the middle 19th century period. Political, military, and economic background is covered, but special emphasis is placed on cultural history. I, C

### Modern Far East

**HIST 2850** 3 cr. 3 hr. ▲

The course covers the major developments in China and Japan from 19th century to the present. It highlights the socio-economic and political transformations under the challenges of imperialism and nationalism. I, C

### Introduction to Secondary School Teaching

**HIST 2860** 3 cr. 3 hr. ▲

This course is required of all students preparing for initial license at the secondary level. It is a sophomore level course for full-time undergraduates and the first course taken by transfer students. It is taught at the local high school and is a clinical laboratory experience. This course includes a 25-hour prepracticum requirement and is a prerequisite for other certification course requirements. Students become familiar with the complexities of secondary school teaching and its demands. The course gives faculty the opportunity to screen students and gives students the opportunity to test their commitment to teaching.

### Middle East History Since 1500

**HIST 2920** 3 cr. 3 hr. ▲

The course covers political, cultural, religious, and military history of the Modern nation states of Middle East. The rise and fall of the Ottoman Empire is also covered. I, C

### Modern African History

**HIST 2930** 3 cr. 3 hr. ▲

A survey of 19th and 20th century African history, this course investigates the slave trade, imperialism, development and the rise of African nationalisms. I, C

### Irish History to 1850

**HIST 3100** 3 cr. 3 hr. ▲

Irish History is studied through significant events such as the Rebellion of 1798, the Act of Union, O'Connell, and Catholic emancipation, the rise of Irish nationalism, and the great famine of 1845–50. I

### India Since 1500

**HIST 3200** 3 cr. 3 hr. ▲

This course discusses India's traditional society and religion as also the legacies of the Mughals, the British, and the nationalist movement. By addressing the dramatic cultural and economic changes set in motion since the sixteenth century, it examines the impact of Islamic, colonial, and nationalist politicians in modern India. I, C

### Modern Russia

**HIST 3300** 3 cr. 3 hr. ▲

The class is an intermediate level survey of the major cultural and political forces, which have shaped the modern Russian state. The course traces the development of Russia from its origins in 10th century Kiev, through the Mongol period, and culminates with an overview of Russian political, cultural, and intellectual history up to the 1917 revolution. I, C

### 20th-Century Russia

**HIST 3350** 3 cr. 3 hr. ▲

This class is an intermediate level survey of 20th century Russian history from 1917 to the revolutionary developments of the Gorbachev era. Emphasis is placed on the events and forces that led to the Russian Revolution in 1917, the establishment of the Soviet Government, the role and character of the Communist party, the Khrushchev era, and concludes with the "2nd Russian Revolution." I, C

### The Age of Revolutions

**\*HIST 3400** 3 cr. 3 hr. ▲

The class covers the major political, social, and cultural developments in France, England, and the United States during the age of the American, French, and Industrial Revolutions, 1763-1848. The meaning and applicability of the term "revolution" is examined, and there are a series of case studies in topics such as art and politics, romanticism, and the religious revival in England.

### Women in European History Since 1700

**\*HIST 3450** 3 cr. 3 hr. ▲

This is an advanced course in European Women's History beginning in 1700 with the changes leading to the French Revolution and continuing to today with the new revolutionary changes in Eastern Europe. The effects of historical events and policies on the lives of French, British, Irish, Jewish, German, Spanish, Italian, and Russian Women is examined. I

### American Colonial History

**HIST 3500** 3 cr. 3 hr. ▲

This course covers the exploration, settlement patterns, imperial system, social structure, rise of representative government in America, and the 18th-century wars for empires. I

### The American Revolution

**HIST 3550** 3 cr. 3 hr. ▲

The course covers the coming of the Revolution, war tactics, and strategy, problems of the Confederation period, and the American Constitution. I

### The U.S. Civil War and Reconstruction 1830–1877

**HIST 3600** 3 cr. 3 hr. ▲

The course examines politics, slavery, and Abolitionism. Political, military, and diplomatic aspects of the war and the failure of reconstruction is also covered. I

### U.S. 1880–1920: The Progressive Era

**HIST 3655** 3 cr. 3 hr. ▲

The major movements of the late nineteenth and early twentieth centuries in United States History are studied in this course, including rise of middle class culture, Populism, urbanization, trade unionism, consumerism, and Progressivism. I

### U.S. 1920–1945: The Modern Age

**HIST 3700** 3 cr. 3 hr. ▲

This course cover topics in American politics, economics, and society from 1920-1945, with special emphasis on reform movements, the great Depression, and World War II. I

### Cold War

**HIST 3750** 3 cr. 3 hr. ▲

This course examines the impact of the Cold War in global perspective. Major themes include the developing US-Soviet conflict in Europe, nuclear weapons proliferation, Third World revolutionary nationalism, detente, the collapse of the USSR, and post-war globalization. I

### The U.S. In World Affairs: 1898 to the Present

**HIST 3850** 3 cr. 3 hr. ▲

The class examines America as a global power. Events covered are World War I, the era of "isolation," origins of World War II, American involvement and wartime diplomacy, breakdown of East-West relations, the Cold War, and the Korean and Vietnam conflicts and post Cold War world.

### The Frontier in American History

**\*HIST 3900** 3 cr. 3 hr. ▲

The Frontier is studied as a historical, social, economic, and psychological process to determine its impact on American development.

## Writing History

**HIST 4000** 3 cr. 3 hr. ▲

The class introduces the historical method with stress on bibliographical aids, historical fallacies, and the theories of history as they have developed. The class is primarily for history majors.

## Technology and US Society, 1790-Present

**HIST 4100** 3 cr. 3 hr. ▲

This course will explore the history of the US through the lens of technology. Topics to be covered include the pre-industrial era, industrialization, transportation revolutions, urbanization, the rise of engineering, technological systems, the impact of the automobile, the communications revolution, and the ethics of technology.

*Prerequisites: HIST 1400 and HIST 1500.*

## Seminar

**HIST 4500** 3 cr. 3 hr. ▲

The seminar provides guided readings and research on a specified topic. It is designed to enrich research and analytical skills of future teachers and those desiring to enter graduate or other professional schools.

## Special Methods in Teaching of History

**HIST 4850** 3 cr. 3 hr. ▲

This course covers special techniques for the teaching of history and their relationship to the principles of general methods. The course is taught at the local high school and is a clinical laboratory experience.

A Pre-Practicum of 25 hours is required.

*Prerequisite: completion of Introduction to Secondary Education.*

## History Practicum in a Secondary School I and II

**HIST 4860, 4870** 6 cr. ▲

In the practicum students are assigned to cooperating schools for a semester of student teaching. A 3.00 GPA in History and an overall GPA of 2.75 are required to enter the program. In addition, students must receive a passing score on the MTEL in General Literacy and History prior to entering the Practicum.

## Independent Study in History

**HIST 4900** ▲ ●

The Independent Study is open to students majoring or specializing in history with the permission of the supervising Instructor and the department. Meeting times and credit are arranged upon approval.

## Directed Study

**HIST 4975** 1-6 cr. ▲ ●

# Human Services

## Key to Course Offerings

\* Asterisk indicates that the course may be offered less than once every two years.

- ▲ Undergraduate Day School
- Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as "Topics" courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

## Introduction to Human Services

**HMSV 1100** 3 cr. 3 hr.

This core course serves as an introduction to the breadth and nature of human services work. Students will become acquainted with a variety of human service agencies at local, state and federal levels (i.e., their organization and administration, potential as hiring placements, and scope of services). The course facilitates students' awareness of the theoretical perspectives, issues and ideological dilemmas in the field of human services. The *required supervised practicum experience (30 hours within a ten week time span)* allows students to "shadow" human service workers in local agencies as they go about their daily activities, thereby gaining firsthand understanding of the nature of the work and the realities of a profession in the discipline of social welfare. This course is a prerequisite for most other Human Services courses.

## Community Resources

**\*HMSV 1150** 3 cr. 3 hr.

This course acquaints students with the services of a variety of public (federal, state and local) and private voluntary non-profit agencies which provide services for various populations. Students learn the range of services provided, how to make referrals to and obtain services from agencies, and how the agencies are operated (including staffing, funding, and administration). This course may emphasize special types of agencies/populations in different semesters.  
*Prerequisite: HMSV 1100*

## Introduction to Criminal Justice

**HMSV 2000** 3 cr. 3 hr.

This course provides an overview of the structure and organization of the criminal justice system. Emphasis is placed on examining the functions and decisions processes of agencies that deal with the management and control of crime and criminal offenders. The course includes didactic presentations, assigned readings, class discussions, visiting practitioner lectures, and small group discussions.

## Research Methods in Human Services Practice

**\*HMSV 2050** 3 cr. 3 hr.

This core course provides the knowledge and skills necessary to use research to inform practice in human services. Students will learn the basic ideas governing scientific inquiry in applied settings, including the formulation of research questions and review of related scientific literature. Emphasis will be placed on the basic skills, including appropriate statistical techniques, required to understand and participate in community needs assessments, program evaluations, consumer satisfaction studies, and similar practical research projects. Students will develop an understanding of both the ethical considerations (including the role of institutional review boards) and the issues related to human diversity involved in performing, evaluating and using research with human participants.

*Prerequisite: HMSV 1100*

## Working with AIDS/HIV in Human Services

**\*HMSV 2100** 3 cr. 3 hr.

This course provides a comprehensive understanding of the psychosocial impact of the HIV/AIDS epidemic as well as appropriate community resources and services for dealing with it. The significant medical, psychological, social and political consequences of the transmission of the human immunodeficiency virus will be examined. Guest lectures and field trips to service provider agencies may supplement class discussions, lectures, films and other activities.

*Prerequisite: HMSV 1100*

### Crisis Intervention

**\*HMSV 2400** 3 cr. 3 hr.

This course focuses on the concepts and techniques of crisis intervention. Many individuals are faced with crisis situations, such as job loss, unwanted pregnancy, divorce, medical procedures, death and dying and so forth. Students are exposed to the specialized short-term techniques that have been developed to help people in these situations. *A supervised practicum (30 hours) in an agency is required.*  
*Prerequisites: HMSV 1100, PSY 2350*

### Interviewing Techniques

**\*HMSV 2500** 3 cr. 3 hr.

This course is designed to help the student, whose goal is to be involved in a helping profession, learn about the problems and processes of interviewing while developing basic skills needed to become an effective interviewer. The course includes assigned readings, class discussions, audio and videotaped simulated interviews, demonstrations and practice sessions. Students' self-evaluations of their performance in videotaped simulated interviews serve as primary learning tools.  
*Prerequisite: HMSV 1100 and permission of the instructor. Students must pre-register in the semester prior to the course.*

### Juvenile Justice

**\*HMSV 2600** 3 cr. 3 hr.

This course is designed to develop student awareness of past and contemporary philosophies, practices and paradoxes of juvenile justice. The course examines programmatic efforts for juveniles "in trouble with the law," and focuses on the relationships among the components of this system of justice. Class presentations and discussions are supplemented by current journal research, and panel discussions by practicing professionals. A supervised practicum (30 hours) is encouraged.  
*Prerequisite: HMSV 2000*

### Services to Children

**\*HMSV 2700** 3 cr. 3 hr.

Students examine the variety of services available to children to support, supplement and substitute for the family. Students learn to understand the structure of the services provided and to explore the ethical dilemmas such services may create.  
*Prerequisite: HMSV 1100*

### Group Work

**\*HMSV 2900** 3 cr. 3 hr.

This core course focuses on group work in human services agencies and exposes students to the theories and techniques of working with clients in groups. Students have opportunities to observe and co-lead simulated groups. *A supervised practicum (30 hours) in an agency is required.*  
*Prerequisites: HMSV 1100, HMSV 2500 and permission of the instructor. Students must pre-register in the semester prior to the course.*

### Addictive Behaviors

**\*HMSV 2950** 3 cr. 3 hr.

This course is designed for students who plan a career in the helping professions (including education), or who wish to understand the cognitive, emotional, social and biological correlates of alcohol and other drug abuse, or other addictive behaviors. A framework is presented for viewing such compulsive behaviors as part of a continuum from "normal" to "dysfunctional," and controversies in the field are discussed. Students will be exposed to models of addiction, a classification of drugs, prevention of alcohol and other drug abuse, and information necessary to work with clients who are affected by addiction, including assessment and diagnosis, modalities of treatment, the role of support groups and relapse prevention. In addition to lectures and class discussions students are required to attend community support group meetings and to participate in a community prevention project (e.g., the Great American Smokeout).  
*Prerequisite: PSY 1100*

### Human Services Administration

**\*HMSV 3000** 3 cr. 3 hr.

This course examines administrative functions and their relationship to organizational effectiveness and efficiency. The internal and external politics of agency survival are addressed, and theoretical concepts of management and leadership styles are explored. Lectures and class discussion are supplemented by panel discussions by practicing professionals, field-based classes, and current journal research. *A supervised practicum (20 hours) in an agency is required.*  
*Prerequisite: HMSV 1100*

### Working with the Aging

**\*HMSV 3200** 3 cr. 3 hr.

The course explores past as well as contemporary philosophies, practices and processes of working with the aging. Further, the course examines the various roles and practices utilized by social support networks in maintaining the social, psychological, and physical well-being of the aged. *A supervised practicum (20 hours) is required.*  
*Prerequisites: HMSV 1100, HMSV 2500*

### Community Based Corrections

**\*HMSV 3300** 3 cr. 3 hr.

This course examines the philosophy of community-based corrections from historical, legal, social and psychological perspectives. The essence of probation and parole and their administration are considered in conjunction with criminal justice issues and practices that affect the court's decision to allow community sanctions and supervision in lieu of incarceration. Contemporary trends and alternatives to traditional supervision are explored as well. A supervised practicum (20 hours) is encouraged.  
*Prerequisite: HMSV 2000*

### The Abuse and Neglect of Children

**\*HMSV 3500** 3 cr. 3 hr.

This course provides students with an overview of the maltreatment of children. Students will learn about the symptoms of the major types of maltreatment, the impact of abuse and neglect on child development, and the dynamics of abusing/neglectful families. They will also be asked to consider domestic violence and substance abuse as forms of maltreatment, and are invited to compare the abuse of children with the abuse of other populations such as the elderly. Students will become acquainted with the child protection system and how it helps children, from receiving reports and assessing cases to providing case management and treatment options for children and their families. In addition to being exposed to didactic material, students will be challenged to examine their own attitudes, prejudices and reactions to abused and neglected children, their families, and the system that strives to help them.  
*Prerequisites: HMSV 1100, PSY 2200 or PSY 2210*

### Social Welfare Policy

**\*HMSV 3580** 3 cr. 3 hr.

This course enables students to learn the importance of social welfare policy, the relationship of values to policy formulation, and how to analyze policy. Students apply this knowledge to income maintenance, poverty assistance programs, health and mental health care, housing and neighborhood living space, as well as to the general problems of service delivery.

*Prerequisite: HMSV 1100*

### Assessment and Intervention

**\*HMSV 3600** 3 cr. 3 hr.

This core course expands on Interviewing Techniques and further provide practical experience in assessment skills and intervention strategies. The course approaches clients in context as members of families, schools and other groups. Special focus is given to (1) understanding family systems theory and how it can be applied to interventions with families and within schools and agencies; (2) developing a working understanding of the DSM IV classification system for mental disorders, including the ethical issues involved in diagnosing and choosing treatments for clients; (3) designing behavioral interventions; and (4) applying a culturally sensitive perspective to working with clients. Repeated presentations of case studies will give students an appreciation of the experience of working with ongoing cases.

*Prerequisites: HMSV 1100, HMSV 2500, PSY 2200, PSY 2350 and permission of the instructor. Students must pre-register in the semester prior to the course.*

### Professional Issues in Human Services

**\*HMSV 3700** 3 cr. 3 hr.

This core course is designed to develop student awareness of the professional issues that affect the roles and responsibilities of human service workers, with particular emphasis on the supervisory relationship. Students explore the dilemmas and challenges that face the practitioner within the context of legally and ethically responsible human service work. A stronger knowledge is gained of the rights and responsibilities of client, human service worker and supervisor.

*Prerequisite: HMSV 1100*

### Management of Case Process

**\*HMSV 3800** 4 cr. 3 hr.

This core course focuses on the process of case management in a variety of human service settings. It is designed to provide the knowledge and practical skills necessary to collect, organize, interpret, and report on information related to clients' needs, functioning and progress, to establish and monitor service plans, to broker services, and to evaluate service provision. Examples of case management in schools, courts, hospitals, clinics, and other human service agencies will be provided. A supervised practicum (90-hours) in an approved setting is required. During this practicum, students will become familiar with the agency's philosophy and operation, including procedures and formats for data/information gathering; case reporting; case conference; record storage, release and transmittal; and procedures to ensure security and confidentiality of all case materials. This course meets the LA&S requirement for Writing for the Human Services major.

*Prerequisites: HMSV 1100, HMSV 2500, PSY 2200, PSY 2350 and permission of the instructor. Students must pre-register in the semester prior to the course.*

### Field Work in Human Services

**\*HMSV 4870-4880** 6 cr. 15 hr.

Students work in an agency 15 hours per week throughout the school year (6 credits per semester for two semesters). *This placement begins only in September.*

**\*HMSV 4890** 12 cr. 30 hr.

A block placement of 30 hours per week for one semester, either Fall or Spring (12 credits, one semester).

Field Work is the structured experience that allows senior Human Services majors to integrate and apply skills and theory in a field-based setting under the supervision of a qualified professional. Placements may be direct service or administrative. Examples of the wide variety of settings include mental health agencies, social services, hospitals, prisons, family service agencies, probation departments, residential programs, nursing homes, community advocacy organizations, crisis centers, and human resource departments in businesses and other organizations. While in placement students participate in a weekly seminar on campus, in which they share their experiences and develop a heightened awareness of their placement site and the larger system of human services.

*Prerequisites: completion of all core courses in Human Services and successful completion of the Field Work eligibility requirements.*

*Students must have completed their prerequisites at least one semester before taking Field Work and must pre-register with the Field Work Office at the beginning of the semester before they plan to start placement.*

### Independent Study

**HMSV 4900** 1-6 cr. 3-18 hr.

Independent Study is offered by request to outstanding students of Junior or Senior standing and requires approval of the professor, the Human Services Review Committee, and the Chairperson of the Behavioral Sciences Department. Independent Study may take the form of special advanced readings or projects, or of problem formulation and research. Under no circumstances is Independent Study substituted for regularly scheduled courses.

### Directed Study

**HMSV 4975** 1-6 cr. 3-18 hr.

# Industrial Technology

## Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis of courses being taught on an experimental basis can be taught as "Topics" courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

## Electric Systems and Circuits

**ITEC 1000** 3 cr. 4 hr. ▲

An introductory course providing an overview of electrical technology with respect to electric production, transmission, control and use. Basic electrical concepts are covered in a lab setting.

## Electronics I

**ITEC 1100** 3 cr. 4 hr. ▲

This course introduces the principles and techniques used to analyze and design linear circuits with an emphasis on DC circuits. Accompanying laboratory exercises support the material presented in class and introduce experimental techniques.

*Prerequisite: ITEC 1000.*

## Metal Fabrication Systems

**ITEC 1200** 3 cr. 4 hr. ▲

The course studies mass production theory, systems, and procedures in metal working.

## Wood Fabrication Systems

**ITEC 1300** 3 cr. 4 hr. ▲

Fundamental woodworking techniques are studied as they relate to construction and manufacturing. Procedures are practiced through selected laboratory experiences.

## Materials Testing

**ITEC 1310** 3 cr. 4 hr. ▲

This class provides an overview of selected materials and their properties, including laboratory experiences designed to give students an understanding of materials testing.

## Construction Systems I

**ITEC 1320** 3 cr. 4 hr. ▲

The course will provide an overview and lab experience in 12 selected construction standards institute components of the construction industry. Through focused lab experiences, students will develop competencies in using the tools, equipment, instruments and techniques essential in the selected areas.

## Technical Drawing

**ITEC 1400** 3 cr. 4 hr. ▲

This course includes lettering, dimensioning, orthographic projection, symbols, sectioning, isometric, and auxiliary views. Problem development and blueprint reading is stressed.

## Architectural Graphics

**ITEC 1450** 3 cr. 4 hr. ▲

An introduction to the techniques and understandings involved in the use of drawing as a way of communicating and developing architectural ideas. Drawing is studied as a tool of visualization, exploring and documenting architectural form, organization, the setting of buildings in the land and the quality of light.

## Graphic Arts Processes

**ITEC 1500** 3 cr. 4 hr. ▲

The course studies the production and evaluation of messages utilizing graphic arts processes. This includes graphic design, desktop publishing, camera work, stripping, platemaking, and offset press operations.

## Typography

**ITEC 1510** 3 cr. 4 hr. ▲

The origins of the alphabet, evolution of type, traditional typography, nomenclature, and classification of typefaces are studied. Emphasis is on planning layout; budget considerations; dimensional coordination, proportion, and the grid system; copyfitting, markup, and proofreading; composition and computer and electronic publishing technology.

## Energy Systems I

**ITEC 1600** 3 cr. 4 hr. ▲

The course studies solar and other forms of energy to supply household needs. Students build and test both commercial and laboratory made devices.

## Energy Resources and Environment

**ITEC 1650** 3 cr. 4 hr. ▲

The Energy Resources and Environment course offers indepth knowledge of energy supplies and sources. The course treats in detail, topics as how rate of formation is slow than replacement, how energy sources could be best utilized, and to identify the technology associated with energy resources. The course will include some field trips.

## Evolution of Industrial Technology

**ITEC 1700** 3 cr. 3 hr. ▲

The course studies the history of industrial technology, and the qualifications, duties, and responsibilities of related careers. A field based pre-practicum experience is an integral part of this course. This experience may be in a school or industrial setting. I

## Technical Analysis

**ITEC 1710** 3 cr. 3 hr. ▲

Applications of mathematics to a variety of technical areas including electronics and mechanics are explored. Topics covered include complex numbers, Lissajou figures, vectors, curve fitting, error analysis, and computer methods.

## Computers in Industrial Technology

**ITEC 1720** 3 cr. 4 hr. ▲

This course familiarizes students with computers through presentation of selected hardware and software concepts. Opportunities for extensive hands-on practice with application programs are provided.

## Women in Science and Technology

**ITEC 2000** 3 cr. 4 hr. ▲

We will study the contributions to the advancement of science and technology made by a selected group of women. For each of these women, we will examine her discipline, her contribution to the discipline, and site her in an appropriate historical and cultural setting. I, C, IDIS

## Electronics II

**ITEC 2100** 3 cr. 4 hr. ▲

This course continues to study the principles and techniques of circuit analysis and design with an emphasis on AC circuits. Electronic circuits employing discrete devices are introduced.

Accompanying laboratory exercises reinforce concepts and introduce advanced measuring movements.

*Prerequisite: ITEC 1100.*

### Laser Technology

**ITEC 2110** 3 cr. 4 hr. ▲

This course examines industrial applications of lasers. I covers laser principles and operating characteristics and treats the safety aspects of laser use. Selected applications illustrate the use of lasers in industry. Laboratory experiences reinforce the lecture material.  
*Prerequisite: ITEC 1000.*

### Advanced Metal Fabrication Systems

**ITEC 2200** 3 cr. 4 hr. ▲

Specialized processes in the metal working industry are studied. Laboratory experiences include performing operations with tool cutter grinders, indexing heads, numerical control millers, turret lathes, and tracer lathes.  
*Prerequisite: ITEC 1200.*

### Wood Products Manufacturing

**ITEC 2300** 3 cr. 4 hr. ▲

In this course emphasis is on the mass production of a product employing the development and use of jigs, fixtures, and other suitable mass production procedures. Appropriate methods of production management are employed.  
*Prerequisite: ITEC 1300.*

### Construction Systems II

**ITEC 2310** 3 cr. 4 hr. ▲

The course studies residential construction with emphasis on construction methods, practices and procedures. The materials, equipment, and techniques used to construct a structure are examined, and architectural problems related to construction are researched. The course is taken with ITEC 2400.  
*Prerequisites: ITEC 1320.*

### Architectural Drawing

**ITEC 2400** 3 cr. 4 hr. ▲

Students design a practical residential structure, conforming to standard practices and Building codes. Technical skills are developed enabling students to communicate ideas. Topics discussed and employed include materials of construction, history, and development of various styles, orientation of house on lot, loads, and design of structural members. Field trips are taken and available films are used for instruction. The course is taken with ITEC 2310.  
*Prerequisite: ITEC 1400 or ITEC 1450.*

### Computer Aided Drafting (CAD)

**ITEC 2410** 3 cr. 4 hr. ▲

Drafting techniques will be reviewed and applied while completing a series of exercises using computer assistance. An emphasis will be placed on drawings commonly experienced in fields of engineering and architecture. Major projects will allow individuals the opportunity to pursue interest topics. A background of computer experience is helpful, but not necessary.  
*Prerequisite: ITEC 1400 or ITEC 1450; ITEC 1720 or permission.*

### Theory of Architecture

**ITEC 2450** 3 cr. 4 hr. ▲

Architectural situations will be explored that illustrate design theories both traditional and contemporary. Accepted construction techniques will be selected that best fulfill design situations. Emphasized will be the difficulties confronting designers as they resolve problems of conflict.  
*Prerequisite: ITEC 1320.*

### Offset Lithography

**ITEC 2500** 3 cr. 4 hr. ▲

The students study the lithographic form of printing as it is used in modern industry. Computer graphics work stations will be used to produce electronically designed artwork. Laser printers and imagesetters will be used to output the offset film and negatives. The majority of the course is spent setting up and running offset presses. Concepts covered include printing line copy, halftones, and controlling ink density.  
*Prerequisite: ITEC 1500.*

### Graphic Design

**ITEC 2520** 3 cr. 3 hr. ▲

Students study the design and production of messages. Students prepare artwork and mechanicals using equipment found in the Industrial Technology Department. The technology of communications is also included.  
*Prerequisite: ITEC 1500 (credit will NOT be given for both COMM 3810 and ITEC 2520.)*

### Screen Printing

**ITEC 2550** 3 cr. 4 hr. ▲

Students work with all forms of screen printing stencils. Torn paper, hand-drawn, hand-cut, and photo-direct stencils will be used. Emphasis is on multiple color registration, using both hand and machine printing techniques. Computer graphics artwork may be used by students with computer experience. L

### Energy Systems II

**ITEC 2600** 3 cr. 4 hr. ▲

The course is limited to students who have demonstrated the ability and desire to continue the research and development of a promising solar energy system as initiated in ITEC 1600.  
*Prerequisites: ITEC 1600.*

### Power and Lighting Systems

**ITEC 2630** 3 cr. 4 hr. ▲

Power and Lighting Systems course offers indepth knowledge of effective, efficient illumination and retrofitting. The course treats in detail, many topics such as smart house, temporary service and collect building, lighting system, financial and occupant information and apply that to required light levels per room and address quality issues such as lamp identification, lighting circuits and lighting codes. Students will develop and present plans for specific lighting systems as a part of laboratory work. The course will include field trips to active sites and research facilities.  
*Prerequisites: ITEC 1000.*

### Man Technology Society

**ITEC 2700** 3 cr. 3 hr. ▲

The course studies the universal characteristics of technology, including effects of technology on society and culture. Topics of interest are researched. I, IDIS

### Statics

**ITEC 2710** 3 cr. 3 hr. ▲

The course involves the study of laws of static equilibrium of real bodies. Topics examined are beam and structural analysis, friction, centroids, and moments of inertia.  
*Prerequisite: ITEC 1710.*

### Automated Manufacturing I

**ITEC 2730** 3 cr. 4 hr. ▲

Students are introduced to the essential technologies used in automated manufacturing through extensive practice in computer-controlled machining, robotics, and pneumatic and hydraulic control systems.  
*Prerequisite: ITEC 1720 or equivalent.*

### O.S.H.A.

**ITEC 2740** 3 cr. 4 hr. ▲

The purpose of this course is to introduce students to the latest occupational safety and health standards and to provide opportunity for the student to perform practical inspections, complete reports, and recommend corrective measures to insure safety and healthful conditions. This is a basic O.S.H.A. 500 course.

### Plastics Technology

**ITEC 2750** 3 cr. 4 hr. ▲

The course is an investigation of the rapidly expanding area of plastics. Emphasis is on plastics production, their merits, and limitations. Tests are conducted to confirm reference data and to promote a better understanding of various plastics and products made from them.

### Designing and Planning

**ITEC 2900** 3 cr. 4 hr. ▲

Elements of product design are experienced through problem solving. Drafting, human engineering, and product analysis are incorporated in design and construction of prototypes.

*Prerequisites: ITEC 1710 and four of the appropriate freshman level courses.*

### Electronics III

**ITEC 3100** 3 cr. 4 hr. ▲

This course further develops the concepts and techniques appropriate to the design and analysis of analog electronic circuits. It provides sufficient background for students who wish to elect upper-level electronics courses.

*Prerequisites: ITEC 2100.*

### Digital Electronics

**ITEC 3110** 3 cr. 4 hr. ▲

The course is an introduction to the techniques for analyzing and synthesizing digital circuits. Emphasis in design work is on IC technology.

*Prerequisites: ITEC 3100.*

### Control Theory

**ITEC 3120** 3 cr. 4 hr. ▲

The course is an introduction to control theory utilizing examples of mechanical, fluidic, electronic, and hybrid control systems. Emphasis is on design, utilizing the project approach.

*Prerequisite: ITEC 3100.*

### Machine Processes

**ITEC 3210** 3 cr. 4 hr. ▲

The course covers the design and fabrication of metal products utilizing machine tools, metalworking processes, and welding.

*Prerequisite: ITEC 2200.*

### Product Modeling and Rendering

**ITEC 3220** 3 cr. 4 hr. ▲

A laboratory course focusing on the preparation of product renderings and the development of three dimensional models for presentation and analysis of design products, processes or systems. The course will cover the types and uses of renderings and models; techniques and standards in their development; and appropriate material representation.

*Prerequisite: junior status.*

### Estimating and Bidding

**ITEC 3300** 3 cr. 4 hr. ▲

The principles of preparing comprehensive unit pricing and systems approach for construction is taught in this course. The emphasis is on detailed estimates in order to determine the scope and cost of each proposed design element.

*Prerequisite: ITEC 2400, ITEC 2310.*

### Mechanical and Plumbing Systems

**ITEC 3310** 3 cr. 4 hr. ▲

The course surveys the principles of heating, ventilating, air conditioning, purification, and control systems. Emphasis is placed on electrical and electronic control and delivery systems, water feed delivery systems, and waste water disposal systems.

*Prerequisites: ITEC 2310, 2400.*

### Construction Supervision

**ITEC 3320** 3 cr. 4 hr. ▲

This course enhances the student's understanding and skills for supervising a construction project. The emphasis is on coordinating all of the construction resources, including materials and manpower, needed for the successful completion of on-site structure.

*Prerequisites: ITEC 3300, 3410.*

### Wood Technology

**ITEC 3330** 3 cr. 4 hr. ▲

Students are introduced to a series of industrial techniques through which lumber is used to produce products. Veneering, patternmaking, model building, finishing, laminating, and bending are some of the techniques explored.

*Prerequisite: ITEC 1300.*

### Construction Systems III

**ITEC 3340** 3 cr. 4 hr. ▲

The course is a study of construction techniques and structural elements. Emphasis is placed on heavy construction procedures used in commercial and industrial projects. The course is taken with ITEC 3410.

*Prerequisites: ITEC 2310, 2400.*

### Engineering Drawing

**ITEC 3400** 3 cr. 4 hr. ▲

In this course students examine orthographic projection, intersections, developments, revolutions, axonometrics, assembly details, and pictorial drawings.

*Prerequisites: ITEC 1400, 2410.*

### Drafting Commercial Structures

**ITEC 3410** 3 cr. 4 hr. ▲

Students develop and produce working drawings, demonstrations, information schedules, and portfolios related to the construction of non-residential properties. The course is taken with ITEC 3340.

*Prerequisites: ITEC 2400, 2310.*

### Architectural Design I

**ITEC 3430** 3 cr. 4 hr. ▲

Designing living spaces will be emphasized during this studio session. The common problems presented by the multiple home activities of house cleaning and maintenance, storage, meal preparation and eating, personal hygiene, child rearing and aging, entertainment, safety, security, etc. will be within the purview of this study. The visual analysis of existing space will be emphasized. Ergonomics and human behavior will be important areas of consideration.

*Prerequisite: junior status.*

### Advanced CAD

**ITEC 3450** 3 cr. 4 hr. ▲

Students study and use advanced Computer Aided Drafting techniques to create two- and three-dimensional surface and solid model drawings applicable to their ITEC concentration area. Selected drawings and a term project are included in a student-developed portfolio.

*Prerequisite: ITEC 2410.*

### Architectural Design II

**ITEC 3460** 3 cr. 4 hr. ▲

Select problems will be completed through which architectural fundamentals will be explored. Individual and group activities will introduce the topics of land site analysis and improvements; structured forms and applied materials; lighting and color considerations; the applications of scale and proportion; and the organization of space. Solutions will be presented in appropriate portfolio form.

*Prerequisite: ITEC 3430.*

### Production Printing

**ITEC 3510** 3 cr. 4 hr. ▲

This course emphasizes plant layouts scheduling and production of contracted jobs. Four color process printing is emphasized. The course is designed to allow serious students to apply their previous instruction in a controlled, industrial setting. Enrollment is limited to ten students.

*Prerequisites:* ITEC 2500.

### Printing Estimating and Production Coordination

**ITEC 3520** 3 cr. 3 hr. ▲

This course provides students with an opportunity to determine how to estimate printed products properly. Relationships between the estimating department, sales, customer service, order writing, and production departments are covered.

*Prerequisite:* ITEC 2500.

### Energy Conservation Principles

**ITEC 3600** 3 cr. 4 hr. ▲

This laboratory course offers in-depth knowledge of energy efficiency, conservation retrofits, and choosing appropriate strategies. Cases are discussed regarding the reduction of energy losses and the application of energy conservation techniques for building control systems. Students develop and present plans for specific energy conservation projects that include field trips to sites and research facilities.

*Prerequisites:* ITEC 1710, MATH 1300 or permission.

### Co-Generation and Waste Recovery

**ITEC 3650** 3 cr. 4 hr. ▲

The Co-generation and Waste Recovery Systems course will focus on analyzing engineering and co-generation systems to meet industrial process needs and use of reject heat to integrate with the production plant. The course will also cover responsibilities of co-generators and their interconnection cost. Students will run computer programs for metering practices and other metering options.

*Prerequisites:* ITEC 1600, 2600.

### Fluid Power Technology

**ITEC 3700** 3 cr. 4 hr. ▲

This course introduces the student to applications of fluid power in a variety of industries. Topics covered include properties and behavior of liquids and gases, schematic diagrams for hydraulic and pneumatic circuits, component uses and characteristics, methods of controlling fluid power systems, circuit design and analysis, and uses of hydraulic/pneumatic systems in automated manufacturing.

### Quality Control

**ITEC 3710** 3 cr. 4 hr. ▲

The course studies the development and utilization of those statistical methods that enhance quality control within a manufacturing environment. Lab work includes the use of a variety of inspection instruments and small scale testing is done to generate data.

*Prerequisite:* ITEC 1710.

### Automated Manufacturing II

**ITEC 3730** 3 cr. 4 hr. ▲

This course requires students to successfully integrate the technologies studied in Automated Manufacturing I into working CIM (Computer-Integrated Manufacturing) systems.

*Prerequisites:* ITEC 2730.

### HAZWOPER

**ITEC 3740** 3 cr. 4 hr. ▲

This is an OSHA-approved hazardous waste operations and emergency response course (OSHA 1910.120). Topics covered include OSHA regulations for this area, exposure risks, material handling practices and equipment, decontamination procedures, and the requirements of OSHA 1910.120.

### Methods of Teaching Technology Education

**ITEC 3800** 3 cr. 3 hr. ▲

This course is designed to provide the prospective technology education teacher with a series of related academic, observational, and participatory experiences based on the fundamental elements of the teaching-learning process. Students develop, implement, and evaluate a variety of short-range instructional methods.

*Prerequisite:* junior status.

### Curriculum Development in Technology Education

**ITEC 3810** 3 cr. 4 hr. ▲

During this course the student is presented experiences that relate directly to the development of a course of study. Students also have the opportunity to analyze and develop strategies pertaining to curriculum development. Students undergo a pre-practicum in a public school technology education program.

*Prerequisite:* Junior status.

### Production Planning and Control

**ITEC 3900** 3 cr. 3 hr. ▲

Theory and practice in the essentials necessary for the operation of a manufacturing or service facility are the main thrust of this course. Layout of production, line operations, time study requirements, and related work problems resulting in an economical and efficient operation are included.

*Prerequisites:* junior status.

### Engineering Experimentation

**ITEC 3910** 3 cr. 4 hr. ▲

Using a series of open-ended projects, this course prepares the student to work independently in a variety of technical areas. Topics covered include: the creative process, research using technical literature, error analysis for single-sample and multi-sample experiments, types of instrumentation, and technical report writing. This course satisfies the junior-level writing requirement for industrial technology students.

*Prerequisite:* junior status.

### Strength of Materials

**ITEC 3930** 3 cr. 4 hr. ▲

This course serves as an introduction to the behavior of real materials under the influence of forces and couples. Axial, shear, torsional, and flexural stresses and strains are determined.

*Prerequisites:* ITEC 1710.

### Industrial Electronics

**ITEC 4100** 3 cr. 4 hr. ▲

The course studies the application of electronic principles to devices and equipment, involving thermoelectronics, photoelectronics, solid-state motor control, welding, etc.

*Prerequisite:* ITEC 3100 and by permission of Instructor.

### Electronic Communications Systems

**ITEC 4110** 3 cr. 4 hr. ▲

The system and circuits utilized in electronic communications are studied, including both transmitters and receivers. Methods of modulation are discussed and television is utilized as a representative system.

*Prerequisite: ITEC 3100 and by permission of Instructor.*

### Microprocessor-Based Control Systems

**ITEC 4120** 3 cr. 4 hr. ▲

This course covers both hardware and software. The hardware portion includes a necessary introduction to the microprocessor itself and emphasizes interfacing the use of microprocessors to affect control. The software portion provides a necessary skill level in machine language programming.

*Prerequisite: ITEC 3100.*

### Seminar in Construction

**ITEC 4310** 3 cr. 4 hr. ▲

This course is open to students specializing in construction. The course deals with current trends and issues facing the construction industry at local, state, and federal levels. The emphasis is on utilizing available resources to solve current problems.

*Prerequisites: ITEC 3300, 3320.*

### Site Planning

**ITEC 4350** 3 cr. 4 hr. ▲

The scope of this study will entail the problems presented to a designer by an unimproved land site. Proper design concepts will be applied as techniques and materials are selected. Solutions will be presented in the form of drawings and estimated costs. Legalities relating to construction codes and zoning will be emphasized.

*Prerequisites: junior status.*

### Descriptive Geometry

**\*ITEC 4400** 3 cr. 3 hr. ▲

Descriptive Geometry is concerned with graphical representation and the problem solving using spatial relationship of points, lines, and planes by means of projections.

*Prerequisite: ITEC 3400.*

### Architectural Professional Practices

**ITEC 4470** 3 cr. 4 hr. ▲

A study will be made of the various office forms, procedures, and protocol through which the practice of architecture is organized. Topics will include the personal ethical and legal interrelationships between other professionals, property owners, and the skilled trades. Legal forms and procedures common to the profession will be introduced.

*Prerequisite: senior status.*

### Process Color Separation

**ITEC 4500** 3 cr. 4 hr. ▲

In this course students experience scanning color photographs directly into electronic publishing systems. Using the electronic publishing hardware and software the images are manipulated and merged to create completed printing negatives. The electronic files and negatives are proofed using a variety of color printers and color keys.

*Prerequisite: ITEC 2500.*

### Seminar in Graphic Arts

**ITEC 4520** 3 cr. 3 hr. ▲

In the seminar students study and discuss current trends, issues, problems, and technical material in graphic arts. Emphasis is placed on comprehending why the trends must take place and how the emerging technology allows the trends to happen. Students are able to project future technical trends within the graphic area.

*Prerequisite: ITEC 2500.*

### Performance Contracting

**ITEC 4600** 3 cr. 4 hr. ▲

The course is designed to provide students the guidance to use the performance contracting energy financing/service mechanism effectively and provide an excellent mechanism to bring economy, energy and the environment into appropriate perspective. The first half of the course builds an understanding of the options available and then walks through each step to effectively secure performance contracting services. The second half applies the material from the first half to different market segments i.e. the federal government and utilities from end-user's point of view. Students will present and discuss their reports in class.

*Prerequisites: ITEC 1600, 2600, 3600.*

### Pre-practicum and Seminar

**ITEC 4840** 3 cr. 3 hr. ▲

The seminar gives students the opportunity to formulate concepts of technology education and develop a working knowledge of principles and practices of technology education administration. Pre-practicum experiences are also included. The course meets the state requirement for certification.

*Prerequisites: ITEC 3800, 3810.*

### Practicum in Technology Education

**ITEC 4860** 10 cr. 30 hr. ▲

The Practicum provides experience in planning and implementing instructional strategies in a public-school setting. A self-evaluation is required. The Practicum meets the state requirement for certification.

*Prerequisite: permission of Instructor.*

### Internship in Industrial Technology

**ITEC 4960** 12 cr. 36 hr. ▲

In the Internship students participate in an industrial experience with the approval of the Industrial Technology faculty.

### Independent Study

**ITEC 4900** 3 cr. ▲

The Independent Study allows students to enroll in a directed study.

### Directed Study

**ITEC 4975** 1-6 cr. ▲

# Interdisciplinary

## Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

Each student is required to complete at least two interdisciplinary courses as part of the Common Graduation Requirements in the Liberal Arts and Sciences Program. These courses are often described in the discipline most closely associated with the interdisciplinary course. This section gives complete course descriptions for the interdisciplinary course or refers to specific areas for descriptions if they are located in other sections.

## History of Architecture

**ART 1300** 3 cr. 3 hr. ▲

See ART 1300. I, L, C, IDIS

## Art Criticism

**ART 3100** 3 cr. 3 hr. ▲

See ART 3100. L, C, IDIS

## Literature and Disability

**ENGL 2300** 3 cr. 3 hr. ▲ ●

See ENGL 2300. L, B, IDIS

## Literature and Film

**ENGL 2330** 3 cr. 3 hr. ▲ ●

See ENGL 2330. L, IDIS

## French Civilization

**FREN 3000** 3 cr. 3 hr. ▲

See FREN 3000. I, L, C, IDIS

## Economic Geography

**GEOG 3000** 3 cr. 3 hr. ▲

See GEOG 3000. I, C, IDIS

## History of Mexico, Central America, and the Caribbean

**HIST 2700** 3 cr. 3 hr. ▲

See HIST 2700. I, C, IDIS

## History of South America

**HIST 2750** 3 cr. 3 hr. ▲

See HIST 2750. I, C, IDIS

## Introduction to Women’s Studies

**IDIS 1000** 3 cr. 3 hr. ▲ ●

The course is a cross-cultural, historical, and interdisciplinary introduction to topics and themes in women’s experiences, including roles in the family, the work force, and public life. L, I, B, C

## Women in Latin America

**IDIS 1100** 3 cr. 3 hr. ▲

Through autobiographies, literature, and films, students examine a multicultural and interdisciplinary view of the social, political, and economic situation of contemporary Latin American women.

## Introduction to International Studies

**IDIS 1200** 3 cr. 3 hr. ▲

The purpose of this survey course is to acquaint students with the field of international studies in the context of contemporary global change. Through lectures, films, performances, and readings, the student gains perspective on some very rapid and important international political-economic transformations and cultural changes. I, L, C

## Creative Arts

**IDIS 1300** 3 cr. 3 hr. ●

Participants acquire basic skills in music, movement, visual art, and language with which they create personal and group works. A final project demonstrating these skills as well as attendance, outside readings, and final exam are required. L

## Global Issues

**IDIS 1800** 3 cr. 3 hr. ▲ ●

This course examines the interdependency of the world’s nations by focusing on current events in the international area and issues such as ozone depletion, pollution, the global economy, conflict and cooperation, population, and hunger. I, C, IDIS

## Women in Science and Technology

**IDIS 2000** 3 cr. 4 hr. ▲

We will study the contributions to the advancement of science and technology made by a selected group of women. For each of these women, we will examine her discipline, her contribution to the discipline, and site her in an appropriate historical and cultural setting. I, C, IDIS

## Dilemmas of Peace and War

**IDIS 2100** 3 cr. 3 hr. ▲ ●

This introductory-level course is an interdisciplinary study of the issues of peace and war. It interweaves history, political science, philosophy, literature, and psychology through readings, discussions, lectures, media, and class presentations. I, L, C, IDIS

## Issues in Women’s Health

**IDIS 2340** 3 cr. 3 hr. ▲

This course offers a multicultural and interdisciplinary examination of women’s health issues and problems, including socialization, self-esteem, sexuality, birth control, substance abuse and violence. I, B, IDIS, C Note: If minoring in Women’s Studies see advisor for course sequence.

## Caribbean Cultures

**IDIS 2400** 3 cr. 3 hr. ▲

This course introduces the culture, politics, economy, and natural history of the Caribbean, and the relation of these facets to the culture of our students. L, C, IDIS, I

## Culture and Society of India

**IDIS 2500** 3 cr. 3 hr. ▲

This course explores developments in India’s cultural heritage, historical epochs, religious traditions, and socio-political movements from antiquity to the present. Class work involves numerous readings of articles on select topics and writing. I, C, IDIS, B

*Prerequisite: Writing II.*

## Man, Society, and Technology

**IDIS 2700** 3 cr. 3 hr. ▲

The course studies universal characteristics of technology, including effects of technology on society and culture. Topics of interests are researched. I, IDIS, B

## Seminar in the Humanities

**IDIS 4000** 3 cr. 3 hr. ▲

This course is a capstone experience for students in General Studies Humanities. Students review research findings and integrate selected humanities areas. This research culminates into a final research paper and classroom presentation.

## Adaptations

**PHED 3050** 3 cr. 3 hr. ▲

(See PHED 3050) Q, IDIS

## Commonwealth of the Arts

**MUSC 2000** 3 cr. 3 hr. ▲ ●

(See MUSC 2000) L, I, B, C, IDIS

### Commonwealth of the Ancient Arts

**MUSC 2100** 3 cr. 3 hr. ▲ ●  
(See MUSC 2100) L, I, C, IDIS

### Logic

**PHIL 1100** 3 cr. 3 hr. ▲ ●  
(See PHIL 1100) Q, L, IDIS

### Philosophy of Human Nature

**PHIL 2600** 3 cr. 3 hr. ▲ ●  
(See PHIL 2600) I, B, IDIS

### Contemporary Philosophy

**PHIL 3340** 3 cr. 3 hr. ▲  
(See PHIL 3340) I, IDIS

### Marxism

**PHIL 4430** 3 cr. 3 hr. ▲  
(See PHIL 4430) I, IDIS

### Dostoevsky and Tolstoy

**RUSS 2400** 3 cr. 3 hr. ▲  
(See RUSS 2400) L, I, C, IDIS

### Physiological Psychology

**PSY 3420** 3 cr. 3 hr. ▲  
(See PSY 3420) B, Q, IDIS

### Russian Literature in English Translation

**RUSS 2500** 3 cr. 3 hr. ▲  
(See RUSS 2500) L, I, C, IDIS

### Russian Life and Culture

**RUSS 2600** 3 cr. 3 hr. ▲  
(See RUSS 2600) L, I, C, IDIS

### Race and Ethnic Relations

**SOC 2500** 3 cr. 3 hr. ▲ ●  
(See RUSS 2500) B, I, C, IDIS

### Social Stratification

**SOC 3000** 3 cr. 3 hr. ▲ ●  
(See SOC 3000) B, I, C, IDIS

### Women in American Society

**SOC 3770** 3 cr. 3 hr. ▲  
(See SOC 3770) B, C, IDIS

### Independent Study

**IDIS 4900** 3 cr. ▲

### Directed Study

**IDIS 4975** 1-6 cr. ▲

## Italian

### Key to Course Offerings

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- I: the Ideas and Events Cluster
- B: the Human Behavior Cluster
- L: the Literature, Language and Arts Cluster
- C: Multicultural

IDIS: Interdisciplinary courses  
*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

- ▲ Undergraduate Day School
- Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as "Topics" courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

### Italian for Beginners I

**ITAL 1000** 3 cr. 3 hr. ▲

The correct pronunciation, reading ability, and fundamentals of grammar and syntax of the Italian language are studied. Students are taught the four language skills of listening, speaking, reading, and writing. Cultural topics are integrated with these skills. Italian gradually becomes the working classroom language. Students with a year or more of high school Italian should register for Italian 2000. L, C

### Italian for Beginners II

**ITAL 1100** 3 cr. 3 hr. ▲

The course is a continuation of ITAL 1000 or is taken with permission of Instructor. L, C

### Intermediate Italian I

**ITAL 2000** 3 cr. 3 hr. ▲

The course focuses on a discussion of advanced grammar points and readings dealing with Italian life. Emphasis is on developing conversational fluency. L, C  
*Prerequisite: ITAL 1000 permission of Instructor.*

### Intermediate Italian II

**ITAL 2100** 3 cr. 3 hr. ▲

The course is a continuation of ITAL 2000 or is taken by permission of Instructor. L, C

## Leadership Academy Honors Program

### Key to Course Offerings

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### Our Many Communities Colloquium

**LEAD 1000** 1 cr. 1 hr. ▲

The first Honors Colloquium stresses the theme of leadership, especially within the contexts of our campus and the local community. It provides a practical as well as intellectual orientation toward the immediate world we live in at Fitchburg State. The course will provide an introduction to the functions of college governance and local city government. Students will study leadership not merely from a theoretical perspective but also in real world contexts. I

### Foundations of Leadership I

**LEAD 1005** 3 cr. 3 hr. ▲

This course focuses on what it means to be leaders in today's world. Students will study different theories of leadership as they apply to leaders, followers, and situations and will have opportunities to observe and apply these theories in real-life situations. Students will also be introduced to some basic psychological research methods and will use these methods to complete several small leadership projects. B

### Foundations of Leadership II

**LEAD 1010** 3 cr. 3 hr. ▲

The second course in the leadership sequence focuses on learning to be an effective leader. The main objective of this course is to teach students leadership skills including listening, negotiating, building consensus, working with resistance and conflict, problem solving, assertiveness, giving and receiving feedback, and motivating others. Students will study interpersonal and group theory and apply these theories to leadership situations in laboratory and community settings. This course will culminate in an applied on-campus group leadership project. B

### Service Learning Project

**LEAD 1025** 1 cr. 1 hr. ▲

This Service Learning Project is basic to a citizen leader's preparation. Students will do a thirty-hour practicum at community agencies, neighborhood organizations, schools, businesses or other settings deemed appropriate for service learning. Students will work in service teams under the aegis of both site and college supervisors. This structured learning environment will allow students to 1) become familiar with their community, 2) work with people on the teams as well as with people at the site, 3) learn and use skills for responsible citizenship and 4) develop their sense of civic responsibility. The college supervisor will hold a seminar once a week for students in the field. Topics of the seminar will relate to students' experiences in the agencies as well as to students' progress in recognizing the impact of their contributions. B  
*Prerequisite: LEAD 1000*

### Honors English I

**LEAD 1050** 3 cr. 3 hr. ▲

This course encourages the development of each student's writing, independent reading and research abilities. Concepts and expressions of leadership in the classical and romantic traditions in literature and the fine arts will be emphasized. Fictional and non-fictional literature will be examined from various class, cultural, gender, historical, literary and political perspectives.

### Leadership in the Outdoors

**LEAD 1140** 1 cr. 1 hr. ▲  
*(PHED 1140)*

Leadership in the Outdoors is a course designed for students in the Leadership Academy. Experiential by design, the course provides students an opportunity to experience and practice a variety of leadership styles through participation in outdoor adventure activities such as: a confidence course, initiative games, orienteering, canoeing and mountain hiking. The inquiry and analysis for the different types of leadership styles will be conducted for both the individual student and the entire class. An overnight camping trip will culminate the Leadership in the Outdoor course.

### The Changing World I (19th Century)

**LEAD 1150** 3 cr. 3 hr. ▲

This course presents an overview of how the world changed during the 19<sup>th</sup> century. Built upon a historical framework within the context of global economy and hegemony, it will introduce students to the lingering implications of such themes as the Industrial Revolution, Nationalism in the West, Imperialism in Asia and Africa, and the globalization of economy and communication. It will explore how European political and industrial power impacted the Afro-Asian nations, but more importantly how it sustained their own expanding European industries and economy. I, C, IDIS

### Honors English II

**LEAD 1200** 3 cr. 3 hr. ▲

This course is a continuation of Honors English I and emphasizes writing, independent reading and research. Students examine varieties of leadership in the personal narratives of cultural, intellectual and political leaders; the analyses of social critics and theorists and in works of fiction. We will examine works from various class, cultural, gender, historical, literary, and political perspectives. The diversity of texts affords students opportunities to develop strategies for the interpretation and analysis of different kinds of source material and to evaluate the concept of "leadership" in many contexts.

### The Changing World II (20th Century)

**LEAD 1250** 3 cr. 3 hr. ▲

The focus of this course will be on the dramatic changes which took place during the 20<sup>th</sup> century. Drawing upon the disciplines of History and Political Science, it will trace the political, social, and economic significance of such topics as the rise of fascism and communism, the "Pax Americana," the Nuclear Age, the rise of National Liberation Movements in the Third World, the collapse of communism, and ongoing globalization as we approach the new millennium. Through its exploration of the forces which shaped the 20<sup>th</sup> century, the students will learn not only about the world around them, but also about the world which will be entering the 21<sup>st</sup> century. I, C, IDIS

### Leaders in the Humanities: The 19<sup>th</sup> century

**LEAD 2000** 3 cr. 3 hr. ▲

An interdisciplinary study of art, music, philosophy and literature from Classicism and Neo-Classicism through Post Impressionism, including the movements of Romanticism, Post-Romanticism, Realism and Impressionism. Emphasis will be placed upon the leaders of the above movements within their disciplines. L, IDIS

### Colloquium: Leaders in the Humanities (19<sup>th</sup> century)

**LEAD 2001** 1 cr. 1 hr. ▲

This colloquium complements Leaders in the Humanities: The 19<sup>th</sup> century by emphasizing research techniques for the humanities. Students will learn to do research using a variety of primary and secondary sources. They will also learn how to present their research in a variety of media. L, IDIS

### Consumer Health

**LEAD 2030** 1 cr. 2 hr. ▲

This course is designed to help the student evaluate health information critically, and select products and services wisely. The past, present, and future of quackery is explored especially in the areas of food, cosmetics, and chronic disorders. Laws and protection agencies, both governmental and private, are surveyed.

### Leaders in the Humanities: 20<sup>th</sup> century

**LEAD 2050** 3 cr. 3 hr. ▲

An interdisciplinary and multicultural study of art, music, philosophy and literature from 1890 to 1995 in Europe and the United States. Periods covered include French Post Impressionism, Fauvism and Cubism; German Expressionism; Spanish and French Surrealism; Early American Modernism, the Harlem Renaissance, Regionalism and Jazz; Abstract Expressionism; Pop Art; Earthworks and contemporary trends. Emphasis will be placed upon the leaders of the above movements within their disciplines. L, IDIS

### Colloquium: Leaders in the Humanities (20<sup>th</sup> century)

**LEAD 2051** 1 cr. 1 hr. ▲

This colloquium complements Leaders in the Humanities: The 20<sup>th</sup> century and continues the development of research techniques for the humanities. Students will expand their understanding of primary and secondary source materials and further develop their presentation skills. L, IDIS

### Physics, Mathematics and Technology

**LEAD 3000** 4 cr. 5 hr. ▲

This course will introduce the principal ideas and the development of modern 20<sup>th</sup> century physics along with its foundations in mathematics. After historical review of the development of ideas from Newton's laws through 19<sup>th</sup> century physics, aspects of quantum mechanics will be addressed. These include the wave-particle duality of nature, the Uncertainty Principle, the probabilistic nature of the Universe, and Einstein's Special and General Theories of Relativity. Q, IDIS

*Prerequisite: MATH 1250 or 1300 or high school math equivalency.*

### Biology, Mathematics and Technology

**LEAD 3050** 4 cr. 6 hr. ▲

This course will address current issues such as the Human Genome mapping project, the spread and control of disease, population growth, and environmental concerns. Each of these topics requires a clear understanding of the mathematics behind the biological questions. A case-study approach and investigative activities that use laboratory experiments and computer simulations in concert with more traditional presentations will provide the focus for addressing these topics. These investigations will illustrate broader mathematical and biological concepts while engaging the students in problem solving, planning, decision making, and group discussions. Q, L, IDIS

### Colloquium: Biology, Mathematics and Technology

**LEAD 3051** 1 cr. 1 hr. ▲

The third year colloquium will emphasize the societal, ethical and moral issues related to scientific advances. Specific topics will follow closely those being presented in Biology, Mathematics, and Technology. Students will be expected to express their viewpoints through class discussion and a personal journal. Effective debating and good listening skills will be taught and cultural differences in beliefs and practices will be discussed. Q, IDIS

### Independent Study in Leadership

**LEAD 4900** 6 cr. 6 hr. ▲ ●

The Independent Study is open to students in the Leadership Academy or Leadership Studies minor with the permission of the supervising Instructor and the Coordinator of the Leadership Academy. Meeting times and credit are arranged upon approval.

### Senior Thesis/Project/Research

**LEAD 4990** 3 cr. 3 hr. ▲

The course is for Leadership Academy students completing the senior requirement. Topics are approved by the thesis committee, coordinator, and advising professor. The course of study, meetings, and credit are arranged with the advisor.

### Senior Thesis/Project/Writing

**LEAD 4991** 3 cr. 3 hr. ▲

## Mathematics

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▲ Undergraduate Day School

● Undergraduate Evening School

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### Basic Mathematics I

**MATH 0100** 3 inst. cr. 4 hr. ▲ ●

This class serves as a review of basic arithmetic skills and an introduction to elementary algebra.

### Basic Mathematics II

**MATH 0200** 3 inst. cr. 4 hr. ▲ ●

The course serves as a continuation of Basic Mathematics I. Concepts studied range from Elementary Algebra through quadratic equations.

Note 1: Institutional Credits (inst. cr.) do not count toward graduation.

Note 2: All students must pass the Math Placement Exam or MATH 0200 before they are permitted to take any of the following mathematics courses.

### Finite Mathematics

**MATH 1200** 3 cr. 3 hr. ▲

In this course a variety of discrete mathematical models are developed and applied to business and to the social and life sciences. Topics covered include matrices, linear programming, probability, and game theory. Q

### Introduction to Functions

**MATH 1250** 3 cr. 3 hr. ▲ ●

This course provides a study of mathematical functions, graphing techniques, and applications. The functions covered in the class are linear, quadratic, polynomial, rational, exponential, and logarithmic. Credit is not awarded for both MATH 1250 and MATH 1300. Q

### Precalculus

**MATH 1300** 3 cr. 3 hr. ▲ ●

This course prepares students for the study of calculus. Topics covered include real numbers, equations and inequalities, analytic geometry, as well as polynomial, trigonometric, exponential, and logarithmic functions. Credit is not awarded for both MATH 1250 and MATH 1300. Q

### Mathematics Across the Curriculum

**MATH 1400** 3 cr. 3 hr. ▲

This course introduces students to a variety of topics in applied mathematics, including population modeling, measurement, growth and form, social decision making, and graph theory. The course is required for Elementary Education majors and Middle School Education majors. Q, IDIS

### Applied Statistics

**MATH 1700** 3 cr. 3 hr. ▲ ●

Methods of data collection, organization, and interpretation, sampling, probability, estimation, and testing are applied to areas including biology, business, medicine, economics, and education. Credit is not awarded for both MATH 1700 and MATH 1800. Q

### Business Statistics

**MATH 1800** 3 cr. 3 hr. ▲ ●

Topics covered in this course include descriptive methods, probability distributions, estimation, testing, analysis of variance, and regression analysis. (Credit is not awarded for both MATH 1700 and MATH 1800.) Q

*Prerequisite: MATH 1250 or MATH 1300.*

### Discrete Mathematics

**MATH 1900** 3 cr. 3 hr. ▲ ●

This course introduces discrete mathematics as applied to computer science. Topics covered include Boolean logic, elementary set theory, functions, relations, enumeration, proof techniques, number systems and trees. Q

*(Credit is not given for both CSC 1900 and MATH 1900.)*

*Prerequisite: Math 1250 or Math 1300 or equivalent knowledge.*

### Informal Geometry

**MATH 2000** 3 cr. 3 hr. ▲

This course involves an intuitive study of basic geometric objects and concepts. Topics studied vary, but are chosen for their intuitive appeal as well as their geometric significance. Q

### Calculus for Business

**MATH 2200** 3 cr. 3 hr. ▲ ●

This course surveys methods and applications of the calculus for functions of one variable, which are useful in business and economics. Topics include differentiation with applications to rates and maximum and minimum values, integration techniques with applications to areas, cost, and rates. (Credit is not awarded for both MATH 2200 and MATH 2300.) Q

*Prerequisite: MATH 1250 or MATH 1300.*

### Calculus I

**MATH 2300** 4 cr. 5 hr. ▲ ●

The derivative of a function, methods of differentiation, and applications are studied. This course includes a computer laboratory component using computer algebra software. (Credit is not awarded for both MATH 2200 and MATH 2300.) Q, Intro

*Prerequisite: MATH 1300 or its equivalent.*

### Calculus II

**MATH 2400** 4 cr. 5 hr. ▲ ●

The course involves the study of the Riemann Integral, methods of integration, and applications. This course includes a computer laboratory component using computer algebra software. Q, Intro

*Prerequisite: MATH 2300 or its equivalent.*

### Introduction to Mathematical Thought

**MATH 2500** 3 cr. 3 hr. ▲

The course is intended to introduce mathematics as the science of reasoning. Topics covered include elementary set theory, logic, techniques of proof, basic properties of the real number system, mathematical induction, and axiomatic systems. Q, Intro

*Prerequisite: MATH 1300 or its equivalent.*

### Linear Algebra

**MATH 2600** 3 cr. 3 hr. ▲ ●

In this course topics covered include the application of vector spaces, linear transformations, and matrices. Q

*Prerequisite: MATH 2300.*

### Applied Statistics II

**\*MATH 2700** 3 cr. 3 hr. ▲ ●

This course is a continuation of MATH 1700. Topics covered include estimation and testing, simple linear and multiple regression, analysis of variance, and nonparametric methods. Q

*Prerequisite: MATH 1700 or MATH 1800.*

### Introduction to Secondary School Teaching

**MATH 2860** 3 cr. 3 hr. ▲

This course is required of all students preparing for initial license at the secondary level. It is a sophomore level course for full-time undergraduates and the first course taken by transfer students. It is taught at the local high school and is a clinical laboratory experience. This course includes a 25-hour prepracticum requirement and is a prerequisite for other certification course requirements. Students become familiar with the complexities of secondary school teaching and its demands. The course gives faculty the opportunity to screen students and give students the opportunity to test their commitment to teaching.

### Geometry I

**MATH 3000** 3 cr. 3 hr. ▲

The course involves a formal study of basic concepts in geometry and the foundations of Euclidean and non-Euclidean geometry. This course is for mathematics majors or minors and students with a mathematics specialization—all others need permission from the Instructor.

*Prerequisites: MATH 2400, 2600.*

### Discrete Algebraic Structures

**MATH 3100** 3 cr. 3 hr. ▲

The course studies discrete algebraic structures of interest in computer science. Topics covered include partial orders, Boolean algebra, graph theory, and finite state machines. Q

*Prerequisite: MATH 2600.*

### Elementary Number Theory

**MATH 3150** 3 cr. 3 hr. ▲

This course studies the properties of the integers. Topics covered include divisibility, prime numbers, congruences, Diophantine equations, cryptography, mathematical induction, and computational number theory.

*Prerequisite: MATH 2500.*

### History of Mathematics

**MATH 3200** 3 cr. 3 hr. ▲

The development of mathematical ideas and methods from ancient to modern times and their relevance to other fields of knowledge is studied. This course is intended for mathematics majors, mathematics minors, or mathematics specialists.

*Prerequisite: MATH 2400.*

### Calculus III

**MATH 3300** 3 cr. 3 hr. ▲ ●

This course studies conic sections, indeterminate forms, Taylor polynomials, infinite and power series, differentials, and multiple integrals. Q, Intro  
*Prerequisite: MATH 2400.*

### Calculus IV

**MATH 3400** 3 cr. 3 hr. ▲ ●

The calculus of polar coordinates, parametric curves, vector valued functions, quadratic surfaces, and directional derivatives are studied. Double integrals in polar coordinates, line integrals, and differential equations may also be considered. Q  
*Prerequisite: MATH 3300.*

### Ordinary Differential Equations

**MATH 3550** 3 cr. 3 hr. ▲

Students examine linear first and second order differential equations, methods of solution, and applications. Series solutions and higher order linear equations are considered.  
*Prerequisites: MATH 2600 and 3300.*

### Introduction to Mathematical Logic

**\*MATH 3600** 3 cr. 3 hr. ▲

This course serves as an elementary introduction to classical and symbolic logic, including standard sentential and first order predicate calculi.  
*Prerequisite: MATH 2500 or MATH 2300.*

### Mathematics Seminar

**MATH 3900** 1 cr. 1.5 hr. ▲

The Seminar provides the opportunity for problem solving and research on one or more topics outside the core curriculum areas.

### Real Variable Theory

**\*MATH 4000** 3 cr. 3 hr. ▲

The course covers rigorous treatment of the foundations of differential and integral calculus with such topics as the real numbers, continuity, metric, and Euclidean spaces.  
*Prerequisites: MATH 2600 and MATH 3300.*

### Topology

**\*MATH 4050** 3 cr. 3 hr. ▲

The course studies the following topics: point sets, metric spaces, topological spaces, connectedness, and compactness.

### Advanced Multivariate Calculus

**MATH 4150** 3 cr. 3 hr. ▲

The differential and integral calculus of vector valued functions and functions of several variables is examined.  
*Prerequisites: MATH 2600, 3400.*

### Probability and Statistics I

**MATH 4200** 3 cr. 3 hr. ▲

The course involves a careful development of elementary probability theory with applications followed by the study of discrete and continuous random variables, including the binomial, Poisson, and normal. Q  
*Prerequisite: MATH 3300.*

### Probability and Statistics II

**MATH 4250** 3 cr. 3 hr. ▲

Random variables and their probability distributions are used to study problems in estimation, hypothesis testing, regression, and analysis of variance.  
*Prerequisite: MATH 4200.*

### Abstract Algebra I

**MATH 4300** 3 cr. 3 hr. ▲

The course studies algebraic structures, including groups, rings, and fields.  
*Prerequisites: MATH 2500 or permission of Instructor, and MATH 2600.*

### Complex Analysis

**MATH 4350** 3 cr. 3 hr. ▲

The course covers the following topics: the complex number system, the analysis of complex functions, analytic functions, integration, series, contour integration, and conformal mappings.  
*Prerequisite: MATH 3300.*

### Operations Research

**MATH 4400** 3 cr. 3 hr. ▲

The course covers the following topics: linear programming, duality, networks, transportation problems, dynamic programming, and stochastic models. Q  
*Prerequisites: MATH 2600 and MATH 2400.*

### Mathematical Modeling

**MATH 4450** 3 cr. 3 hr. ▲

Deterministic and probabilistic models from the physical, social, and life sciences are studied. The course emphasizes the uses of mathematics, rather than the acquisition of new mathematical knowledge. New mathematical ideas are introduced only when they aid in the study of a particular application. Q  
*Prerequisites: MATH 2400, 2600.*

### Numerical Analysis

**MATH 4500** 3 cr. 3 hr. ▲

Numerical analysis is concerned with devising algorithms for approximating the solutions to mathematically expressed problems. Topics are chosen from: round off error and computer arithmetic, solutions of algebraic and transcendental equations, interpolation and polynomial approximation, numerical differentiation and integration, solutions of ordinary differential equations, solutions of linear systems, and approximation theory. Both mathematical rigor and computer solutions are stressed.  
*Prerequisites: MATH 2600, 3300, programming ability in a numerical program language (e.g. FORTRAN, PASCAL).*

### Methods and Materials in Secondary Mathematics

**MATH 4850** 3 cr. 3 hr. ▲

The curriculum and pedagogy of secondary school mathematics is studied. The uses of technology in the teaching of secondary mathematics will be emphasized. The course includes a 30 hour pre-practicum of professional experiences.  
*Prerequisites: MATH 2400 and 2600.*

### Mathematics Practicum in a Secondary School

**MATH 4860** 6 cr. ▲

Students are assigned to cooperating schools for one-half of one semester of student teaching.  
*Prerequisite: permission of the department.*

### Mathematics Practicum in a Secondary School II

**MATH 4870** 6 cr. ▲

Students are assigned to cooperating schools for one-half semester of student teaching.  
*Prerequisites: MATH 4860 and permission of the department.*

### Independent Study

**MATH 4900** 1, 2, 3 cr. ▲ ●

*Prerequisite: permission of the department.*

### Directed Study

**MATH 4975** 1-6 cr.

# Military Science

- ▲ Undergraduate Day School
- Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

Fitchburg State College no longer offers Military Science courses. We continue to list the courses for students who were previously enrolled in the ROTC program and for students who are interested in taking the courses at Worcester Polytechnic Institute through the Worcester Consortium.

## Introduction to Army ROTC

**MILS 1400** 1 cr. 1 hr. ▲

The history, purpose, structure, and methods of the Army ROTC program are introduced in this course. The leadership and management responsibilities of an officer are presented. Emphasis is placed on ROTC and its relationship with the United States Army.

## Introduction to the United States Army

**MILS 1500** 1 cr. 1 hr. ▲

This course provides an overview of the role of the “Total Army” within the framework of the national defense establishment. The integrated roles of the Active Army and the Reserve Components are examined. Emphasis is placed on the duties and responsibilities of the officer serving in the combat arms, combat support, and combat service support branches.

## Land Navigation and Basic Tactics

**MILS 2000** 2 cr. 2 hr. ▲

Students learn the basic fundamentals necessary to navigate. In Land Navigation, students identify terrain features, find locations, determine directions, and plan routes. Maps, protractors, compasses, terrain boards, and audio-visual aids are utilized extensively. The students also receive an introduction to individual tactical techniques and to small unit organization and utilization. Practical exercises are employed to give students hands-on experience in movement techniques and the tactical employment of small units.

## Emergency Medical Treatment/Basic Tactics

**MILS 2200** 2 cr. 2 hr. ▲

The first half of the course presents casualty evaluation, treatment, and evacuation under emergency conditions. Emphasis is on injury prevention under different climatic conditions and on the Cardiopulmonary Resuscitation (CPR) Technique. The second half of the course familiarizes the students with individual, buddy team, and squad tactics. These basic fundamentals are reinforced and built upon throughout the student’s tenure in the Army ROTC program.

## Advanced Theory of Unit Operations

**MILS 3100** 3 cr. 3 hr. ▲

This course provides continuing study of effective leadership in tactical operations, culminating the lessons learned during previous courses. Students examine the theory and dynamics of the military team and its effective employment as part of the combined arms concept.

*Prerequisite: completion of Basic Course or advanced placement credit granted by the Professor of Military Science.*

## Leadership

**MILS 3300** 3 cr. 3 hr. ▲

The course studies the psychology of leadership based on an organizational model. Emphasis is placed on individual, group, transactional, and organizational factors that both a leader and manager need to consider in order to be maximally effective. The student is provided with the essentials for forming a creative, personal management and leadership philosophy for practical application in a real world setting.

*Prerequisites: completion of Basic Course or advanced placement credit granted by the Professor of Military Science.*

## Effective Communication

**MILS 4200** 3 cr. 3 hr. ▲

The course is designed to enhance the communication skills of the Army Officer. Emphasis is on the Army writing style, conducting briefings, and the Army Training Management System. Effective speaking, listening, writing, and military correspondence is studied, with an emphasis on the interrelationship of staff and command assignments, for the effective utilization of people and resources.

*Prerequisite: completion of Basic Course or advanced placement credit granted by the Professor of Military Science.*

## Law, Ethics, and Preprofessional Seminar

**MILS 4300** 3 cr. 3 hr. ▲

This course provides the student with an introduction to Military Law and Military Professional Ethics. The role of the junior officer with regard to military law in the practical setting of his/her initial assignment in an Army unit is examined. This course provides the Advanced Course cadet with a basic knowledge of the Army’s organizational practices and philosophy. The role of the noncommissioned officer is reviewed along with the basics of line and staff functions. An overview of the Army’s personnel management, training, and logistics systems, along with post and installation support organization and functions are presented as a Basic Course. *Prerequisite: completion of Basic Course or advanced placement credit granted by the Professor of Military Science.*

# Music

## Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as "Topics" courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

## Art of Music

**MUSC 1000** 3 cr. 3 hr. ▲ ●

This course approaches the study of music as an aesthetic experience. Representative styles and categories from the Middle Ages to the present are explored. Students are required to attend professional concerts. L, C

## Beginning Musical Instruction

**MUSC 1300** 1-3 cr. 3 hr.

Private lessons at Indian Hill Music School are provided for the following instruments: baritone, clarinet, flute, horn, recorder, synthesizer, vibes, bass, double bass, guitar, oboe, saxophone, trombone, viola, bassoon, drums/percussion, harp, organ, Suzuki violin and cello, trumpet, violin, cello, harpsichord, piano, tuba, and voice. See Chair, Humanities Department.

## Introduction to Music Technology

**MUSC 1400** 3 cr. 3 hr.

Introduces students to the basic techniques and concepts of Electronic Music composition. Beginning with a brief review of the physics of sound and music, the class explores topics including the psycho-social roles of electronic music in art and pop culture, sound synthesis, MIDI, multi-media production, sampling technologies and music programming with C-sound.

## World Music

**MUSC 1500** 3 cr. 3 hr.

This World Music course serves two primary purposes: 1) it teaches students about cultures around the world, and 2) it helps to understand the various intrinsic functions of Non-Western and Western music. By examining the music of peoples from various regions, this course addresses multicultural themes and the ubiquitous role of music in society. In addition to considering the diverse social, political, and cultural roles of music, this course will also teach the basic elements of music (rhythm, timbre, texture, harmony, and form) as are found in a wide range of indigenous musical repertoire. L, C

## Commonwealth of the Arts

**MUSC 2000** 3 cr. 3 hr. ▲ ●

Music's reflection of the values and ideals of societies past and present are explored. Inter-relationships among the fine arts disciplines are examined. L, I, B, C, IDIS

## Commonwealth of Ancient Arts

**MUSC 2100** 3 cr. 3 hr. ▲ ●

An interdisciplinary study of the humanities in ancient Western and non-Western cultures. A systematic overview of painting, sculpture, architecture, music, literature, drama, and philosophy in a historical context of significant cultures, including Paleolithic, Neolithic, Mesopotamian, Egyptian, Greek, Roman, Chinese, Indian, and American. Influences among these and other cultures will be presented. L, I, C, IDIS

## Basic Music Theory

**MUSC 2200** 3 cr. 3 hr. ▲

The course examines rhythmic notation, including meters and tempo. Emphasis is placed on melodic notation, including intervals, scales, and keys. Dynamics, an introduction to key relationship, transpositions, as well as other selected topics are covered. L

## Choral Arts

**MUSC 2300** 1 cr. 2 hr. ▲

The course involves singing choral music from the past and the present, including dramatic music. No more than six semester hours are applicable toward graduation. No more than six semester hours of any combination of MUSC 2300, 2400, 2500, 2600 are applicable toward graduation. (See MUSC 4100.) L

## Intermediate Musical Instruction

**MUSC 2310** 1-3 cr. 3 hr.

Private lessons at Indian Hill Music School are provided for the following instruments: baritone, clarinet, flute, horn, recorder, synthesizer, vibes, bass, double bass, guitar, oboe, saxophone, trombone, viola, bassoon, drums/percussion, harp, organ, Suzuki violin and cello, trumpet, violin, cello, harpsichord, piano, tuba, and voice. See Chair, Humanities Department.

## Instrumental Arts

**MUSC 2400** 1 cr. 2 hr. ▲

Small and large ensembles play representative works including band and jazz ensemble literature. No more than six semester hours of any combination of MUSC 2300, 2400, 2500, 2600 are applicable toward graduation. L

## Class Piano

**MUSC 2500** 1 cr. 2 hr. ▲ ●

The class involves practical keyboard uses in classroom work, activities include accompaniment, simple transposition, and harmonization of melodies at the keyboard. No more than six semester hours of any combination of MUSC 2300, 2400, 2500, 2600 are applicable toward graduation. L

## Class Voice

**MUSC 2600** 1 cr. 2 hr. ▲

The principles of voice production are studied. Breath control, phrasing, resonance, and diction are stressed. No more than six semester hours of any combination of MUSC 2300, 2400, 2500, 2600 are applicable toward graduation. L

## Symphony

**MUSC 3100** 3 cr. 3 hr. ▲

Structural and stylistic characteristics of the symphony from the 18th century to the present are studied. L

## Opera

**MUSC 3200** 3 cr. 3 hr. ▲

Students study several works from the standard operatic repertoire. Some significant trends in modern opera are discussed. L

### Advanced Musical Instruction

**MUSC 3300** 1-3 cr. 3 hr. ▲

Private lessons at Indian Hill Music School are provided for the following instruments: baritone, clarinet, flute, horn, recorder, synthesizer, vibes, bass, double bass, guitar, oboe, saxophone, trombone, viola, bassoon, drums/percussion, harp, organ, Suzuki violin and cello, trumpet, violin, cello, harpsichord, piano, tuba, and voice. See Chair, Humanities Department.

### Twentieth-Century Music

**MUSC 3400** 3 cr. 3 hr. ▲

The course examines the idioms and aesthetic notions of the present century, together with their relationship to the past. L, C

### Appreciating the American Musical

**MUSC 3450** 3 cr. 3 hr. ▲

Students will read a variety of literary texts and analyze how such texts were adopted as musicals, listen to the musicals and explore recurring themes. Particular attention is given to the historical development of the musical play in the 1940s and the dominance of the American book musical from the 1940s to the 1970s. L, IDIS

### American Music

**MUSC 3500** 3 cr. 3 hr. ▲

The course surveys American music from colonial times with some emphasis on “popular” and “Art” music of the present century in the U.S. L, C

### Baroque and Classical Music

**MUSC 3600** 3 cr. 3 hr. ▲

The class examines various composers from Monteverdi to Beethoven. Topics covered in the course include opera, oratorio, passion, cantata, sonata forms, dance forms, and shifting aesthetic views. L

### 19th Century Music

**MUSC 3700** 3 cr. 3 hr. ▲

The class presents a survey of major forms of 19th century music from Beethoven to Mahler. L

### History of Jazz

**MUSC 3800** 3 cr. 3 hr. ▲

This course introduces students to the history of jazz and investigates the musical elements that make up jazz. The role of jazz in American history is explored, and various musical trends that contributed to jazz are traced. L, C

### Women, Music, and Society

**MUSC 3900** 3 cr. 3 hr. ▲

This course looks at the contributions of significant women in music. Compositions by women from different cultures are examined as a reflection of the social, political and economic conditions. Elements of form, structure, and historical style are studied from antiquity to modern times in musical genres such as symphony, opera, chamber music, song, and solo repertoire. L

### Harmony I

**MUSC 4500** 3 cr. 3 hr. ▲

The course involves the harmonization of simple melodies and studies principles of modulation and key relationships. L  
*Prerequisite:* MUSC 2200.

### Harmony II

**\*MUSC 4510** 3 cr. 3 hr. ▲

The course covers further work in modulation, including chromaticism and 19th and early 20th century developments.  
*Prerequisite:* MUSC 4500 or equivalent. L

### Independent Study in Music

**MUSC 4901** 1 cr. 1 hr. ▲ ●

### Independent Study in Music

**MUSC 4902** 2 cr. 2 hr. ▲ ●

### Independent Study in Music

**MUSC 4903** 3 cr. 3 hr. ▲ ●

### Internship in Music

**MUSC 4940** 3 cr. 3 hr. ▲

### Directed Study

**MUSC 4975** 1-6 cr.

## Nursing

### Key to Course Offerings

\* Asterisk indicates that the course may be offered less than once every two years.

- ▲ Undergraduate Day School
- Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

### Introduction to Nursing

**NURS 1010** 1 cr. 1 hr. ▲

This course examines the role of professional nurses within the health care system. The nurse as a promoter of health and differing views of health and illness are also explored.

*Prerequisite:* none, open to any major.

### Scientific Foundations for Nursing—Interventions I

**NURS 2000** 2 cr. 2 hr. ▲

Selected basic alterations in health and physiology underlying nursing assessment, diagnosis, and intervention are discussed. This is the first course in a two-semester sequence.

*Prerequisites:* BIOL 1200 and 1300.

### Scientific Foundations for Nursing—Interventions II

**NURS 2100** 2 cr. 2 hr. ▲

Selected basic alterations in health and physiology underlying nursing assessment, diagnosis, and intervention are discussed. This is the second course in a two-semester sequence.

*Prerequisite:* NURS 2000.

### Nutritional Foundations for Nursing Interventions

**NURS 2200** 3 cr. 3 hr. ▲

This course examines concepts from nutrition science and their application to self-care and client care. The collaborative role of nurse and dietitian is also explored.  
*Prerequisites:* BIOL 1200 and 1300.

### Health Assessment

**NURS 2300** 3 cr. 3 hr.

This course is designed to teach what Nightingale called “the habit of observation.” It provides a foundation for assessment and nursing diagnosis, integrating physical assessment skills, the nursing process, interviewing techniques, health history taking, diagnostic study interpretations, environmental evaluation, and concepts of growth and development. Clinical component is to practice health assessment techniques.

### Pathopharmacology I

**NURS 2500** 3 cr. 3 hr.

This is the first course of a two-course sequence, which integrates basic concepts from pathophysiology and pharmacology. The content focuses on alterations in physiology that produce clinical responses in the body. Theories of stress, adaptation and systems provide the basic for understanding how the body adjusts or fails to adjust to disease processes.

### Pathopharmacology II

**NURS 2600** 3 cr. 3 hr.

This is the second course of a two-course sequence, which integrates basic concepts from pathophysiology and pharmacology. The content focuses on alterations in physiology that produce clinical responses in the body. Theories of stress, adaptation and systems provide the basis for understanding how the body adjusts or fails to adjust to disease processes.

### Nursing Process with the Well Client I

**NURS 2700** 5 cr. 9 hr. ▲

The content of the course deals with theoretical and methodological nursing concepts for practice with well clients. Clinical practice includes psychomotor skills, physical assessment, health promotion and maternity/newborn care. This is the first course in a two-semester sequence.

*Prerequisites:* ENGL 1200, PSY 1100, SOC 1100, BIOL 1200 and 1300.

*Pre or corequisites:* NURS 1010, NURS 2000, NURS 2200, PSY 2200.

### Nursing Process with the Well Client II

**NURS 2800** 5 cr. 9 hr. ▲

The content of the course deals with theoretical and methodological nursing concepts for practice with well clients. Clinical practice includes psychomotor skills, physical assessment, health promotion, and maternity/newborn care. This is the second course in a two-semester sequence.

*Prerequisites:* NURS 2000, NURS 2200, NURS 2700, PSY 2200. *Pre or corequisites:* BIOL 2700, NURS 2100.

### Core Concepts in Medical-Surgical Nursing I

**NURS 2900** 5 cr.

This course addresses core concepts in the nursing care of adults with common health alterations. The development of critical thinking skills is emphasized. Nursing care is presented using a nursing process framework. Clinical experience occurs in sub-acute care agencies.

### Nursing Care of the Child Bearing Family

**NURS 2910** 5 cr. 5 hr. ▲

This course for Registered Nurse students examines current concepts and nursing interventions for the care of prenatal, intrapartal, and postpartal women and neonates. (RN students may exempt by exam).

*Prerequisites:* ENGL 1200, BIOL 1200 and 1300, BIOL 2700, PSY 2200, SOC 1100.

### Pharmacological Basis for Nursing Interventions

**NURS 3100** 2 cr. 2 hr. ▲

This course deals with principles of pharmacology needed for professional nursing practice. Interrelationships among drug action, disease process, and client are the basis for exploring therapeutic effectiveness. Selected drug classifications and prototypes are used to structure content. Legal constraints and ethical issues are explored.

*Prerequisites:* NURS 2800, NURS 2100, BIOL 2700 or permission of the Instructor.

### Core Concepts of Mental Health Nursing

**NURS 3200** 5 credits

This course encompasses psychiatric and mental health nursing concepts for individuals experiencing health alterations. Course work will teach the student to identify contemporary and historical explanations and the etiology and treatment of individuals experiencing psychiatric and mental health disorders. Students will analyze the influence of culture, society, values, beliefs, perceptions, and environment on the behaviors exhibited by individuals, families, groups, and providers with psychiatric and mental health issues. Clinical experience occurs in acute and/or community care agencies.

### Maternal-Newborn Nursing

**NURS 3300** 5 cr. 5 hr.

This course supplies the theoretical foundation and clinical experience to care for the childbearing family. Health promotion of the developing family is emphasized in both community and hospital settings. Care of the high risk mother and neonate are included. Concepts of family theory and dynamics are expanded. Clinical experience occurs in acute and/or chronic care agencies.

### Medical-Surgical Nursing II

**NURS 3400** 5 cr. 5 hr.

This course addresses the nursing care of adults with acute medical and surgical conditions. Holistic care of clients with respect for diversity is stressed. The nursing process is used as a framework to guide content. Clinical experience occurs in acute care agencies.

### Concepts of Nursing I

**NURS 3500** 3 cr. 5 hr. ▲

The evolution and development of theoretical models of nursing as well as other historical precedents are investigated and the interrelationship among the basic concepts of person, environment, health, and nursing are studied. The focus of the clinical component is utilization of the functional health pattern format to assess the health status of clients and the development of a nursing history. This is one of two courses designed to provide advance placement for the registered nurse student that can be taken either semester or concurrently with Nursing Concepts II. *Prerequisite:* ENGL 1200, BIOL 1300, BIOL 2700, PSY 1100, PSY 2200, SOC 1100, pre or co-requisite NLN Mobility Profile II or equivalent.

### Concepts of Nursing II

**NURS 3600** 3 cr. 5 hr. ▲

Selected nursing diagnoses within the format of functional health patterns are addressed. Students are provided the opportunity to explore the interdependence of the multiple elements of the nursing process applied to selected case studies. Experience in the campus laboratory and with selected clients provides the student with the opportunity to demonstrate competence in psychomotor skills related to health and physical assessment. This is one of two courses designed to provide advance placement for the registered nurse student that can be taken either semester or concurrently with Nursing Concepts I. *Prerequisite: ENGL 1200, BIOL 1300, BIOL 2700, PSY 1100, PSY 2200, SOC 1100, pre or co-requisite NLN Mobility Profile II or equivalent.*

### Nursing Process with Clients Experiencing Health Alterations I

**NURS 3700** 10 cr. 18 hr. ▲

Critical thinking skills are developed through application of the nursing process to clients with common health problems. Practice opportunities are offered in selected acute care facilities. This is the first course in a two-semester sequence. *Prerequisites: NURS 2800, NURS 2100, BIOL 2700, and Basic Math Competency, Pre or corequisite: NURS 3100.*

### Nursing Process with Clients Experiencing Health Alterations II

**NURS 3800** 10 cr. 18 hr. ▲

Critical thinking skills are developed through application of the nursing process to clients with common health problems. Practice opportunities are offered in selected acute care facilities. This is the second course in a two-semester sequence. *Prerequisites: NURS 3100, NURS 3700.*

### Pediatric Nursing

**NURS 3900** 5 cr. 5 hr.

This course provides for a theoretical base and clinical experience in caring for infants, children, and adolescents. The focus is the major and most common disorders of infants, children, and adolescents. The nursing process is the basis for providing care in a variety of settings. Health promotion aspects of preventing or alleviating health problems are addressed. Clinical experience occurs in acute care agencies.

### Nursing Care of the Mentally Ill Client

**NURS 3910** 5 cr. 5 hr. ▲

This course for Registered Nurse students examines current concepts and nursing measures in the care of clients with selected alterations in mental health. (RN students may exempt by exam). *Prerequisites: ENGL 1200, BIOL 1200 and 1300, BIOL 2700, PSY 2200, SOC 1100.*

### Nursing Care of the Child

**NURS 3920** 5 cr. 5 hr. ▲

This course for Registered Nurse students examines current concepts and nursing measures in the care of children from infancy through adolescence. (RN students may exempt by exam). *Prerequisites: ENGL 1200, BIOL 1200 and 1300, BIOL 2700, PSY 2200, SOC 1100.*

### Nursing Care of the Adult

**NURS 3930** 10 cr. 10 hr. ▲

This course for Registered Nurse students examines current concepts and nursing measures in the care of adult clients with selected common health problems. (RN students may exempt by exam). *Prerequisites: ENGL 1200, BIOL 1200 and 1300, BIOL 2700, PSY 2200, SOC 1100.*

### Nursing Research

**NURS 4000** 2 cr. 2 hr. ▲

This course prepares students as knowledgeable research consumers. Nursing students identify and explore research problems. *Prerequisites: MATH 1700. Pre or corequisite: NURS 3600 or NURS 3800.*

### Community Health Nursing

**NURS 4400** 5 cr. 5 hr.

This course focuses on systems' concepts as a basis for applying the nursing process with aggregate clients in the community. Special emphasis is placed on nursing care of vulnerable populations including: the homeless, people of poverty, minority populations, women and children, and older adults. Primary, secondary, and tertiary prevention are used when applying the nursing process in a variety of distributive care settings. Clinical experience occurs in community agencies.

### Nursing Process with Families, Groups, and Communities

**NURS 4700** 6 cr. 12 hr. ▲

This course focuses on systems concepts as a basis for applying the nursing process with aggregate clients in the community. Primary, secondary, and tertiary prevention is the basis for interventions in a variety of distributive care settings. Special emphasis is placed on the older adult group. *Prerequisites: NURS 3600 or NURS 3800.*

### Chronic Illness

**NURS 4750** 4 cr. 8 hr. ▲

This course focuses on the application of nursing process with individuals and families in the home health care setting. Emphasis is placed on primary, secondary, and tertiary prevention. *Prerequisites: NURS 3600 or NURS 3800.*

### Selected Nursing Practicum

**NURS 4800** 10 cr. 26 hr. ▲

This capstone course offers opportunities for in-depth exploration of an area of nursing interest. Nursing process with clients experiencing complex health problems, leadership and management principles, and professional issues are integrated into clinical practice. A preceptor model is used to facilitate increased independence in professional practice. *Prerequisites: NURS 4000, NURS 4700, and 4750.*

### Leadership and Management Concepts for Nursing Practice

**NURS 4850** 2 cr. 2 hr. ▲

This course examines concepts underlying professional career development in nursing. The roles of the nurse as manager of client care, as part of a health care institution hierarchy, and as a member of a professional collective are explored. *Prerequisites: NURS 4700 and NURS 4750 or permission of Instructor.*

### Independent Study

**NURS 4901** 1 cr. 1 hr. ▲

### Independent Study

**NURS 4902** 2 cr. 3 hr. ▲

### Independent Study

**NURS 4903** 3 cr. 3 hr. ▲

### Directed Study

**NURS 4975** 1-6 cr.

# Occupational/Vocational Education

## Key to Course Offerings

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis of courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

These courses are only offered through Continuing Education.

## Teaching Methods: Instructional Strategies in Vocational Technical Education

**OCED 2515** 3 cr. ●

Theories and techniques of instruction are examined. Topics covered include proficiency in the application of learning theories, strategies, techniques and the methodology involved in the delivery of specific courses of study. Additional themes include the competency-based vocational technical lessons, lesson plan design, developing behavioral standards, classroom management and the coordination and evaluation of student learning.

Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

## Teaching Methods: Educating the Vocational Technical Learner

**OCED 2516** 3 cr. ●

This course refines the teaching/learning skills introduced in OCED 5515. Micro teaching and video tape replay review strengthen and foster effective teaching in the secondary vocational technical classroom. The requirements of chapter 74 (as amended by chapter 731) as they impact upon the laboratory/classroom setting are explored. Other topics covered include student disciplinary and safety concerns and the identification and utilization of curriculum resources.

Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

## Management of the Vocational Technical Education Environment

**OCED 2518** 3 cr. ●

This course examines laboratory, academic, and related classroom and cooperative placement site safety. Emphasis on developmental psychology, adolescent psychology, learning styles, and discipline strategies addresses the needs of adolescents, students with special needs, disadvantaged youth, nontraditional students, linguistic minorities, and other priority populations. Also studied are student organizations, record keeping and data coordination, advisory committees, and communication networking.

Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

## Students with Special Needs in Vocational Technical Education

**OCED 2523** 3 cr. ●

This course traces the development of Special Needs Programs with emphasis on the identification and understanding of special needs students in vocational schools. Particular attention is given to teaching techniques and administrative organization patterns utilized in a vocational school.

Note: This is a required course for candidates seeking either Massachusetts Department of Education approval as a Vocational Technical Instructor or Special Ed/Voc Ed Mini-approval.

## Competency Based Vocational Technical Curriculum Development

**OCED 2529** 3 cr. ●

This course is designed to enable teachers to identify competencies within their respective vocational technical program areas. It further discusses techniques to enable teachers to develop, evaluate, and verify competencies.

Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

## Brain Compatibility: Teaching and Learning

**OCED 2547** 3 cr. ●

Researchers have learned more about the brain and learning in the last decade than in previous recorded history. This course is designed to provide educators with a review of brain research relevant to learning styles on any grade level and to allow teachers to apply specific brain compatible methods in their classroom and laboratory situations. This area of study is critical to the task of serving students properly. Proficiency in applying brain research to the planning and delivery of instruction is gained through this course.

Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

## Fundamentals of Vocational Technical Education

**OCED 3517** 3 cr. ●

This course examines the history and philosophy of vocational technical education. The present state of Federal vocational education; Chapter 731, Child Labor Laws; Chapter 622 and Title IX; and Chapter 766, State Vocational Council is covered. Additionally the course studies The National Center for Research in Vocational Education; and Federal Vocational Education Regulations.

Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

## Promoting Positive Social Behavior for Students with Special Needs in Vocational Education

**OCED 3524** 3 cr. ●

The course provides familiarity with the continuum of services required for students with special needs in all school settings. The modifications of approach and teaching techniques which make vocational education accessible to all students are discussed in depth. A Case Study is required of each student in the course.

## Strategies and Methods for Teaching Special Needs Students

### Re: Vocational Education

**OCED 3525** 3 cr.

A practical approach to planning instruction for special needs students in the regular class within a vocational school setting. Using a framework for applying theory in practice, teachers develop and/or attempt strategies that are applicable to their classrooms.

### Implementation and Evaluation of Education Plans for Students with Special Needs

**OCED 3526** 3 cr. ●

The course provides experience in interpreting educational prescriptions for implementation within vocational training programs. Each student designs an individualized instructional plan describing all materials, recommended methodology and techniques of evaluation.

### Seminar and Practicum in Vocational Education/Special Education

**OCED 3527** 3 cr. ●

Students complete a practicum or internship in an approved setting for individuals with special needs. Students are assisted in implementing the various facets of their role within a given setting. Visitations are planned not only to observe the competencies being demonstrated but to meet with school administrators in defining the role and functions. Practicum seminar is designed to assist the total group in dealing with current concerns and issues and to allow students to learn from the experiences of each other.

### Implementing a Competency Based Curriculum

**OCED 3539** 3 cr. ●

This course is designed to provide teachers the tools needed to successfully implement a competency based program. Teachers demonstrate competency in revising learning guides and task listings. A management system to evaluate student achievement and maintain competency profiles is examined. Teachers are introduced to the principles of integrated and applied learning to assist them in bridging the vocational and academic competencies required by their students. Activities culminate in the production of a revised/adapted curriculum for a specific vocational technical program area. Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

### Computerized Vocational Technical Curriculum Management

**OCED 3545** 3 cr. ●

This course is designed to introduce the vocational technical educator to the microcomputer as a tool for curriculum, classroom record keeping, and planning. Students adapt, modify, and incorporate the excellent curricular resources developed within Massachusetts, including CBVE, MSCP, and others into practical learning

applications utilizing the computer. In addition to hands-on experience with a microcomputer, the course enables participants to blend classroom and laboratory learning with an emphasis on integrated software and its application within a vocational technical setting. Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

### Integrated Vocational Technical and Academic Curriculum

**OCED 3546** 3 cr. ●

This course shares, explores, and investigates Massachusetts developed curricular resources, including CBVE, MSCP, Model Academic Project, LAPS, as well as nationally devised curriculum, including Principles of Technology, CBE, and others. This learning activity examines the eight methods (academic infusing, cross articulation, vocational/technical relevance, content alignment, the academy model, specialized courses/programs, employability/career path skills and the culminating/senior project) for integration identified by the National Center for Research in Vocational Education at the University of California at Berkeley. Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

### Assessment Standards and Evaluation

**OCED 3549** 3 cr. ●

Participants explore strategies for establishing student performance criteria, assessing student knowledge and attitudes, evaluating hands-on skills and determining student grades. Topics include identifying and examining existing standards and social equity in educational assessment. Methods for linking competency designed instructional objectives to evaluation and measuring instruments are reviewed, including factors related to reliability and range.

Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

### Supervised Practicum in Vocational Education

**OCED 4534** 3 cr. ●

A practicum is a modified teaching placement in a vocational technical school or equivalent field-based experience. Candidates function as “pre-approved” instructors with responsibility for demonstrating ability to implement various teaching models, familiarization with school policies, classroom management techniques, and the coordination of educable training resources. Teaching is supervised by a cooperating teacher and monitored and evaluated by a college instructor. Practicum participants design competency-based lesson plans, participate actively in seminar discussions, and complete a research assignment on educational reform. Eligible practicum time requirements: 5 hours/day x 3-4 days x 6 weeks.

Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

### Advanced Computerized Vocational Technical Curriculum Management

**OCED 4595** 3 cr. ●

This course provides an orientation and application of Lotus 1-2-3 for the vocational technical setting. This software is a recognized leader in the microcomputer spreadsheets market with its ease of use, size, and power. Students learn through hands-on experience how to plan, design, implement and perform analysis utilizing a microcomputer and Lotus 1-2-3. Additionally, a historical view of spreadsheets and their impact on the manner in which effective organizations operate in the planning, creating, saving, and printing of data is emphasized. Participants interpret data using database functions and by creating and printing graphs.

Note: This course may be used as a computer science cluster requirement.

# Philosophy

## Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

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## Introduction to Western Philosophy

**PHIL 1000** 3 cr. 3 hr. ▲ ●

The course serves as an introduction to the problems, methods, and goals of classical and contemporary Western Philosophy. Emphasis is placed upon how these differ from and relate to other fields of human knowledge. I

## Logic

**PHIL 1100** 3 cr. 3 hr. ▲ ●

The course introduces techniques for analyzing the structure and validity of arguments in a natural language, such as English, as well as the concepts and principles of validity. Emphasis is on truth-functional and quantification inference, and a procedure in formal systems. L, Q, IDIS.

## Philosophy of Education

**PHIL 2000** 3 cr. 3 hr. ▲ ●

This course seeks to trace the origin and development of major educational theories and their contemporary implications. I

## Theories of Knowledge

**\*PHIL 2200** 3 cr. 3 hr. ▲

The problems and methods of human knowledge are explored. Theories are presented in the light of idealism, realism, pragmatism, and existentialism. I  
*Prerequisite: PHIL 1000.*

## American Philosophy

**\*PHIL 2440** 3 cr. 3 hr. ▲

The course presents a study of American thought from the Colonial Period to the present. I

## Contemporary Ethical Problems

**PHIL 2500** 3 cr. 3 hr. ▲ ●

The nature of values and morality. Application of ethical theory to such controversial moral issues as criminal punishment and the death penalty, abortion, euthanasia and suicide, the ethical treatment of animals, poverty and the distribution of wealth, prejudice and discrimination, affirmative action, civil disobedience, and war. I

## Contemporary Ethical Systems

**PHIL 2550** 3 cr. 3 hr. ▲

A critical examination of the major ethical theories in classical and contemporary philosophy including Aristotle’s perfectionism, Aquinas’ natural law ethics, Kant’s deontological ethics, Bentham and Mill’s utilitarianism, existentialism, emotivism, and personalism. Topics covered include values and facts; morality and ethics; objectivism, subjectivism, and relativism; ethics and science; and ethics and religion. I

## Philosophy of Human Nature

**PHIL 2600** 3 cr. 3 hr. ▲ ●

The course provides an exploration of human nature or personhood from the triple perspectives of philosophy, religion, and behavioral science. The class focuses on the following thinkers and movements: Plato, Christianity, early modern individualism, Marxism, Freud, existentialism, Frankl’s logotherapy, Skinner, Fromm’s humanism and personalism. I, B, IDIS.

## Man and Nature I

**\*PHIL 2650** 3 cr. 3 hr. ▲

This course is based, in part, on the Ascent of Man film series by Jacob Bronowski. It covers a broad range of topics centering on those discoveries, ideas, and events that have been crucial to the development of modern civilization. The origin of man, ancient civilizations, early mathematics, and astronomy are among the topics covered.

## Man and Nature II

**\*PHIL 2660** 3 cr. 3 hr. ▲

The course is a continuation of PHIL 4650 covering the period from the trial of Galileo to the present, dealing with such topics as evolution, nuclear physics, the theory of relativity, and the human brain.

## Modern Philosophy

**PHIL 3300** 3 cr. 3 hr. ▲

## Ancient and Medieval Philosophy

**PHIL 3310** 3 cr. 3 hr. ▲

The course studies the beginnings of Western Philosophy, including the pre-Socrates, Plato, Aristotle, and several other thinkers of the period. I  
*Prerequisite: PHIL 1000.*

## Renaissance and Modern Philosophy

**\*PHIL 3330** 3 cr. 3 hr. ▲

The course explores trends of thought from fourteenth century nominalism through the Renaissance to Continental Rationalism and British Empiricism. I  
*Prerequisite: PHIL 1000.*

## Contemporary Philosophy

**PHIL 3340** 3 cr. 3 hr. ▲

The course provides an examination of some current trends and issues in contemporary American, British, and European philosophy. I, IDIS  
*Prerequisite: PHIL 1000.*

## Philosophy of Religion

**\*PHIL 3600** 3 cr. 3 hr. ▲ ●

The nature of religious experience and the problem of God’s existence as seen in classical Western theism and process philosophy. Differences between Western and Eastern religion, and between religion and science. I  
*Prerequisite: PHIL 1000.*

## World Religions

**PHIL 3610** 3 cr. 3 hr. ▲

This course studies the principal world religions, including Buddhism, Christianity, Islam, Hinduism, and Judaism. Emphasis is placed on their basic tenets and insights into spiritual values. I, C

## Philosophy of Art

**\*PHIL 4100** 3 cr. 3 hr. ▲

The nature of beauty and aesthetic experience, especially as embodied in the arts. Relation of aesthetic experience to moral and technological experience. Survey and critical evaluation of different theories of aesthetics in Western philosophy. Synthesis of subjective and objective theories. I

## Political and Social Philosophy

**PHIL 4200** 3 cr. 3 hr. ▲

The course examines the various political and social ideas beginning with Plato and continuing to Marx. I  
*Prerequisite: PHIL 1000.*

## Philosophy of Science

**\*PHIL 4300** 3 cr. 3 hr. ▲

The course analyzes the methods and goals of the physical sciences, how they differ from the social sciences, and the philosophic problems encountered in scientific pursuits. I

## Philosophy of Language

**\*PHIL 4400** 3 cr. 3 hr. ▲

This course is the study of theories about structure and meaningfulness of language, especially in twentieth century Anglo-American thought. I

*Prerequisite: PHIL 1000.*

## Marxism

**\*PHIL 4430** 3 cr. 3 hr. ▲

Origins, development, and contemporary application of Marx's thought are explored. The course attempts to provide an understanding of society and history by a philosophy identified with political economy. I, IDIS.

*Prerequisite: PHIL 1000.*

## Philosophy of Love

**PHIL 4500** 3 cr. 3 hr. ●

The course analyzes the concept "love" as employed in the social and moral philosophies of various classical and contemporary thinkers. I

## Ethical Issues in Business

**PHIL 4700** 3 cr. ●

The first objective of the course is to develop proficiency in the identification and analysis of ethical issues as they arise in business. The second objective is to acquaint the student with some specific ethical problems currently faced by business men and women: whistle-blowing, discrimination, truth in advertising, product safety and the environment. Both theoretical and actual cases are studied as well as two current ethical theories. I

## Independent Study

**PHIL 4903** 3 cr. 3 hr. ▲ ●

The Independent Study is open to students who have permission of the supervising instructor and the Department chairperson. Course of study, meetings, and credit are arranged with approval.

# Physics

## Key to Course Offerings

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B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

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IDIS: Interdisciplinary courses

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▲ Undergraduate Day School

● Undergraduate Evening School

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## Physical Science I

**PHYS 1100** 3 cr. 4 hr. ▲ ●

This course is designed to help non-science students in developing a meaningful and functional understanding of key physical science concepts and methodology. Topics include light, color, and electricity. The course is taught with a combination of lectures, group discussions, and learning-by-doing activities. The emphasis is to provide students with open-ended problem solving environments that facilitate insight into the nature of science as an intellectual activity, and to encourage students to explore alternate conceptions of physical phenomena. Q

## Physical Science II

**PHYS 1200** 3 cr. 4 hr. ▲ ●

This course is designed to help non-science students in developing a meaningful and functional understanding of key physical science concepts and methodology. Topics include motion, force, heat, energy, and nature of matter. The course is taught with a combination of lectures, group discussions, and learning-by-doing activities. The emphasis is to provide students with open-ended problem solving environments that facilitate insight into the nature of science as an intellectual activity, and to encourage students to explore alternate conceptions of physical phenomena. Q

## Environmental Physical Science

**\*PHYS 1250** 3 cr. 4 hr. ▲

The course studies the environment, the effects of pollution on the environment, ecosystems, and natural balance. Relevant background material in physical science is taught as needed.

*Prerequisites: PHYS 1100, GEOG 1300, or equivalent.*

## General Physics I

**PHYS 1300** 4 cr. 5 hr. ▲ ●

This first-semester general college physics course consists of studies in the principle and application of classical mechanics, waves, sound, and heat. Typical topics include description of motions, Newton's laws of motion, Kepler's law of planetary motion, universal gravitation, work and energy, conservation laws, temperature, heat, and laws of thermodynamics. Q

*Prerequisite: Math Placement Exam or MATH 0200.*

## General Physics II

**PHYS 1400** 4 cr. 5 hr. ▲ ●

This second-semester general college physics course consists of studies and applications of wave motions, sound, electricity, magnetism, light and optics. Typical topics include Coulomb's law, electric force and field, potential and capacitance, electric circuits, magnetic force and field, magnetic forces on moving charges, electric induction, laws of reflection and refraction, mirrors and lenses, optical instruments, interference and diffraction of light. Q

*Prerequisite: PHYS 2300, Math Placement Exam or MATH 0200.*

## Physics for the Life Sciences

**\*PHYS 1500** 4 cr. 6 hr. ▲

The class serves as an introduction to Physics. Class work includes a brief treatment of force, work, and energy with an emphasis on the nature of waves, optics, and electricity.

## Astronomy

**PHYS 2000** 3 cr. 3 hr. ▲ ●

Emphasis of this course is on the properties of stars. The course begins with a description of the internal structure of the earth, its atmosphere, its motions, etc. Moon, its structure and surface features are studied next. After a brief discussion of optical and radio telescopes, the students are introduced to a rudimentary account of physics of stars such as their surface temperatures, distances, their velocities, etc. Sun is studied as a typical star. Binaries and variable stars (cepheids, novae and supernovae, etc.) interstellar medium and finally galaxies round off the course. Q

## General Physics III

**\*PHYS 2100** 3 cr. 3 hr. ▲

This third-semester of general college physics course discusses the inadequacy of classical physics and introduces the theories and models of modern physics. Topics covered in class work include the development of quantum theory as depicted in blackbody radiation, photoelectric effect, and x-rays, the wave function and the uncertainty principle, atomic spectra, Bohr's model of hydrogen, electronic configuration of atoms, the exclusion principle and the periodic table, properties of nuclei, binding energy, radioactivity and the decay processes, radiation hazards, and nuclear reactions. Q

*Prerequisites: PHYS 1300 and PHYS 1400.*

## Intermediate Mechanics

**\*PHYS 2200** 3 cr. 3 hr. ▲

Calculus and delta methods are used in an analytical study of Newtonian mechanics with emphasis on application to nonconservative forces, central forces, and rotational dynamics. Topics covered in class work are linear oscillator, free and forced oscillations, damping, vibrating string, traveling and standing waves.

*Prerequisite: PHYS 1300 or equivalent.*

## Quantum Mechanics

**\*PHYS 3100** 3 cr. 3 hr. ▲

The course examines the inadequacies of classical physics, including the uncertainty principle, Schrodinger equation, physical interpretation of wave function, energy levels, harmonic oscillator, hydrogen atom, and perturbation theory.

*Prerequisites: PHYS 2100 and MATH 2400.*

## Electricity and Magnetism

**\*PHYS 3200** 3 cr. 3 hr. ▲

After a preliminary introduction to vector algebra, electrostatic and magnetostatic fields in vacuum and material media are discussed. Maxwell's equations and propagation of electromagnetic waves are considered.

## Statistical Mechanics and Thermodynamics

**\*PHYS 4100** 3 cr. 3 hr. ▲

The course examines the laws of thermodynamics, entropy, Carnot cycle, kinetic theory of gases, Bose and Fermi gases, and low temperature physics.

*Prerequisite: PHYS 3100.*

## Solid State Physics

**\*PHYS 4200** 3 cr. 3 hr. ▲

The course provides a short review of quantum mechanics, including crystal structure magnetism semiconductor theory and specific heat of solids.

*Prerequisite: PHYS 4100.*

## Independent Study

**PHYS 4900** 3 cr. ▲

The Independent Study is open to students who have permission of the supervising instructor and the department. The course of study, meetings, and credit are arranged upon approval.

## Directed Study

**PHYS 4975** 1-6 cr.

# Plastics Technology

## Key to Course Offerings

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## Blueprint Reading

**PLAS 1010** 3 cr. ●

This course introduces the basic concepts of blueprint reading and discusses types of lines, angles, and views of a drawing. The student also learns about dimensioning circles, arcs, holes, and threads. Emphasis is on understanding how to interpret a blueprint; with time permitting, students learn how to draw a blueprint.

## Industrial Electrical Maintenance

**PLAS 1030**

This course covers the concepts of electrical trouble-shooting of injection molding machines and associated equipment. Familiarization with basic electricity symbols, blueprint reading, meters used for trouble-shooting, conventional and solid ladder diagrams/schematics, and trouble-shooting is stressed. Programmable Logic Controls (PLC) are examined.

## Mold Design

**PLAS 2020** 3 cr. ●

This course examines the interrelation of plastics material processing, product design and function, and mold design and construction. Fundamental principles of cavity design, material feed systems, ejection systems, parting surfaces, mold actions, cavity and core steel selections, 3-plate, insulated runner, and hot runner molds are discussed.

*Prerequisite: PLAS 5506.*

### Hydraulics/Pneumatics

**PLAS 2040** 3 cr. ●

This course involves a theoretical and practical study of hydraulics and pneumatics, the modern means of power transmission. This course surveys component design and function with an emphasis on problem definitions and solutions. Following an introduction to hydraulics and pneumatics, a study is made of valves, pumps, circuits, and troubleshooting any hydraulic system.

### Injection Molding

**PLAS 2050** 3 cr. ●

The reciprocating screw injection molding machine; the components of injection molding machines; the molding cycle; melting and flow theory, including gate seal-off, basic trouble shooting and process effects are examined. The students have hands-on laboratory experience and are responsible for a class presentation.

### Principles of Supervision

**PLAS 2070** 3 cr. ●

The purpose of this course is to develop an understanding of the role and responsibilities of the supervisor and to strengthen values and skills related to key supervisory functions. The principles and topics addressed include problem solving, decision making, leadership, management ethics, and communication. This course is recommended for experienced and new supervisors and those aspiring to supervisory positions.

### Polymeric Materials, Design, and Application

**PLAS 3060** 3 cr. ●

This course provides comprehensive coverage of polymeric materials, plastic design, and test methodology. Material properties, characteristics, and application are presented for injection molded thermoplastic resins. A discussion of polymer blends and compounds using fillers, additives, and reinforcing fibers are included. Property identification and the associated test procedure are reviewed with hands-on testing provided for the major properties. In addition, plastic product design techniques and application are discussed to complement the discussion of materials.

### Statistical Process Control

**PLAS 3080** 3 cr. ●

The student learns the use of Statistical Methods and S.P.C. to improve quality and productivity through measurement, control, and reduction of variation in the process. Topics covered include: basic statistics, the normal distribution, control chart theory, process capability studies and gage and measurement analysis. Simple metrology concepts and the basics of geometric dimensioning/tolerancing are also covered.

## Political Science

### Key to Course Offerings

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### United States Government

**POLS 1000** 3 cr. 3 hr. ▲

In Modern American Government, the major political institutions, such as the Presidency, the Congress, and the Supreme Court, are examined. Their constitutional antecedents and their modern functions are presented. Special attention is given to the current bureaucracy, elections, and the political actors in the election process. I

### Introduction to Political Science

**POLS 1100** 3 cr. 3 hr. ▲

This course represents an introduction to the field of political science. Political science is the study of how people interact with one another in their communities, whether they are as small as the Fitchburg State College campus, or as large as the entire global community. The course is divided into the following three sections, each of which represents an important sub-field within the discipline: political philosophy, American government, and international politics. I

### State and Urban Government

**POLS 1500** 3 cr. 3 hr. ▲

The class focuses upon current issues and politics in urban and state government and attempts to evaluate proposed solutions to issues. I

### Global Issues

**IDIS 1800** 3 cr. 3 hr. ▲ ●

This course examines the interdependency of the world's nations by focusing on current events in the international arena and issues such as ozone depletion, pollution, the global economy, conflict and cooperation, population and hunger. I, IDIS, C

### Contemporary International Relations

**POLS 2200** 3 cr. 3 hr. ▲

The course studies critical problems confronting the present international system. The "Cold War," armed conflict, internal violence, as well as prospects for the resolution of conflict are explored.

### Introduction to the Legal Process

**POLS 2270** 3 cr. 3 hr. ▲ ●

This course serves as an introduction to the American legal system. Emphasis is placed on how courts and lawyers function, how cases are decided, and the means by which courts interpret legislation.

*Prerequisite:* POLS 1100.

### Political Systems of the Modern World

**POLS 2500** 3 cr. 3 hr. ▲

The course provides a comparative analysis of modern national governments. The importance of the world's political heritage and the implications for the emerging nations of liberal democracy, communism, and dictatorship are explored.

*Prerequisites:* IDIS 1200 or IDIS 1800.

### Sex, Race and the Constitution

**POLS 2550** 3 cr. 3 hr. ▲ ●

This course examines the long history of discrimination in the United States on the basis of race and gender. It examines in detail the guarantee of equal protection of the law found in the 14th Amendment to the Constitution and how the meaning of what is equal have evolved over time. Topics covered will include how to define and measure equality, affirmative action, racial preferences in college admissions, voting rights, distinction based on gender, equality based on physical differences between men and woman, the evolution of the right of privacy, abortion, and sexual harassment. I, IDIS

*Prerequisites:* POLS 1100 or POLS 1100 or CJ 2000.

### The First Amendment

**POLS 2600** 3 cr. 3 hr. ▲

This course examines the basic rights and freedoms derived from the First Amendment to the Constitution. The course will examine in depth great controversies of freedom of speech, press, and religion. Topics covered will include protection for hate speech, speech codes on college campuses, prior restraints on the press, and free exercises of religion, and governmental limitations on the establishment of religion. I

*Prerequisite:* POLS 1000 or POLS 1100 or CJ 2000.

### Criminal Procedure: Rights of the Accused

**POLS 2700** 3 cr. 3 hr. ▲

This course examines the basic rights and freedoms derived from the portions of the Bill of Rights addressing criminal procedure. The course will examine in depth the 4th, 5th, 6th and 8th Amendments to the Constitution. Topics covered will include protection against unreasonable searches and seizures, self-incrimination, double jeopardy, due process of law, the right to counsel, to confront witnesses, trial by jury, and the meaning of cruel and unusual punishment. I

*Prerequisites:* POLS 1000 or POLS 1100 or CJ 2000.

### Public Policy Analysis: Case Studies in American Politics

**POLS 3000** 3 cr. 3 hr. ▲

The course covers four major divisions of public policy: health, education, labor, and welfare. The aim is to attain an understanding of how the American political system works through a study of the policy that has come out of that system.

*Prerequisite:* POLS 1000 or POLS 1500.

### The Conduct of American Foreign Policy

**POLS 3400** 3 cr. 3 hr. ▲ ●

With the collapse of the Soviet Union, the United States has been left as the only global superpower. As a result, American policies around the globe, and responses to such global issues as the environment, human rights, or nuclear proliferation, have become increasingly significant on a national and international level. This course will introduce students to American foreign policy. I

### Constitutional Law

**POLS 3500** 3 cr. 3 hr. ▲

Constitutional Law is the product of interpretation, power, and political calculation. The collusion and collision of these forces produces the parameters of our governmental system. The U.S. Supreme Court over the years has issued many decisions which have fundamentally shaped and altered the scope and distribution of government authority. This course is the study of the product of these decisions and the shaped our current system of government. I

*Prerequisites:* POLS 1000 or POLS 1100 or POLS 2000.

### Asian Politics and Culture

**POLS 3700** 3 cr. 3 hr. ▲

This course introduces the politics and culture of three major Asian states: China, Japan, and India. It begins with their philosophy, history, and society to give students a basic understanding of the Asian peoples and then, approaches their politics. I, C

*Prerequisites:* IDIS 1200 or IDIS 1800.

### Third World Politics, Economics, and Society

**POLS 3800** 3 cr. 3 hr. ▲

The course represents an introduction to the developing nations of Africa, Asia, and Latin America. These developing nations have a significant impact on global politics. Through an examination of the history, politics, economics, and societies of these nations, the students will gain a greater understanding of the developing world. I, IDIS, C

*Prerequisites:* IDIS 1200 or IDIS 1800.

### Independent Study in Political Science

**POLS 4900** 3 cr. 3 hr. ▲ ●

The Independent Study is open to students who have the permission of the supervising instructor and the department. The course of study, meetings, and credit are arranged upon approval.

### Legal Internship

**POLS 4905** 3 cr. 10 hr. ▲

Internships are available in several regional law offices for those persons interested in paralegal work. These internships prepare students for positions in law offices, public administration, and other human services work.

### Legal Internship

**POLS 4915** 6 cr. 20 hr. ▲

(See description above.)

### Legal Internship

**POLS 4920** 9 cr. 30 hr. ▲

### Legal Internship

**POLS 4925** 12 cr. 40 hr. ▲  
(See description above.)

### Internships in Political Science

**POLS 4940** 3-12 cr. ▲

Off-campus opportunities, carrying appropriate academic credit, are available in local, state, and federal government offices and with political campaigns. Internships are open to students who have the permission of the department. Credit and hours are arranged by special permission.

### Directed Study

**POLS 4975** 1-6 cr.

## Psychology

### Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis of courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

### General Psychology

**PSY 1100** 3 cr. 3 hr. ▲ ●

The course introduces the student to the contemporary discipline of the science of human behavior and mental processes. Topics investigated include the scientific method, biological bases of behavior, maturation, motivation, emotions, learning, personality, and adjustment. The course is prerequisite for all other courses in Psychology. B

### Introduction to Research Methods

**PSY 2110** 3 cr. 3 hr. ▲ ●

The emphasis in this course is on research design, including consideration of sampling procedures, questionnaire design, methods of observation, and reporting. Q  
*Prerequisite: PSY 1100.*

### Psychological Statistics

**PSY 2120** 3 cr. 3 hr. ▲

This course expands upon the mathematical concepts introduced in Math 1700. Descriptive statistics are reviewed and inferential statistics are introduced. Analyses considered include t-tests and analysis of variance up to and including factorial designs. Computer analysis is also emphasized. The class meets partial LAS requirement for computer literacy in Psychology major.  
*Prerequisites: PSY 1100, PSY 2110, and MATH 1700.*

### The Psychology of Speech and Communication

**PSY 2160** 3 cr. 3 hr. ▲

This course provides information for judging speech behaviors of self and others. Topics such as concepts of speech, language and communication, effective speaking and listening behaviors, non-verbal communication, animal communication, linguistic and psycholinguistic theory are covered. The class meets LAS speaking and listening requirement for the Psychology major. B

*Prerequisite: PSY 1100.*

### Human Growth and Development

**PSY 2200** 3 cr. 3 hr. ▲ ●

This life-span course emphasizes a study of the physical, physiological, social, and psychological development of the individual from conception to old age. B

*Prerequisite: PSY 1100. (Cannot be used as credit toward the major, but may be used for the minor.)*

### Child Psychology

**PSY 2210** 3 cr. 3 hr. ▲ ●

This course offers an introductory overview of the developing child from conception through preadolescence. Theories and research are used to lay the foundation for the study of the physical, cognitive, social, and emotional development of the child.

Also considered are such topics as attachment, moral development, language acquisition, and genetic and environmental influences on development. This course meets the Office for Children requirement for Category-A daycare certification. B

*Prerequisite: PSY 1100.*

### Adolescent Psychology

**PSY 2230** 3 cr. 3 hr. ▲ ●

Adolescence as a stage of development and as a cultural phenomenon is investigated in this course. The influence of physical, cognitive, and psychosocial factors on the adolescent's search for identity is examined. Emphasis is on an interdisciplinary approach that draws on relevant theories and research from a wide range of fields. B

*Prerequisite: PSY 1100.*

### Adult Development

**PSY 2240** 3 cr. 3 hr. ▲

This course introduces the student to theories and research for the periods of young and middle adulthood. Physical, mental, and personality processes are covered, as well as issues and problems of research in adult development. Application of this knowledge to adults in their relationships and in their work settings is stressed. B

*Prerequisite: PSY 1100.*

### Psychology of Women

**PSY 2250** 3 cr. 3 hr. ▲

Objectives of this course include an increased awareness of the psychological development of women and of the dimensions of self and personhood in relation to society. The examination and analysis of issues relative to current debate concerning the status of women is explored. *Prerequisite: PSY 1100.*

### Gerontology:

#### The Psychology of Growing Old

**PSY 2260** 3 cr. 3 hr. ▲

This course examines the developmental changes, including both gains and losses, which occur in the later part of the life span. The course focuses on theory and research related to biological, physical, cognitive, and psychosocial changes that occur in late life. The emphasis is on understanding the normal aging process. Research methods and designs used to study aging are also covered. B

*Prerequisite: PSY 1100.*

### Psychology of Human Sexuality

**PSY 2280** 3 cr. 3 hr. ▲

This course includes a study of the relationships among the various aspects of sexuality, including relationships, social norms, and cross-cultural variations in sexual behavior. B

*Prerequisite: PSY 1100.*

### Psychology of Personality

**PSY 2300** 3 cr. 3 hr. ▲ ●

Dynamic factors in personality formation are studied through some of the leading theoretical positions on personality development.

*Prerequisite: PSY 1100.*

### Psychology of Death and Dying

**PSY 2320** 3 cr. 3 hr. ▲

Through lectures, readings, discussions, and media, students explore psychological theory, research, and personal feelings concerning the dying process, suicide, grief, sudden death, and dying as it influences persons at different developmental stages. B

*Prerequisite: PSY 1100.*

### Psychology of Intimacy

**PSY 2330** 3 cr. 3 hr. ▲ ●

This course examines the dynamics of partner selection and the process of creating a relationship that maximizes the development of personal integrity and interpersonal security. B

*Prerequisite: PSY 1100.*

### Abnormal Psychology

**PSY 2350** 3 cr. 3 hr. ▲ ●

The course reviews normal, neurotic, and psychotic behavior as well as methods of psychotherapy. Techniques for maintaining optimal psychological health are emphasized. B

*Prerequisite: PSY 1100.*

### Interpersonal Effectiveness

**PSY 2370** 3 cr. 3 hr. ▲ ●

This is a lab-based course which introduces and develops interpersonal competence, particularly as it pertains to dyadic situations. Basic skill areas such as observation, listening, and questioning are addressed, as are integrative skills, such as conflict resolution and relationship development. Students are asked to become more aware of their own interpersonal behavior, and are introduced to the extensive research literature on interpersonal behavior. Applications in both the personal and the professional domain are addressed. The class meets LAS speaking and listening requirement for the Psychology major. B

*Prerequisite: PSY 1100.*

### Psychology of Captivity

**PSY 2400** 3 cr. 3 hr. ▲

This course deals with the effects of captivity on both the captive and the captor. Materials include films, tapes, interviews, first-person accounts, systematic studies of experiences, and the long-term consequences on persons involved as well as on their children.

*Prerequisite: PSY 1100.*

### Psychological Testing

**PSY 2450** 3 cr. 3 hr. ▲ ●

This course is designed to give students a broad understanding of the theory and use of psychological testing. Methods of test evaluation, analysis, and interpretation are presented. Standardized testing instruments used to measure human cognitive and affective factors are explored and their purposes reviewed.

*Prerequisite: PSY 1100 and satisfaction of the math readiness requirement.*

### Social Psychology

**PSY 2500** 3 cr. 3 hr. ▲

This course provides an introduction to the study of human social behavior.

Representative topics include attitudes and their formation, aggression, prosocial behavior, conformity, and interpersonal attraction, as well as group dynamics, structure, and leadership. The application of social-psychological research to contemporary social problems is also considered. B

*Prerequisite: PSY 1100.*

### Group Dynamics

**PSY 2550** 3 cr. 3 hr. ▲ ●

The nature and dynamics of interpersonal relationships are revealed in typical group settings, such as classrooms, workshop seminars, and other discussion-oriented groups. Emphasis is on both content and process as demonstrated in a laboratory learning environment. The class meets LAS speaking and listening requirement for the Psychology major. B

*Prerequisite: PSY 1100.*

### Small Group Leadership

**PSY 2570** 3 cr. 3 hr. ▲

This course is designed to equip students for planning and conducting meetings requiring the coordination of small groups of people. Participants study and practice basic leadership skills applicable to a variety of small group settings. They develop and demonstrate these skills in the context of small group participation in class and as leaders of extra class groups. The class meets LAS speaking and listening requirement for the Psychology major.

*Prerequisite: PSY 1100.*

### Organizational Psychology

**PSY 2610** 3 cr. 3 hr. ▲ ●

This course examines organizational influences on motivation and satisfaction of the workforce. Methods of surveying organizational climate are introduced, and a variety of intervention methods are evaluated. Organizational experience in Japan, Western Europe, and the United States are analyzed and compared. B  
*Prerequisite: PSY 1100.*

### Work and the Individual

**PSY 2620** 3 cr. 3 hr. ▲

This course considers the ways in which individuals meet their needs for growth and development, while the organization meets its needs for worker productivity. How the organization's needs affect workers and how workers react to these pressures are subjects studied. Topics include work as a basic human need, relationships with co-workers, interpersonal skills, uses of power influence, leading and motivating others, meeting personal needs/job satisfaction, adaptation to change, problems in adaptation (alcohol, drugs, lack of competence, etc.), stress management, and career development. B  
*Prerequisite: PSY 1100.*

### Human Factors/Ergonomics

**PSY 2630** 3 cr. 3 hr. ▲

Students develop the ability to fit the demands of people and work together. Competence is developed in tailoring work conditions and equipment to facilitate human performance and in identifying the skills required by the job.  
*Prerequisite: PSY 1100.*

### Performance Appraisal and Development

**PSY 2640** 3 cr. 3 hr. ▲ ●

The definition, measurement, and development of performance in complex work roles is analyzed. An essential ingredient of the course is participatory workshops aimed at developing the skills of behavior observation, performance coaching, and training. B  
*Prerequisite: PSY 1100.*

### Psychology of Human Resources

**PSY 2645** 3 cr. 3 hr. ▲ ●

This course addresses the psychological theory and research concerning human resource systems in organizations. The course covers methods of job analysis; development and use of assessment tools to select employees; performance measurement and appraisal; and employee training and development. The course also addresses the legal and ethical issues of discrimination in the work setting. B  
*Prerequisite: PSY 1100.*

### Personnel Psychology

**PSY 2650** 3 cr. 3 hr. ▲ ●

This course provides an introduction to psychological theory, research and practice in organizational leadership. The purpose is to increase the student's leadership knowledge and skills so that they can achieve greater success and satisfaction from their participation in any organization of which they are a member, whether they hold a formal leadership position or not. The course provides a critical examination of current leadership theory and research, and includes an experiential component as a means for developing specific leadership skills such as listening, questioning, persuasion and conflict resolution.  
*Prerequisite: PSY 1100.*

### Organizational Leadership

**PSY 2655** 3 cr. 3 hr. ▲ ●

This course provides a treatment of the major issues in personnel psychology and emphasizes the psychological aspects of personnel systems. The focus of the course is on the psychological assessment of potential and current employees as a means for "fitting" workers into jobs. Emphasis is also placed on the employment discrimination issues that may emerge in the work setting and the use and interpretation of descriptive and inferential statistics in personnel decision making. B  
*Prerequisite: PSY 1100.*

### Learning Theory and Its Applications

**PSY 2710** 3 cr. 3 hr. ▲

This course focuses on the principles and theories of learning, as derived by both the laboratory psychologist and the educational researcher. Those theories are applied to various social settings, including the classroom, the family, etc. B  
*Prerequisite: PSY 1100.*

### Tests and Measurements

**PSY 2750** 3 cr. 3 hr. ▲

This course is a study of the basic statistical concepts and techniques of measurement. Emphasis is placed upon the application of these techniques to teacher-made tests and standardized tests used in education and psychology. B  
*Prerequisite: PSY 1100. (Cannot be used as credit toward the major but may be used for the minor.)*

### Principles of Guidance

**PSY 2770** 3 cr. 3 hr. ▲

This course introduces students to the psychological theory and research underpinning practice in school guidance counseling.  
*Prerequisite: PSY 1100.*

### Advanced Child Psychology

**PSY 3220** 3 cr. 3 hr. ▲

This course explores in greater depth principles and theories learned in PSY 2110 and acquaints the student with methodology used in contemporary research in child psychology. Through assigned exercises and individual projects, students focus on selected issues in child development. Students work directly with children in applying the principles and techniques learned in the course. Q, B  
*Prerequisites: PSY 2210 or PSY 2230, PSY 2110, PSY 2120, MATH 1700, a 2.5 cumulative average in Psychology and overall, and permission of Instructor. Strongly recommended: PSY 3140.*

### Experimental Psychology

**PSY 3410** 4 cr. 4 hr. ▲

This course is an analysis and study of the scientific method, experimental designs, and laboratory methods in behavioral science, emphasizing laboratory experiments and scientific communication of results. Students design, analyze, and report their own research. Computer data analysis is also covered. The course meets LAS junior/senior writing requirement as well as LAS requirement for computer literacy for the Psychology major.  
*Prerequisites: PSY 2110, 2120, and MATH 1700; junior or senior standing in the major, permission of Instructor.*

### Physiological Psychology

**PSY 3420** 3 cr. 3 hr. ▲

This course concentrates on the relationship between the nervous system and behavior. The experiments and theories of several disciplines that have contributed to this understanding are studied, including neuroanatomy, physiology, biochemistry and psychology. The course is designed to introduce and familiarize students with relevant information from each of these fields. Topics include hormones and sexual and aggressive behaviors; brain regulation of sleeping and dreaming; genetic, anatomical, physiological and neurochemical bases of emotions and mental disorders; biological, neural, and biochemical basis of learning and memory. Special emphasis is given to current research results in neuroscience and their implications for clinical application. Q, B, IDIS  
*Prerequisite: PSY 1100.*

### Perception

**PSY 3430** 3 cr. 3 hr. ▲

In this course principles related to a person's awareness of his or her world are studied. Topics to be considered are psychophysics, the relationship between motivation learning and perception, the sensory bases of perception, and localization in space.  
*Prerequisite: PSY 1100.*

### History and Systems of Psychology

**PSY 3480** 3 cr. 3 hr. ▲

This advanced course provides a consideration of contemporary psychology as seen in its historical perspective. The development of psychological concepts and theories is traced from their antecedents in philosophy and the physical sciences.  
*Prerequisites: junior/senior standing, PSY 2110 and one course from the following: PSY 3420, PSY 3430, PSY 3500, PSY 3530, or PSY 3550.*

### Psychology of Learning

**PSY 3500** 3 cr. 3 hr. ▲

This course focuses on principles and theories of learning, including classical conditioning, operant conditioning, verbal learning, and acquisition of motor skills.  
*Prerequisite: PSY 1100.*

### Motivation

**PSY 3530** 3 cr. 3 hr. ▲ ●

Characteristics of motivated behavior, explanation of sources of motives, and application of theories to current research and interpersonal skills are studied in this course. Emphasis is on the biological, learned, and cognitive components of motivation. Topics include internal and external motives, the relationship of stress and motivation, the place of physiological processes in motivation, issues in motivation of others, motivation for aggressive/passive behaviors, and success/failure motivation. B  
*Prerequisite: PSY 1100.*

### Cognition

**PSY 3550** 3 cr. 3 hr. ▲

Serving as foundations for this course are the neuroscience of cognition and the historical roots upon which our present understanding of human information processing rests. Specific topic areas include attention, semantic and episodic memory, comprehension, categorization, language, problem-solving, and reasoning. Artificial intelligence and the emergence of cognitive science are also considered. Methodology is emphasized throughout the course as students consider classic research studies and apply various techniques in classroom exercises. B  
*Prerequisite: PSY 1100.*

### Teaching Practicum

**PSY 4800** 6 cr. 18 hr. ▲  
**PSY 4803** 3 cr. 9 hr. ▲

Students assist an individual faculty member in the teaching of Psychology. Responsibilities vary with the course. The Teaching Practicum is offered by invitation of faculty only.  
*Prerequisite: 3.0 cumulative average overall and in the major.*

### Practicum in Psychology

**PSY 4810** 3 cr. 9 hr. ▲  
**PSY 4820** 6 cr. 18 hr. ▲

Students perform basic and applied work in Psychology. Students work with staff in areas of mutual interest.  
*Prerequisite: a 2.5 cumulative average in psychology and permission of the Instructor.*

### Independent Study

**PSY 4900** 1-6 cr. 3-18 hr. ▲ ●

This experience is offered primarily to Psychology students of junior or senior standing, and requires approval of the professor and of the Psychology Curriculum Committee. The student must petition the Psychology Curriculum Committee the semester prior to undertaking the Independent Study. Independent Study may take the form of special advanced reading programs, problem identification and research, assistantships, or for acquisition of professional skills. Under no circumstances is Independent Study substituted for regularly scheduled courses. Independent Study may be taken for 1 to 6 semester hours.  
*Prerequisite: 3.0 cumulative average in the major.*

### Advanced Psychology Seminar

**PSY 4920** 3 cr. 3 hr. ▲

In this course students pursue advanced study in their discipline. Students complete a supervised research report and meet in a weekly seminar to discuss their projects and other research topics and issues.  
*Prerequisite: PSY 2110, 2120, 3410, MATH 1700.*

### Internship in Psychology

**PSY 4950** 6 cr. 18 hr. ▲

Through an Internship the student experiences the relationship between courses in Psychology and their applications in the field. Work is carried on in settings approved by the department, faculty member, and an on-site supervisor. Internships are available in service agencies, business, and industry. Each Internship presupposes specific course background. Students are encouraged to discuss Internship plans with their advisors early in their college experience. Interested students must contact the Psychology Coordinator early in the prior semester of the year in which the Internship is desired. Business and industry Internships are offered only in the spring semester and some direct service Internships are available during the fall semester as well. Liability insurance is required of all students enrolled in this course.  
*Prerequisites: 2.5 cumulative average overall and in the major; program approval.*

### Internship in Psychology

**PSY 4960** 12 cr. 36 hr. ▲

Please refer to the preceding description and prerequisites for PSY 4950.

### Directed Study

**PSY 4975** 1-6 cr.

## Russian

### Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis of courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

### Russian for Beginners I

**\*RUSS 1000** 3 cr. 3 hr. ▲

The correct pronunciation, reading ability, and fundamentals of grammar and syntax are taught in this class. Over the semester Russian gradually becomes the working classroom and laboratory language. L, C

### Russian for Beginners II

**\*RUSS 1100** 3 cr. 3 hr. ▲

L, C

### Intermediate Russian I

**\*RUSS 2000** 3 cr. 3 hr. ▲

The course involves remedial pronunciation, grammar review, conversation, and laboratory practice with Russian as the working language. Assigned readings stress USSR life, customs, and culture.

*Prerequisite: two years of high school Russian or RUSS 1100 and/or permission of Instructor.*

### Intermediate Russian II

**\*RUSS 2100** 3 cr. 3 hr. ▲

The course is a continuation of RUSS 2000.

### Dostoevsky and Tolstoy (in English)

**RUSS 2400** 3 cr. 3 hr. ▲

This course provides an in depth comparative study of the two giants of Russian 19th century literature. Contrasts in biography themes and styles are examined. The class is facilitated through lectures and readings in English, a standard length paper, a midterm, and final examination. I, L, C, IDIS

### Russian Literature in English Translation

**RUSS 2500** 3 cr. 3 hr. ▲

The course is a seminar on a specific topic from Russian literature, such as Soviet Literature or the modern Russian novel. Lectures and readings in English emphasize significant works in Russian and Soviet literature. A midterm and final examination and a standard length paper are required class work. The class may be repeated for credit. I, L, C, IDIS

### Russian Culture and Soviet Life (in English)

**RUSS 2600** 3 cr. 3 hr. ▲

The course provides an introduction to Russian life and culture as manifested in Russian geography, art, music, film, and literature. National characteristics of the Russian people and their influence on Soviet institutions are explored as well as everyday life in the Soviet Union. The course includes a significant audio-visual component. I, L, C, IDIS

### Independent Study in Russian

**RUSS 4901** 1 cr. 1 hr. ▲

### Independent Study in Russian

**RUSS 4903** 3 cr. 3 hr. ▲

The Independent Study is open to students studying the language with the permission of the supervising instructor and the Department Chairman. Meeting times and credit are arranged with approval.

## Science Education

### Key to Course Offerings

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

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The following courses are regularly offered in Continuing Education. See the cross-listings for LAS designations.

### General Botany

**SCED 1000**

(see BIOL 1400)

### Nutrition

**SCED 2000**

(see BIOL 1650)

### Human Sexuality

**SCED 2001**

The biological aspects of human sexuality. The purpose of this course is to relate information rather than to advise.

### Winter Botany

**SCED 3000**

An out-of-doors study of the environment during the winter. Daily field trips to study both aquatic and terrestrial plants to discover how they adapt to the cold weather condition.

### Common Rocks and Minerals

**SCED 3270**

(see GEOG 3270)

### Introduction to Astronomy

**SCED 4000**

(see Phys 1030)

# Sociology

## Key to Course Offerings

- Q: designates courses in the Quantitative Scientific Cluster  
I: the Ideas and Events Cluster  
B: the Human Behavior Cluster  
L: the Literature, Language and Arts Cluster  
C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis of courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

## Introduction to Sociology

**SOC 1100** 3 cr. 3 hr. ▲ ●

The course encourages the student to analyze critically the social world, which he or she inhabits. Major theoretical orientations and major concepts of the discipline are reviewed. Social institutions such as Family, Education, and Medicine are examined, and different research techniques used by sociologists are introduced. This course is a prerequisite for all other sociology courses. B, C

## Cultural Anthropology

**SOC 2250** 3 cr. 3 hr. ▲ ●

The course introduces students to varying cultures. Attention is given to hunting and gathering, pastoral, horticultural, agricultural, and industrial societies. Cultural change imposed by industrialization and technological revolution in both third world and modern societies is also analyzed and discussed. The intent of the course is to give students knowledge about the development and variability of cultures, living styles, and values, so that they are prepared to tackle elusive questions of the capabilities, limits, and future of human societies. B, C

## Sociology of Aging

**SOC 2300** 3 cr. 3 hr. ▲

This course examines the socially defined aged, the aging process, and aging societies. It considers such topics as age roles, the status of the elderly across cultures and across history, and the downward mobility of the elderly in American society. B

## Urban Sociology

**SOC 2440** 3 cr. 3 hr. ▲

This course provides a survey of urbanization and the various problems associated with contemporary urban life. Computer-assisted analysis of large-scale data sets helps students explore the issues in planning development. A cross-cultural and historical approach to American urban life is emphasized. B

## Race and Ethnic Relations

**SOC 2500** 3 cr. 3 hr. ▲ ●

This course provides a comparative, historical, and interdisciplinary introduction to interactions between racial and ethnic populations in the U.S. and other societies. Students explore social attitudes and consequences of racial and ethnic difference, and examine how such differences affect the lives of American people. Consideration is given to the political, economic, legal, and socio-cultural experiences of various minority groups. B, I, C, IDIS

## Peoples and Cultures of Africa

**SOC 2510** 3 cr. 3 hr. ▲

A survey of the peoples and cultures of Africa is the major focus of this course. This course examines the social and cultural systems of groups including the Ibo, Yoruba, Hausa-Fulani, Kpelle, Bantu Tiriki, Ganda, Jie, Rwanda, Swazi, and Pastoral Somali. B, C

## Drugs and Alcohol

**SOC 2520** 3 cr. 3 hr. ▲ ●

In this course, students explore sociological issues revolving around drug and alcohol use and abuse in the American society. Topics of discussion include: the socio-historical origins of drugs and alcohol use from a cross-cultural perspective; effects of formal organizations such as drug rehabilitation and alcoholic centers on drug users; and “Push factors” such as family, work, and economic pressures, as they relate to chemical dependency. Also investigated are society’s drug problems in terms of legal and illegal drug use; medical versus recreational use of psychoactive drugs, alcoholic beverages, and tobacco; and definitions and classifications of psychoactive substances. B

## Sociology of Developing Societies

**SOC 2600** 3 cr. 3 hr. ▲

This course provides a survey of the socioeconomic characteristics and features of the developing societies in the context of historical and contemporary experiences of those societies. One of the primary objectives of the course is to critically analyze how the socioeconomic characteristics of the less developed societies affect and are affected by their relationships with developed Western societies and their implications for development. The role of women in development and the impact of development on women also are examined. I, B, C, IDIS

## Sociology of Religion

**SOC 2620** 3 cr. 3 hr. ▲

The course emphasizes the structure and function of religious organizations, beliefs, and practices. Current issues in American religion are also explored. B

## Sociology of the Family

**SOC 2630** 3 cr. 3 hr. ▲ ●

The course analyzes the structure and function of the family. Current trends along with practical solutions to problems of family living are discussed. B

## Sociology of Organizations

**\*SOC 2650** 3 cr. 3 hr. ▲

The course introduces the study of work organizations as social systems. The impact of technological change and the effects of structural factors on organizations are considered. Approaches to organization diagnosis and development are discussed.

## Social Problems

**SOC 2700** 3 cr. 3 hr. ▲ ●

The course examines underlying dynamics and consequences of contemporary social conditions believed to be both undesirable and changeable. Strategies for resolving social problems in the environmental, economic, family, medical, political, and legal spheres are analyzed and compared.

## Medical Sociology

**SOC 2720** 3 cr. 3 hr. ▲

In this course, students explore the effects of stratification on health status and health care. Topics discussed in class include communication between physicians and patients of different socio-cultural backgrounds; formal organizational studies of health facilities such as hospitals, clinics, or doctors' offices; social factors and their relation to chronic illness; and the sociology of mental illness. Also investigated are the relationships between doctors and nurses, the organization and utilization of health services, the comparative examination of health systems either within a society or in a cross-cultural perspective, and the perception of illness as deviant or aberrant behavior. B

## Criminology

**SOC 2750** 3 cr. 3 hr. ▲ ●

This course provides a survey of the field of criminology, including such topics as theories of crime; criminal statistics; homicide, rape, property crimes; white collar crimes and corporate deviance; and debates on punishment and rehabilitation. B

## Juvenile Delinquency

**\*SOC 2760** 3 cr. 3 hr. ▲ ●

This course examines major sociological theories of delinquency including an analysis of empirical studies. Attention is also given to the juvenile judicial system and proposed treatment programs.

## Sociology of Education

**SOC 2800** 3 cr. 3 hr. ▲

This course provides an introduction to the ways sociologists think about educational goals, processes, and outcomes. Students investigate a variety of historical, theoretical, and substantive issues, including: the development of the U.S. public education systems, the "distribution" of education in society; the "players" in the system; the influence of social factors on educational experiences; and educational reform. B

## Social Stratification

**SOC 3000** 3 cr. 3 hr. ▲ ●

The course provides a critical examination of the dominant perspectives and dimensions of social stratification, using a cross-cultural, historical, and interdisciplinary framework. Particular attention is paid to the analysis of U.S. class structure and the effects of social stratification on life chances of groups. B, I, C, IDIS

## Basic Skills of Social Research

**SOC 3130** 3 cr. 3 hr. ▲

The course emphasizes the aims and techniques of various research methods as applied to sociological study and practice. Topics covered in class include a critical examination of literature reviews, interviewing, observation, questionnaire development, data entry, and quantitative computer analysis of data. The course meets LAS Computer Literacy for Sociology majors requirement.

*Prerequisites:* Cultural Anthropology and two additional intermediate level Sociology courses.

## Application of Social Research in the Work Setting

**\*SOC 3140** 3 cr. 3 hr. ▲

The course provides a deeper understanding of techniques of social research than SOC 2130. The application of such techniques to consumer behavior, business and government organizations, and social agencies, is examined.

## Social Theory

**SOC 3160** 3 cr. 3 hr. ▲

The course studies social philosophy precursors, sociological scientific theorists from Comte to Parsons, and contemporary schools of thought in Sociology. The course meets LAS Writing requirement for Sociology majors.

*Prerequisite:* Social Research and two intermediate level Sociology courses or permission of Instructor.

## Law and Society

**SOC 3500** 3 cr. 3 hr. ▲

This course focuses on law as a practical resource. Students examine how the availability of law is distributed in society; what the law provides for those who use it; and how the law has been influenced by certain trends of use. Students study ways in which the law has been analyzed, and discover the nature of legal evolution and social change. B

*Prerequisites:* two intermediate level sociology courses or permission of Instructor.

## Women in American Society

**SOC 3770** 3 cr. 3 hr. ▲

This seminar course examines the statuses, roles, expectations, and realities of women, particularly as experienced in the contemporary U.S. Patterns and differences among women's lives are explored through a variety of readings, class discussions, and writing projects. (Cross listed in Women's Studies IDIS 2340) B, C, IDIS

*Prerequisite:* two intermediate level sociology courses, or permission of Instructor.

## Independent Study

**SOC 4900** 1-6 cr. 3-18 hr. ▲ ●

A program of study designed for in-depth learning in a specific topic for which no regular course is available. This Independent Study is only for Sociology majors and may be taken no more than two times with permission of faculty. Independent Study requires approval of the professor and of the Sociology Curriculum Committee.

*Prerequisite:* 3.0 cumulative average in the major.

## Internship in Sociology

**SOC 4960** 6 cr. 15 hr. ▲

The Internship is arranged in consultation with faculty and carried out under the auspices of an approved agency or program at the local, state or federal level. This experience is designed to develop skills in sociological practice, principles, and/or research. Students are encouraged to discuss Internship plans with their advisors early in their college experience, as there are specific procedures and required courses. Liability insurance is required of all students enrolled in this course.

*Prerequisite:* junior or senior standing, 2.5 cumulative average in the major, program approval.

## Internship in Sociology

**SOC 4970** 12 cr. 30 hr. ▲

See SOC 4960 for description and prerequisites.

## Directed Study

**SOC 4975** 1-6 cr. ▲ ●

## Spanish

### Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis or courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

### Spanish for Beginners I

**SPAN 1000** 3 cr. 3 hr. ▲ ●

The correct pronunciation, reading ability, and fundamentals of grammar and syntax of the Spanish language are studied. Students are taught the four language skills of listening, speaking, reading, and writing. Cultural topics are integrated with these skills. Spanish gradually becomes the working classroom language. Students with a year or more of high school Spanish should register for Spanish 2000. L, C

### Spanish for Beginners II

**SPAN 1100** 3 cr. 3 hr. ▲ ●

The course is a continuation of SPAN 1000 or is taken with permission of Instructor. L, C

### Intermediate Spanish I

**SPAN 2000** 3 cr. 3 hr. ▲ ●

The course focuses on a discussion of advanced grammar points and readings dealing with Spanish life. Emphasis is on developing conversational fluency. L, C  
*Prerequisite: SPAN 1000 or permission of Instructor.*

### Intermediate Spanish II

**SPAN 2100** 3 cr. 3 hr. ▲ ●

The course is a continuation of SPAN 2000 or is taken by permission of Instructor. L, C

### Hispanic Culture

**SPAN 2600** 3 cr. 3 hr. ▲

This course is designed to provide students with a knowledge and understanding of the Hispanic world through a study of the historical and cultural development of different countries. Emphasis is placed on contemporary problems and social customs of the Hispanic population in the USA. L, C.  
*Prerequisite: SPAN 2100 or permission of Instructor.*

### Hispanic Literature

**SPAN 2700** 3 cr. 3 hr. ▲

The course focuses on selected works reflecting the Hispanic heritage in contemporary Spanish and Latin American literature. L, C  
*Prerequisite: SPAN 2100 or permission of Instructor.*

### Spanish Conversation and Composition

**SPAN 3500** 3 cr. 3 hr. ▲ ●

This course is designed to teach skills that increase the student’s overall ability to read, speak, and write the language. Students are expected to write compositions on topics developed in class. L, C  
*Prerequisite: SPAN 2100 or permission of Instructor.*

### Practical Spanish for the Public Services Professional I

**SPAN 4000** 3 cr. 3 hr. ▲ ●

The course teaches practical Spanish to enable people in public services, human services, nursing, medical technology, special education to communicate with their clients. Special emphasis is placed on the cultural and psychological characteristics of Spanish speaking peoples. L, C

### Practical Spanish for the Public Services Professional II

**SPAN 4100** 3 cr. 3 hr. ▲

The course is a continuation of SPAN 4000 or is taken by permission of Instructor. L, C

### Independent Study in Spanish

**SPAN 4901** 1 cr. 1 hr. ▲ ●

### Independent Study in Spanish

**SPAN 4903** 3 cr. 3 hr. ▲ ●

The Independent Study is open to students in the language with the permission of the supervising Instructor and the Department Chairman. Meeting times and credit are arranged upon approval.

### Independent Study in Spanish

**SPAN 4906** 6 cr. 6 hr. ▲ ●

### Directed Study

**SPAN 4975** 1-6 cr. ▲ ●

## Special Education

### Key to Course Offerings

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

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### Foundations in Special Education

**SPED 2100** 3 cr. 3 hrs.

The historical foundations of education, leading up to the creation of our current educational system will be traced. Students will examine various philosophies of education and determine the aspects of these philosophies that they embrace as future teachers. The qualities of effective schools and school systems in meeting the needs of diverse learners will be identified. The impact of laws and litigation on the development of our current system will be traced. Students will explore the ever-changing and evolving role of the special education and elementary teacher, and reflect upon their needs as teacher candidates.

### Introduction to Individuals with Disabilities

**SPED 2150** 3 cr. 3 hrs.

The course focuses on the characteristics, behavioral, social, and learning needs of children and adults with special needs. Emphasis is placed on the total special education delivery system; controversies and issues in the field, relevant state and federal legislation, and court cases. Field experience required.

### Program Development for Students with Severe Disabilities

**SPED 2200** 3 cr. 3 hrs.

This course examines effective instructional strategies for teaching students with intensive special needs and includes an overview of specific diagnoses and their implications for teaching. Particular attention is given to program development and implementation within inclusive settings. Taken in conjunction with Student Teaching (Practicum).

### **Students with Physical and Health Care Needs**

**SPED 2510** 3 cr. 3 hrs.

Students examine various physical and health conditions common in children with special needs. Health care plans are developed along with effective implementation strategies. Collaborative models for working with health care professionals and related service providers will be examined. Field experience required. For Severe Disabilities Majors only.

*Prerequisites: SPED 2100, SPED 2150*

### **Language Arts: Teaching and Adapting Instruction**

**SPED 2522** 3 cr. 3 hrs.

This course builds on previously taught research-based approaches to teaching children with special needs. The major curriculum focus is on language arts. Students further develop skills in assessments, planning and designing materials, and teaching children with diverse learning needs. Students are introduced to procedures for developing IEP's.

*Pre-requisites: SPED 2100, 2150 or permission of instructor.*

### **Math/Science/Social Studies for the Inclusive Classroom**

**SPED 2530** 3 cr. 3 hrs.

This course was designed to address the basic concepts and issues in developing and modifying curriculum in mathematics, science, and social studies while analyzing current research-based approach to instruction. Students examine various service delivery models and strategies for meeting the challenges of creating inclusive classrooms that address the educational needs of all students. The curriculum presented is based on the Massachusetts Curriculum Frameworks in each discipline.

*Prerequisites: SPED 2100, SPED 2150 or permission of instructor.*

### **Language Development and Speech**

**SPED 3401** 3 cr. 3 hrs.

The course addresses the normal development of speech and language, and disorders associated with each of these areas of communication. Students demonstrate a knowledge of phonological problems and language disorders as they effect academic learning. In the area of language/learning disorders students demonstrate an understanding of delayed language and language disabilities as they relate to reading, mathematics, and written language. Students analyze second language acquisition and educational practices related to linguistic minority students. A related field experience is required.

*Prerequisites: SPED 2100, SPED 2150*

### **Math/Science/Social Studies for Students with Disabilities**

**SPED 3420** 3 cr. 3 hrs.

This course is designed to demonstrate a hands-on approach to teaching Math, Science, and Social Studies with a range of modifications for students with disabilities. Participants explore instructional strategies that will enable them to implement the curricula within an inclusive setting as well as in a substantially separate site. Teacher Candidates explore how to supplement traditional textbooks with hands-on investigative activities that teach to the learning styles of students. Math, Science and Social Studies topics across the curriculum are stressed. Teacher Candidates are introduced to various types of assessment techniques utilized by both classroom and special educators. The Department of Education Frameworks in the three content areas will be discussed and reviewed.

*Prerequisites: SPED 2100, SPED 2150, SPED 2530*

### **Reading/Learning Problems**

**SPED 3440** 3 cr. 3 hrs

This course is designed to provide multiple perspectives and essential topics for teaching reading in the elementary school and it specifies how to assess students and how to use assessment results to provide effective reading instruction. Students develop a knowledge base concerning the skills involved in the total reading process and factors which affect the acquisition of the reading skills and assessment procedures to plan appropriate teaching strategies. Topics covered include the nature of the reading process, the relationship between language, reading and writing, the use of assessment instruments, planning teaching strategies, examining reading resources and writing IEP's. Students focus on developing and adapting reading material for children with various reading problems.

*Prerequisites: SPED 2100, SPED 2150, SPED 2522, SPED 3401*

### **Behavior Management**

**SPED 3500** 3 cr. 3 hrs.

This course prepares students to carry out a variety of behavior change strategies in educational settings. Emphasis is on the development of a positive, problem-solving approach supporting the development of constructive learning and social behavior of children. Students also develop an awareness of the effect of teacher behavior on the behavior of children. Taken in conjunction with the Integrated Professional Pre-Practicum/Practicum (IPP).

### Reading in Special Education

**SPED 3550** 3 cr. 3 hrs.

This course addresses the serious consequences of reading disabilities and related disorders, the condition of dyslexia and the historical and contemporary theories on what goes wrong in the reading acquisition process in children with dyslexia. Assessment of dyslexia and related disorders will be analyzed. The course also focuses on general principles derived from research on effective techniques for working with children with dyslexia and on the application of those techniques in specific areas of the language arts: phonological awareness, phonics knowledge, automaticity and fluency in word reading, reading comprehension, spelling, handwriting and composition. It will address the relationship between reading, writing and spelling instruction. Taken in conjunction with the Integrated Professional Pre-Practicum/ Practicum (IPP).

Prerequisite: SPED 3440

### Strategies for Secondary Students with Disabilities

**SPED 3575** 3 cr. 3 hrs.

This course will focus on adolescents with disabilities. Students examine various instructional strategies to address the learning and behavioral challenges typical of adolescent learners with such conditions as learning disabilities, behavioral disorders, and mild retardation. Students explore instructional methods relating to reading, written language, mathematics, study skills and social skills for the adolescent with disabilities. Transitions and post secondary programming will address the specific needs of secondary-school students as they leave the high school environment. For Special Education Majors only or by permission of instructor.

### Secondary Programs for Adolescents (14-22) with Disabilities

**SPED 3800** 3 cr. 3 hrs.

Students in secondary education certification programs are provided with the legal perspective of services to individuals with disabilities. Learning problems and needs of various disabilities are addressed. Strategies for modifying instruction are a major focus.

### Assessment of Students with Moderate Disabilities

**SPED 4001** 3 cr. 3 hrs.

The course introduces students to the assessment process, describes a comprehensive evaluation, and discusses mandatory assessment regulations. The topics of descriptive statistics, reliability and validity, and norm/criterion-referenced assessments are addressed. Various types of assessment are reviewed and discussed. The focus is on interpreting test results and using assessment data to write Individual Educational Plans. Taken in conjunction with Student Teaching (Practicum).

Prerequisites: Required courses below SPED 3550.

### The Integrated Professional Pre-Practicum/Practicum (IPP)

This is a twelve-credit preparation block for Licensures in Moderate Disabilities, Severe Disabilities, and Elementary Teacher. For the IPP Curriculum, Teacher Candidates take two courses: SPED 3500-Behavior Management and SPED 3550-Reading in Special Education while they are involved in the following teaching experiences:

#### IPP Pre-Practicum/Practicum: Elementary (Gr. 1-6)

**SPED 3665** 6 cr. 6 hrs.

Candidates spend half the semester, half days in an elementary school in classrooms where students with disabilities are integrated or included. The Teacher Candidate assists in the design and instruction of lessons, adapting when necessary, and does direct teaching.

#### IPP Pre-Practicum/Practicum: Moderate Disabilities (PreK-8)

**SPED 3675** 6 cr. 6 hrs.

Candidates spend half the semester, half days in the role of a special educator teaching children with Moderate Disabilities (PreK-8). The children are serviced in resource rooms, in integrated programs or in inclusive classrooms. In this role students are responsible for assisting in assessing children's performance, direct reaching and evaluation.

#### IPP Pre-Practicum/Practicum: Severe Disabilities

**SPED 3765** 6 cr. 6 hrs.

In this field experience, Teacher Candidates assume the role of a teacher of students with severe disabilities. Students work with individuals on functional academics and on the development of appropriate social skills. Participants assist in the development and implementation of instructional programs.

### Practicum: Severe Disabilities I (All Levels)

**SPED 3840** 6 cr. 6 hrs.

Teacher Candidates complete the practicum in an inclusive educational setting under the direction of a mentor who is certified in the area of licensure sought by the Candidate and under the guidance of the college supervisor. Candidates teach students with severe disabilities. Taken in conjunction with SPED 2200.

### Practicum: Severe Disabilities II (All Levels)

**SPED 3845** 6 cr. 6 hrs.

Teacher Candidates complete the practicum in a special education setting under the direction of a mentor who is certified in the area of licensure sought by the candidate and under the guidance of the college supervisor. Candidates assume the role of the teacher of students with severe disabilities. Taken in conjunction with SPED 2200.

### Practicum: Elementary (Gr. 1-6)

**SPED 3860** 6 cr. 6 hrs.

Teacher Candidates complete the practicum in an elementary setting under the guidance of the college supervisor and under the direction of a mentor who is certified in the area of licensure sought by the candidate and under the guidance of the college supervisor. Taken in conjunction with SPED 4001.

### Practicum: Moderate Disabilities (PreK-8)

**SPED 3870** 6 cr. 6 hrs.

Teacher Candidates complete the practicum in an inclusive or special education pre-kindergarten to eighth grade setting under the direction of a mentor who is certified in the area of licensure sought by the candidate and under the guidance of the college supervisor. Taken in conjunction with SPED 4001.

### Practicum: Moderate Disabilities (5-12)

**SPED 3875** 6 cr. 6 hrs.

Teacher Candidates complete the practicum in an inclusive setting or a special education setting at the middle or high school level under the direction of a mentor who is certified in the area of licensure sought by the candidate and under the guidance of the college supervisor. Taken in conjunction with SPED 4001.

### Practicum: Moderate Disabilities II (5-12)

**SPED 3878** 6 cr. 6 hrs.

Teacher Candidates complete the practicum in an inclusive setting or a special education setting at the middle or high school level under the direction of a mentor who is certified in the area of licensure sought by the candidate and under the guidance of the college supervisor. Taken in conjunction with SPED 4001.

### Independent Study

**SPED 4900** 3 cr. 3 hrs.

The Independent Study facilitates the review, development, and synthesis of a problem in special education. The Independent Study is open to juniors and seniors with permission of the Instructor.

### Directed Study

**SPED 4975** 1-6 cr.

## Speech

### Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

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### Speech Improvement

**\*SPCH 0100** 1 cr. 1 hr. ▲

Students are assigned to this remedial course after being evaluated as needing speech improvement. Individual and group therapy is used.

### Introduction to Speech Communication

**SPCH 1000** 3 cr. 3 hr. ▲ ●

The class focuses on theory and practice of interpersonal and public communication, including communication theory, self-concept, perception, language, listening, non-verbal communication, and public speaking. L

### Argumentation and Debate

**SPCH 1100** 3 cr. 3 hr. ▲

Students participate in projects that emphasize analysis, research, evidence, strategies, briefing, refutation, and the delivery of debates on representative questions. L

### Business and Career Communication

**\*SPCH 1200** 3 cr. 3 hr. ▲

Theory and methods of communication are applied to business and career problems. Emphasis is placed on skills especially important to students planning to work for or with an organization. Interviewing, group conferences, and staff presentations are emphasized.

### Effective Speaking for the Electronic Media

**SPCH 1300** 3 cr. 3 hr. ▲

The class focuses on a variety of speaking experiences encountered by those who plan to use electronic media in their occupation. The class is particularly suited to students who anticipate speaking roles in industry-made productions as well as those who aspire to careers as professional broadcasters. L

### Small Group Communication

**\*SPCH 1400** 3 cr. 3 hr. ▲ ●

The course explores the fundamentals of group discussion in private and public settings. Emphasis is on group structure, leadership, and interpersonal relationships, including extensive practice in varied group situations.

### Public Speaking

**SPCH 1600** 3 cr. 3 hr. ▲

The course fosters the development of skills and strategies employed in the preparation and presentation of the public address. Students make critical assessments of rhetorical strategies used by public figures. L

### Intercollegiate Debate and Forensics

**\*SPCH 2100** 1 cr. 1 hr. ▲

The course provides opportunities for study and participation in debate and forensic speaking activities.

### Voice and Articulation

**\*SPCH 2400** 3 cr. 3 hr. ▲

The course concentrates on the elements of vocal production and presentation with special emphasis on the study and application of phonetic theory. L

### Persuasion

**SPCH 2600** 3 cr. 3 hr. ▲

The course studies the causes of listener belief and action with special emphasis on the development of strategies to influence listener behavior.

### Rhetorical Criticism

**\*SPCH 2800** 3 cr. 3 hr. ▲

The class explores approaches to the rhetorical criticism of significant speeches and speech movements, past and present.

# Technical Theater

## Key to Course Offerings

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I: the Ideas and Events Cluster

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IDIS: Interdisciplinary courses

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▲ Undergraduate Day School

● Undergraduate Evening School

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## Theatrical Design Skills

**TETA 2100** 3 cr. 4 hr. ▲

A lecture/laboratory course presenting basic problem solving skills in scenic and costume craft covering terminology and processes of stage production including integration of design elements/materials, basic drafting, stage carpentry, rigging, equipment use, and shop safety.  
*Prerequisites: ITEC 1200, 1300, 1400.*

## Fundamentals of Stage Lighting Design

**TETA 2300** 3 cr. 4 hr. ▲

A lecture/laboratory course dealing with the application of the elements of design relating to lighting for the theater and dance. Mechanics of basic electricity, color theory, instrumentation, distribution, and control.  
*Prerequisite: ITEC 1000.*

## Scene Design

**TETA 2400** 3 cr. 4 hr. ▲

A lecture/laboratory study of the historical and contemporary contribution of space and environment atmospherics to the creation of the world of the play/dance and the theater experience as a whole. Rendering, graphic media, specification writing, and scenic models are addressed.  
*Prerequisites: TETA 2100, ITEC 1000.*

## Costume Design

**TETA 2500** 3 cr. 4 hr. ▲

The history of fashion silhouette is explored along with the design elements used in developing a character’s costume. Students will apply historical perspective and utilize the design elements of line, texture, color, and gesture in designing costumes.

*Prerequisites: TETA 2100.*

## Advanced Stage Lighting Design

**TETA 3300** 3 cr. 4 hr. ▲

A lecture/laboratory study of the problems of stage lighting for the Proscenium and Non-Proscenium stages. Students are expected to develop and apply concept and historical lighting techniques in various theater and dance genre (musical-comedy, cabaret, modern, and jazz dance). Computer applied lighting will be used in a production environment.

*Prerequisites: TETA 2300, ITEC 2410.*

## Advanced Scene Design

**TETA 3400** 3 cr. 4 hr. ▲

An advanced course emphasizing approaches and techniques relating to the design, development, and implementation of scenic concepts. Students will utilize approaches to research design and develop scenic concepts. Concepts will be developed, rendered, constructed, and rigged to production standards.

*Prerequisites: TETA 2400, ITEC 2410.*

## Advanced Costume Design

**TETA 3500** 3 cr. 4 hr. ▲

An advanced lecture/laboratory study of the integration of design elements into unified production styles. Students will study historical clothing. Construction techniques and rendering will be applied using CAD. Line, texture, color, gesture and movement will be integrated into a unified production style and applied in a production environment.

*Prerequisites: TETA 2500, ITEC 2410.*

## Stage Make-up

**TETA 3600** 3 cr. 4 hr. ▲

A lecture/laboratory course investigating the principles, techniques, and materials of character stage make-up and practical application. Students will apply, in a production setting, principles, techniques, and materials of character stage make-up. They will identify historical justification for period make-up and apply techniques for live animation, clowning, and dramatic character.

*Prerequisites: TETA 2400.*

## Stage Management

**TETA 4100** 3 cr. 4 hr. ▲

A lecture/laboratory study of the professional union approach to stage management and personnel mediation in stage production. Students will apply knowledge and technique related to contract and union policy in various repertory scenarios. The aspects of prompt books, blocking documentation, call-sheets, rehearsal set-up and running and calling the show will be implemented.

*Prerequisites: senior status.*

## Theater Internship

**TETA 4950** 3 cr. ▲

# Theater

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\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

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## Introduction to Theater

**THEA 2000** 3 cr. 3 hr. ▲ ●

This introductory course surveys theater with emphasis on its history, focuses, practices, and major practitioners, including directors, actors, and scenic designers. The focus is on historical and social contexts. L, C

## Children’s Theater

**\*THEA 2100** 3 cr. 3 hr. ▲

This introductory course in theater for children explores its principles and practices, covering aspects of play production for juvenile audiences. Emphasis is on script selection and evaluation, directing, acting, and staging techniques.

## Stage Movement

**THEA 2500** 3 cr. 3 hr. ▲

This workshop-oriented course utilizes the basic techniques of theatrical mime and movement with emphasis on developing each student’s potential for effective physicalization on stage.

## Acting I

**THEA 2700** 3 cr. 3 hr. ▲ ●

In this course the acting fundamentals of stage speech and movement, creative mime and improvisation are explored. Plays are read and analyzed. Systematic technique building and scene study are heavily emphasized. L

## Acting II

**THEA 2800** 3 cr. 3 hr. ▲

This will be an advanced course in examining the art of the actor building on the preliminary skills learned in Acting I. Students will perform scenes from the contemporary and classical repertoire. Traditional and contemporary methods of character development will be studied and attempted. Techniques of acting Shakespeare will be learned. Audition technique will be introduced and developed.

## Applied Acting

**THEA 2850** 3 cr. 3 hr. ▲

This course will offer the practical, on-stage experience of realizing a role in a fully mounted main stage production. Students will accomplish this through performance, maintaining an actor’s journal and writing an analysis of the experience after the production is completed. This course may be taken for up to two times for credit.

## Stagecraft and Theater Production

**\*THEA 3000** 3 cr. 3 hr. ▲

In a laboratory situation, the student takes one selected play from initial sketches through to the finished model and plans for production, including design, set building, costuming, lighting, and management.

## Acting for the Camera

**THEA 3010** 3 cr. 3 hr.

An intensive scene study course for the advanced student actor. Scenes will be selected from extant and new film scripts and will be directed, filmed and edited by film students who are taking a companion course in the Communications department. *Prerequisite: COMM 3730 Directing.*

## Directing the Play

**THEA 4000** 3 cr. 3 hr. ▲

This lecture/seminar/workshop covers the basic elements of style, blocking, organization, and focus for directing.

## Independent Study

**THEA 4903** 3 cr. 3 hr. ▲ ●

The Independent Study is for exceptional students excelling in scholarship and is taken upon approval of department head and advising instructor. Course of study, meetings, and credit are arranged upon approval.

## Internship

**THEA 4940** 3 cr. ▲

## Directed Study

**THEA 4975** 1-6 cr. ▲

# Women’s Studies

## Key to Course Offerings

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B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

*Multicultural and interdisciplinary courses also fulfill a cluster designation.*

\* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Courses having a more narrow focus than those taught on a regular basis of courses being taught on an experimental basis can be taught as “Topics” courses. These courses will be assigned numbers based on the student level for which they are intended—first, second, third or fourth year.

## Introduction to Women’s Studies

**IDIS 1000** 3 cr. 3 hr. ▲ ●

The course presents a cross-cultural, historical, and interdisciplinary introduction to topics and themes in women’s experiences, including roles in the family, the work force, and public life. L, I, C, IDIS

## Women and Literature

3 cr. 3 hr. ▲

(See ENGL 3300) L

## Women in Latin America

**IDIS 1100** 3 cr. 3 hr. ▲

The course provides a multicultural and interdisciplinary examination of the social, political, and economic situation of contemporary Latin American women using autobiographies, literature, and films.

## Women in Science and Technology

**IDIS 2000** 3 cr. 4 hr. ▲

We will study the contributions to the advancement of science and technology made by a selected group of women. For each of these women, we will examine her discipline, her contribution to the discipline, and site her in an appropriate historical and cultural setting. I, C, IDIS

## Women in American Society

**IDIS 2340** 3 cr. 3 hr. ▲ ●

The course focuses on the multicultural and interdisciplinary examination of the statuses, roles, expectations, and realities of women in society with emphasis on the U.S. B, C, IDIS

**Contemporary Issues in Women's Health**

**IDIS 2340** 3 cr. 3 hr. ▲ ●

The course provides a multicultural and interdisciplinary examination of women's health issues, including violence against women, sexual freedom, abortion, menopause, work place risks, and problems of poor, elderly women. I, B, C, IDIS

**History of U.S. Women to 1870**

3 cr. 3 hr. ▲

(see HIST 2450) I, C

**History of U.S Women from 1870 to the Present**

3 cr. 3 hr. ▲

(see HIST 2500) I, C

**History of Women in Europe**

3 cr. 3 hr. ▲

(see HIST 3450) I

**Psychology of Women**

3 cr. 3 hr. ▲

(see PSY 2250)

**Independent Study in Women's Studies**

**IDIS 4903** 3 cr. 3 hr.

**Women, Art, and Society**

3 hr. 3 cr. ▲ ●

(see ART 1830) L, C

**Women, Music, and Society**

3 hr. 3 cr. ▲ ●

(see MUSC 3900) L

**Internship**

**IDIS** 3 cr. ▲

# Graduate Division



**G**raduate Education at Fitchburg State College is an exciting and challenging adventure. It offers diverse perspectives for part time and full time advanced study in a variety of professional and academic fields.

The Office of Graduate Studies is committed to engaging excellence as it promotes learning in every aspect of its educational mission—to consistently offer its students the affordable high quality evening degree programs, courses, and other life-long learning opportunities they desire, seek, and need. The commitment to quality is evidenced in the dedicated cadre of faculty who are actively involved in their professional and academic fields—who bring their focussed expertise and experience to their classrooms, laboratories, and studios.

Fitchburg State College's Office of Graduate Studies is proud of the contributions its faculty, graduates, and other former students have made, and will continue to make, to their chosen fields of endeavor.

## Graduate Faculty

Fitchburg State College faculty holding terminal degrees are eligible for graduate faculty status. Faculty with advanced degrees and special recognition in their field are qualified for associate graduate faculty status. Experts from other universities or the community-at-large may serve, by invitation, as visiting lecturers.

### Administration

The Office of Graduate Studies is administered by the Dean of Graduate Studies.

The Graduate Council consists of five members of the graduate faculty (selected by the Fitchburg State College Faculty Association), three administrators (appointed by the College's President) and a matriculated graduate student. The Graduate Council makes reports and recommendations on the following matters:

The changing of course requirements within an existing graduate curricula; the addition of new courses within such curricula; and the criteria to be applied in designating, as such, members of the graduate faculty. The Council shall also hear appeals from graduate students to the College's graduate program.

Reports and recommendations made by the Graduate Council are transmitted to the President of the college through the Academic Vice President; copies are transmitted to the college Faculty Association's Chapter President and the chairperson of each department that sponsors a graduate program. The Graduate Council shall send copies of minutes and its agenda to the All College Committee.

### Graduate Program Chair

Each graduate program has a Graduate Program Chairperson who, among other things is responsible for:

- Quality control of the graduate curriculum.
- Evaluation of course content and degree program relevancy.
- Developing and maintaining a 2-year plan of course offerings.
- Developing course schedule for yearly offerings (summer, fall, winter, spring).
- Working with the Graduate Council and the Dean of Graduate Studies in administration and policy matters.
- Evaluating graduate students each semester and reviewing student folders.
- Recommending and approving courses to be taken by matriculated students each semester.
- Advising and assisting in appropriate policy actions needed by graduate students (e.g., acceptance of transfer credits, graduation, review, etc.).
- Reviewing applications for admission.

### Professional Education Programs

The professional education programs at Fitchburg State College are under the broad coordination of an Education Unit that includes the following certification and degree program areas: Undergraduate and Graduate Teacher Preparation Programs, Graduate Guidance Counseling Program and Graduate Educational Leadership and Management Programs.

For more detailed information about educational licensure, contact the Office of the Associate Dean of Education at 978-665-3239 or visit their web site at [www.fsc.edu/edcert](http://www.fsc.edu/edcert).

# Admissions

## Application Requirements

To apply for study in the Graduate Program applicants are required to submit:

- A completed application for admission (available from the Admissions Office or the Graduate Office)
- An official transcript of a Bachelor's degree from an accredited College or University with a 2.8 or better GPA on a 4.0 scale: All transcripts must be sent directly from the institution to the Admissions Office. No hand-carried transcripts will be accepted. Transcripts must verify that a baccalaureate program, including comprehensive examinations, was completed.
- An official report of the Miller Analogies Test Score, or the Graduate Record Examination (GRE), or GMAT score for Master of Business Administration Degree candidates. Test scores over five years old will not be accepted.
- All official transcripts for graduate level course work to be considered as transfer
- Three letters of recommendation from individuals under whom the applicant has studied and/or under whose immediate supervision he/she has worked in a professional capacity; and/or from others who are in a position to offer a pertinent appraisal of academic and interpersonal skills, ability, and potential. Applicants are asked to use the Letter of Recommendation forms provided with the Graduate Application. All letters of recommendation should be mailed directly to the Admissions Office by the individual making the referral. Hand-carried letters will not be accepted.
- \$25.00 application fee (\$50.00 for international students)
- Professional resume
- Applicants to graduate initial licensure teacher preparation programs must successfully complete the literacy and communication subtests of the Massachusetts Tests for Educator Licensure (MTEL) and submit passing scores as part of their application. In addition, students must successfully pass the appropriate content area exam(s) of the MTEL prior to student teaching. For the most current information regarding licensure requirements for teacher preparation programs, contact the Teacher Certification Office at 978-665-3239.
- Additional program-specific degree requirements are listed with program descriptions in this publication

The application, fee, and other requested materials should be sent to:

Office of Admissions  
Fitchburg State College  
160 Pearl Street  
Fitchburg, MA 01420-2697

## Additional Application Requirements for International Students

Applicants who do not possess a permanent visa with an Alien Registration number must submit the following paperwork in order to be considered for admission to Fitchburg State College:

- 1 Applicants must take the Test of English as a Foreign Language (TOEFL) if their native language is not English. A Student must receive a minimum score of 550. To request an application write to: TOEFL, Box 899, Princeton, NJ, 08540 U.S.A. The college may also request additional information regarding the applicant's ability to converse in English.
- 2 An official bank statement must be provided from a bank showing that sufficient funds will be available for one academic year. The total expense for graduate study for fall and spring semester is \$10,850.00 (this includes tuition and fees, living expenses and miscellaneous expenses).
  - The bank statement must show the amount available in U.S. dollars.
  - The statement must show when the account was opened.
  - The statement must show the bank's official seal and must be notarized and sent directly to the Graduate Admissions Office.
- 3 Also, if the student will have a financial sponsor, the college must receive a notarized letter of support stating the sponsor will be financially responsible for the student while the student is attending Fitchburg State College. This letter must be mailed directly to the Graduate Admissions Office. Please note that no federal or state financial aid is available to students with F or J visas.
- 4 If the applicant is already in the United States, he/she must submit copies of the following:
  - I-94 card
  - Passport
  - Visa Stamp
  - Copies of all past I-20/ or IAP-66
- 5 If the student is transferring from another university or college in the United States, a Transfer Recommendation Form must be completed. You may also request this form from the International Education Office.

### **Application Deadlines for International Students**

Spring Admission: October 1<sup>st</sup>

Fall Admission: May 1<sup>st</sup>

## Admissions Procedures

Once all application materials have been received by the Admissions Office, the appropriate Departmental committee reviews an applicant's qualifications and makes the decision. The Dean of Graduate Studies transmits its decision to the student. The admission process is completed when the Dean concurs with the program's decision and approves or denies the applicant's admission. While admission decisions are prompted by a completed application, the admissions process and its outcome are based on academic department criteria.

### Transfer of Credit

The Graduate Office accepts a maximum of 6 semester hours in transfer credits from regionally accredited graduate schools. The M.S. in Criminal Justice Program allows a maximum of 12 semester hours to be considered for transfer. An additional 6 semester hours of Fitchburg State College graduate credits may be transferred into a graduate program. All requests for transfer credit must be approved by the Graduate Program Chair. No more than 6 semester hours of course work at the 6000 level may be considered. Transfer credit requests are acted upon when a student is accepted as fully matriculated.

The transfer of credits must be approved by the student's Academic Advisor and by the Dean (forms are available in the Graduate Office) and meet the following criteria:

- A grade of B (3.0) or better; pass/fail grades are not transferrable
- Courses accepted in transfer must carry graduate level credit
- Courses must be relevant to degree specialization
- Transferred courses are only valid if taken within six years of the date of graduation from a matriculant's graduate program
- Courses previously counted toward a graduate degree or CAGS from FSC or another accredited institution do not qualify for transfer towards an FSC Master's or CAGS Program

Transferred courses are not included in cumulative GPA.

No requests for transfer credits are accepted during the Spring Semester prior to a student's anticipated graduation.

## Residency Requirement

Students acquiring credit towards a Master's degree off-campus in affiliated programs must take at least 6 credits of core course requirements from Fitchburg State College Residency Faculty.

Fitchburg State College Residency Faculty are:

- Graduate Faculty
- Associate Graduate Faculty or,
- Adjunct Graduate Faculty designated "Residency Faculty" by the Graduate Council.

Graduate Program Chairs overseeing affiliating programs are responsible for ensuring that their students are provided the opportunity to meet the residency requirement by staffing appropriate core courses with Residency Faculty.

## Academic Policies and Procedures

### Advisors and Plan of Study

#### Graduate Advisors

Every student is assigned an advisor from the student's area of specialization. The advisor:

- Provides a vital link between the students, faculty, and the Dean
- Assists the degree candidate in developing a plan of study
- Approves all courses, including electives, accepted in the student's degree programs

All variances from the approved plan of study must be filed with the Registrar's Office. Plan of study forms are available in the Graduate Office or Registrar's Office.

### Course Registration

Students must register for courses within the curriculum requirements as set in the College Catalog of the year of their matriculation. However, it is the right of the College to alter the requirements to meet statutory, educational, or professional standards.

For regularly scheduled courses, students must register before the second class meeting. Early registration is recommended for all matriculated graduate students and graduate applicants in order to secure seats in the courses needed to proceed in degree programs. The regular registration period ends two weeks prior to the start of the semester, with "late registration" and late charges commencing thereafter. Please refer to the current semester course bulletin for specific dates.

### Student Health Insurance

Every graduate student registered for 6.75 or more credits is required by law to purchase health insurance. Students must purchase the school sponsored health plan or show proof of comparable coverage in an alternate health plan in order to enroll. For more details, see Student Health Services section in this catalog.

### Special Students

A special student holds a baccalaureate degree or higher and may take classes in most graduate or certificate programs, but is not matriculated as a degree candidate. Additional policies applying to special students are as follows:

- Special Students are allowed to register for a maximum of 6 credits in one discipline.
- To register for courses beyond 6 semester hours Special Students must matriculate or obtain written approval from the appropriate graduate program chair.
- Graduate courses at the 6000 level are exempt from this policy.
- Credit from courses may apply to a degree only if prerequisites for the program are met, the student is matriculated, and approval is received from the Program chair or advisor.

### Waiver of Course Prerequisites

Waivers of course prerequisites, when authorized, are not to be construed either as waivers of program matriculation requirements or as waivers of credit hours required to complete a program.

## Retention in a Graduate Degree Program

To maintain enrollment in a graduate program, students must:

- Receive a 2.8 average in undergraduate prerequisite course work as designated by individual graduate programs. Students must receive a 2.0 in all other undergraduate prerequisite course work outside of their major. Undergraduate prerequisite courses must be finished before graduate coursework can begin.
- Maintain a cumulative average of 3.0 in graduate coursework counted toward the degree or certificate.
- Adhere to the ethical/professional standards as defined by the profession and/or the academic department.

### ***Probation and Academic Dismissal***

- A student will be placed on probation if in any semester the student's graduate GPA falls between a 3.0 and a 2.75 cumulative average.

A student will be dismissed from the program:

- If the graduate cumulative average falls below 2.75.
- If the graduate cumulative average of a student on probation remains between 3.0 and 2.75 for two consecutive enrollment periods.
- If the student has accumulated more than 6 semester hours of graduate credit with a grade of 2.0 even though the graduate cumulative average remains 2.75 or higher.
- If the student has received a grade of 0.0.
- If the student's cumulative average in designated undergraduate prerequisite coursework falls below 2.8.
- If the student's cumulative average in undesignated undergraduate prerequisite coursework falls below 2.0.

## Course Load

The course load for a part-time graduate student is less than 9 credit hours in a given semester. These requirements preclude a greater load when a student has full-time employment. Any student registering for credit beyond this normal load must submit a written request seeking approval from the Dean prior to registering. Academic petition forms are available in the Graduate Office or from advisors.

The course load to be considered a full-time graduate student is a minimum of 9 credit hours in a given semester. Students who are registered for at least 6 credits in Thesis, Continuation of Thesis or Internship/Practicum are considered to have full-time status.

The course load for half-time status is 5 credit hours.

The course load for a full-time Graduate Assistant is 6 semester hours per fall and spring semester, which is considered full-time status.

The maximum course load for any student during winter session is 6 credit hours. The maximum course load for any student during the combined summer sessions is 12 credit hours.

## Continued Progress Toward Degree

Matriculated students who do not register for classes for a full academic year (fall, spring, and summer) must request a leave of absence by writing to the Dean. Without an approved request a student is dismissed from the degree program.

## Readmission to Degree Program

A student who has been dismissed from a program because of failure to request a leave of absence may reapply to the program.

A student who has been dismissed from a program for academic reasons may not register for further courses in that program at Fitchburg State College. After a minimum time period of one year, a student may apply to Fitchburg State College for readmission.

Readmission is contingent on the capability of the student to maintain at least a 3.0 GPA and on evidence that there are sufficient courses remaining in the student's program to achieve a 3.0 GPA.

The program/policies in effect at the time of readmission are those that the student must follow.

## Grade Substitution Policy

Students who have been dismissed from a graduate program on academic grounds and who are subsequently readmitted to a program may retake courses in which they have received a 2.0 or a 0.0 grade. If the class is repeated, the new grade will be substituted for the original grade in calculating the student's cumulative GPA. The original grade, however, will continue to appear on the transcript. Transfer courses cannot be used to substitute for courses in which a grade of 2.0 or a 0.0 has been obtained.

## Grading System

4.0	Superior
3.0 or 3.5	Good
2.0 or 2.5	Passing
0	Failure
W	Withdrew
IN	Incomplete
IP	In-Progress

### ***Incomplete Course***

An incomplete (IN) may be awarded with the recommendation of the instructor when the student has completed 80% of the coursework but cannot complete the rest due to illness or some other serious reason. The student must file a petition for an incomplete with the instructor prior to the last day of class. A student who has received an Incomplete in lieu of a course grade must make up the missing part or his/her coursework during the first four weeks of the following semester. Failure to do so will result in an automatic 0.0 for the course.

### ***In-Progress Course***

A grade of IP (In-Progress) may be awarded for thesis, practicum, internships, and clinical experience at the end of a given semester. Practicums and internships need to be completed within two semesters. The time limit for thesis is the six years allowed for the completion of a degree. If the thesis, internship and/or practicum are not completed within the allotted time then the IP grade will be changed to either an incomplete (IN) or a grade of 0.0.

## Withdrawal from Courses

Withdrawal from courses may be made prior to the eleventh class for regularly scheduled courses and prior to the twenty-sixth class hour for special scheduling or institute courses without academic penalty. Withdrawals may be initiated by phone by calling the Registrar's Office, or by visiting that office in the Sanders Administration Building. In either case, the student, the instructor, and the advisor must receive a confirming copy of the completed course withdrawal form.

Students who "withdraw" by simply not attending class, automatically receive a failing grade for the course.

See tuition and fees refund policy.

## Cancellation of Course

The college may cancel courses for insufficient enrollment or for other reasons deemed to be in the best interest of the college. Students who registered for a course which is canceled may transfer to another course or receive a full refund of tuition and fees.

## Course Changes

Changes to courses must be made before the second meeting. (Class meeting time defined as 2.5 hours) No change in credit is permitted after the second class meeting. After the start of the second class meeting, the dropping of a class will be considered a withdrawal.

## Audit

Students may enroll in courses on an audit (or non-credit) basis. The availability of seating in all classes is determined after all matriculated students, program applicants and credit-seeking students have registered. Permission of the instructor and the Dean is required prior to registration. Tuition and fees for audited courses are the same as those which apply to the courses when taken for academic credit. Students enrolled on an audit basis must have completed all applicable course prerequisites in order to have achieved the sufficient level of knowledge and expertise required by the course content. Students who elect the audit option may be required to complete course assignments, papers, presentations, etc. Final grades are not issued, however, courses audited will be so noted on the student's transcript. A change from credit to audit status, or from audit to credit status, must be made before the third class meeting of the course.

## Independent Study Credit Policy

Independent study allows degree candidates to step outside of course offerings and explore a specialized area of study in a challenging new environment. Students are encouraged to seek out independent study opportunities under the guidance and supervision of a professor in whose specialization they wish to study. A maximum of six independent study credits is allowed in a master's degree program. Vouchers, graduate assistant tuition waivers, tuition remissions, and veterans' tuition benefits may not be applied to independent study. Before embarking on an independent study applicants must receive approval from the instructor, their advisor, and the Dean of Graduate Studies. Only on-campus faculty supervises independent studies. Independent study should not be substituted for any course listed in the current catalog.

## Thesis

Several of the graduate programs at Fitchburg State College include a thesis requirement or thesis option. Students completing a thesis must adhere to the policies and standards set forth in the thesis guidelines. Thesis guidelines can be obtained through the Office of Graduate Studies or the student's academic department.

## Second Master's Degree

Students holding a Master's degree from Fitchburg State College are generally not encouraged to enroll in a second Master's degree program but may want to consider a Certificate of Advanced Graduate Study (CAGS) program. To matriculate in a second Master's degree program the student must petition the Graduate Council for its approval.

## Graduation Requirements

Students must:

- Maintain a minimum cumulative GPA of 3.0 in the degree program with no graduate coursework below a 2.0
- Successfully complete all program requirements
- Submit completed petitions/waivers for review to the Office of Graduate Studies no later than the eighth week of the spring semester prior to anticipated graduation
- Students who are writing a thesis should refer to the Thesis guidelines for specific requirements
- File an application for graduation with the Registrar's Office by January 1st of the year of anticipated graduation

## Time Limits

Master's degree programs must be completed within six years of the date of the student's first course in the program.

## Petition for Review

Students must request a review of their folder prior to the semester in which they will complete requirements for the degree. Application for Graduation Forms must be submitted to the Registrar's Office prior to January 1 to qualify for May graduation. Obtain forms from the Graduate Office or the Registrar's Office.

## Academic Dishonesty Policy

Academic dishonesty in all its forms, including cheating, fabrication, plagiarism, and the facilitating of academic dishonesty by aiding and abetting any of the aforementioned is not tolerated at Fitchburg State College. Violators will be subject to FSC's Academic Affairs established judicial process.

## Student Complaints Policy

### **Right to Confer**

- A student who is dissatisfied with a grade or any aspect of instruction has a right to confer with the instructor.
- A student who is dissatisfied with a grade, any aspect of instruction, or academic decision of a graduate program bearing on her or his status in a graduate program, has a right to confer with her or his advisor.
- A student who is dissatisfied with a grade, any aspect of instruction, or academic decision of a graduate program bearing on her or his status in a graduate program, has a right to confer with the program's Graduate Program Chair and Department Chair.
- A student seeking advice on how to proceed with a complaint about a grade, any aspect of instruction, or academic decision of a graduate program bearing on her or his status in a graduate program, has a right to confer with the Dean of Graduate Studies Office. International students also have a right to confer with the Office of International Education.

### **Department/Program Responsibilities**

- Departments/Programs will make their policies and procedures for mediating/arbitrating student complaints readily available to students as a part of a Department/Program handbook, or, as a separate document.
- Entering matriculated students will be apprised of the Department's/Program's policies and procedures for mediating/arbitrating student complaints as a part of their orientation to the program.
- Each Department/Program will file its policies and procedures for mediating/arbitrating student complaints with the Office of the Dean.
- Every effort should be made by the Graduate Program Chair, in accordance with Department/Program policies and procedures, to informally mediate student complaints concerning academic matters.
- If informal mediation cannot be achieved, the complaint will be formally arbitrated at the Department/Program level in accordance with its policies and procedures for doing so. Usually, this will involve the participation of the Department's Graduate Committee.
- The burden of proof rests with the student.
- Departmental/Program decisions may be appealed on procedural grounds when bias is alleged.

### **Dean of Graduate Studies Responsibilities**

- A student alleging bias may contest a Department's/Program's decision on procedural grounds by filing a formal appeal in writing to the Dean.
- In a timely manner, the Office of the Dean will conduct an investigation and will forward its findings, and the student's written appeal, to the Graduate Council.
- The Graduate Council will consider the appeal at its next available meeting.
- Within two weeks of the meeting, the Chair of the Graduate Council will forward a written recommendation to the Dean.
- The Dean, then, will communicate a decision in writing to the student, the Graduate Council, and the Graduate Program Chair.
- The final decision is made by the Dean.
- If it is decided that the Department/Program failed to appropriately follow its procedures for mediating/arbitrating student complaints, the case will be reheard within the Department with the Dean serving *ex officio* as a non-voting member of the committee.
- If it is decided that the Department/Program was unbiased—that it appropriately followed its procedures for mediating/arbitrating student complaints—the Department's/Program's decision will stand.

### **Non-Academic Student Complaints**

- When sexual harassment, racial discrimination or other prohibited/illegal behaviors are alleged by a student to have occurred, the student should address her or his complaint to the Director of Human Resources/Affirmative Action.

## Educational Certification Programs

The Fitchburg State College Graduate Division offers courses which may be used for certification purposes in several different areas, including Special Education, Counseling, School Administration, etc. Certification is the function of the Commonwealth's Bureau of Certification, not the college.

Students are advised to address any question regarding certification to:

Bureau of Teacher Preparation Certification and Placement  
350 Main Street  
Malden, Massachusetts 02148-5023  
781-338-3000  
[www.doe.mass.edu](http://www.doe.mass.edu)

## Transcripts

Transcripts are prepared upon submission of a transcript request form. Please include your social security number, name, address, dates of attendance, and degree area. Transcripts are free of charge.

To obtain a transcript write to:

Office of the Registrar  
Fitchburg State College  
160 Pearl Street  
Fitchburg, MA 01420-2697

# Graduate Programs

Fitchburg State's Office of Graduate and Continuing Education schedules both undergraduate and graduate-level courses. Most programs are offered in the evenings; some may be offered on weekends or during the days in summer or winter session.

The Office of Graduate Studies offers programs of study leading to the following Graduate degrees:

## Certificate of Advanced Graduate Study (CAGS)

Educational Leadership and Management

Higher Education Administration

School Principal

Supervisor/Director

Technology Leader

Interdisciplinary Studies

Teacher Leadership

## Master's Degrees

### Master of Arts

Biology

English

History

### Master of Arts in Teaching \*\*

Biology\*

Earth Science\* (Not accepting new students)

English\*

History\*

Mathematics\*

### Master of Business Administration

Accounting

Human Resources Management

Management

### Master of Education \*\*

Arts Education

Educational Leadership and Management\*

Early Childhood Education\*

Elementary Education\*

General Studies

Middle School Education\*

Occupational Education

Science Education

Secondary Education

Special Education\*

Teacher of Students with Severe Disabilities

Teacher of Students with Moderate Disabilities

Special Education: Guided Study

Technology Education\*

### Master of Science

Communications/Media

Computer Science

Counseling

Marriage and Family Therapy

Mental Health Counseling

School Guidance Counseling (PreK-9), (5-12)\*\*

Criminal Justice

Nursing (Forensic)

## Certificate Programs

Adolescent and Family Therapy

Child Protective Services

Communications/Media

Early Intervention

Educational Technology

Fine Arts Director Program

Forensic Case Work

Forensic Nursing

Professional Mentoring for Teachers

School to Career Specialist

Substance Abuse Services

\* Options include a core curriculum which leads to licensure in the field.

\*\*The professional education programs at Fitchburg State College are under the broad coordination of an Education Unit that includes licensure and degree programs in teacher preparation, guidance counseling and educational administration.

Numerous partnerships with schools, educational organizations and the private sector are a hallmark of the College's commitment to supporting the preparation of school professionals. For more detailed information about the educator licensure programs and related partnerships, contact the Office of Teacher Certification at 978-665-3239 or visit their web site at [www.fsc.edu/edcert](http://www.fsc.edu/edcert).

# Certificate of Advanced Graduate Study (CAGS)

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## General Philosophy

Fitchburg State College's CAGS programs are designed to meet well-defined career needs of professionals who have earned an appropriate Master's degree and who wish to attain greater competency in a combination of areas of study within one of the major CAGS fields offered.

## General Description of Program

Each student's CAGS program is planned under the direction of an advisor and is built on the academic background, professional position, and career goals of the student. CAGS programs consist of an integrated core curriculum, supervised professional practice, an Internship, and elective courses.

## General Program of Study

Upon acceptance into the program, the student's plan of study is developed with and approved by an advisor, who works with the student over the course of study. A minimum of thirty approved graduate credits is required to complete the CAGS with the following restrictions:

- CAGS courses may not repeat work previously accomplished by the student in other graduate degree study
- CAGS credits must be earned in Graduate-level courses

Details regarding the CAGS curricula, including information about required and elective courses, may be found in the specific CAGS program descriptions which follow.

## CAGS—Interdisciplinary Studies

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### Graduate Program Chair

*Harry Semerjian, EdD*

### Graduate Committee

*Ronald P. Colbert, EdD*

*Rosemarie Giovino, EdD*

*Anita Hotchkiss, PhD*

*Bonnie House, MFA*

*Nancy Kelly, PhD*

*Nadimpalli Mahadev, PhD*

*Edward Martens, PhD*

*Donald Schmidt, PhD*

*Esmail Valanejad, PhD*

*Susan Williams, PhD*

### Program Objectives

The CAGS Program in Interdisciplinary Studies provides the opportunity for students who have completed a Master's degree to continue advanced degree study in two disciplines of their choice.

### Program Description

The program allows participants to step out of the confines of their Master's degree and create a program of study based on their interests. This CAGS program invites the student to develop his/her ideas and hypotheses and to acquire new understanding and knowledge in such areas as developing critical thinking skills, improving interpersonal relationships, and employing reflection for intellectual growth. By broadening the individual's background the candidate becomes an effective leader, who has the knowledge and skills to influence institutional reform.

### Admissions Standards and Criteria

To apply for enrollment in the CAGS in Interdisciplinary Studies, a student must submit documents as outlined in the Graduate Admissions section as well as:

- Documentation of a Master's degree from a regionally accredited institution
- MAT/GRE/GMAT exams not required

## Program Requirements

Each student's CAGS program is planned and approved under the direction of an advisor and faculty member/professional from both disciplines chosen by the student. The CAGS consists of an integrated core curriculum, supervised professional practice, and/or an Internship and elective courses.

The integrated core curriculum consists of:

- Fifteen advanced graduate credits in two declared disciplines
- A graduate Internship demonstrating specified competencies in the two fields or graduate thesis related to the same
- A structured seminar taken while writing thesis or completing Internship

The student must complete 36 semester hours, which includes 6 semester hours of core course work and 15 semester hours in each of the two academic disciplines.

At the end of formal academic study, the student shall submit a proposal regarding the graduate thesis or Internship. The committee then meets to review the proposal and its criteria for evaluation implementation.

### Potential Combined Fields of Study

Arts, Computer Science, Education, Educational Leadership, English, History, Occupational Education, Professional Staff Development, Psychology, Science, Special Education, and/or Women's Studies.\*

\* Students are not limited to the field of study listed above.

## Program of Study

### Required Core Curriculum

		<i>Fifteen advanced graduate credits in each declared discipline</i>	<i>30 S.H.</i>
IDIS	9400	<i>Seminar and Internship in Interdisciplinary Studies</i> <b>or</b>	<i>6 S.H.</i>
IDIS	9500	<i>Seminar and Graduate Thesis</i>	<i>6 S.H.</i>
		<b>Total for Certificate</b>	<b>36 S.H.</b>

# CAGS—Educational Leadership and Management

### Graduate Program Chairs

*Michael Fiorentino, Jr., EdD*  
*Daniel Nomishan, EdD*

### Graduate Committee

*George Bohrer, PhD*  
*Laurie DeRosa, EdD*  
*Charles Hetzel, PhD*

## Program Objectives

The CAGS in Educational Leadership and Management Program prepares the student to meet the standards of Massachusetts Educator Licensure as a Supervisor/Director (P-12) or School Principal (P-6, 5-8, 9-12).

## About the Program

The CAGS Program is an interdepartmental program. Within this spirit, relationships between faculty members in education departments and other programs across the college have been allied.

## Program Description

The CAGS program in Educational Leadership and Management is designed for students with the desire to:

- Develop competencies in managerial skills related to political arenas, personnel, fiscal affairs, acquisition of material resources, diverse publics and pupil populations, and organizational change
- Strengthen, deepen, and expand the knowledge base in the field of leadership and management in order to anticipate and to solve problems inherent in the educational system
- Demonstrate through course work and field-based experiences the knowledge, skills, and attitudes that are required to lead and manage an educational enterprise effectively and efficiently

## The Program offers preparation for two Massachusetts Educator Licenses

### Principal Licensure (P-6, 5-8, 9-12)

### Supervisor/Director-Licensure (P-12)

There are two licensure options in this program. There is one option for students who wish to seek school principal licensure and a second option for students who wish to supervise or direct Art and/or Music programs in school systems. Successful completion of the degree and all requisite licensure requirements qualifies degree recipients for endorsement as a principal or supervisor/director.

### Non-Licensure Candidates

Students who do not wish to pursue licensure plan a program of study that includes courses from each of the four competency areas and develop a thirty-nine semester hour program that meets their professional and personal goals. Such a program should be planned with and approved by the student's advisor. Applicants to the non-licensure track do not need to submit scores from the Massachusetts Tests for Educator Licensure (MTEL).

## Admissions Standards and Criteria

To apply for enrollment in the CAGS in Educational Leadership and Management program, candidates must submit documents as outlined in the Graduate Admission section as well as:

- A Master's degree from a regionally accredited institution
- Minimum of three years teaching experience
- MAT/GRE/GMAT exams are not required
- Applicants must provide documentation of a valid teacher certification/license at the standard/professional level.
- Applicants to Option A and B must successfully complete the literacy and communication subtests of the Massachusetts Tests for Educator Licensure (MTEL) and submit passing scores as part of their application.

For more information regarding licensure requirements for teacher preparation programs, contact the Teacher Certification Office at 978-665-3239 or visit their web site at [www.fsc.edu/edcert](http://www.fsc.edu/edcert).

## Program Requirements

A minimum of 39 graduate credits is required to complete the CAGS program. Students plan a program of study with their advisor that is based on professional interests and intent. The program includes courses from each of the four competency areas. The courses in these areas are multi-disciplined and cross departmental lines. In addition a supervised practicum and internship is required.

During the practicum/internship, the student becomes involved in a field-based educational administrative experience. Requirements include:

- Practicum is 300 clock hours within one year;
- Internship is 300 clock hours within one year;
- Students seeking professional licensure may complete a 400 clock hour clinical experience;
- Optional thesis (EDLM 9500): A thesis topic is chosen in consultation with the student's advisor early in the last year of study, or not later than the completion of 24 semester hours of study. A student must successfully defend his/her thesis to a committee as described in the handbook of thesis guidelines;
- Comprehensive Exam covering the basic principles and concepts inherent in the field of educational leadership and management;

## Program of Study

### Core Courses

EDLM	8005	Foundations of Educational Administration	3 S.H.
EDLM	8050	Seminar: Research in Educational Leadership <b>or</b>	
EDLM	91XX	Practicum and Internship in Leadership and Management	6 S.H.
EDLM	9600	The Contemporary Educational Leader (Capstone)	3 S.H.
		Subtotal of core courses	12 S.H.

**Non-Licensure Candidates** plan a program of study including courses from each competency area.

### Competency Areas

#### Political and Fiscal Affairs

EDLM	7005	Politics of Education	3 S.H.
EDLM	7010	Physical Plants and Transportation	3 S.H.
EDLM	7040	Collective Bargaining in Education	3 S.H.
EDLM	8000	Community Relations	3 S.H.
EDLM	8020	Law for the Educator	3 S.H.
EDLM	8030	Public School Finance	3 S.H.
EDLM	9015	Public Relations Tools for Leaders	3 S.H.
MGMT	9320	Labor Management	3 S.H.

#### Collegial Leadership and Consultation

EDLM	7020	Organizational Theory and Educational Planning	3 S.H.
EDLM	7030	Introduction to Systems Approaches in Education	3 S.H.
EDLM	8006	Principles of Success for Practicing Administrators: Putting Plans into Action	3 S.H.
EDLM	8010	Human Resources and Personnel Administration	3 S.H.
EDLM	9000	The Principal: Organization and Administration of Elementary, Middle, and Secondary School	3 S.H.
EDLM	9010	Cases and Concepts in Educational Administration	3 S.H.
EDLM	9020	Collegial Supervision	3 S.H.
EDLM	9100	Dynamics of Planned Change	3 S.H.
PSY	8200	Principles of Guidance and Counseling	3 S.H.

#### Technology for Educators

EDLM	7000	Computer Application in Education	3 S.H.
EDLM	7510	Applying Computer Technology in Education	3 S.H.
ETEC	7800	Using the Computer as a Tool for Thinking Skills	3 S.H.
ETEC	8600	Computers and Writing	3 S.H.
ETEC	9100	Seminar in Educational Technology	3 S.H.
ENGL	8073	Computers and Writing	3 S.H.
CRAR	8146	Arts Technology in the Classroom	3 S.H.

### Diverse Publics and Populations

EDLM	7520	Planning Professional Development Programs	3 S.H.
EDLM	7530	Schools, Family, Student Partnerships in Education	3 S.H.
EDLM	7600	Managing Diversity	3 S.H.
EDLM	8040	Curriculum Leadership and Evaluation	3 S.H.
EDLM	8800	Administration of Special Education Programs	3 S.H.
SPED	7000	Survey of Special Education	3 S.H.
IDIS	9065	Women in Contemporary Society	3 S.H.
CRAR	8145	Celebrating Diversity through the Arts	3 S.H.
PSY	8100	Child Abuse and Neglect	3 S.H.

### Option A—School Principal Core (P-6, 5-8, 9-12) Licensure Supervisor/Director (P-12) Licensure

#### Required Courses

EDLM	8000	Community Relations	3 S.H.
EDLM	8010	Human Resources and Personal Administration	3 S.H.
EDLM	8020	Law for the Educator	3 S.H.
EDLM	8030	Public School Finance	3 S.H.
EDLM	8040	Curriculum Leadership and Evaluation	3 S.H.
EDLM	8050	Seminar: Research in Educational Leadership	3 S.H.
EDLM	9000	The Principal: Organization and Administration of the Elementary, Middle, and Secondary School	3 S.H.
EDLM	9020	Collegial Supervision	3 S.H.
EDLM	9100	Dynamics of Planned Change	3 S.H.
EDLM	9600	The Contemporary Educational Leader (Capstone)	3 S.H.
EDLM	9110	Practicum/Internship in Leadership Management <b>or</b>	6 S.H.
EDLM	9120	<b>or</b>	
EDLM	9130	<b>or</b>	
EDLM	9140		

**Total for CAGS 39 S.H.**

### Option B—Supervisor/Director (P-12) Licensure

#### Required Courses

EDLM	8000	Community Relations	3 S.H.
EDLM	8010	Human Resources and Personnel Administration	3 S.H.
EDLM	8020	Law for the Educator	3 S.H.
EDLM	8030	Public School Finance	3 S.H.
EDLM	9020	Collegial Supervision	3 S.H.
EDLM	9100	Dynamics of Planned Change	3 S.H.
CRAR	9051	Supervising, Directing and Leading in Arts Ed. I	3 S.H.
CRAR	9052	Supervising, Directing and Leading in Arts Ed. II	3 S.H.
CRAR	9060	Creative Arts Research	3 S.H.
CRAR	9070	Creative Arts Curriculum Development and Applications	3 S.H.
EDLM	9500	Free Elective or Thesis	3 S.H.
EDLM	9210	Practicum/Internship in Leadership Management	6 S.H.

**Total for CAGS 39 S.H.**

**Additional Clinical experience required for Professional Licensure 6 S.H.**

## CAGS—Educational Leadership and Management: Higher Education Administration

### Graduate Program Chairs

Michael Fiorentino, Jr. EdD

Daniel Nomishan, EdD

### Graduate Committee

George Bohrer, PhD

Laurie DeRosa, EdD

Charles Hetzel, PhD

### Program Objectives

The key objectives of the CAGS in Educational Leadership and Management: Higher Education Administration Program are to prepare and develop students with the necessary skills and competencies to administer programs in universities, colleges, and junior colleges; to teach and conduct research in educational environments of all types; and to provide leaders for higher educational institutions and its related professions.

### Program Description

The CAGS program in Educational Leadership and Management: Higher Education Administration is designed for students with the desire to:

- Assume the role of college administrators and policy makers, admissions directors, student personnel administrators, deans, directors of institutional advancement, fund raising at junior colleges, senior colleges, and universities.
- Pursue executive positions in cultural, educational, business, government, public policy, and human service organizations and agencies.
- Demonstrate through course work and field-based experiences the knowledge, skills, and attitudes that are required to lead and manage an educational enterprise effectively and efficiently.

### Cohorts and Careers

The CAGS program is deliberately limited in enrollment and to students with interests related to the program areas of concentration to assure attention to the student's professional needs. Students come from varied academic backgrounds and institutional types and usually have some experience working in a higher education setting. Each entering cohort of students share some common courses and experiences.

Most students enter administrative, analytic or policy positions. Their initial work usually is in positions reflecting their areas of concentration in settings such as:

- University, college or community college administration;
- Public policy organizations and agencies in postsecondary education;
- Postsecondary continuing education in higher educational institutions, professional association, business or government.

## Admissions Standards and Criteria

To apply for enrollment in the CAGS in Educational Leadership and Management program, candidates must submit documents as outlined in the Graduate Admissions section as well as:

Documentation of Master's degree from a regionally accredited institution

MAT/GRE/GMAT exams not required

## Program Requirements

A minimum of 36 graduate credits is required to complete the CAGS program. The program curriculum consists of:

Three Transition Courses from the general Educational Leadership and Management track

A core of tightly-focused Concentration Courses intended to increase the student's knowledge about and understanding of the interrelated, societal, institutional, and personal dimensions, of higher and postsecondary education.

An Internship of 300 clock hours to be completed within one year, allows each student to link their academic work to their own professional development needs.

## Program of Study

Transition Courses

The following are the basic courses required of CAGS students in the Educational Leadership and Management program:

<i>EDLM 8010</i>	<i>Human Resources</i>	<i>3 S.H.</i>
<i>EDLM 8020</i>	<i>Law for the Educator</i>	<i>3 S.H.</i>
<i>EDLM 8050</i>	<i>Seminar: Research in Educational Leadership</i>	<i>3 S.H.</i>

Concentration Courses

<i>EDLM 9026</i>	<i>History of Higher Education</i>	<i>3 S.H.</i>
<i>EDLM 9030</i>	<i>Leadership Theory</i>	<i>3 S.H.</i>
<i>EDLM 9040</i>	<i>Organizational Issues</i>	<i>3 S.H.</i>
<i>EDLM 9050</i>	<i>College and University Teaching</i>	<i>3 S.H.</i>
<i>EDLM 9060</i>	<i>Social Context</i>	<i>3 S.H.</i>
<i>EDLM 9070</i>	<i>Strategic Planning in Higher Education</i>	<i>3 S.H.</i>
<i>EDLM 9080</i>	<i>Practicum in Higher Education Administration</i>	<i>6 S.H.</i>
	<i>Elective Course</i>	<i>3 S.H.</i>
	<b>Total for CAGS</b>	<b>36 S.H.</b>

# CAGS—Educational Leadership and Management: Technology Leader

## Graduate Program Chairs

*Michael Fiorentino, Jr. EdD*

*Daniel Nomishan, EdD*

## Graduate Committee

*George Bohrer, PhD*

*Laurie DeRosa, EdD*

*Charles Hetzel, PhD*

## Program Objectives

The CAGS in Educational Leadership and Management: Technology Leader Program is a non-licensure program designed to provide future leaders in technology for school systems. The technology leader degree track provides an in-depth examination of the implications of the technology revolution that has the potential to transform teaching and learning in our schools. Special emphasis is placed on the key role that technology leaders have in initiating the process of change, technology integration and faculty development. The track includes a variety of opportunity for hands-on technology-based experiences and includes critical core courses in educational leadership and management. ***This track is primarily offered off-campus through a collaborative partnership with the Merrimack Education Center in Chelmsford.***

## Program Description

The CAGS program in Educational Leadership and Management is designed for students with the desire to:

- Gain competence in the use of software applications as productivity and learning tools
- Develop perspective on their daily work by examining the theory and practice of education
- Create models that incorporate the use of technology to support effective teaching and curriculum development
- Explore the use of instructional technology to address contemporary educational issues
- Understand the implication of “digital literacy” for teaching and learning
- Plan for building and maintaining technology infrastructure within a school system.

## Admissions Standards and Criteria

To apply for enrollment in the CAGS in Educational Leadership and Management: Technology Leader Program, candidates must submit documents as outlined in the Graduate Admissions section as well as:

A Master's degree from an accredited institution

MAT/GRE/GMAT exams not required

The MTEL exam is not required for the Technology Leader track of the CAGS in Educational Leadership and Management.

## Program Requirements

A minimum of 36 graduate credits is required to complete the CAGS program. The program curriculum consists of:

### Program of Study

#### Required Core Courses

EDLM	8005	Foundations of Educational Administration	3 S.H.
EDLM	8050	Seminar: Research in Educational Leadership	3 S.H.
EDLM	9100	Dynamics of Planned Change	3 S.H.
EDLM	9020	College Supervision	3 S.H.
EDLM	91XX	Practicum/Internship	6 S.H.
		<b>Subtotal</b>	<b>18 S.H.</b>

#### Required Technology Courses

ETEC	9200	Project in Educational Technology	3 S.H.
EDLM	9002	Managing Educational Technology Infrastructure	3 S.H.
		<b>Subtotal</b>	<b>6 S.H.</b>

#### Choose Four Electives in Consultation with Advisor

##### (Samples of Electives)

ETEC	8700	Creating Educational Web Sites	3 S.H.
ETEC	7600	Impact of Technology in Education	3 S.H.
ETEC	7700	A Graphics Approach to Technology	3 S.H.
ETEC	7800	Using the Computer as a Research Tool	3 S.H.
ETEC	8600	Computer and Writing	3 S.H.
		<b>Subtotal</b>	<b>12 S.H.</b>
		<b>Total for CAGS</b>	<b>36 S.H.</b>

## CAGS—Teacher Leadership

### Graduate Program Chair

TBA

### Program Objectives

The CAGS program in Teacher Leadership is designed to provide individuals who are desirous of playing a teacher leadership role in partnership with colleagues with the necessary collegial orientation and skills to work effectively with administrators, colleagues, family and community members to improve curriculum and instruction. Specifically, the program is designed for teachers who want to remain in the classroom, and yet, want to become competent in affecting the educational process for which they share responsibility.

### Program Description

CAGS students in Teacher Leadership acquire an orientation of collegiality and support while becoming competent in the areas of communication, consultation, change facilitation, leadership, reflection, problem solving, and evaluation. They prepare to accept the role of instructional leader and mentor as they engage in research based practices. The course of study allows students to:

- contribute to the creation of an educational environment that fosters the development of shared leadership skills
- foster an educational environment for the development of effective teaching and learning skills by assisting fellow teachers in applying the pedagogy of effective teaching
- foster the development of children and young adults' critical thinking as a fundamental goal of instruction
- connect teaching, learning and assessment in a meaningful way
- develop values, skills and strategies for teaching children and young adults with diverse backgrounds and strengths
- Engage and encourage reflective teaching and self analysis in others
- employ exemplary coaching, mentoring supervisory competencies
- assimilate research-based practices into their existing repertoires and facilitate their inclusion in others
- acquire a repertoire of supervisory and observational skills that will support teachers in the use of varying styles of teaching for improving instruction
- create and disseminate useful resources for pre-service and in-service teachers

## Admissions Standards and Criteria

To apply for enrollment in the CAGS in Consultation and Peer Leadership, a student must submit documents as outlined in the Graduate Admissions section as well as:

- Documentation of a Master's degree from a regionally accredited institution
- An appropriate teaching certificate
- MAT/GRE/GMAT exams not required

## Program Requirements

The Certificate of Advanced Graduate Study in Consultation and Peer Leadership requires a total of 36 semester hours as follows:

- Twenty-seven credit hours required course work in Education and Psychology
- Nine credit hours as electives

## Program of Study

### Required Courses

EDUC/ SPED	9010 <i>The Adult Learner</i>	3 S.H.
PSY	7020 <i>Group Dynamics</i>	3 S.H.
EDLM	9020 <i>Collegial Supervision</i>	3 S.H.
EDLM	9100 <i>Dynamics of Planned Change</i>	3 S.H.
SPED	9200 <i>Consultation Strategies</i>	3 S.H.
EDUC/ SPED	9250 <i>Educational Strategies</i>	6 S.H.
EDUC/ SPED	9350 <i>Internship and Reflective Analysis Seminar</i>	6 S.H.
	<i>Electives</i>	9 S.H.
	<b>Total for Certificate</b>	<b>36 S.H.</b>

# Master of Arts/Master of Arts in Teaching

## Master of Arts in Biology Master of Arts in Teaching Biology

**Graduate Program Chair**  
Christopher Cratsley, PhD

**Graduate Committee**  
George Babich, PhD  
Margaret Hoey, PhD  
Howard Thomas, PhD  
Graduate Student Representative

### Program Objectives

The Master of Arts (MA) in Biology is designed to prepare the student for a career in Biology, Environmental Science, or for advanced study in these fields. The Master of Arts in Teaching (MAT) Biology prepares the candidate for Professional Teacher Licensure at the secondary level.

### Program Description

The MA program in Biology offers a flexible program of study with both a thesis and non-thesis track. The program is designed to provide the best scientific experience and the most comprehensive exposure to biological literature available.

Specifically, the MA program in Biology aims to:

- Promote graduate-level scholarship and the development of a strong scientific philosophy in the biological sciences
- Apply sound, scientific thinking to analyze biological issues in society and new discoveries in science
- Demonstrate an understanding of how science, ethics, and technology are related
- Develop strong critical thinking skills through the use of experimental investigation
- Develop various skills needed for employment within the scientific-technical community
- Demonstrate individual research abilities and communication skills through a thesis program or an independent research project

The Master of Arts in Teaching Biology program combines a core curriculum of both Biology and Education to give graduates a strong background in Biology while providing the skills for the complex process of teaching. The combination enables teachers to:

- Demonstrate the application of a wide range of biological knowledge including a bioethical perspective
- Expand their strategies for teaching science from a multicultural, gender-balanced perspective
- Demonstrate the ability to communicate verbally, orally, and quantitatively
- Develop strong critical thinking skills through the use of experimentation and integrate these skills into teaching

### Admissions Standards and Criteria

Applicants to the MA/MAT in Biology program must submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a Bachelor's degree from an accredited institution, preferably with (but not limited to) a major or minor in biology or an allied discipline and at least 2 semesters each of Chemistry, Physics and Mathematics
- The official results of the Graduate Record Exam (GRE)

*Notes: Applicants with inadequate preparation will be required to take prerequisite courses prior to admission.*

*Students interested in the thesis option should contact a potential graduate advisor as part of the application process.*

Applicants to the MAT in Biology program must submit a copy of their initial teaching license. Applicants without Initial Licensure may be admitted to the program, but will be required to complete additional coursework leading to Initial Licensure including 75 hours of pre-practicum experience and a 150 hour practicum.

- Applicants to graduate initial licensure teacher preparation programs must successfully complete the literacy and communication subtests of the Massachusetts Tests for Educator Licensure (MTEL) and submit passing scores as part of their application. In addition, students must successfully pass the appropriate content area exam(s) of the MTEL prior to student teaching.

For more information regarding licensure requirements for teacher preparation programs, contact the Teacher Certification Office at 978-665-3239 or visit their web site at [www.fsc.edu/edcert](http://www.fsc.edu/edcert).

### Program Requirements

The Masters of Arts in Biology program has a thesis and non-thesis track. Each track provides the student with a solid investigative core balanced by content course work. During the first year each student completes a biology seminar during which the student's writing and communication skills are evaluated. The thesis committee (comprised of the thesis advisor and at least two other graduate faculty) helps the student design a series of courses (electives) which aid him/her in successfully completing the thesis.

Students in the MAT program complete 18 credits in Biology. All MAT students are required to take Bioethics, Seminar in Biology, and a series of Biology electives. In consultation with their advisor, students choose electives that together with prior coursework encompass the areas of Molecular Biology, Genetics, Cell Biology, Developmental Biology, Organismal Biology, Evolution, Ecology and Environmental Science. In addition, MAT candidates must complete 18 credits in Education courses directly related to licensure requirements.

## Program of Study

### MA in Biology

BIOL	7400	Bioethics	3 S.H.
BIOL	9004	Research in Biology	3 S.H.
BIOL	9011	Seminar in Biology	3 S.H.
BIOL	9010	Thesis	6-9 S.H.
		*Electives	18-27 S.H.
		<b>Total for Degree</b>	<b>36 S.H.</b>

\*27 hours reflects a non-thesis option.

### MAT in Biology

<b>Content Core in Biology</b>			<b>12 S.H.</b>
BIOL	7400	Bioethics	3 S.H.
BIOL	9011	Seminar in Biology	3 S.H.
		Electives	12 S.H.
		Total	18 S.H.

### Education Core for Professional License\*

BIOL	8000	Advanced Methods of Teaching at the Secondary Level	3 S.H.
BIOL	8250	Curriculum and Technology	3 S.H.
BIOL	8260	Curriculum Design and Development	3 S.H.
EDUC	8300	Research in Education	3 S.H.
BIOL	9400	Clinical Experience or	6 S.H.
BIOL	9500	Internship	6 S.H.
		<b>Total for Degree</b>	<b>36 S.H.</b>

\*The core experience must include a research project. The proposal is developed in the Research in Education course and conducted during the clinical experience or internship.

### Additional Requirements for Students Who Do Not Have Initial Licensure

Students who do not have Initial Licensure take additional course work in the first year of the program leading to that level of certification. This includes:

#### Undergraduate Credits

PSY	2230	Adolescent Psychology	3 S.H.
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#### Graduate Credits

EDUC	7012	The Modern Secondary School (Includes 75 pre-practicum hours)	3 S.H.
SCED	9000	Methods in Biology and Earth Science Teaching	3 S.H.
BIOL	8090	Practicum	6 S.H.

To be eligible for the practicum, students must have an appropriate base in the discipline as approved by their advisor and completed all of the above courses. The practicum (student teaching) is taken in conjunction with the Advanced Methods in Teaching at the Secondary Level course.

## Master of Arts in Teaching Earth Science

### Graduate Program Chair

TBA

### Graduate Committee

Robert Champlin, PhD

Robert Gardula, PhD

**The MAT in Earth Science program is currently not accepting new students.**

### Program Objectives

The Master of Arts in Teaching (MAT) Earth Science program is designed for students with Initial Licensure who are seeking Professional Licensure as secondary school teachers of Earth Science. The program produces professional teachers who are able to combine a solid base of scholarship in a specific academic discipline with effective teaching strategies based on the findings of research.

### Program Description

The MAT in Earth Science program offers graduate students rigorous scholarship within a specific academic discipline in combination with the pedagogical tools and strategies necessary for the most effective classroom teaching. The program is designed to prepare secondary school teachers for the twenty-first century and to provide models of exemplary teaching methods. Through involvement in intensive, supervised clinical experiences in the secondary school, candidates enhance their skills as educators and learn to analyze and evaluate effective teaching in their academic discipline. The program of study:

- Promotes the development of a scholar-teacher with a strong background in Earth Science, as well as skills in the complex process of teaching Earth Science
- Demonstrates the application of a wide range of scientific knowledge including theoretical, ethical, and experimental perspectives
- Suggests ways to integrate the role of women and racial and ethnic groups into traditional Earth Science courses
- Enables teachers to incorporate multicultural and gender-balanced perspectives into their strategies for teaching
- Develops rigorous critical thinking skills and integrates these skills into their teaching
- Inculcates a sound philosophy of teaching
- Enables students interested in Earth Science to pursue advanced studies
- Corresponds with the licensure requirements of the Department of Education of the Commonwealth of Massachusetts

## Admissions Standards and Criteria

To apply for enrollment in the Master of Arts in Teaching Earth Science program, students must submit documents as outlined in the Graduate Admissions Section as well as:

- Evidence of an undergraduate major in Earth Science or a relevant discipline (at least 30 credits)
- Applicants to the MAT in Earth Science must submit a copy of their initial teaching license. Applicants without Initial Licensure may be admitted to the program, but will be required to complete additional coursework leading to Initial Licensure.
- Applicants to graduate initial licensure teacher preparation programs must successfully complete the literacy and communication subtests of the Massachusetts Tests for Educator Licensure (MTEL) and submit passing scores as part of their application. In addition, students must successfully pass the appropriate content area exam(s) of the MTEL prior to student teaching.

For more information regarding licensure requirements for teacher preparation programs, contact the Teacher Certification Office at 978-665-3239 or visit their web site at [www.fsc.edu/edcert](http://www.fsc.edu/edcert).

## Program Requirements

Students in the MAT program in Earth Science must complete:

- Fifteen credits in Earth Science, including at least one course in each of the following areas: geology, astronomy, meteorology, oceanography, and ecology
- Additional Earth Science course work to meet the categories of Standard I, if the student enters the program with inadequate preparation in Earth Science at the undergraduate level
- Clinical core of five courses including: Advanced Methods of Teaching at the Secondary Level, Curriculum and Technology, Curriculum Design and Development, Research in Education, and a Clinical Experience or Internship

Students work closely with an advisor in the academic concentration to design individual programs to further their knowledge, scholarship, and subject-related teaching skills.

## Program of Study

<i>Content Core in Earth Science</i>	<i>18 S.H.</i>
<i>Core Education Courses</i>	<i>18 S.H.</i>

### Content Core in Earth Science

Choose six of the seven courses listed:

<i>ESCI 7007 Ecology</i>	<i>3 S.H.</i>
<i>ESCI 7100 New England's Glacial Landscape</i>	<i>3 S.H.</i>
<i>ESCI 7200 Observational Astronomy</i>	<i>3 S.H.</i>
<i>ESCI 7300 Meteorology</i>	<i>3 S.H.</i>
<i>ESCI 7400 Oceanography</i>	<i>3 S.H.</i>
<i>ESCI 8100 Environmental Geology</i>	<i>3 S.H.</i>
<i>ESCI 9100 Independent Study</i>	<i>3 S.H.</i>
<b>Total</b>	<b>15 S.H.</b>

### Education Core for Professional License\*

<i>ESCI 8000</i>	<i>Advanced Methods of Teaching at the Secondary Level</i>	<i>3 S.H.</i>
<i>ESCI 8250</i>	<i>Curriculum and Technology</i>	<i>3 S.H.</i>
<i>ESCI 8260</i>	<i>Curriculum Design and Development</i>	<i>3 S.H.</i>
<i>EDUC 8300</i>	<i>Research in Education</i>	<i>3 S.H.</i>
<i>ESCI 9400</i>	<i>Clinical Experience or</i>	<i>6 S.H.</i>
<i>ESCI 9500</i>	<i>Internship</i>	<i>6 S.H.</i>
	<b>Total for Degree</b>	<b>36 S.H.</b>

\* The core experience must include a research project. The proposal is developed in the Research in Education Course and conducted during the clinical experience or internship.

### Additional Requirements for Students Who Do Not Have Initial Licensure

Students who do not have Initial Licensure take additional course work in the first year of the program leading to that level of licensure. This includes:

<b>Undergraduate Credits</b>		
<i>PSY 2230</i>	<i>Adolescent Psychology</i>	<i>3 S.H.</i>
<b>Graduate Credits</b>		
<i>ESCI 7012</i>	<i>The Modern Secondary School (Includes 75 pre-practicum hours)</i>	<i>3 S.H.</i>
<i>SCED 9000</i>	<i>Methods in Biology and Earth Science Teaching</i>	<i>3 S.H.</i>
<i>ESCI 8090</i>	<i>Practicum</i>	<i>6 S.H.</i>

To be eligible for the practicum, students must have an appropriate base in the discipline as approved by their advisor and completed all of the above courses as well as taken and passed the subject area Massachusetts Test for Educator Licensure. The practicum (student teaching) is taken in conjunction with the Advanced Methods in Teaching course.

# Master of Arts in English

## Master of Arts in Teaching English

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### Graduate Program Chair

*Chola Chisunka, PhD*

### Graduate Committee

*Roberta Adams, PhD*

*Janice Alberghene, PhD*

*Lisa Gim, PhD*

*Nancy Kelly, PhD*

*Irene Martyniuk, PhD*

*Thomas Murray, PhD*

*Doris Schmidt, PhD*

*Nancy Yee, PhD*

### Program Description

The English Department offers two graduate degrees in English, the Master of Arts in English and the Master of Arts in Teaching English.

The **Master of Arts in English (MA)** provides specialization in the study of the traditional and newer canons of literature, literary theories, and research writing. The MA is designed for students pursuing careers in literature, writing, research and community college or college teaching. It provides a background for students planning to go on to a Ph.D. program. A joint MA program with the History Department allows students to specialize in the History and Literature of Women and develop expertise in the interdisciplinary field of Women's Studies.

The **Master of Arts in Teaching English (MAT)** program is designed to develop the scholar-teacher by providing a strong specialization in the traditional and newer canon of literature in English with the theories and methodologies for teaching English in the middle and secondary schools. A licensure track within this program leads to Professional Licensure as a teacher of English at the secondary level.

### Program Objectives

The Master of Arts in English (MA) program is designed to train students to understand and employ a variety of strategies in literature, research, writing, and teaching. The Master of Arts program aims to:

- Promote graduate-level scholarship in the study of literature
- Encourage the development of a wide range of literary knowledge, including a global perspective
- Provide a wide range of courses, from Medieval Literature and Shakespeare's Major plays to Twentieth-Century Women's Fiction and Africa Through the Novel
- Polish and expand writing style and techniques, and
- Explore major literary theories and the history of English as a discipline

The **History and Literature of Women** track of the Master of Arts in English program is designed to prepare teachers, researchers, writers, and museum curators in an interdisciplinary area within the field of Women's Studies. It aims to provide students with the academic foundation needed to pursue doctoral work in Women's History, Women's Literature, or Women's Studies.

The **Master of Arts in Teaching English (MAT)** program is designed to develop the scholar-teacher by providing a strong background in English and skills for the complex process of teaching English. The Master of Arts in Teaching English program is designed for students interested in studying the theories, methodologies, and materials for teaching English in the middle and secondary schools in addition to broadening their knowledge of literature.

The MAT program aims to:

- Bridge the gap between cutting-edge scholarship and classroom practice
- Suggest ways to integrate the voices of women and minorities into the traditional literary canon
- Enable practicing teachers to expand strategies for teaching writing through the use of process writing, collaborative writing, and writing on the computer
- Enable practicing teachers to expand strategies for teaching literature through the application of current modes of criticism

**MAT in English Certification** program is designed to provide students with the necessary course work for Professional Licensure as teachers of English. Students not holding Initial Licensure take additional course work during their first semesters leading to that level of certification.

### Admissions Standards and Criteria

To apply for enrollment in the Master of Arts in English or Master of Arts in Teaching English program, a student must submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a Bachelor's degree from an accredited institution, preferably with (but not limited to) a major or minor in English
- Applicants to the MAT in English must submit a copy of their initial teaching license. Applicants without Initial Licensure may be admitted to the program, but will be required to complete additional coursework leading to Initial Licensure.
- Applicants to graduate initial licensure teacher preparation programs must successfully complete the literacy and communication subtests of the Massachusetts Tests for Educator Licensure (MTEL) and submit passing scores as part of their application. In addition, students must successfully pass the appropriate content area exam(s) of the MTEL prior to student teaching.

For more information regarding licensure requirements for teacher preparation programs, contact the Teacher Certification Office at 978-665-3239 or visit their web site at [www.fsc.edu/edcert](http://www.fsc.edu/edcert).

Note: Applicants with inadequate preparation for success in the program will be required to take undergraduate courses in English prior to admission. For those pursuing certification there may be additional prerequisite courses, depending upon previous course work in education.

## Master of Arts in English Program of Study

Courses in specific periods and genres in American, British, and World Literature as well as literary research and theory are required.

ENGL	8050	Graduate Research in English	3 S.H.
ENGL	9000	Literary Theory	3 S.H.
Nine 9000-Level Literature Courses			27 S.H.

(must be approved by advisor)

*Master's Thesis Option: Students may apply to do a six-credit*

*Master's Thesis (See Master's Thesis Guidelines) or take two elective courses in Literature (must be approved by advisor):*

ENGL	9100	Master's Thesis Research	3 S.H.
ENGL	9200	Master's Thesis Writing	3 S.H.
<b>Total for Degree</b>			<b>33 S.H.</b>

## History and Literature of Women Program of Study

### Required Core

ENGL	8050	Graduate Research in English	3 S.H.
HIST	7450	Historiography	3 S.H.
Seminar in the History and Literature of Women			3 S.H.

### Women's History and Literature Courses

Three courses in the History of Women (must be approved by advisor)			9 S.H.
Four courses in the Literature of Women (must be approved by advisor)			12 S.H.
Master's Thesis			6 S.H.
<b>Total for Degree</b>			<b>36 S.H.</b>

## Master of Arts in Teaching Program of Study

ENGL	8050	Graduate Research in English	3 S.H.
ENGL	8070	Literature in the Classroom	3 S.H.
ENGL	8071	Literature for Young Adults	3 S.H.
ENGL	8076	Process Writing Across the Curriculum	3 S.H.
Six 9000-Level Literature Courses (must be approved by advisor)			18 S.H.
One English Education or Literature Elective (must be approved by advisor)			3 S.H.
<b>Total for Degree</b>			<b>33 S.H.</b>

## Master of Arts in Teaching English Professional Licensure Program of Study

ENGL	8050	Graduate Study and Research in English	3 S.H.
ENGL	8070	Literature in the Classroom	3 S.H.
ENGL	8071	Literature for Young Adults	3 S.H.
ENGL	8076	Process Writing Across the Curriculum	3 S.H.
Four 9000-Level Literature Courses (must be approved by advisor)			12 S.H.
<b>Subtotal</b>			<b>24 S.H.</b>

### Education Core for Professional Licensure

ENGL	8000	Advanced Methods of Teaching at the Secondary Level	3 S.H.
ENGL	8250	Curriculum and Technology	3 S.H.
ENGL	8260	Curriculum Design and Development	3 S.H.
ENGL	9400	Clinical Experience (400 hours) and Research Project <b>or</b>	
ENGL	9500	Internship (400 hours) and Research Project	6 S.H.
<b>Subtotal</b>			<b>15 S.H.</b>

### Additional Requirements for Students Who Do Not Have Initial Licensure

These courses do not count toward the 39 credits required for the MAT.

*ENGL	7012	The Modern Secondary School and Prepracticum (75 hours)	
*PSY	2230	Adolescent Psychology	
*ENGL	8090	Practicum (150 hours)	
*Must precede Education Core.			
<b>Total</b>			<b>39 S.H.</b>

To be eligible for the practicum, students must have an appropriate base in the discipline as approved by their advisor and completed all of the above courses, as well as taken and passed the subject area Massachusetts Test for Educator Licensure. The practicum (student teaching) is taken in conjunction with the Advanced Methods in Teaching at the Secondary Level course.

# Master of Arts in History

## Master of Arts in Teaching History

### Graduate Program Chair

Teresa Thomas, PhD

### Graduate Committee

Benjamin Lieberman, PhD

Susan Williams, PhD

### Program Objectives

The Master of Arts (MA) in History is designed for students pursuing careers in historical research, writing, or post-secondary level teaching. The Master of Arts in Teaching (MAT) History combines advanced studies in both history and the teaching of history. The MAT Clinical Track (Track B) leads to Professional License at the secondary level as a teacher of history.

### Program Description

The curriculum for both the MA and MAT programs aims to:

- Promote graduate-level historical scholarship
- Support and encourage the development of a wide range of historical knowledge, including a global perspective

Additionally, the MAT program strives to:

- Expand the scholar/teacher's skills in the complex process of teaching history
- Enable practicing teachers to expand their strategies for teaching history from a multicultural, gender-balanced perspective

### Admissions Standards and Criteria

To apply for enrollment in either the Master of Arts or Master of Arts in Teaching History programs, students must submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a Bachelor's degree from a regionally accredited institution, preferably with (but not limited to) a major or minor in History
- Applicants to the MAT in History must submit a copy of their initial teaching license. Applicants without Initial Licensure may be admitted to the program, but will be required to complete additional coursework leading to Initial Licensure.
- Applicants to graduate initial licensure teacher preparation programs must successfully complete the literacy and communication subtests of the Massachusetts Tests for Educator Licensure (MTEL) and submit passing scores as part of their application. In addition, students must successfully pass the appropriate content area exam(s) of the MTEL prior to student teaching.

For more information regarding licensure requirements for teacher preparation programs, contact the Teacher Certification Office at 978-665-3239 or visit their web site at [www.fsc.edu/edcert](http://www.fsc.edu/edcert).

For those pursuing the MA, a writing sample must be submitted. This may include an undergraduate level term paper or a published article and should be the equivalent of at least ten typed, double-spaced pages and include footnotes and a bibliography.

*Note: Applicants with inadequate preparation in history are required to take undergraduate courses in history prior to admission.*

### Program Requirements

The MA program requires 36 hours of academic work, including completion of a master's thesis. Two tracks are available, described in the program of study. All degree candidates must pass a written comprehensive examination with questions in at least two different historical areas and one historiography question related to the thesis topic. Students are also required to pass an oral thesis defense. Details regarding advancement to candidacy are available from the History Department.

The MAT program has two tracks. Both tracks include a content core in history.

Track A is for teachers who are already licensed and seeking advanced studies in history and the teaching of history.

Track B is for students with Initial Licensure who seek Professional Licensure\*. In addition to the content core, students must complete a 21-credit clinical core of education courses designed to fulfill requirements for Professional Licensure.

*\*Students applying for Track B who do not have Initial Licensure may be admitted to the program but will be required to complete additional course work leading to Initial Licensure including 75 hours of pre-practicum experiences and a 150 hour practicum.*

### MA in History Program of Study

The MA in History Program offers two tracks.

#### Track A—Master of Arts

Course requirements for Track A of the MA are:

One course in each of three areas:

		<i>European History</i>	3 S.H.
		<i>U.S. History</i>	3 S.H.
		<i>Non-Western History</i>	3 S.H.
<i>HIST</i>	7450	<i>Historiography</i>	3 S.H.
		<i>Elective</i>	3 S.H.
		<i>Area of Specialization,</i>	
		<i>to include at least two seminars</i>	15 S.H.
<i>HIST</i>	9100	<i>Thesis</i>	6 S.H.
		<b>Total for Degree</b>	<b>36 S.H.</b>

#### Track B—Master of Arts

Track B focuses on the History and Literature of Women.

Course requirements for Track B of the MA degree are:

#### Required Core

<i>ENGL</i>	8050	<i>Graduate Study and Research in English</i>	3 S.H.
<i>HIST</i>	7450	<i>Historiography</i>	3 S.H.
		<i>Seminar in the History and Literature of Women</i>	3 S.H.
		<b>Subtotal</b>	<b>9 S.H.</b>

#### Women's History and Literature Courses

		<i>Four courses in the History of Women</i>	12 S.H.
		<i>Three courses in the Literature of Women</i>	9 S.H.
		<b>Subtotal</b>	<b>21 S.H.</b>

#### Master's Thesis

		<i>Thesis Writing</i>	6 S.H.
		<b>Total for Degree</b>	<b>36 S.H.</b>

## MAT in History Program of Study

The MAT in History offers two tracks.

### Requirements

Students in both tracks of the MAT degree program complete a 15 credit content core in history including at least one course in each of the following areas:

		<i>Non-Western History</i>	3 S.H.
		<i>World History</i>	3 S.H.
		<i>U.S. History</i>	3 S.H.
		<i>European History</i>	3 S.H.
HIST	7450	<i>Historiography</i>	3 S.H.
		<b>Sub-total</b>	<b>15 S.H.</b>

### Track A—Master of Arts in Teaching

		<i>Content Core in History</i>	15 S.H.
		<i>Area of Specialization</i>	15 S.H.
		<i>History Elective</i>	3 S.H.
		<i>Relationship Between History and Other Fields of Knowledge in the Social Science</i>	3 S.H.
		<b>Total for Degree</b>	<b>36 S.H.</b>

### Track B—Master of Arts in Teaching

		<i>Content Core in History</i>	18 S.H.
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### Education Core for Professional License\*

HIST	8000	<i>Advanced Methods of Teaching at the Secondary Level</i>	3 S.H.
HIST	8250	<i>Curriculum and Technology</i>	3 S.H.
HIST	8260	<i>Curriculum Design and Development</i>	3 S.H.
EDUC	8300	<i>Research in Education</i>	3 S.H.
HIST	9400	<i>Clinical Experience</i> or	6 S.H.
HIST	9500	<i>Internship</i>	6 S.H.
		<b>Total for Degree</b>	<b>36 S.H.</b>

\*The core experience must include a research project. The proposal is developed in the Research in Education course and conducted during the clinical experience or internship.

### Additional Requirements for Students Who Do Not Have Initial Licensure

Students in the MAT programs who do not have Initial Licensure take additional course work in the first year of the program leading to that level of licensure. This includes:

#### Undergraduate Credits

PSY	2230	<i>Adolescent Psychology</i>	3 S.H.
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#### Graduate Credits

HIST	7012	<i>The Modern Secondary School</i> (Includes 75 pre-practicum hours)	3 S.H.
ENGL	8076	<i>Process Writing Across the Curriculum</i>	3 S.H.
HIST	8090	<i>Practicum (150 hours)</i>	6 S.H.

To be eligible for the practicum, students must have an appropriate base in the discipline as approved by their advisor and completed all of the above courses, as well as taken and passed the subject area Massachusetts Test for Educator Licensure. The practicum (student teaching) is taken in conjunction with the Advanced Methods in Teaching at the Secondary Level course.

## Master of Arts in Teaching Mathematics

### Graduate Program Chair

Gerald Higdon, PhD

### Graduate Committee

Richard Bisk, PhD  
Christine Cosgrove, PhD  
Lucy Dechéne, PhD  
Barry Light, EdD  
Claire McAndrew, EdD  
Mark Snyder, PhD  
Abdulkeni Zekeria, PhD

### Program Objectives

The Master of Arts in Teaching Mathematics program is designed to provide sufficient content courses in mathematics and professional courses in education to educate students in advanced mathematics and to prepare candidates for Professional Licensure at the secondary level.

### Program Description

The MAT program in mathematics aims to:

- Enhance and deepen the candidate's knowledge of mathematics
- Develop the candidate's teaching skills
- Strengthen the interactive connection between field-based experience and knowledge of theory
- Provide interdisciplinary studies
- Improve the candidate's skills to:
  - a. Communicate with high school students and evaluate their progress
  - b. develop and evaluate curriculum
  - c. continue his/her own professional development

Two tracks are available: Track A is a professional graduate track for those who desire advanced study in mathematics and/or who currently hold Professional Licensure at the Secondary Level. Track B is for students with Initial Licensure\*. In addition to the content core, students must complete an 18-credit clinical core of education courses designed to prepare the student for Professional Licensure at the Secondary Level. Each semester various content courses will be offered. Students should check current class listing for course selection.

## Admission Standards and Criteria

To apply for enrollment in either the Master of Arts or Master of Arts in Teaching Mathematics program, students must submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a baccalaureate degree from a regionally accredited institution, preferably with (but not limited to) a major in mathematics.
- The official results of the Graduate Record Exam (GRE).
- Applicants with inadequate preparation in mathematics will be required to take undergraduate courses in mathematics prior to admission. For those pursuing certification there may be additional prerequisite courses depending upon what previous coursework in education has been completed.
- Applicants to the MAT in Mathematics must submit a copy of their initial teaching license. Applicants without Initial Licensure may be admitted to the program, but will be required to complete additional coursework leading to Initial Licensure.
- Applicants to graduate initial licensure teacher preparation programs must successfully complete the literacy and communication subtests of the Massachusetts Tests for Educator Licensure (MTEL) and submit passing scores as part of their application. In addition, students must successfully pass the appropriate content area exam(s) of the MTEL prior to student teaching.

For more information regarding licensure requirements for teacher preparation programs, contact the Teacher Certification Office at 978-665-3239 or visit their web site at [www.fsc.edu/edcert](http://www.fsc.edu/edcert).

## Program Requirements

All students must complete a core of at least one content mathematics course in each of the following three groupings:

1. Algebra  
Number Theory
2. Analysis  
Probability
3. Geometry  
Mathematical Modeling  
Discrete Mathematics

Additionally, all students must satisfactorily pass two approved comprehensive examinations. One exam must cover two of the above three content course groupings. The other may be in mathematics education.

Students in Track A, the professional graduate track, must complete 21 semester hours of content courses in mathematics and 9 semester hours of electives.

Students in Track B, the clinical track, must complete 18 semester hours of content courses in mathematics and a 18-credit clinical core of education courses directly related to certification requirements.

## Program of Study

### Track A

Content Courses in Mathematics	21 S.H.
Approved Electives	6 S.H.
Electives in Education	3 S.H.
<b>Total Credits</b>	<b>30 S.H.</b>

### Track B

Content Courses in Mathematics	18 S.H.
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### Education Core for Professional License\*\*

MATH 8000	Advanced Methods of Teaching at the Secondary Level	3 S.H.
MATH 8250	Curriculum and Technology	3 S.H.
MATH 8260	Curriculum Design and Development	3 S.H.
EDUC 8300	Research in Education	3 S.H.
MATH 9400	Clinical Experience <b>or</b>	6 S.H.
MATH 9500	Internship	6 S.H.
<b>Total Credits</b>		<b>36 S.H.</b>

\*\*The core experience must include a research project. The proposal is developed in the Research in Education course and conducted during the clinical experience or internship.

### \*Additional Requirements for Students Who Do Not Have Initial Licensure

Students in the MAT programs who do not have initial licensure take additional course work in the first year of the program leading to that level of certification. This includes:

#### Undergraduate Credits

PSY 2230	Adolescent Psychology	3 S.H.
MATH 4830	Methods and Materials in Secondary Mathematics (Includes 30 pre-practicum hours)	3 S.H.

#### Graduate Credits

MATH 7012	The Modern Secondary School (Includes 75 pre-practicum hours) One additional approved professional course	3 S.H. 3 S.H.
MATH 8090	Practicum (150 hours)	6 S.H.

To be eligible for the practicum, students must have an appropriate base in mathematics content courses equivalent to that required of undergraduate secondary mathematics candidates (as approved by their advisor), have a 3.0 GPA in mathematics, have completed all of the above non-practicum courses, and passed the secondary mathematics subject area Massachusetts Tests for Educator Licensure.

# MBA—Master of Business Administration

## Graduate Program Chair

Joseph McAloon, MBA

## Graduate Committee

Diane Caggiano, JD

Kwahng Kim, PhD

John McKeon, MS

James T. Noonan, PhD

Janette M. Purcell, PhD

Louis J. Zivic, EdD

## Program Objectives

The Master of Business Administration (MBA) degree is designed to provide students with the skills and knowledge necessary to become leaders in business and in administration. It seeks to develop decision makers with strong analytical skills who are socially responsible, sensitive to cultural diversity, and aware of the broadening world market.

## Program Description

The MBA program is comprised of three course clusters, including 24 credits of a foundation level core and 30 credits from an advanced core and specialized tracks. To complete the degree students must fulfill the following:

### **Eight courses (24 credits) at the foundation level**

The foundation courses provide essential background knowledge regarding accounting, economics, management, marketing, finance, quantitative analysis, business law, and data processing. (It is assumed that most students entering the program with an undergraduate degree in business administration will be able to waive these foundation courses. Life experience credit may be used for waiver of some of the foundation courses based on evaluation and recommendation of a faculty committee.)

### **Six courses (18 credits) in advanced core**

In the advanced core students acquire advanced skills and knowledge regarding current business and management practice and methodology.

### **Three specialized tracks**

The specialized tracks are in the fields of accounting, human resources management, and management. Each track includes three specialized courses and one free elective.

## Admissions Standards and Criteria

Admissions criteria meet the standards of the three national accrediting agencies, The International Assembly for Collegiate Business Education (IACBE), Member of American Assembly of Collegiate Schools of Business (AACSB), Member of Association of Collegiate Business Schools and Programs (ACBSP). To enroll in the Master of Business Administration Program, a student must submit documents as outlined in the Graduate Admissions section as well as:

- The official results of the Graduate Management Admissions Test (GMAT)

In addition to the College's standard admission requirements for Master's degree programs, all applicants are expected to have:

- An undergraduate GPA not less than 2.8
- A GMAT score of not less than 400
- TOEFL scores for natives of non-English speaking countries
- A formula score of not less than 1000

$$\text{Formula} = (200 \times \text{undergraduate gpa}) + \text{GMAT score}$$

Applicants whose formula score is less than 1000 but whose record exhibits promise in other ways may be admitted. No more than 10 to 20 percent of MBA candidates are accepted under these circumstances.

## Program of Study

### Foundation Core Courses—Undergraduate

(applies to all tracks)

BSAD	1700	Introduction to Computer Information Systems (or equiv.)	3 S.H.
BSAD	3200	Principles of Management	3 S.H.
BSAD	3300	Fundamentals of Marketing	3 S.H.
BSAD	3400	Basic Finance	3 S.H.
BSAD	3500	Business Law I	3 S.H.
ECON	1200	Principles of Economics, Micro	3 S.H.

### Foundation Core Courses—Graduate

MGMT	7001	*Quantitative Methods for Business	3 S.H.
MGMT	7002	**Accounting for Graduate Students	3 S.H.
MGMT	7003	***Foundations of Finance/Economics	
MGMT	7004	****Foundations of Marketing/Management	
		Subtotal	24 S.H.

\* MGMT 7001 Quantitative Methods for Business can be replaced by Math 2200 (Calculus for Business) and Math 1800 (Business Statistics). Approval done on a case-by-case basis.

\*\*MGMT 7002 Accounting for Graduate Students may be replaced by BSAD 2010 (Introduction to Financial Reporting) and BSAD 2020 (Introduction to Managerial Accounting) or equivalent. Approval done on a case-by-case basis.

\*\*\* MGMT 7003 Foundations of Finance/Economics may be replaced by BSAD 3400 or ECON 1200.

\*\*\*\* MGMT 7004 Foundations of Marketing/Management may be replaced by BSAD 3200 or BSAD 3300.

**Advanced Core Requirements/Applications**

(applies to all tracks)

MGMT 9040	Organizational Behavior and Development	3 S.H.
MGMT 9060	Management Information Systems	3 S.H.
MGMT 9160	Marketing Management	3 S.H.
MGMT 9170	Corporate Finance	3 S.H.
MGMT 9180	Accounting Practices for Managers or	
MGMT 9030	Accounting Theory (for Accounting Track students only)	3 S.H.
MGMT 9500	Strategic Management	3 S.H.
	<b>Subtotal</b>	<b>18 S.H.</b>

**Track Electives**

The specialization in Accounting, Human Resources Management, or Management includes a free elective. To satisfy the requirement, the student chooses a course from any of the MBA course offerings or, with permission of the Graduate Program Chair, a course from another graduate discipline. Selected Topics courses may be counted as directed electives only with prior approval of the Graduate Program Chair.

**Accounting Track**

<b>A. Foundation Core Courses</b>	<b>24 S.H.</b>	
<b>B. Advanced Core Courses</b>	<b>18 S.H.</b>	
<b>C. Required Accounting Track Courses*</b>		
MGMT 9032	Advanced Financial Accounting Issues	3 S.H.
MGMT 9034	Selected Topics in Advanced Managerial Accounting	3 S.H.
MGMT 9036	Accounting Information Systems	3 S.H.
	<b>Subtotal</b>	<b>9 S.H.</b>
<b>D. Free Elective</b>	<b>3 S.H.</b>	
	<b>Total for Degree</b>	<b>54 S.H.</b>

\*Note: Students electing the Accounting Track must either be graduates of approved undergraduate Accounting programs or have at least 24 undergraduate credit hours beyond Basic Accounting with the approval of the Program Director.

**Human Resources Management Track**

<b>A. Foundation Core Courses</b>	<b>24 S.H.</b>	
<b>B. Advanced Core Courses</b>	<b>18 S.H.</b>	
<b>C. Required Human Resources Management Track Courses</b>		
MGMT 9050	The Human Resources Function and the Manager	3 S.H.
MGMT 9070	Legal Issues in Human Resources Management	3 S.H.
MGMT 9450	Selected Topics in Management (approved by chair for HR relevance)	3 S.H.
	<b>Subtotal</b>	<b>9 S.H.</b>
<b>D. Free Elective</b>	<b>3 S.H.</b>	
	<b>Total for Degree</b>	<b>54 S.H.</b>

**Management Track**

<b>A. Foundation Core Courses</b>	<b>24 S.H.</b>	
<b>B. Advanced Core Courses</b>	<b>18 S.H.</b>	
<b>C. Required Management Track Courses</b>		
MGMT 9050	The Human Resources Function and the Manager	3 S.H.
MGMT 9080	Management Theory and Process	3 S.H.
<b>D. Directed Elective Courses</b>		
	Choose at least one:	
MGMT 9100	Business and Society	3 S.H.
MGMT 9130	Legal Environment of Business	3 S.H.
MGMT 9008	Quality Management Theory	3 S.H.
MGMT 9002	Management of the Global Environment	3 S.H.
MGMT 9020	Economic Theory and Managerial Decision Making	3 S.H.
MGMT 9450	Selected Topics in Management	3 S.H.
MGMT 9600	E-Commerce	3 S.H.
	<b>Subtotal</b>	<b>9 S.H.</b>
<b>E. Free Elective</b>	<b>3 S.H.</b>	
	<b>Total for Degree</b>	<b>54 S.H.</b>

# Master of Education Programs

## MEd—Arts Education

### Graduate Program Chair

Harry Semerjian, EdD

### Graduate Committee

James Colbert, PhD

James Leve, PhD

Susan Wadsworth, MFA

### Program Objectives

The program of study for the Master of Education in Arts Education is a non-licensure degree program designed to provide creative experiences in the arts for teachers and community workers and enables them to transfer the creative process to their professional situations.

### Program Description

The curriculum for the Master of Education in Arts Education integrates the arts and the creative process in three course areas, including core courses in Arts Education and Curriculum, Distribution courses in special topics, and electives, which may include Independent Study or Field Experience.

### Admissions Standards and Criteria

To apply for enrollment in the Master of Education in Arts Education program, students must submit documents as outlined in the Graduate Admissions section on as well as:

- An official transcript of a Bachelor's degree from a regionally accredited institution preferably with (but not limited to) a major or minor in an art area such as language arts, visual arts, music, physical education or dance
- A paper outlining the student's rationale for entering the program

### Program of Study

#### Core Courses

CRAR 9051	Supervising, Directing and Leading in Arts Education I	3 S.H.
CRAR 9052	Supervising, Directing and Leading in Arts Education II	3 S.H.
CRAR 9060	Creative Arts Research	3 S.H.
CRAR 9070	Creative Arts Curriculum Development and Applications	3 S.H.
CRAR 9090	Arts Presentation	3 S.H.
	<b>Subtotal</b>	<b>15 S.H.</b>

#### Distribution Courses

Students choose five courses from any of the six distribution areas.

Integrated Arts	
Music	
Movement	
Language Arts/Drama	
Visual Arts	
Crafts	
<b>Subtotal</b>	<b>15 S.H.</b>

#### Additional Courses

A minimum of 3 semester hours must be fulfilled in one of the following ways:

Courses from any of the above distribution areas	
Credits transferred into the program	
Courses related to graduate areas	
Independent Study	
Field Experiences in Creative Arts	
<b>Subtotal</b>	<b>3 S.H.</b>
<b>Total for Degree</b>	<b>33 S.H.</b>

See also Fine Arts Director Certificate Program.

# MEd—Educational Leadership and Management

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## **Graduate Program Chairs**

*Michael Fiorentino, Jr. EdD*  
*Daniel Nomishan, EdD*

## **Graduate Committee**

*George Bohrer, PhD*  
*Laurie DeRosa, EdD*  
*Charles Hetzel, PhD*

## **Program Objectives**

The Master of Education in Educational Leadership and Management Program prepares the student to meet the standards of Massachusetts Educator Licensure as either a Supervisor/Director (P-12) or School Principal (P-6, 5-8, 9-12). The program offers courses and experiences, that equip school administrators with the skills and competencies necessary for becoming effective educational leaders.

## **About the Program**

This Program is an interdepartmental program. Within this spirit, relationships between faculty members in education departments and other programs across the college have been allied.

## **Program Description**

The program prepares educational administrators who are reflective, person-centered practitioners able to effectively construct, articulate, and apply educational theory and research through leadership roles. The program aims to prepare students to:

- Develop competencies in managerial skills related to political arenas, personnel, fiscal affairs, acquisition of material resources, diverse populations, and organizational change
- Strengthen, deepen, and expand the knowledge base in the field of leadership and management in order to anticipate and to solve current and future problems inherent in the educational system
- Demonstrate through course work and field-based experiences the knowledge, skills, and attitudes that are required to lead and manage an educational enterprise effectively and efficiently

## **The College offers preparation for two Massachusetts Licenses**

### **Principal Licensure (P-6, 5-8, 9-12)**

### **Supervisor/Director-Licensure (P-12)**

There are two licensure options in this program. There is one option for students who wish to seek school principal licensure and a second option for students who wish to supervise or direct Art and/or Music programs in school systems. Successful completion of the degree and all requisite licensure requirements qualifies degree recipients for endorsement as a principal or supervisor/director.

### **Non-Licensure Candidates**

Students who do not wish to pursue licensure may, in consultation with their advisor, plan a 39 credit program of study that meets their professional and personal goals. Courses from each of the four competency areas should be included. Applicants to the non-licensure track do not need to submit scores from the Massachusetts Tests for Educator Licensure (MTEL).

## **Admissions Standards and Criteria**

To apply for enrollment in the MEd in Educational Leadership and Management program, the student must submit documents as outlined in the Graduate Admissions section on as well as:

- A minimum of three years of teaching experience
- Applicants to Track A and B must successfully complete the literacy and communication subtests of the Massachusetts Tests for Educator Licensure (MTEL) and submit passing scores as part of their application. In addition, students must successfully pass the appropriate content area exam(s) of the MTEL prior to student teaching.
- Applicants must provide documentation of a valid teacher certification/license at the standard/professional level.

For more information regarding licensure requirements for teacher/administrator preparation programs, contact the Teacher Certification Office at 978-665-3239 or visit their web site at [www.fsc.edu/edcert](http://www.fsc.edu/edcert).

## Program Requirements

A minimum of 39 graduate credits is required to complete the MEd program as well as to prepare for application for one of the two certificates: Principal/Supervisor/Director Certification (Track A) and Supervisor/ Director-Art or Music (Track B). A minimum of 45 credits is required for standard Certification.

Both programs consist of:

- A core of tightly-focused and comprehensive courses;
- Students within the Massachusetts certification sequence are involved in three broad based pre-practicum experiences leading up to the formal practicum/internship. A supervised practicum/internship in the form of field based educational experience.  
The practicum is 300 clock hours to be completed within one year. The internship is 300 clock hours to be completed within one year;
- Students seeking professional licensure may complete a 400 clock hour clinical experience;
- Optional Thesis (EDLM 9500): A thesis topic is chosen in consultation with the student's advisor early in the last year of study, or no later than the completion of 24 semester hours of study. A student must successfully defend his/her thesis to a committee as described in the handbook of thesis guidelines;
- Comprehensive Exam covering the basic principles and concepts inherent in the field of educational leadership and management.

## Program of Study

### Track A—School Principal (P-6, 5-8, 9-12) Licensure Supervisor/Director (P-12) Licensure

#### Required Courses

EDLM	8000	Community Relations	3 S.H.
EDLM	8010	Human Resources and Personnel Administration	3 S.H.
EDLM	8020	Law for the Educator	3 S.H.
EDLM	8030	Public School Finance	3 S.H.
EDLM	8040	Curriculum Leadership and Evaluation	3 S.H.
EDLM	8050	Seminar: Research in Educational Leadership	3 S.H.
EDLM	9000	The Principal: Organization and Administration of the Elementary, Middle, and Secondary School	3 S.H.
EDLM	9010	Cases and Concepts in Educational Administration	3 S.H.
EDLM	9020	Collegial Supervision	3 S.H.
EDLM	9100	Dynamics of Planned Change	3 S.H.
EDLM	9110	Practicum/Internship in Leadership Management	6 S.H.
EDLM	9120	or	
EDLM	9130	or	
EDLM	9140	Elective in consultation with advisor	3 S.H.
		<b>Total for Degree</b>	<b>39 S.H.</b>

Additional Clinical Experience Required for Professional Licensure 6 S.H.

### Track B—Supervisor/Director Art or Music

#### Required Courses

EDLM	8000	Community Relations	3 S.H.
EDLM	8010	Human Resources and Personnel Administration	3 S.H.
EDLM	8020	Law for the Educator	3 S.H.
EDLM	8030	Public School Finance	3 S.H.
EDLM	9020	Collegial Supervision	3 S.H.
EDLM	9100	Dynamics of Planned Change	3 S.H.
CRAR	9051	Supervising, Directing, and Leading in Arts Education I	3 S.H.
CRAR	9052	Supervising, Directing, and Leading in Arts Education II	3 S.H.
CRAR	9060	Creative Arts Research	3 S.H.
CRAR	9070	Creative Arts Curriculum Development	3 S.H.
EDLM	9500	Free Elective or Thesis	3 S.H.
EDLM	9210	Practicum/Internship in Leadership Management	6 S.H.
		<b>Total for Degree</b>	<b>39 S.H.</b>

Additional Clinical Experience Required for Professional Licensure 6 S.H.

### Non-Licensure Candidates

Students who do not wish to pursue certification may take the core courses in either track plus 6 semester hours of electives for a total of 39 semester hours.

# MEd—Educational Leadership and Management: Technology Leader

## Graduate Program Chairs

Michael Fiorentino, Jr. EdD  
Daniel Nomishan, EdD

## Graduate Committee

George Bohrer, PhD  
Laurie DeRosa, EdD  
Charles Hetzel, PhD

## Program Objectives

The MEd in Educational Leadership and Management: Technology Leader Program is a non-licensure program designed to provide future leaders in technology to school systems. The technology leader degree track provides an in-depth examination of the implications of the technology revolution that has the potential to transform teaching and learning in our schools. Special emphasis is placed on the key role that technology leaders have in initiating the process of change, technology integration and faculty development. The track includes a variety of opportunity for hands-on technology-based experiences and includes critical core courses in educational leadership and management. ***This track is primarily offered off-campus through a collaborative partnership with the Merrimack Education Center in Chelmsford.***

## Program Description

The MEd program in Educational Leadership and Management is designed for students with the desire to:

- Gain competence in the use of software applications as productivity and learning tools
- Develop perspective on their daily work by examining the theory and practice of education
- Create models that incorporate the use of technology to support effective teaching and curriculum development
- Explore the use of instructional technology to address contemporary educational issues
- Understand the implication of “digital literacy” for teaching and learning
- Plan for building and maintaining technology infrastructure within a school system.

## Admissions Standards and Criteria

To apply for enrollment in the MEd in Educational Leadership and Management: Technology Leader Program, candidates must submit documents as outlined in the Graduate Admissions section. The MTEL Exam is not required for this Technology Leadership track of the MEd in Educational Leadership and Management.

## Program Requirements

A minimum of 36 graduate credits is required to complete the MEd program. The program curriculum consists of:

## Program of Study

### Required Core Courses

EDLM 8040	Curriculum and Evaluation	3 S.H.
EDLM 8050	Seminar: Research in Educational Leadership	3 S.H.
EDLM 9100	Dynamics of Planned Change	3 S.H.
EDLM 9020	College Supervision	3 S.H.
EDLM 91XX	Practicum/Internship	6 S.H.
	Subtotal	18 S.H.

### Required Technology Courses

ETEC 9200	Project in Educational Technology	3 S.H.
EDLM 9002	Managing Educational Technology Infrastructure	3 S.H.
	Subtotal	6 S.H.

### Choose Four Electives in Consultation with Advisor (Samples of Electives)

ETEC 8700	Creating Educational Web Sites	3 S.H.
ETEC 7600	Impact of Technology in Education	3 S.H.
ETEC 7700	A Graphics Approach to Technology	3 S.H.
ETEC 7800	Using the Computer as a Research Tool	3 S.H.
ETEC 8600	Computer and Writing	3 S.H.
	Subtotal	12 S.H.
	<b>Total for CAGS</b>	<b>36 S.H.</b>

# MEd—Early Childhood, Elementary, or Middle School Education

## Graduate Program Chair

*Pamela Hill, EdD*

## Graduate Committee

*Ronald Colbert, EdD*

*Rona Flippo, EdD*

*Charles Hetzel, PhD*

*George Miller, PhD*

*Daniel Nomishan, EdD*

## Program Objectives

The MEd in Early Childhood Education, MEd in Elementary Education, and the MEd in Middle School Education programs are designed for fully licensed teachers and those seeking a license who wish to pursue advanced levels of reflection, knowledge, skill, and professionalism. The programs provide three tracks: a Non-Clinical Track for teachers who hold a Professional License, a Clinical Track for teachers who hold an Initial License and are pursuing a Professional License, and a Dual Stage Track for those individuals who do not hold an Initial License or Professional License.

Students with an approved baccalaureate degree, but without an Initial or Professional License, must select a 44-45 credit Dual Stage Track. Each dual stage track leads to eligibility for an Initial License and Professional License at the level of the selected program, i.e. Early Childhood Education, Elementary Education or Middle School Education.

## Program Descriptions

The MEd in Early Childhood Education, MEd in Elementary Education, and the MEd in Middle School Education programs of study enable educators to:

- Reflect on historical, philosophical, and theoretical perspectives related to current educational issues and practice
- Examine empirical research and engage in the scientific reasoning process
- Acquire and apply advanced knowledge of child development theory and research in the design and implementation of education curricula, practices, and environments
- Acquire knowledge of how children develop as thinkers and learners
- Acquire and apply advanced knowledge of emerging, research-based educational principles in the planning, implementation, and evaluation of the educational environment and instructional program
- Become more aware of societal demands on the curriculum as they relate to meeting the diverse needs of students
- Investigate effective educational partnership models, which focus on family strengths, circumstances, and cultural experiences
- Demonstrate effective strategies and techniques for working with diverse populations of students in integrated learning environments

- Examine the shared values, ethics, purposes, and commitments, which bond the educational community
- Acquire a professional orientation of collegiality and support, whereby contributions can be made to the improvement of education through the construction of knowledge and applications

## Admissions Standards and Criteria

To apply for enrollment in the Master of Education in Early Childhood Education, Master of Education in Elementary Education or Master of Education in Middle School Education, a student must submit documents as outlined in the Graduate Admission section as well as:

- An appropriate teaching certificate (Initial Licensure is required for the Clinical Tracks.) Those in dual stage tracks are exempt from this requirement.
- Applicants without initial licensure applying to the dual stage track must successfully complete the literacy and communication subtests of the Massachusetts Tests for Educator Licensure (MTEL) and submit passing scores as part of their application. In addition, students must successfully pass the appropriate content area exam(s) of the MTEL prior to student teaching.

For more information regarding licensure requirements for teacher preparation programs, contact the Teacher Certification Office at 978-665-3239 or visit their web site at [www.fsc.edu/edcert](http://www.fsc.edu/edcert).

## Program Requirements

The Master of Education in Early Childhood Education, Master of Education in Elementary Education, and Master of Education in Middle School Education require that 36 credits be acquired in a suggested sequence within six years or less. The course sequence has been designed to ensure quality and provide flexibility to serve the variety of student interests and professional needs. A program advisor assists each student with the planned sequence and advises the selection of electives to meet individual goals and interests.

Each program is composed of:

- Five required common core courses
- Three designated specialized courses from the selected discipline of Early Childhood Education, Elementary Education, or Middle School Education
- Four elective courses or, for students in the Clinical Tracks, a Clinical Internship plus two elective courses

Students in the dual stage tracks must complete or demonstrate:

- Prerequisite undergraduate course work which must be completed before starting program courses: General Psychology and Child or Adolescent Psychology
- An additional 8-9 credits of graduate and undergraduate level course work bringing the program totals for these tracks to 44-45 credits
- 75 hours pre-practicum experiences
- 150-300 hour practicum

Retention in the dual stage tracks and admission to the practicum are dependent upon positive vote(s) by the Graduate Curriculum Committee.

## Program of Study

### Required Core Courses

EDUC	7300	Advanced Child Development (*A)**	3 S.H.
EDUC	7400	Contemporary Issues in Education (*A)	3 S.H.
EDUC	7500	Curriculum Design and Implementation for Multi-Needs Populations (*A)**	3 S.H.
EDUC	8200	Qualitative Reading Assessment and Analysis (*C)	3 S.H.
EDUC	8300	Research in Education (*B)	3 S.H.
		<b>Subtotal</b>	<b>15 S.H.</b>

### Specialized courses designated within selected discipline and track

#### Early Childhood Education Program

EDUC	8250	Family Involvement in ECE (*C)	3 S.H.
EDUC	8450	Literacy in Early Childhood Education (*B)**	3 S.H.
EDUC	8500	Developmental Assessment in ECE (*C)	3 S.H.

#### Early Childhood Education Clinical Track

EDUC	9200	Clinical Internship I (*B or C)	+3 S.H.
EDUC	9201	Clinical Internship II (*B or C)	+3 S.H.
		<b>Subtotal</b>	<b>9 or 15 S.H.</b>

#### Early Childhood Education Dual Stage Track Requirements

EDUC	3100	Science, Math, and Social Studies in ECE**	4 S.H.
EDUC	2400	Fine Arts in ECE**	4 S.H.
EDUC	9400	Practicum I/Early Childhood Education	3 S.H.
EDUC	9450	Practicum II/Early Childhood Education	3 S.H.
		<b>Subtotal</b>	<b>9 or 15 or 29 S.H.</b>

#### Elementary Education Program

EDUC	8400	Literacy in Elementary and Middle School Education (*B)**	3 S.H.
EDUC	8650	Advanced Strategies and Approaches for Teaching Critical Thinking in Content Areas (*B)	3 S.H.
EDUC	8600	Advanced Seminar in Child-Centered Issues (*C)	3 S.H.

#### Elementary Education Clinical Track

EDUC	9200	Clinical Internship I (*B or C)	+3 S.H.
EDUC	9201	Clinical Internship II (*B or C)	+3 S.H.
		<b>Subtotal</b>	<b>9 or 15 S.H.</b>

#### Elementary Education Dual Stage Track Requirements

EDUC	2750	Science in Education**	+3 S.H.
EDUC	3020	Teaching Mathematics**	+3 S.H.
EDUC	3500	Creative Arts in Elementary Education	+3 S.H.
EDUC	8360	Advanced Social Studies in Education	+3 S.H.
EDUC	9600	Practicum/Elementary Education	+3 S.H.

### Middle School Education Program

EDUC	8150	Advanced Assessment, Design and Evaluation of Middle School Curriculum (*A)	3 S.H.
EDUC	8350	Middle School Instructional Strategies and Practices (*B)	3 S.H.
EDUC	8750	Seminar in Early Adolescent Issues (*A)	3 S.H.

#### Middle School Education Clinical Track

EDUC	9200	Clinical Internship I (*B or C)	+3 S.H.
EDUC	9201	Clinical Internship II (*B or C)	+3 S.H.
		<b>Subtotal</b>	<b>9 or 15 S.H.</b>

#### Middle School Dual Stage Track Requirements

EDUC	2750	Science in Education**	+3 S.H.
EDUC	3020	Teaching Mathematics**	+3 S.H.
EDUC	8400	Literacy in Elementary and Middle School Education**	+3 S.H.
EDUC	8360	Advanced Social Studies in Education	+3 S.H.
EDUC	9700	Practicum/Middle School Education	+3 S.H.

### Elective Courses

Students in each discipline and track (with exception of Dual Stage Tracks) elect, with the recommendation of an advisor, a combination of elective credits which serve the individual's interests and complete the 36 semester hour program.

For students in the Clinical Tracks the electives will be selected to ensure that at least two courses in the total program reflect one of the curriculum areas.

For students in the Middle School Education track, four graduate level elective courses in one or more Massachusetts Curriculum Frameworks Content Area(s) must be selected.

<i>Subtotal of Electives</i>	<i>6 or 12 S.H.</i>
<b>Total for Degree</b>	<b>36 S.H.</b>
<b>Total for Dual Track</b>	<b>44-45 S.H.</b>

(\*A) (\*B) (\*C) indicate sequence suggested to strengthen knowledge, skills, and attitudes. It is strongly recommended that students follow this sequence in order to gain the necessary knowledge and competencies for more advanced courses.

\*\*Courses requiring pre-practicums in the dual stage track program.

# MEd—General Studies

## Graduate Program Chair

George Miller, PhD

## Graduate Committee

George Bohrer, PhD

Michael Fiorentino, EdD

Elaine Francis, EdD

Pamela Hill, EdD

Anne Howard, PhD

## Program Objectives

The MEd in General Studies in Education is a non-licensure degree program designed for individuals who wish to pursue advanced levels of reflection, knowledge, skill, and professionalism in the field of education.

## Program Description

It is intended that the individual will continue to develop as a reflective, student-centered individual who is able to effectively articulate and apply educational theory and research in the field of education.

To this end, graduate students will:

- Reflect on historical, philosophical, and theoretical perspectives related to current educational issues and practices
- Examine empirical research and engage in the scientific reasoning process
- Acquire and apply advanced knowledge, educational theory, and research in the design and implementation of appropriate educational curricula, practices, and environments
- Acquire knowledge of how individuals develop as thinkers and learners
- Acquire and apply advanced knowledge of emerging, research based, educational principles in the planning, implementation, and evaluation of the educational environment and instructional programs
- Become more aware of societal demands on the curriculum as they relate to meeting the diverse needs of individuals
- Investigate educational partnership models which effectively focus on family strengths, circumstances, and cultural experiences
- Demonstrate effective strategies and techniques for working with diverse individuals in integrated learning environments
- Examine the shared values, ethics, purposes, and commitments which bond the educational community
- Acquire an orientation of collegiality and support, whereby contributions can be made to the future improvement of education through the construction of knowledge and its application
- Be prepared to pursue further graduate studies

## Admissions Standards and Criteria

To apply for enrollment in the Master of Education in General Studies Program, students must submit documents as outlined in the Graduate Admission section. Applicants to this program are not required to submit scores for the Massachusetts Test for Educator Licensure (MTEL) or a copy of a teaching license.

## Program of Study

EDUC	7400	Contemporary Issues in Education	3 S.H.
EDUC	8300	Research in Education	3 S.H.
EDUC	9500	Thesis*	
		*With Program Chair's approval, students may substitute 6 credit action research or internship in lieu of thesis	6 S.H.
		Subtotal	12 S.H.

### Two of the following three courses:

EDUC	7600	Impact of Technology in Education	3 S.H.
SPED	7650	Inclusion of Students with Special Needs in Regular Education	3 S.H.
EDUC	7021	Connecting Reading and Writing	3 S.H.
		Subtotal	6 S.H.

## Goal Areas

In conjunction with the program advisor, individual students will select two goal areas of concentration. **Nine** credits of coursework will be completed in each goal area. These courses will be selected in order to meet the needs and interests of each individual student. Goal areas may include technology, assessment, special education, diversity, literacy, curriculum and instruction, etc.

Subtotal	18 S.H.
<b>Total for Degree</b>	<b>36 S.H.</b>

**No courses below the 7000 level will be accepted toward the program without written approval of the Program Chairperson.**

# MEd—Occupational Education

## Graduate Program Chair

James Alicata

## Graduate Committee

Robert Kokernak, PhD

Edward Martens, PhD

Steven Therrien, MNS

## Program Objectives

The graduate program in Occupational Education is designed for students who have earned a Baccalaureate degree in Technology Education or Vocational Education and want increased awareness and knowledge of current issues and trends in Occupational Education. The program develops an individual's professional competencies in relation to his/her career goals in education and provides advanced study of the principles and practices of educational research.

## Program Description

The MEd in Occupational Education Program consists of 36 credits to be completed in a suggested sequence within six years. The course sequence has been designed to ensure quality and provide flexibility to serve the variety of student interests and professional needs. A program advisor assists each student with the planned sequence, and advises the selection electives (12 semester hours) to meet individual goals and interests.

There are three principal sites where the OCED graduate program is offered:

### North

Greater Lowell Regional Vocational/Technical High School  
Pawtucket Boulevard  
Tyngsboro, MA 01879

### Central

Assabet Valley Regional Vocational School  
Fitchburg Street  
Marlborough, MA 01752

### South

Bristol Plymouth Regional Vocational/Technical High School  
940 County Street  
Taunton, MA 02780

### Additional Sites

Greater New Bedford Regional Technical High School  
1121 Ashley Boulevard  
New Bedford, MA 02745

Blue Hills Regional Technical School  
800 Randolph Street  
Canton, MA 02021

Montachusett Regional Vocational/Technical High School  
1050 Westminster Street  
Fitchburg, MA 01420

Diman Regional Vocational/Technical High School  
251 Stonehaven Road  
Fall River, MA 02723

Whittier Regional Vocational/Technical High School  
115 Amesbury Line Road  
Haverhill, MA 01830

## Admissions Standards and Criteria

To apply for enrollment in the Master of Education in Occupational Education program, a student must submit documents as outlined in the Graduate Admission section as well as:

- An appropriate teaching license

## Program Requirements

The MEd in Occupational Education program consists of 36 credits to be completed in a suggested sequence within six years.

Total credits are divided between:

- Twenty-four semester hours of required courses
- Twelve semester hours of electives designed to allow the vocational educator to develop specific skills relative to his/her career goals

It is recommended that students take OCED 7250: Research and Statistics in Occupational Education, early in the program. All electives must be approved by the program advisor prior to enrollment in the courses.

## Program of Study

### Required Courses

OCED	7000	History and Philosophy of Occupational Education	3 S.H.
OCED	7050	Seminar in Occupational Education	3 S.H.
OCED	7100	Supervision in Occupational Education	3 S.H.
OCED	7150	Evaluation in Occupational Education	3 S.H.
OCED	7200	Public School Laws Relating to Occupational Education	3 S.H.
OCED	7250	Research and Statistics in Occupational Education <b>or</b>	3 S.H.
EDLM	8050	Seminar: Research in Education Leadership	3 S.H.
OCED	7300	Curriculum Development in Occupational Education	3 S.H.
OCED	7350	Public School Finance in Occupational Education	3 S.H.
		<b>Total required courses</b>	<b>24 S.H.</b>

### Elective Courses (Partial Listing) 12 S.H. Required

OCED	7400	Advanced Methods of Teaching in Occupational Education	3 S.H.
OCED	7410	Organization and Administration of Vocational Guidance	3 S.H.
OCED	7420	Administration of Cooperative Educational Programs	3 S.H.
OCED	7430	Effective Teaching of Special Needs Students in the Vocational Environment	3 S.H.
OCED	7440	Professional Development Workshop	2 S.H.
OCED	7450	Vocational Special Needs Seminar	3 S.H.
OCED	7600	Computer Aided Drafting I	3 S.H.
OCED	7610	Computer Aided Drafting II	3 S.H.
OCED	7620	History of Technology	3 S.H.
OCED	7630	Automated Manufacturing I	3 S.H.
OCED	7640	Automated Manufacturing II	3 S.H.
OCED	7650	Quality Control	3 S.H.
OCED	7660	Material and Process Cost Estimating	3 S.H.
		Total elective credits	12 S.H.
		<b>Total for Degree</b>	<b>36 S.H.</b>

## MEd—Science Education

### Graduate Program Chair

Christopher Cratsley, PhD

### Graduate Committee

Robert Champlin, PhD

Howard Thomas, PhD

### Program Objectives

The MEd in Science Education offers two tracks for students who want to advance their study of Biology, Earth Science, and Environmental Science. Track A enhances the skills of certified teachers in Biology and Earth Science. Track B is the non-teaching track, designed to prepare the student for a career in Biology or Environmental Science.

### Program Description

The **science teaching track** with a core of three courses provides a solid foundation in science and science education. The certified student's performance is closely monitored by the Graduate advisor and the Graduate faculty in Science Education.

The **non-teaching track** is designed to meet the needs of individuals pursuing specific training in Biology or Environmental Science. The student is prepared for careers in fields ranging from basic research to state environmental agencies. The student works closely with an advisor so that a flexible program is designed to provide the most current scientific information and research technology available within the program.

The student undertakes a solid investigative core based upon two research courses. This is balanced by the course "Science, Ethics, and Technology." Students may work with the advisor and the Graduate Science Curriculum Committee (GSCC) to waive certain required courses or to add supplemental courses provided at other institutions. (Students seeking licensure at the secondary level in Biology or Earth Science should apply to the MAT degree programs.)

### Admissions Standards and Criteria

To apply for enrollment in the Master of Education in Science Education program, the student must submit documents as outlined in the Graduate Admission section as well as:

- An appropriate teaching certificate (for science teaching track)
- An official transcript of a Bachelor's degree from a regionally accredited institution with a major or minor in biology, earth science, or related field
- The official results of the GRE (Graduate Record Examination)

## Program of Study

### Track A—Science Education

#### Required Courses

SCED	9000	Methods in Teaching Biology and Earth Science	3 S.H.
SCED	9001	The Modern Science Curriculum	3 S.H.
SCED	9002	Research in Science Education	3 S.H.
		<b>Subtotal Required Credits</b>	<b>9 S.H.</b>

#### Electives

SCED	8001	Independent Study	
SCED	8002	Internship	
SCED	8003	Practicum in Science Workshops	
		Science Content Courses	
		Science Teaching Courses	
		Related Education Courses	
		Approved Transfer Courses	
		<b>Subtotal Required Electives</b>	<b>27 S.H.</b>
		<b>Total for Degree</b>	<b>36 S.H.</b>

### Track B—Science (Non-teaching)

#### Required Courses

SCED	8001	Independent Study	3 S.H.
SCED	9003	Science, Ethics and Technology	3 S.H.
SCED	9004	Research in Science	3 S.H.
		<b>Subtotal Required Courses</b>	<b>9 S.H.</b>

#### Electives

SCED	8002	Internship	
		Workshops	
		Science Content Courses	
		Approved Related Courses	
		Approved Transfer Courses	
		Thesis	
		<b>Total Required Electives</b>	<b>27 S.H.</b>
		<b>Total for Degree</b>	<b>36 S.H.</b>

## MEd—Secondary Education

### **Graduate Program Chair**

Nancy Kelly, PhD

### **Graduate Committee**

Elaine Francis, EdD

Edward Roberts, MEd

Robert Tapply, EdM

### **Program Objectives**

The Office of Graduate and Continuing Education offers a generic Master of Education degree for teachers at the secondary level, which *does not lead to licensure in any area*. This program provides teachers with the opportunity to update their knowledge and skills and to participate in courses specific to their professional goals.

### **Program Description**

The MEd program addresses education reform issues and curriculum/development models to meet the needs of today's school systems. The curriculum of the 36 credit degree program is individually planned in consultation with the advisor and provides teachers with the latest effective, research-based practices and technologies to enhance classroom instruction.

### **Admissions Standards and Criteria**

To apply for enrollment in the Master of Education in Secondary Education Program, students must submit documents as outlined in the Graduate Admission section. Applicants to this program are not required to submit scores for the Massachusetts Test for Educator Licensure (MTEL) or a copy of a teaching license.

### **Program of Study**

#### **Core Courses**

SEED	8250	Curriculum and Technology	3 S.H.
EDUC	8300	Research in Education	3 S.H.
SEED	9100	*Thesis	3-6 S.H.
SPEED	7709	The High School Environment: Challenges in Educating Students with Special Needs	3 S.H.
ENGL	8076	Process Writing across the Curriculum	3 S.H.
		Subtotal	15-18 S.H.

#### **Specialized Courses**

SEED	8000	Advanced Methods of Teaching at the Secondary Level	3 S.H.
SEED	8260	Curriculum Design and Development at the Secondary Level	3 S.H.
		Subtotal	6 S.H.
		Electives must be 7000 level or higher. Two 6000 level courses may be taken with advisor's permission.	15 S.H.
		<b>Total for Degree</b>	<b>36-39 S.H.</b>

\* With Program Chair's approval, students may substitute 6 credit action research or internship in lieu of thesis.

## MEd—Special Education

### **Graduate Program Chairs**

Denise O'Connell, EdD, Moderate Disabilities and Guided Study Program

Anne Howard, PhD, Severe Disabilities Program

### **Graduate Committee**

Rosemarie Giovino, EdD

Shari Stokes, EdD

### **Clinical Master's Program**

The Special Education Department has developed an innovative Clinical Master's Program, which integrates theoretical competency with practical application. Students complete clinical course work over a four-semester (two-year) period while concurrently completing field-based requirements. Course content is organized under four strands: Assessment, Curriculum, Strategies and Collaboration. Each semester the course content builds upon the work of previous semesters in the four strands noted above.

### **Program Description**

The MEd in Special Education program is designed to prepare students for careers in teaching children with disabilities. The degree offers students preparation in one of two program areas:

- Teacher of Students with Moderate Disabilities
- Teacher of Students with Severe Disabilities

### **Teacher of Students with Severe Disabilities**

This program prepares graduates to work with students with severe disabilities at all levels.

On an alternating year basis, this program begins at the Merrimack Education Center (MEC) in Chelmsford and at the Massachusetts Bay Community College in Wellesley.

### **Teacher of Students with Moderate Disabilities**

Students may choose to work at grade levels Pre-K through 8, or 5-12. This program meets at the Fitchburg State College campus.

Information on both Clinical Master's Programs is available through the Special Education Department 978-665-3308. Informational meetings are held at the Special Education Department office on the third Thursday of every month from 4:00–5:00 pm at the McKay Campus School. Call for specific dates.

## MEd—Special Education: Clinical Program

Effective October 2001, Massachusetts certification requirements changed. Professional licensure (formerly standard certification) will require 3 years of employment in the role of the license, and one year induction program (working with a mentor in the school district).

### Please Note:

The Massachusetts Department of Education continually revises teacher education standards and requirements for licensure. As a result, students are advised that Special Education Department program requirements are also subject to change to maintain compliance with both State and professional standards. The Special Education Department at Fitchburg State College makes a concerted effort to notify students of changes in program requirements and regulations as soon as they are officially published by the State Department of Education. When appropriate, the Special Education Department advises students of potential changes in advance of formal announcement and implementation.

The Special Education Department will work with teacher candidates and the school districts to meet these requirements. Through a nationally accredited and state approved curriculum, the Clinical program provides the content and experiences that will lead to initial licensure, provided the candidate has met other state requirements, such as the employment and Massachusetts Tests for Educator Licensure (MTEL) requirements. Prospective students are strongly encouraged to attend an informational meeting to more fully understand the requirements they must meet to acquire licensure.

## Program Objectives

Program prepares graduates to:

- Demonstrate knowledge of the field of special education, including legislation and litigation that has affected the rights of individuals with disabilities
- Demonstrate competence in teaching that leads to success for all children in the least restrictive environment
- Evaluate children to determine their educational needs and to design appropriate programs
- Collaborate with teachers and parents to develop effective teaching strategies that will enhance children's learning
- Demonstrate sensitivity, understanding and respect for children and adults from diverse cultural, religious, ethnic, and racial backgrounds

## Admissions Standards and Criteria

To apply for enrollment in the Master of Education in Special Education program, a student must submit documents as outlined in the Graduate Admission section, as well as:

- Applicants to graduate initial licensure teacher preparation programs must successfully complete the literacy and communication subtests of the Massachusetts Tests for Educator Licensure (MTEL) and submit passing scores as part of their application. In addition, students must successfully pass the appropriate content area exam(s) of the MTEL prior to clinical experience. For the most current information regarding licensure requirements for teacher preparation programs, contact the Teacher Certification Office at 978-665-3239.

## Program Requirements

Students interested in the Clinical Master's Program may be required to take prerequisite courses depending on their previous course work and/or teaching certificate(s). Prospective students should attend an informational meeting and meet with an advisor from the Special Education Department to determine prerequisite courses that need to be completed. Prerequisite courses include:

- SPED 7004 Working with Individuals with Disabilities
- SPED 8300 Language Development, Differences, and Disorders
- SPED 7020 Modifying and Adapting Curriculum: Math, Science, Social Studies
- SPED 7025 Pedagogy in Reading and Language Arts
- Child/Adolescent Development

In addition, students in the Teacher of Students with Moderate Disabilities program are required to take SPED 9000 Research in Special Education prior to beginning clinical coursework.

Applicants should meet with an advisor to determine prerequisite courses and experiences for the initial licensure.

## Program of Study

### Teacher of Students with Severe Disabilities

#### Required Courses

SPED	8814	<i>Clinical Course Work I Foundations in Assessment, Curriculum, and Program Development; Collaboration to Support Change</i>	6 S.H.
SPED	8801*	<i>Fieldwork (Severe Disabilities)</i>	1 S.H.
SPED	8861*	<i>Practicum (Severe Disabilities)</i>	6 S.H.
SPED	8824	<i>Clinical Course Work II Assessment, Curriculum, Strategies, and Program Development in Functional Domains; Collaboration for Family and Advocacy</i>	6 S.H.
SPED	8834	<i>Clinical Course Work III Assessment, Curriculum, and Strategies re: Language, Physical and Medical Issues and Collaboration for the Educational Team</i>	6 S.H.
SPED	8862	<i>Clinical Experience (Severe Disabilities)</i>	6 S.H.
SPED	8844	<i>Clinical Course Work IV Assessment, Curriculum Strategies for the Content Areas; Transition from School to Work; Collaboration for Inclusion and Ethical Issues</i>	6 S.H.
SPED	9000	<i>Research in Special Education Electives</i>	3 S.H. 6 S.H.
<b>Total for Degree</b>			<b>40 or 45 S.H.</b>

## Teacher of Students with Moderate Disabilities

### Required Courses

SPED	8914	Clinical Course Work I: Assessment, Curriculum, Strategies in Reading Language Arts	6 S.H.
SPED	8901*	Fieldwork Credit (Moderate Disabilities) or	1 S.H.
SPED	8961*	Practicum (Moderate Disabilities)	6 S.H.
SPED	8924	Clinical Course Work II: Assessment, Curriculum, and Strategies for Math/Science	6 S.H.
SPED	8934	Clinical Course Work III: Assessment in Cognition/Achievement/Transition Curriculum for Social Skills and Affective Development: Strategies for Behavior Management; Collaboration Skills for Inclusion	6 S.H.
SPED	8962	Clinical Experience (Moderate Disabilities)	6 S.H.
SPED	8944	Clinical Course Work IV: Legal and Ethical Issues in Assessment: Curriculum Theory and Development; Transition; Collaboration with Families; The Educational Team	6 S.H.
SPED	9000	Research in Special Education Electives	3 S.H. 6 S.H.
<b>Total for Degree</b>			<b>40 or 45 S.H.</b>

\* In year one, students enrolled in the Clinical Master's Program who already hold Standard Certification in any area, or Provisional with Advanced Standing in Special Education take the one semester hour fieldwork credit, all others take the practicum.

## MEd Special Education: Guided Study Program

### Program Objectives

The Guided Study program in Special Education was developed to meet the needs of teachers who already hold Special Education licensure, and who are interested in further development of their professional skills. The Guided Study Program is a non-licensure degree program and does not require applicants to submit scores from the MTEL.

### Program Description

All students are required to take three courses: *SPED 9000 Research in Special Education*, *SPED 9280 Consultation and Collaboration Skills*, and *SPED 9400 Current Issues in Special Education*. Students work with an advisor to identify and receive approval for three goal areas that they wish to address through the curriculum offerings. The advisor will work with the student to develop a plan of study to meet the identified goals.

### Program Requirements

Graduates must complete 39 credits for the Guided Study Program. All students complete an internship as part of their plan of study. The internship is designed to allow students to demonstrate acquired skills in an educational setting. Internship plans are developed with the advisors and are submitted to the Special Education Graduate Curriculum Committee for approval.

## MEd—Technology Education

### Graduate Program Chair

Steven Therrien, MNS

### Graduate Committee

Robert Kokernak, PhD

Edward Martens, PhD

### Program Objectives

The Master's of Education in Technology Education program leads to professional licensure (P-9) (5-12) in the field of technology education.

### Program Description

The Master's in Technology Education is a 39-credit program designed to fill the requirements for certification as a Technology teacher and to meet the needs of the practicing teacher with prior preparation and experience. In addition, the program aims to:

- Demonstrate the application of a wide range of knowledge in the area of technology education, including the technologies of manufacturing, communications, construction, power, energy, and transportation
- Prepare teachers to design, implement, and evaluate the most contemporary teaching strategies and approaches in technology/engineering education
- Enable teachers to acquire skills in developing and working with tools, machines, and materials
- Explore relationships among technology/engineering education, career awareness, math, science, and other fields of knowledge
- Implement unique problem-oriented strategies for diverse and exceptional student populations

### Admissions Standards and Criteria

To apply for enrollment in the Master of Education in Technology Education program, a student must submit documents as outlined in the Graduate Admission section as well as:

- An official transcript of a Bachelor's degree from a regionally accredited institution (A liberal arts or science undergraduate major is required for those seeking full certification)
- An appropriate teaching certificate
- Applicants to graduate initial licensure teacher preparation programs must successfully complete the literacy and communication subtests of the Massachusetts Tests for Educator Licensure (MTEL) and submit passing scores as part of their application. In addition, students must successfully pass the appropriate content area exam(s) of the MTEL prior to student teaching.

For more information regarding licensure requirements for teacher preparation programs, contact the Teacher Certification Office at 978-665-3239 or visit their web site at [www.fsc.edu/edcert](http://www.fsc.edu/edcert).

## Program Requirements

The 39-credit program includes:

- Twelve credits of graduate pedagogy
- Fifteen credits of technology knowledge and field applications
- Six credits of professional electives
- Six credits of clinical experience

## Program of Study

### A. Graduate Pedagogy

ITEC	8000	<i>Advanced Methods of Teaching at the Secondary Level</i>	3 S.H.
EDUC	8300	<i>Research in Education</i>	3 S.H.
ITEC	8900	<i>Curriculum Development for Technology Education</i>	3 S.H.
		<i>Subtotal of Graduate Pedagogy</i>	9 S.H.

### B. Competence and Field Applications

(in the following cluster areas)

ITEC	8400	<i>Communications in Technology Education</i>	3 S.H.
ITEC	8500	<i>Power and Energy in Technology Education</i>	3 S.H.
ITEC	8600	<i>Manufacturing in Technology Education</i>	3 S.H.
ITEC	8700	<i>Construction in Technology Education</i>	3 S.H.
ITEC	8800	<i>Transportation in Technology Education</i>	3 S.H.
		<i>Subtotal of Competence and Field Applications</i>	15 S.H.

### C. Clinical Experience

ITEC	9500	<i>Internship</i>	6 S.H.
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### D. Professional Electives

		<i>Choose from any industrial technology courses.</i>	9 S.H.
		<b>Total for Degree</b>	<b>39 S.H.</b>

# Master of Science Programs

## MS—Communications/Media

### Graduate Program Chair

Randy Howe, EdD

### Graduate Committee

John Chetro-Szivos, PhD

Charles Sides, PhD

### Program Objectives

The Master of Science in Communications/Media Degree Program develops the knowledge and skills for the effective implementation of communications media within business, industry, government, not-for-profit agencies, health services and education. Students may choose concentrations in:

- Communications/Media Management
- Technical and Professional Writing
- Instructional Technology (offered at Rollins Griffith Teacher Center, Dorchester)
- Library Media (offered at Rollins Griffith Teacher Center, Dorchester)

### Program Description

Courses are designed to prepare students to effectively function as organizational, financial and strategic leaders of a technological communications/media organization.

- Courses are conveniently offered in the late afternoon and evening to accommodate life-work schedules
- Distance learning opportunities are available for some courses
- The faculty includes experienced communications/media practitioners

### Admissions Standards and Criteria

To apply for enrollment in the Master of Science in Communications/Media program, a student must submit documents as outlined in the Graduate Admission section as well as:

- Two or more years of experience with communications/media technology
- A departmental interview and portfolio presentation

### Program Requirements

The Master of Science Degree in Communications/Media requires a total of 36 semester credit hours as follows:

- Twelve credit hours required course work in Communications/Media
- Eighteen credit hours as electives from Communications/Media and other departmental offerings at FSC and/or through Rollins Griffith Teacher Center
- Six credit hours as either a practicum or thesis

### Program of Study

#### Required Core Courses for all tracks

COMM 9010	Communications Technology Forecasting	3 S.H.
COMM 9120	Legal and Ethical Issues in Communication	3 S.H.
COMM 9140	Managing Communication	3 S.H.
COMM 9110	Communications Research Methods	3 S.H.
COMM 9200	Practicum <b>or</b>	6 S.H.
COMM 9980	Thesis	6 S.H.
<b>Total required courses</b>		<b>24 S.H.</b>

#### Communications/Media Management Track\*

##### Objectives

The Communications/Media Management Track is designed to provide knowledge and skills for the effective management of communications/media operations within business, industry, government, non-profit, and health services.

**\*Note: This program utilizes a cohort model and will commence when sufficient enrollment is secured.**

##### Description

Courses in the Communications/Media Management Program are structured to complement and extend the participant's professional skills and experiential base. Faculty collaborate with professionals working in the field organizations and as independent producers to prepare students to function as organizational, financial, technological, and strategic leaders of communications media. Specifically, students learn the importance of:

- Developing leadership skills
- Controlling budgets
- Understanding business protocols
- Building a base of support
- Introducing new technologies

#### Elective Course Offerings, partial listing

COMM 9020	Media Communications Facilities Design	3 S.H.
COMM 9030	Instructional Design and Analysis in Communications/Media	3 S.H.
COMM 9130	Effective Leadership and the Media Manager	3 S.H.
COMM 9090	Interactive Design and Analysis in Communications/Media	3 S.H.
COMM 9071	Managing the Documentation LifeCycle, Part I	3 S.H.
COMM 9080	Managing the Documentation LifeCycle, Part II	3 S.H.
<b>Total for Degree</b>		<b>36 S.H.</b>

### **Technical and Professional Writing Track\***

#### **Objectives**

The Master of Science in Communications/Media technical and Professional Writing Degree Program is designed to provide knowledge and skills necessary to develop print and online communications materials within business, industry, government, and journalistic enterprises.

**\*Note: This program utilizes a cohort model and will commence when sufficient enrollment is secured.**

#### **Description**

Courses in the Communications/Media Technical and Professional Writing Program are structured to complement and extend the participant's professional skills and experiential base. Faculty collaborate with professional writers, editors, documentation managers, and multimedia designers to prepare and mentor students in developing their communications materials for publication and distribution.

Specifically, students learn the importance of:

- Forecasting communication technology needs
- Researching for publication
- Designing and developing online and multimedia materials
- Designing and developing text-based documentation
- Editing manuscripts for publication
- Managing communications development

#### **Technical and Professional Writing Track Offerings: (partial listing)**

COMM 7000	Writing Workshop 1	3 S.H.
COMM 7500	Writing Workshop 2	3 S.H.
COMM 8300	Writing Workshop 3	3 S.H.
COMM 8400	Writing Workshop 4	3 S.H.
COMM 8500	Philosophical Issues in Professional Writing	3 S.H.
COMM 9090	Interactive Design and Analysis in Communications/Media	3 S.H.
	<b>Total for Degree</b>	<b>36 S.H.</b>

### **Instructional Technology Track (offered at Rollins Griffith Teacher Center, Dorchester)**

#### **Objectives**

The objective of the Master's Degree in Communications/Media track in Instructional Technology is to equip teachers and interested professionals with the knowledge and skills necessary for the effective development and management of media technology in school settings.

This program is designed to:

- Update teacher's technological skills with innovative curricula and courses
- Build on teacher's curriculum-based knowledge and equip them with skills for presenting information to students in new, innovative and creative methodologies
- Enable teachers to incorporate technology into their classroom curricula
- Assist teachers and other professionals in meeting the requirements for certification as a Unified Media Specialist

#### **Instructional Technology Track Elective Offerings: (partial listing)**

COMM 7020	Portable Video Production	3 S.H.
COMM 7030	Graphics for Designing Media	3 S.H.
COMM 7100	Television Production 1	3 S.H.
COMM 7150	Television Production 2	3 S.H.
COMM 7200	Communication and Visual Theory	3 S.H.
COMM 7250	Photography for Educators	3 S.H.
COMM 7253	Hyper Text Mark Up Language	3 S.H.
COMM 8050	Advanced Photography for Educators	3 S.H.
COMM 8100	Color Photography for Educators	3 S.H.
COMM 8150	Advanced Graphics for Educators	3 S.H.
COMM 8600	Selection and Evaluation of Instructional Materials	3 S.H.
COMM 9030	Instructional Design and Analysis in Comm/Media	3 S.H.
COMM 9090	Interactive Multimedia	3 S.H.
COMM 9975	Clinical Experience	3 S.H.
	<b>Total for Degree</b>	<b>36 S.H.</b>

### **Library Media Track (offered at Rollins Griffith Teacher Center, Dorchester)**

#### **Objectives**

The Library/Media track of the Master's Degree in Communications/Media equips teachers with training in library and information science, and in media technology.

This program is designed to:

- Develop skills for operating library/media centers
- Provide knowledge of the new information technologies
- Forge selection and utilization competencies for print and non-print media
- Assist educators in meeting the requirements for certification as a School Library Media Specialists.

#### **Library Media Track Elective Offerings: (partial listing)**

COMM 7253	HTML: Developing a Third Generation Web Site	3 S.H.
COMM 8000	Administration of School/Library Media Centers	3 S.H.
COMM 8030	Technology, Media Centers, and Libraries	3 S.H.
COMM 8250	Advanced Studies in Children's and Young Adults' Literature	3 S.H.
COMM 8600	Selection and Evaluation of Instructional Materials	3 S.H.
COMM 9030	Instructional Design and Analysis in Comm/Media	3 S.H.
COMM 9090	Interactive Multimedia	3 S.H.
COMM 9975	Clinical Experience	3 S.H.
	<b>Total for Degree</b>	<b>36 S.H.</b>

### **Certificate Options**

#### **Certificate of Achievement**

As an alternative to the full Master's Degree, students completing COMM 9010, COMM 9120, COMM 9140, and COMM 9110, and two additional courses totaling 18 credit hours in Communications/Media Management with a cumulative average of 3.0 or better may be awarded a Certificate of Achievement.

# MS—Computer Science

## Graduate Program Chair

Nadimpalli Mahadev, PhD

## Graduate Committee

Kevin Austin, PhD

Natasha Kourtonina, PhD

## Program Objectives

The Master's degree program in Computer Science provides the opportunity for the graduate students to obtain competitive skills and knowledge to succeed as computer scientists in the constantly developing high-technology market place.

## Program Description

The Master's degree program in Computer Science is designed for students with the desire to:

- Upgrade and enhance their existing knowledge and skills.
- Gain experience with new technologies.
- Prepare for advanced professional positions.
- Initiate new career paths.

The program specializes in hardware, software, networking and state-of-the-art knowledge. Degree candidates have the opportunity to study a variety of topics such as object-oriented systems development, graphics, networks, and database systems. Our program provides our students the opportunity to develop marketable technical skills for the quickly evolving information-based society.

Concentrations are designed for computer science graduates as well as for students and professionals from other disciplines. Our flexible program serves students of various backgrounds who are committed to broadening their education, earning advanced degrees, and improving their careers.

Candidates select their courses of study to build on their knowledge, skills, and interests. A close collaboration between students and the graduate faculty ensures that individual goals meet with department standards. A departmental graduate advisor is available to all students.

## Admissions Standards and Criteria

To apply for admission into the M.S. in Computer Science program, applicants must have an equivalent of 4-year bachelors degree in computer science, mathematics, engineering or other appropriate field of study from an accredited program. They must submit documentation as outlined by the Graduate Admissions. In addition, GRE scores in quantitative and analytical parts must be at least in the 50th percentile.

Depending on background, an applicant may be admitted into the graduate program and be required to complete a subset of the undergraduate prerequisites listed below. All the undergraduate prerequisites are offered in the evening.

## Program of Study

The program offers fundamental and advanced courses in Computer Science. Core courses provide firm theoretical foundation for further study. Most classes are offered in the evenings.

### I. Prerequisite Requirements (Undergraduate)

An overall GPA of 3.0 or better is needed in all the required prerequisite courses.

CSC	1500	Computer Science I (Java)	3 S.H.
CSC	1550	Computer Science II (Java)	3 S.H.
CSC	2560	Systems Programming (UNIX & C)	3 S.H.
CSC	3100	Operating Systems	3 S.H.
CSC	3200	Programming Languages	3 S.H.
CSC	3700	Algorithms & Data Structures	3 S.H.
CSC	4400	Software Engineering	3 S.H.
CSC	1600	Introduction to Electronics	4 S.H.
CSC	1650	Digital Electronics	4 S.H.
CSC	2600	Computer Organization	4 S.H.
CSC	3600	Microprocessors	4 S.H.
MATH	1900	Discrete Mathematics	3 S.H.
MATH	2200	Business Statistics	3 S.H.
MATH	2300	Calculus I	4 S.H.
MATH	2400	Calculus II	4 S.H.
MATH	2600	Linear Algebra	3 S.H.
Total Prerequisite Courses			54 S.H.

### II. Graduate Requirements:

Graduate courses can be taken only after completing all the undergraduate prerequisites. (Your advisor may grant appropriate exceptions.)

#### A. Core courses (all courses required):

CSC 7050	Theory of Computation	3 S.H.
CSC 7400	Object Oriented Analysis & Design	3 S.H.
CSC 8050	Design and Analysis of Algorithms	3 S.H.

#### B. Elective courses\* (18 S.H. selected from any elective courses):

<b>Algorithms</b>		
CSC 7160	Software Development in Computer Graphics	3 S.H.
CSC 9050	Graph Algorithms	3 S.H.
<b>Web Programming</b>		
CSC 7500	Database Design	3 S.H.
CSC 8205	Advanced Java	3 S.H.
<b>Programming</b>		
CSC 7000	Programming UNIX in "C"	3 S.H.
CSC 7200	Object Oriented Programming in "C++"	3 S.H.
CSC 8190	UNIX Network Programming	3 S.H.
<b>Networking</b>		
CSC 7255	Data Communications and Networking	3 S.H.
CSC 8120	Local Area Networks	3 S.H.
CSC 8255	Adv. Network Technologies	3 S.H.
<b>Operating Systems</b>		
CSC 8180	Windows Programming using MFC	3 S.H.
CSC 8280	Advanced Operating Systems	3 S.H.
CSC 8600	Topics: Client/Server Networking	3 S.H.

### General Electives

CSC 7600 Topics: Embedded Systems	3 S.H.
CSC 7-9600 Topics in Computer Science	3 S.H.
CSC 8901 Internship**	1-3 S.H.
CSC 9000 Independent Study	3 S.H.

### C. Master's Thesis (total of 6 S.H.):

Consult the college procedures and department policies on thesis.

**Total for Degree 33 S.H.**

\*Elective courses constantly change as new areas of study develop in this very dynamic field. New courses are often tested as topics courses first.

\*\*All students have the opportunity for practical work experience through internships (up to a maximum of 6 S.H.). This is highly recommended for all fulltime students, students not currently employed in the computer industry, and foreign students not familiar with US work protocol. To participate in this program, a student must be a matriculated graduate student with 9 months participation in this program and be in good academic standing. International students may be eligible for curricular practical training.

## MS—Counseling

### Graduate Program Chairs

Michael Bloomfield, EdD

Richard J. Spencer, PhD

### Graduate Committee

G. Jefferson Breen, EdD

Carol Globiana, EdD

John M. Hancock, PhD

Lynne Kellner, PhD

Thomas Schilling, PhD

Graduate Student Representative

### Program Objectives

The MS in Counseling program is designed to prepare professional counselors as human development teachers or facilitators whose primary function is to help individuals enhance life adjustment, facilitate personal growth, and expand behavioral competencies so that they can cope more effectively with their environment. Through the program students increase their self-awareness, their sensitivity to others, and their effectiveness as facilitators as they develop skills in counseling. The three major programs of study; marriage and family therapy, mental health counseling, and school guidance counseling, all fulfill the academic requirements for state licensure in their respective fields.

### Program Description

The program is based on a developmental socialization model of intervention, which recognizes that at each developmental stage—infancy, childhood, adolescence, young adulthood, the middle years, and old age—individuals face tasks that can lead to problems needing professional assistance. Counselor education is based on the belief that effective counselors are both personally and professionally integrated. For this reason, a balance between didactic and experiential learning is maintained.

### Programs of Study

#### Marriage and Family Therapy

Prepares professionals in family systems therapy. Students are introduced to and integrated with a variety of family therapy theories, including systematic, structural, strategic, and reflecting a team approach. Course work provides the student with:

- Didactic study of theory
- Practical applications of techniques
- Personal growth as a therapist
- Development of a personal model of family therapy

Courses are taught both at Fitchburg State College and at the LUK Family Institute (LUK, Inc.), an adolescent and family counseling agency in Fitchburg, MA, which offers specialized training and supervision in family systems therapy with emphasis on families with adolescents. This program of study offers students the opportunity to apply for a license as Marriage and Family therapists. (L.M.F.T.)

### ***Mental Health Counseling***

Prepares professionals for counseling positions in a wide variety of settings. Mental Health Counseling involves the application of the principles of psychotherapy, human development, learning theory, group dynamics, and the etiology of mental illness and dysfunctional behavior. The applications are relevant to individuals, couples, families, and groups for the purpose of treating psychopathology and promoting optimal mental health.

Students take a core of required courses emphasizing generic skills. Additional course work may be directed toward:

- areas of interest such as family counseling, substance abuse, child abuse and neglect, forensic case work, etc., or
- client groups, such as children, adolescents, adults, etc.

This program of study offers students the opportunity to apply for licensure as mental health counselors. (L.M.H.C.)

### ***School Guidance Counseling***

Prepares professionals for counseling at either the elementary (PreK-8) or secondary (5-12) school levels. Course work centers on preparation to work with children in a school environment with serious emotional, cognitive, and behavioral disorders. In addition, graduates are educated in methods to work effectively with teachers, parents, administrators, nurses, school psychologists, and other members of the school community to assist youngsters to obtain an appropriate education and to participate productively in society.

This program of study offers students the opportunity to apply for Initial Licensure as an elementary school (PreK-9) and/or secondary school (5-12) guidance counselor.

## **Certificate Programs of Study**

### ***Adolescent and Family Therapy Certificate***

Provides specialized training in family systems therapy. Instruction emphasizes the relationship between the student's own experience with her/his family and clinical work with client families. Students are taught to understand and work with families from a variety of family therapy theories, including systematic, structural, strategic and structural-analytic. In addition, students are taught skills to begin building their own model of family therapy from current models as well as from their personal perspective of being a therapist.

Courses are taught both at Fitchburg State College and the LUK Family Institute (LUK, Inc.).

### ***Child Protective Services Certificate***

Provides professionals with specialized training in skills specific to working with:

- Victims of child abuse and neglect
- Abusers
- Families of both the abuser and abused

The certificate in Child Protective Services requires a minimum of two years of study involving a sequence of courses, beginning with the theoretical and finishing with practical applications and a field component.

### ***Substance Abuse Services Certificate***

Provides training in skills specific to working with substance abusers, including those with dual diagnoses, and the families of substance abusers. Course work typically spans two years; however, students may elect to extend that time frame or complete the required course work in less time.

## **Special Status Student**

This program of study is designed for professionals who already hold a Master's degree in Counseling or a related field. The program prepares graduates for the opportunity to apply for:

- Licensure as a Marriage and Family Therapist (L.M.F.T.)
- Licensure as a Mental Health Counselor or (L.M.H.C.)
- Initial Licensure as a School Guidance Counselor (PreK-8) and/or (5-12)

A second Master's degree is not awarded through this program of study. Students apply for enrollment through the CAGS in Interdisciplinary Studies Program.

## **Admissions Standards and Criteria**

To apply for enrollment in the MS in Counseling Program, a student must submit documents as outlined in the Graduate Admission section as well as:

- A personal statement (maximum 300 words) describing goals and reasons for applying to the program
- Applicants to school guidance counseling programs of study must submit a passing score in the literacy portion of the Massachusetts Educator Certification Test.

Students are admitted to the college and take Phase I coursework in the program. After the successful completion of the Phase I coursework, students apply for Candidacy in the Graduate Counseling Program.

Candidacy is awarded by the Behavioral Sciences Committee on Graduate Programs based on:

- The successful completion of the undergraduate prerequisites
- The successful completion of the experiential and theoretical aspects of counseling (Phase I course work)
- The successful completion of the Literacy portion of the Massachusetts Educator Certification Test (for the School Guidance Counseling Program of Study)
- The demonstration of competent personal and appropriate ethical behavior
- The demonstration of competent interpersonal skills

## Program Requirements

For all programs, students together with their advisors, must plan a program to meet the candidate's career goals. All courses must have advisor approval prior to registration.

<b>I. Undergraduate Prerequisites</b>	<b>*12 S.H.</b>
<i>General Psychology</i>	3 S.H.
<i>Developmental Psychology</i>	3 S.H.
<i>Abnormal Psychology</i>	3 S.H.
<i>Statistics, Psychological Statistics or Applied Statistics for Counselors</i>	3 S.H.

\* Undergraduate credits are not figured into degree requirements for Graduate Study.

## II. Graduate Requirements

### Marriage and Family Therapy

A minimum of 60 semester hours is required. Students must take:

- Fifty-seven semester hours of required courses including; 12 semester hours of Internship
- Three semester hours of electives

#### Phase I

PSY 7010	<i>Counseling Theories</i>	3 S.H.
PSY 7020	<i>Group Dynamics</i>	3 S.H.

#### Phase II

PSY 7005	<i>Mental Health and Family Counseling: Professional Practice, Standards and Ethics</i>	3 S.H.
PSY 8010	<i>Issues in Development: Counseling Children and Adolescents</i>	3 S.H.
PSY 8020	<i>Issues in Development: Counseling Adults</i>	3 S.H.
PSY 8130	<i>Psychopathology I: Diagnosis and Assessment</i>	3 S.H.
PSY 8190	<i>Social and Cultural Foundations: Issues and Diversity</i>	3 S.H.
PSY 8300	<i>Psychological Testing and Assessment: Theory and Practice</i>	3 S.H.
PSY 8500	<i>Counseling Techniques and Case Analysis: Individuals and Families</i>	6 S.H.
PSY 8750	<i>Family Models, Organization and Process I</i>	3 S.H.
PSY 8755	<i>Family Models, Organization and Process II</i>	3 S.H.
PSY 8950	<i>Research and Evaluation</i>	3 S.H.
PSY ****	<i>Psychology Elective</i>	3 S.H.

#### Phase III

PSY 8770	<i>Advanced Systemic Intervention I</i>	3 S.H.
PSY 9087	<i>Internship in Marriage and Family Therapy</i>	12 S.H.
PSY 8780	<i>Advanced Systemic Intervention II</i>	3 S.H.
	<b>Total for Degree</b>	<b>60 S.H.</b>

### Mental Health Counseling

A minimum of 60 semester hours is required. Students must take:

- Fifty-four semester hours of required courses including 12 semester hours of Internship
- Six semester hours of electives

#### Phase I

PSY 7010	<i>Counseling Theories and Techniques</i>	3 S.H.
PSY 7020	<i>Group Dynamics</i>	3 S.H.

#### Phase II

PSY 7005	<i>Mental Health and Family Counseling: Professional Practice, Standards and Ethics</i>	3 S.H.
PSY 8030	<i>Life Span Development</i>	3 S.H.
PSY 8130	<i>Psychopathology I: Diagnosis and Assessment</i>	3 S.H.
PSY 8132	<i>Psychopathology II: Treatment and Outcome</i>	3 S.H.
PSY 8190	<i>Social and Cultural Foundation: Issues in Counseling</i>	3 S.H.

PSY 8215	<i>Life Style and Career Development</i>	3 S.H.
PSY 8300	<i>Psychological Testing and Assessment: Theory and Practice</i>	3 S.H.
PSY 8500	<i>Counseling Techniques and Case Analysis: Individuals and Families</i>	6 S.H.
PSY 8700	<i>Group Work and Leadership</i>	3 S.H.
PSY 8710	<i>Family and Systems, Models and Interventions</i>	3 S.H.
PSY 8950	<i>Research and Program Evaluation</i>	3 S.H.
PSY ****	<i>Psychology Elective</i>	6 S.H.

#### Phase III

PSY 9090	<i>Internship in Mental Health Counseling</i>	12 S.H.
	<b>Total for Degree</b>	<b>60 S.H.</b>

### School Guidance Counseling

A minimum of 51 semester hours is required. Students must take:

- Fifty-one semester hours of required courses, including 9 semester hours of Internship

#### Phase I

PSY 7010	<i>Counseling Theories</i>	3 S.H.
PSY 7020	<i>Group Dynamics</i>	3 S.H.

#### Phase II

PSY 7000	<i>School Counseling: Professional Practice, Standards &amp; Ethics</i>	3 S.H.
PSY 8010	<i>Issues in Development: Counseling Children and Adolescents</i>	3 S.H.
PSY 8100	<i>Childhood Trauma and its Impact on School Based Services</i>	3 S.H.
PSY 8190	<i>Social and Cultural Foundations: Issues in Counseling</i>	3 S.H.
PSY 8200	<i>Principles of Guidance and Counseling</i>	3 S.H.
PSY 8205	<i>Psychology of Learning: Theory and Applications</i>	3 S.H.
PSY 8210	<i>Occupational Information and Career Counseling (For Secondary Certification, 5-12) or Counseling in the Elementary School (For Elementary Certification, Pre-K-9)</i>	3 S.H.
PSY 8220	<i>Working with Individuals with Special Needs</i>	3 S.H.
PSY 8230	<i>Psychological Testing and Assessment: Theory and Practice</i>	3 S.H.
PSY 8300	<i>Counseling Techniques and Case Analysis: Individuals and Families</i>	6 S.H.
PSY 8500	<i>Research and Program Evaluation</i>	3 S.H.

#### Phase III

PSY 9085	<i>Internship in School Counseling</i>	9 S.H.
	<b>Total for Degree</b>	<b>51 S.H.</b>

# MS—Criminal Justice\*

## Graduate Program Chair

Paul Weizer, PhD

## Graduate Committee

Fazal Ahmed, PhD

Charles Brownlee, JD

Kimberly Faust, PhD

Margot Kempers, PhD

Jonathan Sorensen, PhD

Elizabeth Walsh, JD

## Program Objectives

The Criminal Justice program is designed for the criminal justice practitioner either presently employed or seeking employment in the field. Enrollment is also open to students with interest in research, theory, or pre-law.

**\*Note: Enrollment in this program is based on a cohort model. Contact the Office of Admissions for program start date.**

## Program Description

The degree requires 36 semester hours of course work. Twenty-four credits are fulfilled by the CORE areas, and 12 are fulfilled in a specialized track of study.

The substantive areas of criminology, law enforcement, law adjudication, and corrections are interwoven throughout the three core areas of the curriculum. Specific attention is paid in the core areas of study to issues of diversity, ethical dilemmas and contemporary issues. Each CORE provides the necessary foundation for the subsequent CORE area.

Another component of each student's work is the choice of track course work. Each student selects the track most appropriate to his/her professional goals. Track decisions are made in consultation with the faculty advisor.

## Program of Study

### CORE I—Foundations

The goal of this integrated first CORE is to explore the theoretical foundations of criminal justice policy and practice.

The CORE I phase of the program consists of six (6) credits that include the following subjects:

CJ	7240	Criminal Justice Process	20 hrs.
CJ	7260	Social Relations and the Legal Systems	20 hrs.
CJ	8530	Criminology	35 hrs.

### CORE II—Applications

The goal of this integrated CORE is to develop a practical knowledge of the inherent complexities and day-to-day operations of the American criminal justice system. This is accomplished by focusing on law and its mechanics; the role of research in criminal justice work; etiology of criminal behavior; system management; and ethical and contemporary issues in the criminal justice profession.

The CORE II phase consists of twelve (12) credits that include the following subjects in Section I and II:

### A. Section I

CJ	8410	Criminal Law: Substantive and Procedural	37.5 hrs.
CJ	8430	Research Methods	37.5 hrs.

### B. Section II

CJ	8540	Administrative and Organizational Development	20 hrs.
CJ	8560	Contemporary Issues	10 hrs.
CJ	8580	Ethical Issues in Criminal Justice	10 hrs.
CJ	8590	Program Evaluation and Statistics	35 hrs.

### CORE III—Capstone

The Capstone experience gives each student an opportunity to integrate theory and practice by utilizing the knowledge and skills acquired throughout the program. Students participating in the Capstone meet together in seminar classes.

To complete the Capstone experience, each student must choose **one** of the following six-credit options:

- CJ 9820 Internship (300 field hours)
- CJ 9840 Project
- CJ 9860 Thesis

## Admissions Standards and Criteria

To apply for enrollment in the Master of Science in Criminal Justice program, a student must submit documents as outlined in the Graduate Admission section, as well as:

- A personal statement (maximum 300 words) or a personal interview. The statement should describe the goals and reasons for applying to this program and include information about previous course work, training or work experiences related to the program.

## Specialized Tracks

Each student develops a specialized track of study from the tracks listed below. All tracks are worth 12 credits.

### Professional Studies Track

This is an integrated track designed to inform the student about the legal, ethical, and professional implications of situations encountered in the workplace, as well as the dilemmas which they present.

Courses appropriate for this track include but are not limited to:

CJ	9620	Legalities of Criminal Justice Administration	3 S.H.
CJ	9640	Technology and Legal Limitations	3 S.H.
CJ	9660	Professional Issues: Liabilities and Challenges	3 S.H.
CJ	9680	Cultural Diversity and Communication	3 S.H.

### Individualized Studies Track

This track allows the student to pursue academic and professional areas of interest on this campus as well as at other institutions. Some or all of the twelve semester hours of course work may be taken off-campus and transferred into the program. Prior approval of the faculty advisor is required for the development of this track.

### Management Track

This track, designed by the Business Administration Department, is intended for the student who is particularly interested in applying management theory and practice to criminal justice administration. Prerequisites may be required.

MGMT	9040	Organizational Behavior and Development	3 S.H.
MGMT	9050	Management of Human Resources	3 S.H.
MGMT	9080	Management Theory and Process	3 S.H.
MGMT	9320	Labor Management	3 S.H.

### **Forensic Case Work Track**

This track informs students about the nature of the offender and offenses, the systems that treat and manage the offender, issues and interventions in case work, and the legal and ethical issues that confront professionals in the system

Students may qualify to apply this course work toward a Certificate in Forensic Case Work Studies offered through the Department of Behavioral Sciences. Prerequisites may be required.

The track courses are:

PSY	8172	Criminal Psychopathology	3 S.H.
PSY	8175	Treatment Issues and Interventions in Forensic Case Work	3 S.H.
PSY	8174	Systems, Law and Issues in Forensic Case Work	3 S.H.

One elective from the following courses or coursework approved by the faculty advisor:

PSY	8100	Childhood Trauma and its Impact on School Based Services	3 S.H.
PSY	8120	Sexual Abuse of Children and Adolescents	3 S.H.
PSY	8140	Alcohol Abuse and Other Addictive Disorders	3 S.H.
PSY	8176	Mental Status Examination	1 S.H.

### **Child Protection Studies Track**

This track informs students about the impact of childhood abuse and neglect, and sexual abuse on those who become involved in the criminal justice system. The student will learn to recognize and treat the effects of abuse. The student also examines how her/his own experiences affect the manner in which she/he works with victims and perpetrators of abuse and neglect. Prerequisites may be required.

PSY	8100	Child Abuse and Neglect, and other Individual/Societal Dysfunctions <b>or</b>	3 S.H.
PSY	8120	Sexual Abuse of Children and Adolescents	3 S.H.
PSY	8150	Case Management Treatment of Victims	6 S.H.
PSY	8160	Psychology and Treatment of Offending Behavior	3 S.H.

### **Counseling Studies Track**

This track informs students about the theory and practice of counseling through experiential, group, and traditional course work. Prerequisites may be required.

PSY	7010	Counseling Theories	3 S.H.
PSY	7020	Group Dynamics	3 S.H.
		Two electives (with advisor approval)	6 S.H.

Students will choose 6 semester hours from the following course offerings:

(or course work approved by the faculty advisor)

PSY	8010	Issues in Development: Counseling Children and Adolescents <b>or</b>	3 S.H.
PSY	8020	Issues in Development: Counseling Adults	3 S.H.
PSY	8060	Psychology of Women: Counseling Implications	3 S.H.
PSY	8100	Child Abuse and Neglect, and other Individual/Societal Dysfunction	3 S.H.
PSY	8120	Sexual Abuse of Children and Adolescents	3 S.H.
PSY	8130	Psychopathology I: Diagnosis and Assessment	3 S.H.
PSY	8140	Alcohol Abuse and other Addictive Disorders	3 S.H.
PSY	8180	Legal and Ethical Issues in Counseling	3 S.H.
PSY	8710	Family and Systems, Models and Interventions	3 S.H.

## **MS—Nursing (Specialty: Forensic Nursing)**

### **Graduate Program Chair**

Barbara S. Cammuso, PhD, EdD, APRN, BC

### **Graduate Committee**

Magda Becher, PhD, RN

Robert Dumas, PhD, RN

A. Lynne Wagner, EdD, APRN

### **Program Objectives**

The Master of Science in Nursing degree program is designed for registered nurses who wish to pursue advanced leadership positions in the community and the health care system. The graduate is prepared to contribute to the development of nursing science, to the improvement of health care, and to pursue doctoral study.

### **Program Description**

Through course work and clinical experience, graduates are prepared to:

- Base advanced professional practice on the concept that humankind are unique, interacting, multidimensional beings
- Use nursing practices to guide care for a specialized client population
- Demonstrate competence in the advanced practice role
- Actively promote professional standards, ethics, and legal principles in nursing and health care
- Use a variety of strategies to influence policy-making relating to societal health needs
- Assume leadership roles with health care consumers and providers to improve the planning and delivery of health care
- Contribute to the advancement of nursing knowledge through validation and/or extension of research findings
- Integrate theories and advanced knowledge into clinical practice and professional decision-making
- Demonstrate commitment to the evolving profession of nursing

The specialty in Forensic Nursing prepares nurses to apply:

- Knowledge and skills of nursing and forensic science to the investigation of trauma concurrently with emergency care and emotional support for victims of violent crime
- The nursing process to public or legal proceedings
- Aspects of health care to the scientific investigation and treatment of trauma
- Sensitivity to the health needs and concerns of diverse populations as a clinical nurse specialist
- Direct services such as legal documentation to individual and group clients, including insurance companies and law firms
- Consultation and education for groups, related agencies, and communities

- Expert witness skills in investigations related to violence and trauma
- Skills for varied settings, including emergency health services, schools, correctional facilities, varied community health agencies, employee assistance programs in occupational health settings and law enforcement agencies

**Note:** This program is offered on a cohort basis. Contact the Office of Admissions for program start date.

### Admissions Standards and Criteria

To apply for enrollment in the Master of Science in Nursing program, a student must submit documents as outlined in the Graduate Admission section as well as:

- An official transcript as a graduate of an accredited baccalaureate nursing program
- Three letters of recommendation including documenting a minimum of one year of recent successful clinical practice or part-time equivalent
- A license as a RN in Massachusetts (or indication of intent to apply for same)
- Written personal statement of career goals

### Program of Study

The program is currently planned on a part-time, 6-7 credit per semester cycle through evening and weekends. The course sequence is designed to:

- Complete a majority of core nursing courses with the exception of the Scholarly Inquiry requirement prior to or concurrent with any clinical specialty nursing course
- Support the clinical specialty nursing courses through prerequisite cognate courses
- Provide students the opportunity to select either a research project or thesis
- Cap the program with a practicum experience

It should be noted that nursing courses and required cognates may have prerequisite undergraduate or graduate course work.

## Program Requirements

### A. Core Nursing Courses

NURS	7000	Nursing With Diverse Populations	1 S.H.
NURS	7200	Nursing Theory	3 S.H.
NURS	7300	*Advanced Clinical Concepts	3 S.H.
NURS	7400	Contexts and Roles for Advanced Practice	3 S.H.

### Scholarly Inquiry Requirement

NURS	7700	Nursing Research	3 S.H.
NURS	9010	Research Thesis <b>or</b>	3 S.H.
NURS	9100	Research Project	2 S.H.
		<b>Subtotal</b>	<b>15 or 16 S.H.</b>

### B. Required Cognates in the Forensic Nursing track

CJ	8410	Criminal Law: Substantive and Procedural	3 S.H.
CJ	9640	Technology and Legal Limitations	3 S.H.
		<b>Subtotal</b>	<b>6 S.H.</b>

### C. Required Nursing Courses in the Forensic Nursing track

NURS	8000	Introduction to Forensic Nursing	3 S.H.
NURS	8130	*Scientific Foundations for Forensic Nursing Interventions	3 S.H.
NURS	8200	*Forensic Nursing: Caring for Victims and Perpetrators I	3 S.H.
NURS	8300	*Forensic Nursing: Caring for Victims and Perpetrators II	3 S.H.
NURS	9500	*Practicum in Forensic Nursing	3 S.H.
		<b>Subtotal</b>	<b>15 S.H.</b>

**Total for Degree 36 or 37 S.H.**

\* These courses have a clinical component for a total of 420 hours.

# Certificate Programs

## Adolescent and Family Therapy Certificate

### Program Objectives

The program provides specialized training and supervision in adolescent and family therapy. This certificate is offered in affiliation with the Adolescent and Family Institute of Luk, Inc.

### Program Description

A minimum of 21 semester hours over two years of study is required. Students must take a sequence of required courses including 6 semester hours of Internship. All courses taken must have advisor approval prior to registration.

### Admissions Standards and Criteria

To apply for enrollment in the Adolescent and Family Therapy Certificate Program, a student must submit documents as outlined in the Graduate Admission section as well as:

- A personal statement (maximum 300 words). The statement should describe your goals and reasons for applying to this program and include information about previous course work, training or work experiences related to the program. It should also discuss specifically the strengths you bring and the areas of competencies you need to develop.
- MAT/GRE/GMAT exams not required

### Program of Study

#### Undergraduate Prerequisite Courses

*General Psychology*  
*Abnormal Psychology*  
*Developmental Psychology*

#### Phase I

PSY	7005	<i>Mental Health and Family Counseling: Professional Practice, Standards and Ethics, or</i>	3 S.H.
PSY	8710	<i>Family and Systems, Models and Interventions, or</i>	3 S.H.
PSY	8740	<i>Systems Theory</i>	3 S.H.
PSY	8750	<i>Family Models, Organizations and Process I</i>	3 S.H.

#### Phase II

PSY	8755	<i>Family Models, Organizations and Process II</i>	3 S.H.
PSY	8770	<i>Advanced Systemic Intervention I</i>	3 S.H.
PSY	8780	<i>Advanced Systemic Intervention II</i>	3 S.H.

#### Phase III

PSY	9075	<i>*Internship in Counseling</i>	6 S.H.
<b>Total for Certificate</b>			<b>21 S.H.</b>

\* Internship sites are carefully selected from agencies which have extensive treatment programs in adolescent and family therapy.

## Child Protective Services Certificate

### Program Objectives

Provides specialized training for professionals in skills specific to working with the victims of child abuse and neglect, with abusers and with the families of both.

### Program Description

A minimum of 21 semester hours over two years is required. Students must take a sequence of required courses including 6 semester hours of Internship. Internship sites are carefully selected from agencies which have existing abuse treatment programs and experienced staff for supervision.

All courses taken must have advisor approval prior to registration.

### Admissions Standards and Criteria

To apply for enrollment in the Child Protective Services Certificate Program, a student must submit documents as outlined in the Graduate Admission section as well as:

- A personal statement (maximum 300 words). The statement should describe your goals and reasons for applying to this program and include information about previous course work, training or work experiences related to the program. It should also discuss specifically the strengths you bring and the areas of competencies you need to develop.
- MAT/GRE/GMAT exams not required

### Program of Study

#### Phase I

PSY	8100	<i>*Childhood Trauma and Its Impact on School Based Services or</i>	
PSY	8120	<i>*Sexual Abuse of Children and Adolescents</i>	3 S.H.
PSY	8150	<i>Case Management and Treatment of Victims (two semesters: spring and summer I)</i>	6 S.H.

#### Phase II

PSY	8160	<i>Psychology and Treatment of Offending Behavior</i>	3 S.H.
PSY	8170	<i>Family Treatment with Abusive/Neglectful Families</i>	3 S.H.

#### Phase III

PSY	9070	<i>Internship in Child Protection</i>	6 S.H.
<b>Total for Certificate</b>			<b>21 S.H.</b>

\* The introductory course (*Childhood Trauma and Its Impact on School Based Services or Sexual Abuse of Children and Adolescents*) is open to Child Protective Services students as well as the college and the community. After taking this course students pursuing the certificate are required to make a commitment to finish the program in order to take the remaining courses.

\* Students who can document 3,000 hours of experience working directly with child abuse and neglect may elect to take an examination to waive the introductory course.

## Communications/Media Certificate Program

### Program Objectives

The Communications/Media Certificate Program is designed to provide knowledge and skills for the effective development and management of communications/media operations within business, industry, government, and health services.

### Admissions Standards and Criteria

To apply for enrollment in the Communications/Media Certificate Program, a student must submit documents as outlined in the Graduate Admission section as well as:

- Two or more years of experience in communications/media production
- A departmental interview and portfolio presentation
- MAT/GRE/GMAT exams not required

### Program of Study

The Communications/Media Certificate Program required courses are offered in the following paired sequence:

COMM 9010	Communications Technology Forecasting	3 S.H.
COMM 9110	Communications Research Methods	3 S.H.
COMM 9120	Legal and Ethical Issues in Communication	3 S.H.
COMM 9140	Managing Communication	3 S.H.
	Elective Coursework	6 S.H.
	<b>Total for Certificate</b>	<b>18 S.H.</b>

### Certificate of Achievement

Students must complete the 18 credit hours required course work in Communications/Media.

## Early Intervention Certificate Program

### Program Objectives

The program has been developed to meet the Department of Public Health Certification requirements for Early Intervention Specialists. Effective in 1998, this certification is required for early intervention specialists.

### Program Description

Early Intervention is a program sponsored by the Massachusetts Department of Public Health. Students who study early intervention learn to help parents of children with special needs from birth to age three to recognize and understand their child's particular developmental needs and teach them ways to help their child grow.

Early intervention specialists work with children from birth to three who are premature, have feeding, vision, or hearing problems; are slow to sit up, stand, walk, talk, or do things for themselves; have behavior or attention difficulties; or were born with a disability or health condition that affects their development. Also, the early intervention specialist works with the families of children who have an established biological or environmental risk for developmental delay.

As part of a team, the early intervention specialist works with the family to determine what type of developmental help would be most beneficial for the child. Together they establish an Individual Family Service Plan (IFSP) that specifies all the educational, training, therapy, and support services the family will receive to best help the child.

### Admissions Standards and Criteria

To apply for enrollment in Early Intervention Certificate Program, a student must submit documents as outlined in the Graduate Admission section as well as:

- Complete Child Psychology and an introductory course in Special Needs
- MAT/GRE/GMAT exams not required

### Program Requirements

This certificate program combines twelve credits of course work and six practicum credits. The course work may be taken in any sequence. All coursework must be completed before the practicum.

### Program of Study

SPED 6600	Early Intervention	3 S.H.
SPED 8140	Screening and Assessment of at Risk Infants and Toddlers	3 S.H.
SPED 7950	Physical and Medical Aspects of Working with Children with Disabilities	3 S.H.
SPED 9200	Collaboration Skills for Teachers	<b>or</b>
EDUC 8250	Family Involvement in Early Childhood Education	3 S.H.
SPED 8900	Early Intervention Practicum	6 S.H.
	<b>Total for Certificate</b>	<b>18 S.H.</b>

# Educational Technology Certificate Program

## Program Objectives

This program offers educators and administrators the necessary skills to utilize computer technology in the practice of teaching and program administration. This program stresses the use of the computer as both a teaching tool and as a means to examine curricula and teaching effectiveness.

## Admissions Standards and Criteria

To apply for enrollment in the Educational Technology Certificate program, a student must submit documents as outlined in the Graduate Admission section.

- MAT/GRE/GMAT exams not required

## Program of Study

A total of 15 semester hours of designated credits must be earned and a cumulative average of 3.0 maintained in the program to be eligible for the certificate. This program may be applied to any of the Master's degree or CAGS programs in Education.

### Course Requirements

ETEC	7600	<i>Impact of Technology on Education</i>	3 S.H.
ETEC	7700	<i>A Graphics Approach to Technology</i>	3 S.H.
ETEC	7800	<i>Using the Computer as a Tool for Thinking Skills</i>	3 S.H.
ETEC	8600	<i>Computers and Writing</i>	3 S.H.
ETEC	9200	<i>Project in Educational Technology</i>	3 S.H.
<b>Total for Certificate</b>			<b>15 S.H.</b>

# Fine Arts Director Certificate Program

## Program Objectives

The program is designed for those responsible for the supervision of fine arts programs or teachers moving into such areas of responsibility.

## Admissions Standards and Criteria

To apply for enrollment in the Fine Arts Director Certificate program, a student must submit documents as outlined in the Graduate Admission section.

- MAT/GRE/GMAT exams not required

Note: Applicants should either be certified to teach in one of the arts areas or hold a position as director of an arts area in a K-12 school.

## Program of Study

The Fine Arts Director Certificate Program consists of four graduate courses. Applications are invited from individuals holding a valid Teaching Certificate in one of the arts areas.

The certificate program courses may be applied toward the CAGS Program in Educational Leadership and Management or the MED in Arts Education.

### Certificate Courses

CRAR	9051	<i>Supervising, Directing and Leading in Arts Education I</i>	3 S.H.
CRAR	9052	<i>Supervising, Directing and Leading in Arts Education II</i>	3 S.H.
CRAR	9060	<i>Creative Arts Research</i>	3 S.H.
CRAR	9070	<i>Creative Arts Curriculum Development and Application</i>	3 S.H.
<b>Total for Certificate</b>			<b>12 S.H.</b>

# Forensic Case Work Certificate Program

## Program Objectives

The Forensic Case Work Certificate Program provides specialized training to professionals in the fields of criminal justice, mental health, or social services.

## Program Description

Course work concentrates on:

- The nature of the offender and offense
- The designated systems that treat or otherwise manage the offender
- Issues and interventions in case work
- The legal and ethical issues that confront the workers in the systems

## Admissions Standards and Criteria

To apply for enrollment in the Forensic Case Work Certificate program, a student must submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a bachelor's degree from an accredited institution in human services or a related field
- A personal statement (maximum 300 words). The statement should describe your goals and reasons for applying to this program and include information about previous course work, training or work experiences related to the program. It should also discuss specifically the strengths you bring and the areas of competencies you need to develop.
- MAT/GRE/GMAT exams not required

## Program Requirements

A minimum of 22 semester hours over two years of study, is required. Students may elect to extend that timeframe or complete the required course work in less time. There are 50 hours of course-related field practica and 150 clock hours of Internship included in the program.

## Program of Study

### Undergraduate Prerequisite Courses

*General Psychology*

*Introduction to Sociology*

*Abnormal Psychology*

*Introduction to Human Services (this course may be waived if the student is working or has worked in a human services or forensic casework facility.)*

### Phase I

PSY	8100	*Childhood Trauma and its Impact on School Based Services	or	
PSY	8120	*Sexual Abuse of Children and Adolescents		3 S.H.
PSY	8172	Criminal Psychopathology		3 S.H.

### Phase II

PSY	8140	Alcohol Abuse and Other Addictive Disorders		3 S.H.
PSY	8174	Systems, Laws and Issues in Forensic Case Work		3 S.H.
PSY	8175	Treatment Issues and Intervention in Forensic Case Work		3 S.H.
PSY	8176	Mental Status Examination		1 S.H.
		Elective Course Work		3 S.H.

### Phase III

PSY	9065	Internship in Forensic Case Work		3 S.H.
<b>Total for Certificate</b>				<b>22 S.H.</b>

\*Students must take at least one of these two courses. If comparable courses have been taken at the undergraduate level, the student may apply to her/his advisor to have them credited to this certificate program.

# Forensic Nursing Certificate Program

## Program Objectives

This program provides an opportunity for advanced practice nurses who hold a master's degree in nursing from accredited programs to acquire specialization in forensic nursing. Forensic nursing is the application of nursing science to public or legal proceedings and the integration of the forensic aspects of health care with the bio-psycho-social education of the professional nurse. Students are prepared to deal with the prevention, scientific investigation, and treatment of victims of trauma and/or death as well as the investigation and treatment of perpetrators of abuse, violence, criminal activity, and traumatic accidents.

## Program Description

The student in forensic nursing:

- is cross-trained in the principles and philosophies of nursing science, forensic science, and criminal justice
- assumes a mutual responsibility with law enforcement agencies and the courts in protecting the legal, civil, and human rights of victims of violent crimes, as well as the rights of perpetrators

## Admissions Standards and Criteria

To apply for enrollment in the Forensic Nursing Certificate Program, a student must submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a Master's degree in Nursing from an accredited program
- Three letters of recommendation documenting a minimum of one year of recent successful clinical practice or part-time equivalent
- A Massachusetts RN license (or indication of intent to apply for the same)
- Written personal statement of career goals

## Program Requirements

The program consists of specialized courses in forensic nursing and related courses for a total of 21 credits. Four of the nursing courses contain a clinical/laboratory component, including a more extensive practicum.

## Program of Study

<b>A. Required cognates in the Forensic Nursing track</b>			
CJ	8410	<i>Criminal Law: Substantive and Procedural</i>	3 S.H.
CJ	9640	<i>Technology and Legal Limitations</i>	3 S.H.
		<i>Subtotal</i>	6 S.H.
<b>B. Required nursing courses in the Forensic Nursing track</b>			
NURS	8000	<i>Introduction to Forensic Nursing</i>	3 S.H.
NURS	8130	<i>*Scientific Foundations for Forensic Nursing Interventions</i>	3 S.H.
NURS	8200	<i>*Forensic Nursing: Caring for Victims and Perpetrators I</i>	3 S.H.
NURS	8300	<i>*Forensic Nursing: Caring for Victims and Perpetrators II</i>	3 S.H.
NURS	9500	<i>*Practicum in Forensic Nursing</i>	3 S.H.
		<i>Subtotal</i>	15 S.H.
		<b>Total for Certificate</b>	<b>21 S.H.</b>

\* These courses have a clinical component for a total of 360 hours.

# Professional Mentoring for Teachers Certificate Program

## Program Objectives

This Program provides teachers who wish to further their professional development through graduate course work an opportunity to develop attitudes and skills related to the role of a professional mentor.

## Program Description

Through required courses and a mentoring internship, teaching professionals begin developing collegiality in relation to their profession and become more skilled in the areas of communication, peer consultation and leadership, reflection, problem solving, and evaluation.

## Admissions Standards and Criteria

To apply for enrollment in the Mentoring for Teachers Certificate program, a student must submit documents as outlined in the Graduate Admissions section as well as:

- An appropriate teaching certificate
- MAT/GRE/GMAT exams not required

## Program Requirements

The program includes course work which may, with the permission of an appropriate advisor, provide elective credits suitable for an MEd program in which the student is matriculated. Nine of the course credits are credits required of the CAGS in Teacher Leadership. With appropriate advising and planning, these credits can be applicable to such a CAGS program.

## Program of Study

EDUC/			
SPED	9010	<i>The Adult Learner</i>	3 S.H.
EDLM	9020	<i>Collegial Supervision</i>	3 S.H.
SPED	9200	<i>Consultation Strategies</i>	3 S.H.
EDUC	9360	<i>Mentoring Internship: Program Design, Management, and Evaluation</i>	3 S.H.
		<i>Electives (e.g. EDLM 9100, SPED 7650)</i>	3 S.H.
		<b>Total for Certificate</b>	<b>15 S.H.</b>

Note: Students must have completed the three required courses prior to participating in EDUC 9360 Mentoring Internship.

# School to Career Specialist Certificate

## Program Objectives

The school to Career Specialist certificate program is designed to:

- Provide STC personnel with a base knowledge of the Federal Legislation, Massachusetts comprehensive plan, and the requisite program components.
- Prepare professionals to develop, implement and sustain the school-based learning and work based learning, and connecting activities components in their schools.
- Enable specialists to acquire and use strategies for developing industry, business and community partnerships relating to school to career goals.
- Provide competencies relative to student mentoring, career assessment, portfolio development, job shadowing, and establish and operate work based learning experiences for students away from the school setting.
- Provide the opportunity, through clinical internship, to develop and implement components of a STC program in the public school setting.

## Admission Standard and Criteria

An applicant for enrollment in the school to Career Specialist certificate program at Fitchburg State College is required to submit documents as outlined in the Graduate Admissions section as well as:

- an appropriate teaching or administrator certificate

## Program Description

This 15-credit program is offered in the evening, in the summer, and during special scheduled sessions to allow interested professionals maximum access. The coursework and clinical experience requirements are delivered and supervised by graduate and qualified adjunct faculty. Practica are offered and supervised during the regular public school day and calendar.

The School to Career Specialist (STC) Certificate Program provides practicing school professionals with the base knowledge of the school to career movement, a working knowledge of the requisite components of a school program, the competencies to develop and operate a STC school component, and the techniques necessary to evaluate and sustain a quality program. It provides qualified school personnel with the ability to develop and implement three key elements of a school to career program, namely: school based learning, work based learning and connecting activities, in compliance with the School to Work Opportunities Act (STWOA).

## Program of Study

### **A. Legislation and school to career movement**

*ITEC/PDEV 8050 School to Career Components Seminar* 1 S.H.

*ITEC/EDLM 8100 STWOA Federal Legislation & State Plan* 2 S.H.

### **B. Knowledge Base**

*ITEC/EDLM/EDUC 8250 School to Career in the Public School Curriculum* 3 S.H.

*ITEC/PDEV 8300 Developing STC Industry/Business/Community Partnership* 3 S.H.

*ITEC/PDEV 8350 Career assessment, Mentoring, Portfolios, and Coordination of Work-Based Learning Experiences* 3 S.H.

### **C. Application to Practice**

*ITEC/EDLM 9400 School to Career Clinical Internship* 3 S.H.

**Total for Certificate** 15 S.H.

# Substance Abuse Services Certificate

## Program Objectives

Provides specialized training in skills specific to working with substance abusers, including those with dual diagnoses, and the families of substance abusers.

## Admissions Standards and Criteria

To apply for enrollment in the Substance Abuse Services Certificate program, a student must submit documents as outlined in the Graduate Admissions section as well as:

- A personal statement (maximum 300 words). The statement should describe your goals and reasons for applying to this program and include information about previous course work, training or work experiences related to the program. It should also discuss specifically the strengths you bring and the areas of competencies you need to develop.
- MAT/GRE/GMAT exams not required

## Program Requirements

A minimum of 21 semester hours over two years of study is required. Students may elect to extend that timeframe or complete the required course work in less time. There are 50 hours of course-related field practica and 150 clock hours of Internship included in the program.

## Program of Study

### Undergraduate Prerequisite Courses

*General Psychology*  
*Introduction to Sociology*  
*Abnormal Psychology*  
*Introduction to Human Services (This course may be waived if the student is working or has worked in a human services or in a substance abuse facility.)*

### Phase I

PSY	8140	<i>Alcohol Abuse and Other Addictive Disorders</i>	3 S.H.
PSY	8142	<i>Intervention and Rehabilitation Services for Substance Abusers</i>	3 S.H.

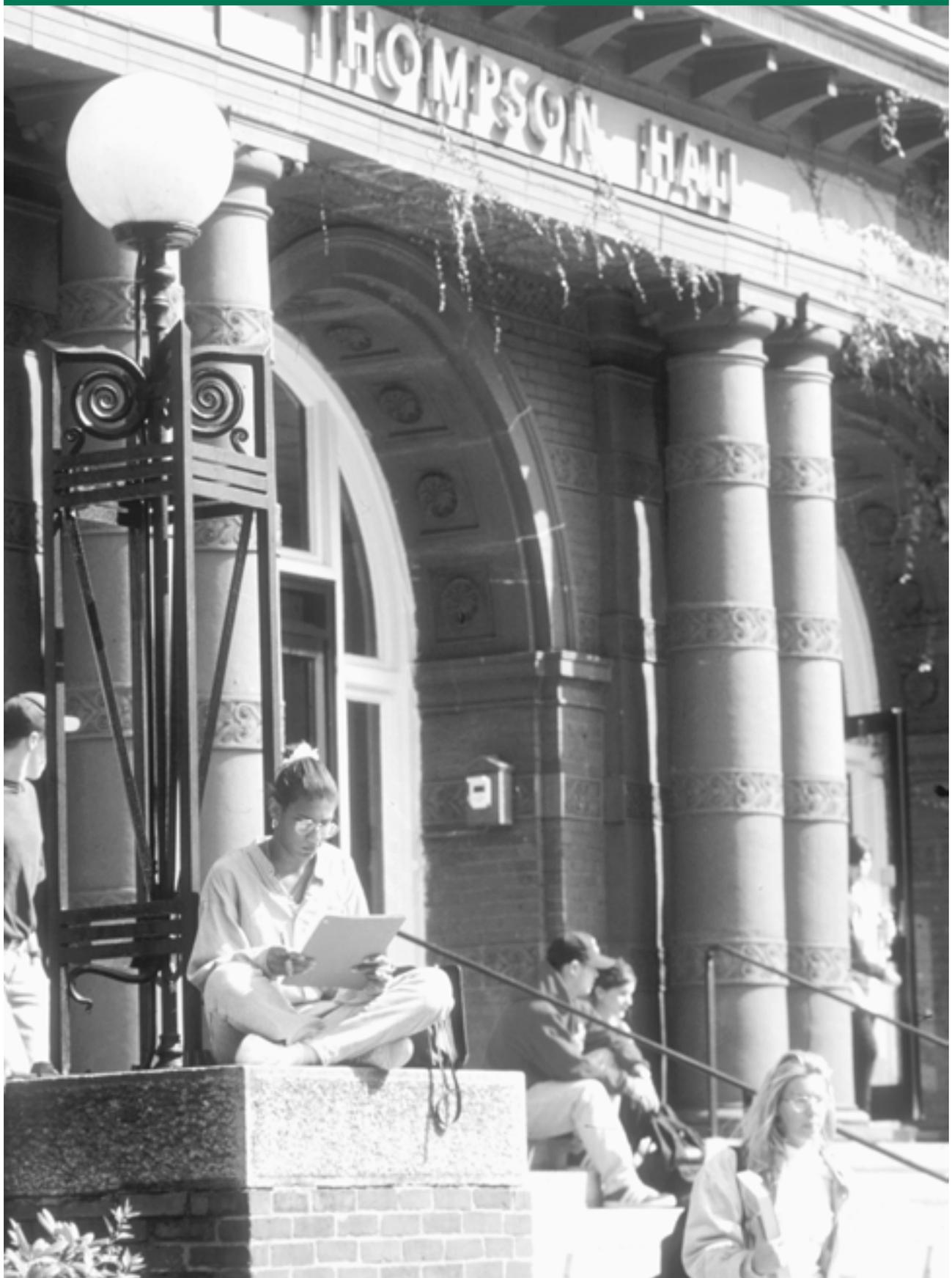
### Phase II

PSY	8143	<i>The Impact of Alcohol Abuse and other Addictive Disorders on Family Systems</i>	3 S.H.
PSY	8144	<i>Case Management in Substance Abuse Services</i>	3 S.H.
PSY	8148	<i>Counseling the Substance Abuser</i>	3 S.H.
		<i>Elective Course Work</i>	3 S.H.

### Phase III

PSY	9072	<i>Internship in Substance Abuse Services</i>	3 S.H.
		<b>Total for Certificate</b>	<b>21 S.H.</b>

# Graduate Course Descriptions



## Fitchburg State College Course Numbering System

Undergraduate courses are numbered 1000-5999

Graduate courses are numbered 6000-9999

- a. 6000-level numbers are reserved for professional development and updating courses.
- b. Numbers 7000-9999 are assigned graduate courses (higher course numbers imply higher level courses).

Note: Course descriptions of all undergraduate and graduate courses can be obtained from the Office of the Registrar.

Waivers of listed course prerequisites, where granted, do not constitute waiver of required core courses or total program credit hours.

## Biology

### Biology of Mammals

**BIOL 7001** 3 cr.

This course is an investigation of the evolution and present biology of mammals involving extensive use of native New England species. Laboratory work includes identification of mammal species from skins, skulls, and tracks. Field trips enhance familiarity with what is learned in the classroom. The course involves four hours of lecture/laboratory plus additional hours for field trips.

### Freshwater Biology

**BIOL 7003** 3 cr.

A field study course designed to study aquatic ecological systems. Daily field trips are taken to the lakes, ponds, streams, and rivers in the Fitchburg area to collect water samples and specimens. Laboratory analysis is conducted to determine the physical and chemical properties of the water and to identify and study the organisms.

### Biology of the Brain and Behavior

**BIOL 7005** 3 cr.

This course focuses on the biological bases of behavior. A variety of media including lectures, journal articles, and films are used to study ethology, psychology, neurobiology and genetics in an attempt to understand the mechanisms underlying behavior.

*Prerequisite: one semester of the following:*

### Winter Botany

**BIOL 7008**

A comprehensive designed to discuss survival during winter. Observations are taken to observe herbaceous plants. Lectures and in-

### The Modern Se

**BIOL 7012**

Required of all have initial licey broad range of is today's secondar familiar with the of secondary sch hours of preprac

### Summer Field

**BIOL 7200**

A field study of and herbs found field trips to coll laboratory work ecology and taxo

### Evolution

**BIOL 7300**

An introduction the evolution of is placed on the relationship of v on the evolution paleontological evolutionary pi

## Marine Biology

**BIOL 7600** 3 cr.

This course examines physical, chemical, and biological factors in the marine environment. The dominant animals and plants in salt marsh, sand beach, tide pools, and a rocky inter-tidal area are investigated. Data on physical and chemical conditions is collected and correlated with the composition, behavior, and physiology of the flora and fauna within each habitat. Saturday or Sunday field trips supplement lectures.

## Advanced Methods of Teaching at the Secondary Level

**BIOL 8000** 3 cr.

Combines academic study with clinical practice and supervision. Theories and topics studied and demonstrated include learning styles, critical thinking, computer applications, and inclusive learning environments. Emphasis is placed on integrating culturally or linguistically diverse students and those with special needs. Interdisciplinary course development and implementation, student assessment including portfolio assessment and writing are studied for utilization across the curriculum.

*Prerequisite: BIOL 7012 or Initial Teacher Licensure.*

## Independent Study

**BIOL 8002** 3 cr.

The Independent Study provides an opportunity for Biology students to work independently on the development of a written work, a science curriculum, a job related document, or some other activity agreed upon by the student and the graduate faculty advisor. The final product of this study is a written or otherwise permanent documentation of the study completed.

## Practicum

**BIOL 8003** 6 cr.

The practicum provides an opportunity for students to gain teaching experience in area schools and in the college campus school Practicum experience is designed to meet the State requirements for advanced provisional teacher certification.

## Practicum

**BIOL 8090** 6 cr.

Student teaching experience is offered to give practical classroom experience to those degree students who have not satisfied the state requirements for certification.

## Curriculum and Technology

**BIOL 8250** 3 cr.

This course looks at the integration of educational technology in the classroom, and its relationship to learning theories. Mac and IBM computer hardware, and interfaces for classroom inquiry including video and microscope cameras, digital image capture, scanners, and computer projection panels are examined. Students learn similarities between standard software programs available for writing, computation, and data analysis. It includes a survey of software for studies, ranging from Encyclopedias on CD-ROM to programs that are specific to the study of various topics in science, art literature, math, and language. The class explores the use of the internet as a classroom resource, the hardware and software necessary to get on line, search engines, browsers, URLs, online journals, education web sites, online interest groups, and how to design a web page.

## Curriculum Design and Development

**BIOL 8260** 3 cr.

This course is designed to provide students with knowledge and skills of the curriculum development-revision process. In collaborative groups students review, revise and expand the curriculum and assessment procedures in order to integrate current research findings and education reform initiatives. Students articulate a general Curriculum map contextually appropriate for grade-level content as they plan for integrating content with social, behavioral, processing, thinking skills and Curriculum frameworks. Students design an integrated 9-12<sup>th</sup> grade curriculum that aligns content standards across disciplines. Finally, interdisciplinary groups design an integrated curriculum unit.

## Research in Biology

**BIOL 9004** 3 cr.

Research is carried out in a specific field of Biology that involves an in-depth exploration of a well-defined problem. The student must develop a hypothesis for the possible solution to the problem; develop the experimental technique to test the hypothesis; and develop a logical conclusion based upon the data collected. The final product is a written documentation of the research and results. Each study is done under the supervision of graduate faculty.

## Thesis in Biology

**BIOL 9010** 3 cr.

Students will conduct a research project which will result in a thesis. This thesis will be developed under the supervision of a thesis advisor and a thesis committee of at least three people.

## Seminar in Biology

**BIOL 9011** 3 cr.

This course is designed to prepare students for research careers. Topics covered are hypothesis formation, experimental design, literature searches, and quantitative methods. Emphasis is placed on student participation and evaluation of each topic. A final research proposal is required of each student.

## Special Topics

**BIOL 9100** 3 cr.

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

## Clinical Experience

**BIOL 9400** 6 cr.

The Clinical Experience is a capstone course allowing full integration and application of content knowledge and pedagogical theory and practice. In a high school classroom students incorporate all standards specific to the discipline in which certification is sought as well as all common standards for classroom teachers. A minimum of 400 clock hours or one full semester on-site under the auspices of the college is fulfilled. A research project is completed during the duration of the clinical experience.

## Internship

**BIOL 9500** 6 cr.

The Internship is a capstone experience allowing full integration and application of content knowledge and pedagogical theory and practice. Within the individual's classroom it incorporates all standards specific to the discipline in which certification is sought as well as all common standards for classroom teachers. A minimum of 400 clock hours or one full semester on-site under the auspices of the college is fulfilled. A research project is completed during the duration of the internship.

## Communications/Media

### Portable Video Production and Non-Linear Video Editing

**COMM 7020** 3 cr.

Process-oriented course with emphasis on selection, operation, and use of current portable equipment designed for instructional use. Emphasis on setting up and operating video and audio equipment for classrooms, small ITV studios, location shooting, and postproduction for preparation of instructional software.

### Graphics for Designing Media

**COMM 7030** 3 cr.

Basic course applying the elements of graphic design to the development of learning resources. Students apply their acquired graphic skills to prepare overhead transparencies, visuals for display, and other graphic materials in instructional settings.

### Slide-Sound Production

**COMM 7050** 3 cr.

Instruction in presentation techniques of projected imagery; emphasis on 35mm slide/tape and super 8mm film animation. Instruction in basic operation of the appropriate equipment and adaptation of the product for effective instruction. Students must supply film.

### Television Production I for Educators

**COMM 7100** 3 cr.

Process-oriented course with emphasis on setting up. Operating and maintaining radio and television production equipment. Students will be involved in production of a half-hour show to be cablecast on Channel A-3, A-8, A-22 in Boston.

### Television Production II for Educators

**COMM 7150** 3 cr.

Process-oriented course designed to make students proficient in production of TV programming with stress upon being able to make, obtain and setup necessary props, background, trick camera shots and sound effects. Emphasis on advanced skill development and color production as a team. Students will learn to integrate good television programming into school-based curriculum and to use television as an instructional tool.

### Communication and Visual Theory

**COMM 7200** 3 cr.

Exploration of the theoretical constructs underlying all visual expression with particular emphasis on projected imagery. Activities include applying theory through design and producing visual statements in a variety of media for the classroom.

### Photography for Educators

**COMM 7250** 3 cr.

Basic course offering instruction camera handling, film exposure and development, production, mounting, display, and evaluation of prints. A skills course with applications for teachers, media specialists, and others interested in use of the photographic medium. Students must have access to an adjustable camera. Students are responsible for film, paper, and chemicals.

### HTML: Developing a Third Generation Web Site

**COMM 7253** 3 cr.

Process-oriented course covering basic HTML (hyper text markup language), emphasizing the use of CGI scripts and forms to create customized and interactive web pages. The course will touch on some of the newest features of HTML, such as tables, that bring HTML into the real publishing world.

### Administration of School Library/Media Centers

**COMM 8000** 3 cr.

Presents topics dealing with library/media services, planning centers and program management, developing and presenting budgets, record keeping, selection and acquisition of equipment and materials, computerization, and other basic management considerations that align and organize themselves with the daily operation of school library/media centers.

### Organization of Learning Resources

**COMM 8010** 3 cr.

Broad view of the organizational facet of the media center; varied patterns of organizing, arranging, cataloging and classifying learning resources (print and non-print). The use of printed aids and commercial services, the central cataloging center, acquisition, patterns of shelving and related problems of distribution.

### Technology, Media Centers and Libraries

**COMM 8030** 3 cr.

Explores new technologies and their impact on schools, media centers and libraries. Students will use the latest cataloging and circulation programs, videodisc technology, on-line services, bulletin boards, CD-ROM and facsimile machines.

### Advanced Photography for Educators

**COMM 8050** 3 cr.

Assumes knowledge of basic photographic principles with emphasis on control of the medium. Topics include exposure, metering, darkroom techniques, and print manipulation. Discusses educational applications, design and composition, and critical evaluation of work.

### Color Photography for Educators

**COMM 8100** 3 cr.

Color course offering instruction in all basic aspects of color printing whether you intend to work with color negatives or color slides. Students must have access to an adjustable camera. Students are responsible for film, paper and chemicals.

### Advanced Graphics for Educators

**COMM 8150** 3 cr.

Advanced course applying the elements of graphic design, copy-fitting and printing procedures to the development learning resources. Students apply their acquired graphic skills to prepare overhead transparencies, visual for display, and other graphic materials in instructional settings.

### Advanced Portable Video Production

**COMM 8200** 3 cr.

Advanced ITV production course which supplement skills developed in prior production classes. Use of sophisticated program planning procedures and production/postproduction techniques. Emphasis on advanced skills development and color production as a team.

### Advanced Studies in Childrens' and Adults' Literature

**COMM 8250** 3 cr.

Survey of literature for children and young adults (print and non-print) including wide reading books and introduction to authors, illustrators and other media creators. Explores the nuanced ways in which language of a literary text is communicated. Centers on a close analysis of literature, poetry, short stories and novels for children and young adults.

### **Writing Workshop IV**

**COMM 8400** 3 cr.

These four courses (COMM 7000, COMM 7500, COMM 8300, COMM 8400) are individualized writing tutorials in which students work on their own projects under the direction of a writing instructor. Students, in discussion with the instructor, propose topics of interest and develop them to publishable form. Depending upon the student's interest, topics may focus on technical communication, science journalism, or appropriately related nonfiction (essays or books). Upon completion of the workshop sequence, students should have a suitable manuscript(s) ready for publication.

### **Philosophical and Rhetorical Issues in Professional Writing**

**COMM 8500** 3 cr.

This course examines critical philosophical issues inherent in technical and professional writing. Adopting a historical approach, the application of various philosophical stances to the roles of jargon, syllogism, enthymeme, objectivity/subjectivity, logical proof, deconstruction and error will be examined.

### **Selection and Evaluation of Instructional Materials**

**COMM 8600** 3 cr.

Reviews types of learning resources (print and non-print) found in the library media center with relation to their use, tools and criteria for selection and evaluation. Includes related background reading, developing a selection policy and planning and building a balanced collection.

### **Topics**

**COMM 9000** 3 cr.

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

### **Communications Technology Forecasting**

**COMM 9010** 3 cr.

This course assesses new technologies and potential applications within communications/media and prepares students for long-range planning. Students examine digitization and new imaging, video technology, interactive and multimedia systems, wireless networks, groupware, desktop technology, and satellite communications. In addition students develop forecasts for their organizations using techniques such as The Delphi Survey, Trend Extrapolation, Relevance Trees, and Network Analysis.

*Prerequisite: COMM 9110*

### **Media Communications Facilities Design**

**COMM 9020** 3 cr.

A study of structural, technological, human, and environmental parameters required for comprehensive design specifications for new or renovated facilities as applied to media production and/or utilization. Students become familiar with blueprint reading, power requirements, electrical distribution, low voltage networking, heating and air conditioning, lighting, ergonomic design, OSHA and other safety codes and requirements. Emphasis is placed on analyzing vendor proposals and contracts.

### **Instructional Design and Analysis in Communications/Media**

**COMM 9030** 3 cr.

The course introduces the design of educational and training programs and prepares students to conduct needs and task analyses, write measurable objectives, select appropriate media and delivery systems, and evaluate effectiveness of results.

### **Managing the Documentation Life Cycle, Part I**

**COMM 9071** 3 cr.

A study of internal communications problems associated with the design and development of information products. Students analyze documentation teams, DOC plans, corporate style guides, government and military standards, and interpersonal work style preferences for their impact on the documentation life cycle.

### **Managing the Documentation Life Cycle, Part II**

**COMM 9080** 3 cr.

A study of external communications problems associated with the design and development of information products. Examines document design, document maintenance, editing and production problems, desktop publishing, online documentation, and interactive communications systems for their impact on the document life cycle.

### **Interactive Design and Analysis in Communications/Media**

**COMM 9090** 3 cr.

A presentation of organizational structure and teamwork requirements and their impact on timeline demands of various multimedia designs. Analysis of project objectives for designs and paradigms of interactive formats is conducted for presentations, training, marketing, and kiosks. Students survey hardware and software options for addressing project needs.

### **Communications Research Methods**

**COMM 9110** 3 cr.

An examination of the various research tools and methodologies used in the communications field to produce a viable thesis proposal. Students are familiarized with methods of content analysis, audience research, needs assessment, and the use of statistical procedures to quantify value and variable measurement. The value of research conducted by others is recognized as a tool in conducting one's own research.

### **Legal and Ethical Issues in Communication**

**COMM 9120** 3 cr.

The course analyzes fiscal issues such as financial control systems, budgeting, promotional strategies, direct marketing, capital maintenance, amortization, contracting for services, taxes, total quality management (TQM), and managing by objectives. Students observe how the changes in national and international business relationships impact the media industries. In addition the ramifications of instant information on communications, and trends such as downsizing, outsourcing, and networking are explored. Lastly, students become familiar with legal issues, such as copyright, contracts, releases, royalties, video publishing, unions, multimedia, and ownership.

### **Effective Leadership and the Media Manager**

**COMM 9130** 3 cr.

The course provides a perspective on the internal politics, legal regulations, and organizational strategies for communicating vertically, horizontally, and diagonally within an organization. Students examine issues pertaining to corporate culture; diversity in the workplace; principles and legal regulations regarding hiring, firing, promoting, and disciplining employees; managing successful meetings; and conflict management.

### **Managing Communication**

**COMM 9140** 3 cr.

The course presents the principles of formulating persuasive strategies for creating written, electronic, and mediated communications. Students become familiar with current computing hardware, software, accessories, interfaces, and applications helpful to the media manager for presentation purposes.

## Practicum in Communication

**COMM 9200** 6 cr.

A practical experience in which students apply knowledge and skills in a real-life problem-solving situation. Students receive first-hand experience in identifying the problem, setting the parameters, planning for the application of human and technological resources, and evaluating the outcome. A mediated oral presentation of the project is made to the sponsoring organization and to the graduate advisor.  
*Prerequisite:* COMM 9110 and permission of Advisor.

## Thesis in Communication

**COMM 9980** 6 cr.

An empirical study of a proposition stating the relationship between two or more concepts, phenomena, or events. This critical analysis focuses on a current or potential problem or practice facing managers of business, industry, government, and health service media centers. The study includes a research procedure for the tabulation, statistical analysis, and interpretation of numerical data.  
*Prerequisites:* permission of Advisor and COMM 9110.

## Computer Science

\*Asterisk indicates that the course is offered infrequently.

### Programming under UNIX in "C"

**CSC 7000** 3 cr.

This is an advanced level programming course exploring the C language, emphasizing I/O processing in the UNIX environment. Students will improve their C programming skills while exploring many of the resources made available by modern implementation of UNIX.  
*Prerequisite:* CSC 2560.

### Theory of Computation

**CSC 7050** 3 cr.

This course provides an introduction to theoretical computer science. The course covers the fundamentals of automata theory, formal languages, and computability theory. Several distinct models of computation including the Turing Machine will be introduced. The concepts of computability, decidability and reducibility will be explored.  
*Prerequisites:* MATH 2400 and CSC 2560.

### Software Development in Computer Graphics

**CSC 7160** 3 cr.

This course is about developing large-scale computer graphics package starting with low-level algorithms and using standard modularization and integration techniques practiced in industry. The course provides an in-depth introduction to state-of-the-art interactive computer graphics algorithms with special emphasis on the GKS standard. 2-D and 3-D viewing, clipping and geometric modeling will be studied. Raster extensions and mathematical algorithms will be presented.  
*Prerequisites:* MATH 2600 and CSC 3700.

### Object Oriented Programming in "C++"

**CSC 7200** 3 cr.

This course introduces Object Oriented Programming and Object Oriented Design paradigms by focusing on the C++ programming language. Students are expected to have previous exposure to C and another object oriented programming. Topics covered include classes, polymorphism, encapsulation and inheritance; input/output streams, templates, exception handling, file processing and standard template library.  
*Prerequisite:* CSC 3700.

## Data Communications and Networking

**CSC 7255** 3 cr.

This course covers data communications principles, emerging networking technologies, as well as local and wide area networks. Signal transmission analysis, modulation concepts, modems, multiplexers, digital technologies, and various transmission models will be extensively discussed. Network protocols will be presented including TCP/IP protocol suite and IEEE 802 standards. Network technologies such as ISDN, xDSL, SONET, packet switching networks, Ethernet and ATM will also be discussed.  
*Prerequisites:* CSC 2560 and 2600.

### Object Oriented Analysis and Design

**CSC 7400** 3 cr.

This course introduces the Software Engineering principles used in the development of large software products. Topics such as requirements engineering using use cases, systems and software analysis using object-oriented principles, software design using class diagrams and implementation using CASE tools are covered. Project management issues are also introduced.  
*Prerequisites:* CSC 3700 and CSC 4400.

### Database Design

**CSC 7500** 3 cr.

This course covers concepts of database systems in general and relational database systems in particular. The techniques for database modeling and the concepts of Structured Query Language (SQL) will be studied. The issues involved in the design, implementation, maintenance and security of relational databases will be discussed.  
*Prerequisite:* CSC 3700.

### Design and Analysis of Algorithms

**CSC 8050** 3 cr.

This course introduces the concepts of computational complexity and the complexity classes P and NP. Topics covered include sorting and searching algorithms, graph algorithms, string matching, NP-completeness problems and dynamic programming techniques.  
*Prerequisites:* CSC 3700 and CSC 7050.

## Local Area Networks

**CSC 8120** **3 cr.**

The purpose of this course is to study new techniques in the theoretical design of local area networks, as well as to gain practical experience in the installation, maintenance, and management of LAN networks. Security topics including firewalls, proxy servers and privacy management will be studied extensively.

*Prerequisite:* CSC 7255.

## Windows Programming using MFC

**CSC 8180** **3 cr.**

This course focuses on the development of Windows applications written in Visual C++ and using the Microsoft Foundation Classes (MFC). Students will learn application framework fundamentals and the documentation / view architecture of a Windows application program. Concepts such as Dynamic Data Exchange (DDE) and Multiple Document Interface (MDI) will be implemented. Student projects will include creating application programs that include dialog boxes, pull-down menus and printing options.

*Prerequisite:* CSC 7200.

## UNIX Network Programming

**CSC 8190** **3 cr.**

This course is designed for experienced C programmers who have no previous network programming experience under UNIX platform. The course includes Ethernet, the TCP/IP family of protocols, sockets, virtual circuits, datagram circuits, and programming concepts. Project using the BSD socket interface will be developed in the course.

*Prerequisite:* CSC 7000.

## Advanced Java

**CSC 8205** **3 cr.**

This course covers the emerging and advanced Java technologies used in the 3-tier architecture. Various Swing components used for the front-end user interface, Servlets and JSP used on the web server and JDBC used for back-end database connectivity are studied extensively. The course begins with a quick review of major topics in object-oriented programming as implemented by Java.

*Prerequisites:* CSC 7200 and CSC 7500.

## Advanced Network Technologies

**CSC 8255** **3 cr.**

This course covers the emerging and advanced network technologies and architectures such as Fast Ethernet, Gigabit Ethernet, Fiber Channel, Virtual LAN, Frame Relay, SONET, and Broadband ISDN. Other concepts such as Quality of Service, Packet over SONET, Multiprotocol Label Switching, Digital Subscriber Line, Voice over IP will also be discussed.

*Prerequisite:* CSC 7255.

## Advanced Operating Systems

**CSC 8280** **3 cr.**

This course provides a high-level review of different responsibilities of an operating system with an emphasis on coding practices of a popular operating system. Major functional components of a modern operating system such as file systems, CPU scheduling, memory management, virtual memory, secondary memory management, concurrency and security will be studied.

*Prerequisites:* CSC 3100 and CSC 8180.

## Graph Algorithms

**CSC 9050** **3 cr.**

This course introduces various graph algorithms such as shortest path; depth first and breadth first searches; minimum spanning trees; graph connectivity and network flows; and graph coverings and colorings. Graph problems are analyzed for the existence of polynomial time algorithms.

*Prerequisite:* CSC 8050.

## Topics in Computer Science

**CSC 7600, 8600, 9600** **3 cr. each**

The objective of Topics course is to study a topic of current interest in computer science. The course serves as a vehicle for curriculum experimentation and/or enrichment. The course of study should provide an understanding of some current advance in computer science and/or greater understanding of a particular topic that is of current interest.

*Prerequisites depend on the topic of study.*

## Internship

**CSC 8901** **1- 3 Cr.**

A 3-credit on- or off-campus internship requires 12 hours of work each week for fifteen weeks. Students apply their knowledge and skills to develop practical solutions to computer science or information technology problems. Approval by graduate chairperson is needed to register for this course. A written report on the work done in the format specified by departmental policy must be submitted to the chairperson to receive a grade.

*Prerequisites:* 12 S.H. graduate courses in Computer Science.

## Independent Study

**CSC 9000** **3 cr.**

The independent study provides an opportunity for highly motivated students to explore advanced areas of computer science not provided within the departmental curriculum. Approval of the faculty sponsor, consent of the advisor and permission of the Chairperson are required.

*Prerequisites:* 18 S.H. graduate courses in Computer Science.

## Master's Thesis I & II

**CSC 9010, 9011** **3 cr. each**

Students conduct a research project resulting in a thesis. Thesis develops under the guidance of a thesis supervisor and thesis committee. Thesis must be developed and presented according to the guidelines set forth by the college and the department.

*Prerequisites:* 18 S.H. graduate courses in Computer Science.

## Thesis Continuation I & II

**CSC 9012, 9013** **3 cr. each**

Students that need more time to complete the thesis can register for up to two thesis continuation courses. The credits in these courses may be used for maintaining full-time status, but do not count toward the total credits required for the degree.

*Prerequisite:* CSC 9011.

# Creative Arts

## Creative Teaching

**CRAR 8140** 3 cr.

This course applies creative problem solving techniques and the arts to other content areas of the curriculum.

## Celebrating Diversity through the Arts

**CRAR 8145** 3 cr.

The course is a study of methods used for balancing Euro-centric cultural backgrounds; celebrating cultural diversity through the arts; building respect and understanding through cultural grid systems; creating harassment-free learning environments; teaching without gender bias; understanding, discussing, and preventing classroom sexism, racism, anti-Semitism, and homophobia.

## Arts Technology in the Classroom

**CRAR 8146** 3 cr.

This lab experience provides professional development in the Arts Technologies. Emphasis is placed on integrating these exciting tools into varied learning. Topics include both Visual Arts and Music applications such as digitized images, digital sound, scanners, synthesizers, video overlay card, MIDI laser discs, sequencers, and sound design. This course is a must for educators from all disciplines and levels. No prior technology expertise required.

## Advanced Graduate Studio

**CRAR 8150** 3 cr.

The building “blocks”: value, alternation, shape, balance, dominance, graduation, depth and focal point are used to develop a personal method of application that will allow the student to make self diagnosis, prognosis and treatment of their own maladies in their works of art to allow for successful completion of their own intentions in their art works.

*Prerequisite: Approval from the Graduate Program Chair.*

## Music Learning Theory and Creativity

**CRAR 8200** 3 cr.

A study of Gordon’s learning theory of music aptitude, achievement, and testing and its relationship to musical creativity. After learning and performing basic rhythmic and tonal patterns students apply this knowledge and skill in creating compositions. The similarities and differences among the terms discovery, creativity and improvisation are discussed and experienced in a variety of music projects. The importance of creativity and improvisation in Gordon’s skill learning sequence are discussed and experienced in depth.

## Dance in Education

**CRAR 8350** 3 cr.

An exploration of the field of creative movement and structured dance forms. Students learn applications for working with children through movement and are encouraged to seek personal dance experiences.

## Art and Human Development

**CRAR 8500** 3 cr.

This course is applicable to students who are in human services fields, including diverse groups teachers, social workers, recreation directors, religious educators, and others. Students use hands-on activities to demonstrate how concepts and practices are learned and to facilitate students’ needs.

## Supervising, Directing, and Leading in Arts Education I

**CRAR 9051** 3 cr.

The course involves discussions about inter-departmental and interdepartmental relations, faculty development, grants, community relations, the diversity of a community, the needs of exceptional learners, and other administrative concerns.

## Supervising, Directing, and Leading in Arts Education II

**CRAR 9052** 3 cr.

The course involves of discussion of such topics as the efficient and humane use of personnel, finance, curriculum, and physical resources. The evaluation and supervision of programs and personnel is also covered.

## Creative Arts Research

**CRAR 9060** 3 cr.

Studies include an inquiry into the role of the creative process in education and the arts, as well as the integration of the arts in education. Research into the cultures of various community groups and the inclusion of exceptional learners in the educational process are considered.

## Creative Arts Curriculum Development and Applications

**CRAR 9070** 3 cr.

This course is designed to help aspiring leaders understand how to develop and implement systemic K-12 fine arts curriculum, instruction, and assessment.

## Arts Presentation

**CRAR 9090** 3 cr.

Students create a culminating project after completing at least eighteen semester hours in the degree.

*Prerequisite: CRAR 9070.*

# Criminal Justice

## CORE I

### Foundations

**CJ 7200** 6 cr.

Students must register for this six credit CORE which includes the following modules of study:

### Criminal Justice Process

**CJ 7240**

This area of study explores the organization and function of the criminal justice system.

### Social Relations and the Legal System

**CJ 7260**

This course explores law as a social process that is both a source of order and of conflict.

### Criminology

**CJ 8530**

An examination is conducted of the historical development of criminological theories, including the Classical School of the eighteenth century, the Marxist and Socialist Schools of the late nineteenth century, and contemporary theories of the twentieth century. Emphasis is on social, political, economic, religious, racial, gender, and emotional characteristics of crimes and offenders.

## CORE II

### Applications in Criminal Justice

**CJ 8400** 6 cr.

Students must register for this six credit CORE which includes the following modules of study:

### Criminal Law: Substantive and Procedural

**CJ 8410**

This area of study examines both substantive and procedural criminal law. Within the context of the historical development and philosophy of law, students are introduced to the definitions and classification(s) of crime and their application to the system of criminal justice.

### Research Methods

**CJ 8430**

This course of study allows the student to develop competencies in understanding, analyzing, and questioning research findings. Basic techniques and knowledge are introduced to assist the student in locating, understanding, and using resources relevant to legal analysis of the law, measurement of crime and criminal behavior, and interpretation of research findings.

## CORE IIB

### Applications

**CJ 8500** 6 cr.

Includes the following six course titles:

### Administration and Organizational Development

**CJ 8540**

This component increases the students' awareness of organizational dynamics by providing them with the skills to analyze organizations and to learn to view them from several frames of reference.

### Contemporary Issues

**CJ 8560**

The course examines current social trends as they confront the criminal justice professional in the field, in institutional settings, and in the courts. Students explore contemporary theories and responses to emotionally demanding issues that challenge the community and the criminal justice system, as well as the strategies for responding to these problems.

### Ethical Issues in Criminal Justice

**CJ 8580**

An examination of major ethical issues that span the components of the criminal justice system. Students will explore the ethical challenges and ensuing dilemmas that occur in daily professional work along with strategies for responding to job situations.

### Program Evaluation and Statistics

**CJ 8590** 3 cr.

This course provides an introduction to elementary statistical methods as applied to problems in crime and criminal justice. It is an introduction to descriptive statistics, exploratory data analysis, probability theory, inferential statistics, and program evaluation. Its purposes are to enable students to do empirical statistical work as well as intelligently and critically read academic publications. Even if students do not plan to do quantitative work after graduation, understanding the theory and limits of statistical analysis is important given its prevalence in criminal justice.

## Professional Studies Track

### Legalities of Criminal Justice Administration

**CJ 9620\*** 3 cr.

The course examines contemporary issues facing criminal justice administrators and explores the legal considerations necessary in determining sound managerial solutions. Topics of discussion include: the legal implications of employee hiring, training, promotion, and discipline; internal investigations; discrimination challenges; affirmative action plans; labor relations and unions; and the development of departmental policies and procedures. Students examine each topic within the realm of relevant state and federal law. This course is especially fitting for practitioners who are faced with policy-related decisions in the criminal justice field.

### Technology and Legal Limitations

**CJ 9640\*** 3 cr.

This course surveys the latest technology used in the criminal justice field for investigative procedures, crime scene analysis, interviews, surveillance, and evidence collection. The course is designed to balance the limitations of advancing technology within the limitations of the law. The ethical question "Does the End justify the Means" is addressed throughout class discussions and case studies. Guest speakers with expertise in the technology field enhance the student's understanding of and appreciation for the use of investigative techniques.

### Professional Issues: Liabilities and Challenges

**CJ 9660\*** 3 cr.

This course clarifies the ideological conflicts—from enforcement to rehabilitation—that may be encountered by the criminal justice practitioner. Through case studies, this course focuses on the legal and ethical responsibilities of the criminal justice professional including: liability standards and philosophies of practice, and professional ethics. Attention is paid to the invisible effects of discretion as a part of the decision making process.

### Cultural Diversity and Communication

**CJ 9680\*** 3 cr.

This course reviews individual and group models of relationships between criminal justice agencies and the public, with emphasis on gender, race, and ethnic differences. Special attention is paid to areas of potential conflict and cooperation with distinctive cultural groups. Alternative dispute resolutions are emphasized, including problem solving, negotiation, meditation, and conflict resolution strategies.

## CORE III

### Theory and Practice/Capstone Experience

**CJ 9800** 6 cr.

#### Option I: Internship

**CJ 9820**

The Capstone Internship is a supervised, field-based (300 hours) learning experience in an approved criminal justice agency. Responsibilities can include administration, case/clinical work, training and development, or research. The student is responsible for systematically applying theoretical concepts in an applied and practical way to the work of the organization and contributing to the goals of the criminal justice system. Placement is facilitated through the Field Placement Office, Department of Behavioral Sciences, in accordance with departmental policies. The Internship is monitored by a faculty member who conducts on-site evaluations of the student's skills and competencies. Students are required to meet as a group in a seminar class; assignments include a paper discussing a literature review of relevance to the Internship and a discussion of the application of the literature to the field experience.

#### Option II: Project

**CJ 9840**

The Capstone Project is a significant undertaking appropriate to the criminal justice field and reflects originality and independent thinking. The Project must be a systematically organized effort with appropriate form and methodology. Projects may vary considerably from developing a prototype service/program to undertaking a media project. A written abstract is required and includes an articulated rationale, explained significance of project, identified objectives, and conclusions/recommendations. The student works under the supervision of a faculty member and in cooperation with an approved criminal justice field site. The focus of the project must be approved by the Graduate Committee on Criminal Justice.

#### Option III: Thesis

**CJ 9860**

The Capstone Thesis is supervised, systematic research or analytical study of a significant problem/issue, which results in an original, written product. Students are challenged to think independently and critically throughout the process of developing the study. The paper must reflect an organized effort with an appropriate and useful format through which to discuss a comprehensive review of the literature, problem identification, assumptions, significance of the study, sources and methods of gathering and analyzing information, and conclusions/recommendations. The student works under the supervision of a faculty member, and the topic of the thesis must be approved by the Graduate Committee on Criminal Justice.

#### Seminar

**CJ 9880**

All students participating in the Capstone experience, regardless of the option chosen, meet together in a seminar class. Students share scholarship from their works in progress and discuss issues related to their Capstone experiences. Faculty facilitate the discussions and oversee the students' work. At the end of the Capstone experience, students present the results of their internship, project, or thesis to the entire Capstone group.

## Early Childhood/ Elementary/ Middle School

### Topics

**EDUC 7000** 3 cr.

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

### Writing to Learn

**EDUC 7001** 3 cr.

This research-based course is designed for classroom teachers, administrators, curriculum coordinators, Chapter I, ESL, Bilingual, and special needs teachers who want to involve themselves in the writing process and become more knowledgeable about the teaching of writing.

### Cooperative Learning Structures and Strategies in the Content Area

**EDUC 7004**

Comprehensive course in cooperative learning designed to provide an in-depth look at a variety of instructional practices and strategies appropriate for effective teaching and learning in the inclusionary and heterogeneous classroom. Learning objectives are pertinent for all disciplines. Class projects align with the requirements of State and National standards.

### Developing Interdisciplinary Learning Centers: Incorporating Cooperative Learning Strategies

**EDUC 7006** 3 cr.

This course explores the variety of methods and materials inherent in developing multi-level, multimedia learning centers. The focus will be on integration in a variety of curriculum areas. Participants develop an interdisciplinary learning center to be used in a classroom setting. Techniques for effectively incorporating cooperative learning strategies into the implementation of these centers will be explored. Scheduling and evaluative techniques are integral parts of the focus in this K-12 course.

### **Developing Math Materials for Classroom Use**

**EDUC 7007** 3 cr.

This course involves the construction and use of varied math materials used for instruction in K-12 classrooms. Displays of multi-level, multi-media materials emphasize hands-on methods of instruction. Scheduling and evaluative techniques are also discussed.

### **Construction and Use of Reading Games**

**EDUC 7008** 3 cr.

Participants develop and assess learning games used for reading instruction in grades K-12. Many methods and materials are presented, shared, and discussed by the instructor. Reading games are made by course participants to meet their individual needs in the classroom.

### **Storytelling in the Curriculum**

**EDUC 7010** 3 cr.

This course will address storytelling and its relationships to today's multicultural classroom. The use of oral history projects and the use of folklore in the curriculum is explored. Emphasis will be on promoting storytelling in the classroom. Current theory on the relationship of oral and written language acquisition will be reviewed. Storytelling, self-esteem building, healing and creative conflict resolution techniques for the classroom will be discussed.

### **The At Risk Young Reader/Writer: Assessment and Intervention**

**EDUC 7017 51** 3 cr.

This specialized course focuses on early intervention for young children (K-2) who are at risk or are experiencing difficulties learning to read and/or write. The course uses the theoretical framework of emergent literacy as a foundation for assessment and intervention strategies. Students learn to use a variety of assessment tools, such as observation survey and running records to plan individualized, small group (guided reading) and large group (morning message, interactive writing) interventions.

### **Drawing/Writing and the New Literacy**

**EDUC 7018**

For teachers in a Socratic, radically-constructivist, brain-based literacy program, this course addresses the challenge of teaching literacy skills so that they “stick”. The abilities to write and to read depend upon many skills including the ability to pay attention, extract information, and to communicate information. These skills can be learned through drawing. When writing accompanies drawing, a double literacy develops both verbally and visually. The new literacy models encourage integrated brain function.

### **Drawing/Writing and the New Literacy-Intermediate**

**EDUC 7019**

Consolidation of the five-step drawing and writing program introduced in EDUC 7018, Drawing/Writing. Emphasis on understanding multiple literacies and increasing self-knowledge through the Neuroconstructivist, cross-model teaching and learning are reviewed and deepened. Work with the writing curriculum in part four of the text “Drawing/Writing and the New Literacy”. Introduction to the four-fold hypothesis.

### **Connecting Reading and Writing**

**EDUC 7021** 3 cr.

This research based course is designed for classroom teachers, administrators, Chapter I, ESL, Bilingual, and special needs teachers who have participated in “Writing To Learn” and would like to become more knowledgeable about the relationship between reading and writing.

*Prerequisite: EDUC 7001 or permission of the Instructor.*

### **Teaching Science in the Elementary and Middle School**

**EDUC 7025** 3 cr.

This course covers contemporary thinking, practices, and research in the teaching of science to elementary and middle school students. Emphasis is on providing innovative hands-on experiences for students.

### **Advanced Concepts and Methods of Elementary and Middle School Math**

**EDUC 7040** 3 cr.

Participants investigate methods and materials used in elementary and middle school programs. Students develop functional math skills for use by elementary and middle school teachers. This graduate course includes information on math principles (set, function, probability and statistics, geometry, and measurements, algebra, and computer awareness) and provides opportunities for the application of such information.

### **Whole Language in the Elementary School**

**EDUC 7101** 3 cr.

This course provides a study of reading and writing processes from a psycholinguistic viewpoint. Whole language strategies for developing meaning including charts, chants, and shared reading are explored. Emphasis is on theory and effective practice.

### **Early Childhood Education Issues: A Seminar**

**EDUC 7170** 3 cr.

This course is designed to investigate issues and problems related to the education of young children. Emphasis is placed on current research and developmental theories related to the emotional, social, cognitive, linguistic, motoric development of a child and learning theories. Methodological and curricular concerns, teaching strategies, and child-centered issues are explored. Other topical areas include developmentally appropriate practices, national accreditation, and teacher training in early childhood education. As part of the seminar students are required to undertake a library research paper on some aspect of Early Childhood Education.

### **Play in Early Childhood Education: Theory, Research, Practice**

**EDUC 7190** 3 cr.

This course is designed for Early Childhood Educators and students of Early Childhood Education who are interested in investigating play—the most important means that young children have in growing cognitively, socially, emotionally, physically, linguistically, and motorically. Theories of play, methods to enhance development through play, effective approaches to support young children's play, as well as materials and resources are explored.

**Advanced Child Development****EDUC 7300** 3 cr.

This core course explores human growth and development from birth to age eighteen. Particular attention is given to exploring the relationship between developmental theory and knowledge and educational decisions and practice. Various theoretical perspectives are covered as well as specific developmental areas, such as physical-motor, cognitive, language, social, and emotional development. How children develop as thinkers and learners, specifically how problems are solved at different points in development, is emphasized. In addition, students develop a clear understanding of the process of objective observation of children, as well as observation and recording skills appropriate for investigating various aspects of child development and behavior. Dual Stage Track students complete a pre-practicum experience.

**Contemporary Issues in Education****EDUC 7400** 3 cr.

This core course is designed to encourage students to think about the history and foundations of educational practice and issues. Students reflect upon past, current, and emerging educational practices and issues using a variety of frameworks including: historical, theoretical, social, political, and legal. The current issues discussed include relating to teaching as a profession. Particular emphasis is placed upon rethinking personal assumptions, considering alternative perspectives, and investigating current and emerging educational theories, practices, and issues.

**Curriculum Design and Implementation for Multi-Needs Populations****EDUC 7500** 3 cr.

This core course is designed to provide students with knowledge and skills of the curriculum development process as well as an awareness of societal demands on the curriculum. Effective curriculum development and implementation is a dynamic and continuous process through which teachers can plan, implement and evaluate the instructional program in a systematic and logical way. Particular attention is given to designing and organizing curriculum and selecting teaching strategies, which effectively create a learning environment to meet the diverse needs of students. Students cover the major components of the curriculum development process including developing philosophy and objectives, needs assessment, instructional planning and implementation, assessment and evaluation, and curriculum refinement. Emphasis is given to the curriculum areas of Fine Arts, Math, Science, and Social Studies. Students demonstrate curriculum competencies through the development of various curriculum projects, which include understanding a variety of teaching strategies, resource applications, and student assessment. Dual Stage Track students complete a pre-practicum experience.

**Advanced Assessment, Design, and Evaluation of the Middle School Curriculum****EDUC 8150** 3 cr.

This course studies the historical and philosophical foundations of curriculum development in the middle school. By looking at various curriculum models, existing curriculum, the nature and needs of the middle school student, subject area knowledge, established standards and societal issues, students fully explore the question, "What ought to be the curriculum of the middle school?" Special attention is given to interdisciplinary, thematic planning and instruction.

**Qualitative Reading Assessment and Analysis****EDUC 8200** 3 cr.

This core course focuses on reading assessment through use of informal procedures, such as miscue analysis, metacognitive assessments, schemata assessments, informal reading inventories, and other teacher initiated and designed assessment procedures. Additionally, the course emphasizes teacher decision making and instructional planning based on qualitative analysis of children's reading and study strategies.

*Prerequisites: a course in Literacy Education at the graduate level recommended or with permission of the Instructor.*

**Family Involvement in Early Childhood Education****EDUC 8250** 3 cr.

This specialized course explores the importance of family interaction with the Early Childhood Educator. Students receive a general overview of parent-child interactions, parent involvement, parent education, and parent participation in Early Childhood Education. Students are exposed to the various theoretical and practical approaches to family involvement practices in the Early Childhood Education setting. Awareness, understanding, and appreciation of various family needs, circumstances, and cultural experiences are promoted. Family-professional partnership models, which effectively serve families with a variety of needs and experiences, are explored.

**Research in Education****EDUC 8300** 3 cr.

In this core course students engage in the scientific reasoning process and reflect upon this process as it relates to the educator's role. The goals and methods of educational research, the reading and analysis of primary sources, development of an educational research proposal using research and the teacher as researcher, are explored. In addition, course material includes currently used research strategies, such as ethnographic studies, action research and the case study approach. Emerging educational practices that are research-based are highlighted. Appropriate inferential and descriptive statistical methodologies are also studied. Students are strongly encouraged to develop a clinical action research proposal during this course.

### **Middle School Instructional Strategies and Practices**

**EDUC 8350** 3 cr.

This course provides an in-depth look at a variety of instructional practices and strategies appropriate for effective teaching and learning of the early adolescent. Attention is given to addressing the needs of diverse student populations, including but not limited to children with different learning abilities, exceptional talent, different culture/ethnic background or at-risk characteristics. Active and interactive learning strategies are emphasized.

### **Advanced Social Studies in Education**

**EDUC 8360** 3 cr.

This course assesses traditional as well as new technologies and their potential applications within the field of social studies education from a historical, theoretical, and practical perspective. Students examine how to integrate instructional experiences that equalize educational opportunities for a diverse and inclusive student population and explore opportunities for enhancing multicultural pluralism. The course investigates social studies content, strategies, and techniques deemed essential to fulfill varied curriculum requirements by exploring the integrative and interdisciplinary nature of the content. Action-oriented processes are used to focus on the pertinent questions and issues at local, state, and national levels as well as those of global importance. Also inquiry-oriented processes are used to require students to ask questions and further develop and expand academic, social, and thinking skills and/or strategies through a variety of approaches to research in the social studies/social science areas. Students are encouraged to challenge convention, raise questions about social assumptions and identify critical issues in social studies education.

### **Literacy in Elementary and Middle School Education**

**EDUC 8400** 3 cr.

This specialized course in literacy education examines literature and research related to literacy development. Specific attention is focused on language development, reading/writing process and on literature-based instruction. Classroom strategies and curriculum adaptations that enhance the learning and motivation of diverse learners, including those which integrate the Fine Arts, are presented, implemented, and appraised. Dual Stage Track students complete a pre-practicum experience.

### **Literacy in Early Childhood Education**

**EDUC 8450** 3 cr.

Advanced strategies for literacy development of young children are presented in this specialized course. Specific focus is placed on emerging literacy and reading process and adaptations, including adaptations which integrate the Fine Arts to address the needs of all learners. Students examine the interdependence of reading and writing on oral receptive and expressive language. A review of the literature that emphasizes theoretical and empirical research related to literacy development and its implications for teaching young children is investigated. Dual Stage Track students complete a pre-practicum experience.

### **Advanced Emergent Literacy: New Perspectives, Pre-K - 2**

**EDUC 8480** 3 cr.

Emphasis in this course is placed on reading and understanding the implications of recent research in emergent literacy. In addition, students observe and respond to early reading and writing behaviors. Students learn to support early writing, develop directional principles, and understand concepts about print and early reading strategies from Reading Recovery by identifying and selecting natural language texts that promote a self-improving reading system and using picture book literature in gaining literacy. Participants learn to make instructional decisions based on current knowledge of emergent literacy and their own close observations.

*Prerequisites:* EDUC 7101, 8400, or 8450.

### **Developmental Assessment in Early Childhood Education**

**EDUC 8500** 3 cr.

This is an advanced course in the design, development, and implementation of developmental assessment tools in Early Childhood Education. Students explore the meaning of developmental assessment, aspects of assessment reliability and validity, test construction and administration, limitations of assessment, observation as a tool for assessment, and other related topics. Students evaluate and demonstrate the uses of various assessment instruments.

### **Advanced Seminar in Child-Centered Issues**

**EDUC 8600** 3 cr.

This specialized course in the Elementary Education program provides students with the opportunity to explore, discuss, and reflect upon a variety of child-centered issues. Background information for discussions includes research results concerning environments which support and enhance optimum development. Some of the topics covered in the class are multi-cultural/multi-ethnic education, family-teacher partnerships, self-esteem research, inclusion, cognitive styles and creativity, the educator's role with abused children, and educating from student strengths and interests.

### **Advanced Strategies and Approaches for Teaching Critical Thinking in the Content Areas**

**EDUC 8650** 3 cr.

This specialized seminar integrates all content area subjects in an elementary school curriculum. In particular, it introduces students to the nature and scope of Mathematics, Science, Social Studies, and Fine Arts in the elementary school. Students investigate a variety of content models and curriculum programs while they explore theoretical foundations, practical applications, and current issues in the content areas. Strategies and modern techniques for effectively working with diverse populations of students, including computer application in the various content areas, are researched and emphasized. Students demonstrate competencies by developing and demonstrating techniques and activities which illustrate how concepts and practices are learned in each module and how they relate to student needs.

### **Seminar in Early Adolescent Issues**

**EDUC 8750** 3 cr.

This specialized course in the Middle School Education program gives students the opportunity to identify, explore, discuss, and reflect upon a wide variety of early adolescent issues central to the adolescent students' education, growth, and development. Background information for discussions include research results concerning environments, which support and enhance adolescents' optimal development. Topics explored in the course may include self-esteem; family, school, and community partnerships; learning styles; social changes; and the role of the middle school teacher.

### The Adult Learner

**EDUC 9010** 3 cr.

The focus of this course is on the nature of the adult learner. Through journals and readings students gain an understanding of how the adult learner processes experience, how learning is best structured, and how feedback should be provided. An extension of this focus includes an investigation of human relations, gender uniqueness as well as relations within diverse populations as they impact the personal competence of the adult learner.

### Clinical Internship I and II

**EDUC 9200/9201** 3 cr./3 cr.

This internship is required of students in the Early Childhood Education, Elementary Education, and Middle School Education Clinical Tracks to provide students with the opportunity for supervised direct teaching in the role and at the level of the certificate sought. Students demonstrate advanced pedagogical and content knowledge, skills, understanding and collegial orientation, and are involved in advanced seminar work. Students are required to begin the investigation of some aspect of educational theory or practice and complete a research project. Matriculated students in the Early Childhood Education, Elementary Education, and Middle School Education Clinical Tracks are eligible for enrollment in an Internship program if they meet the following requirements: successful completion of three core courses “(A) level” and one specialization course “(B) level”, an approved plan for simultaneous enrollment in one or two specialized courses, and a plan for an Internship approved by their advisor one semester in advance.

Note: Clinical Internship I and II may be taken in the same semester or in successive semesters.

### Educational Strategies

**EDUC 9250** 6 cr.

Given the context of the adult learner and the process of implementing educational change studied in the previous courses in the CAGS sequence, the focus of this course is on effective and promising strategies which improve teaching and, thereby, learning for all children. Students become proficient at critiquing the design, analysis, and results of research to determine which strategies hold promise for improving teaching. Students also study current effective strategies in the field, such as cooperative learning, social interaction, peer mediation, teaching/learning styles, cross

cultural competency, apprenticeship models, reciprocal teaching, and project approach, as well as implementation of these strategies in their schools.

### Internship and Reflective Analysis Seminar

**EDUC 9350** 6 cr.

This internship is designed to advance the development of self-directing educators who initiate, facilitate, participate in, and evaluate all aspects of educational practice. A year-long experience, the Internship offers an opportunity to practice communication skills and apply collaborative skills with one or more colleagues in the field. Through cooperative participation of school personnel, students are given the realm in which to plan, organize, and evaluate ways of improving instruction and to implement educational change through such peer leadership structures and practices as mentoring, collaborative supervision, peer coaching, and team teaching. All work is carried out under the supervision of faculty. Ongoing internship projects are analyzed during biweekly seminars.

### Mentoring Internship: Program Design, Management, and Evaluation

**EDUC 9360** 3 cr.

### Practicum I/Early Childhood

**EDUC 9400** 3 cr.

In this practicum experience students are assigned to cooperating schools for a period of student teaching.

### Practicum II/Early Childhood Education

**EDUC 9450** 3 cr.

In this practicum experience students are assigned to cooperating schools for a period of student teaching.

### Practicum/Elementary Education

**EDUC 9600** 3 cr.

In this practicum experience students are assigned to cooperating schools for a period of student teaching.

### Practicum/Middle School Education

**EDUC 9700** 3 cr.

In this practicum experience students are assigned to cooperating schools for a period of student teaching.

## Earth Science

### Ecology

**ESCI 7007** 3 cr.

The dynamic relationship between organisms and their environment is investigated in this survey of major ecological concepts and methodology. Field and laboratory work emphasize problem identification, formulation of hypothesis, data collection, and analysis and interpretation of results in terms of biological implications.

### The Modern Secondary School

**ESCI 7012** 3 cr.

Required of all MAT candidates who do not have initial licensure to teach. Covers a broad range of issues faced by teachers in today's secondary schools. Students become familiar with the complexities and demands of secondary school teaching. Includes 75 hours of prepracticum experience.

### New England's Glacial Landscape

**ESCI 7100** 3 cr.

New England's topographic features were shaped during the last ice age which ended approximately 11,000 years ago. Students learn how glacial geologists study ice age clues to determine how local landforms were developed. Field trips are required with emphasis on site identification of glacial features.

### Observational Astronomy

**ESCI 7200** 3 cr.

This celestial survey course is aimed at providing both basic instruction and experience in viewing and recording the evening sky. Participants learn to set up, align, and use all types of basic telescopes; view constellations, planets, moon star clusters, nebula, galaxies, double stars, and variable stars of the fall and early winter sky; learn basic techniques for recording observations through the medium of sketching, photography, and CCD cameras. A substantial part of this course consists of field work located at instructor's observatory in a rural section of Fitchburg approximately ten minutes from the college. The remaining work consists of labs and analyses of data collected by participants. A project is required of all students. Meetings after the first session are held off-campus and some variable scheduling is done to take advantage of sky conditions or cancellations due to cloud cover.

## Meteorology

**ESCI 7300** 3 cr.

This is an introductory course in atmospheric meteorology, oceanography, and the space environment. Main topics of consideration are climatology and large-scale transient weather phenomena that affect the earth. Course curriculum includes background concepts in meteorology and a student project on a topic of current interest.

## Oceanography

**ESCI 7400** 3 cr.

This course examines the physical and chemical properties of sea water and their roles in the energy/nutrient cycles of marine ecosystems, the role of nutrient cycles and upwelling in fisheries locations, the fluid dynamics of oceanic circulations in both the surface and deep water regions, and the geology of the seabed, including plate tectonics (continental drift), marine sedimentation processes and coral reef formation and bleaching. Finally, a thorough study of the coastal geomorphic/oceanic processes that shape the coastlines of the world via wave dynamics, coastal erosion, and erosion control techniques is explored.

## Advanced Methods of Teaching at the Secondary Level

**ESCI 8000** 3 cr.

Combines academic study with clinical practice and supervision. Theories and topics studied and demonstrated include learning styles, critical thinking, computer applications, and inclusive learning environments. Emphasis is placed on integrating culturally or linguistically diverse students and those with special needs. Interdisciplinary course development and implementation, student assessment including portfolio assessment and writing are studied for utilization across the curriculum.

*Prerequisite: ESCI 7012 or Initial Teacher Licensure.*

## Environmental Geology

**ESCI 8100** 3 cr.

A case studies approach that applies basic principles of geology to environmental problems as a result of such phenomena as earthquakes, volcanic eruptions, landslides, floods, groundwater contamination, fossil fuels, and processing of natural resources.

*Prerequisite: introduction to Geology or its equivalent.*

## Curriculum and Technology

**ESCI 8250** 3 cr.

This course looks at the integration of educational technology in the classroom, and its relationship to learning theories. Mac and IBM computer hardware, and interfaces for classroom inquiry including video and microscope cameras, digital image capture, scanners, and computer projection panels are examined. Students learn similarities between standard software programs available for writing, computation, and data analysis. It includes a survey of software for studies, ranging from Encyclopedias on CD-ROM to programs that are specific to the study of various topics in science, art literature, math, and language. The class explores the use of the internet as a classroom resource, the hardware and software necessary to get on line, search engines, browsers, URLs, online journals, education web sites, online interest groups, and how to design a web page.

## Curriculum Design and Development

**ESCI 8260** 3 cr.

This course is designed to provide students with knowledge and skills of the curriculum development-revision process. In collaborative groups students review, revise and expand the curriculum and assessment procedures in order to integrate current research findings and education reform initiatives. Students articulate a general Curriculum map contextually appropriate for grade-level content as they plan for integrating content with social, behavioral, processing, thinking skills and Curriculum frameworks. Students design an integrated 9-12<sup>th</sup> grade curriculum that aligns content standards across disciplines. Finally, interdisciplinary groups design an integrated curriculum unit.

## Research in Education

**ESCI 8500** 3 cr.

Research is carried out in a specific field of Education that involves an in-depth exploration of a well-defined problem. The student must develop a hypothesis for the possible solution to the problem; develop the experimental technique to test the hypothesis; and develop a logical conclusion based upon the data collected. The final product is a written documentation of the research and results. Each study is done under the supervision of graduate faculty.

## Independent Study

**ESCI 9100** 3 cr.

The content of these courses is designed by a student with the guidance of a faculty member to provide in-depth exposure to a topic for which no regular course is available.

## Clinical Experience

**ESCI 9400** 6 cr.

See BIOL 9400 for course description.

## Internship

**ESCI 9500** 6 cr.

The Internship is a capstone experience allowing full integration and application of content knowledge and pedagogical theory and practice. Within the individual's classroom it incorporates all standards specific to the discipline in which certification is sought as well as all common standards for classroom teachers. A minimum of 400 clock hours or one full semester on-site under the auspices of the college is fulfilled. A research project is completed during the duration of the internship.

# Educational Leadership and Management

## Computer Application in Education

**EDLM 7000** 3 cr.

This course is designed for teachers and administrators who have had little exposure to computers and data processing. Administrators learn to use the computer as a management tool, especially as it relates to fiscal and personnel matters. Through hands-on experience, participants become familiar with the equipment and learn how computers and systems work.

## Politics of Education

**EDLM 7005** 3 cr.

This course deals with the various processes that are utilized at the Federal, State, and Local levels to identify multilevel educational programs and priorities and to fund them. Students develop systematic knowledge about their political environment, acquire skills and strategies necessary to act on that knowledge, and attain principles that shape responsible political action. Guest speakers share their particular viewpoints in these areas.

## Physical Plants and Transportation

**EDLM 7010** 3 cr.

This course examines the challenges, problems, and activities related to new building programs, as well as the various aspects of phasing out old buildings; providing alternate uses; and redefining grade, curricula, and administrative organizational patterns.

## Organizational Theory and Educational Planning

**EDLM 7020** 3 cr.

This course explores the principles of school district organization and function. In the context of the school district, students assess the individual and social needs, formulate direction setting purposes, and acquire model building and simulation techniques. Plant management and transportation issues are also addressed.

## Introduction to Systems Approaches in Education

**EDLM 7030** 3 cr.

The course provides a conceptual basis for systems approaches to administrative and leadership problems in education. Through cases and simulations students learn the application of such techniques. Needs assessment, planning, operational, and evaluative approaches are discussed and practiced.

## Collective Bargaining in Education

**EDLM 7040** 3 cr.

This course reviews the Federal and State statutes pertaining to collective bargaining in the public sector. Specific emphasis is placed on those statutes bearing on Massachusetts and its educational enterprises. Among the topics discussed and dissected are bargaining contracts, bargaining processes, and legal issues.

## Topics

**EDLM 7500** 3 cr.

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

## Applying Computer Technology in Education

**EDLM 7510** 3 cr.

This course provides teachers and administrators, at all levels and in all subject areas, with strategies for developing and implementing the use of current and near future computer technology in education. Participants explore creative techniques to build into and enhance their existing curriculum. Working with current software applications, the Internet, and the World Wide Web, participants devise programs and materials for their own classrooms and schools and in support of their teaching. Individual laboratory and project development activity will take place during each class. Little or no prior computer experience is needed.

## Planning Professional Development Programs

**EDLM 7520** 3 cr.

This course will assist both the educational administrator and the classroom practitioner to focus on professional development and its central importance to school improvement. Students will consider the necessary elements to develop a “quality” professional development program. Given the current Massachusetts reform initiative in teacher certification, and that school districts are providing low or no cost options for staff development, this seminar will address timely issues including effective analysis, planning, roles, schedules, and designs of meaningful professional development. Professional training plans and techniques in hospitals, social agencies, and industrial sites will also be explored.

## Schools, Family, Student Partnerships in Education

**EDLM 7530** 3 cr.

This course explores techniques and practices which can maximize the strengths and advantages of schools, families, and students. A shift of the current paradigm of education to one that applies the principles of supporting and developing the student is explored. Particular attention will be given to teacher, parent, and student partnerships for learning how to help students to learn. While discussing theoretical and practical applications of such partnerships, functional local programs will be designed to enhance the involvement of each of these groups in the educational process.

## Managing Diversity

**EDLM 7600** 3 cr.

This seminar focuses on cultural diversity in schools and on the growing challenges and opportunities diversity provides for educators. Emphasis is given to the unique regional cultural/linguistic demographics of diversity within a proactive perspective. Reflective readings and application strategies prepare the educational leader for rewarding multicultural communication and a commitment to effective management of diversity.

## Community Relations

**EDLM 8000** 3 cr.

Students learn communication techniques and acquire knowledge about political structures and regulations for improving a school and/or community. Individuals develop strategies for relations within their own community, utilizing specific goal-setting techniques. A review of current literature promotes an awareness of the diverse publics involved and suggests methods for dealing with and influencing perceptions about schools and their educational goals. A pre-practicum experience is included as an activity of this course.

## Foundations of Educational Administration

**EDLM 8005** 3 cr.

This introductory course is designed to provide an overview of school leadership focusing on the philosophical foundations of education; the psychological traditions of learning processes; the legal parameters of the school as an institution within the society; the cultural environment of urban, suburban, and rural educational settings; and educational trends as indicated by current research and pertinent literature.

### **Principles of Success for Practicing Administrators: Putting Plans into Action**

**EDLM 8006** 3 cr.

This course develops theory and practice behind the implementation of “Principle-Centered Leadership.” The course is built around specific issues and needs of individuals who are fully employed as school administrators/directors. Topics covered include: communicating effectively, developing innovative action plans based on goals and vision, creating a support system that empowers others, and developing steps of program implementation within organization restrictions. Administrators practice sustaining action, problem solving, celebrating success, and measuring progress.

### **Human Resources and Personnel Administration**

**EDLM 8010** 3 cr.

This course focuses on establishing the rationale and organizational structure that supports effective human resource administration. Among the topics included in this course are staff selection, teacher induction, teacher tenure, promotion and dismissal, salary scheduling, policy making, relations with professional and non-professional personnel, and employee welfare. Emphasis is placed on the interpersonal dynamics of the educational enterprise as it relates to human resource management. Additionally, there is an exploration of issues involving, affirmative action, and concerns about the underrepresentation of minorities in teaching and administration.

### **Law for the Educator**

**EDLM 8020** 3 cr.

Constitutional and statutory provisions governing a public school system are examined on local, state, and national levels. A thorough review is made of the legal parameters surrounding the local level of the educational system. In addition, students inspect federal and state guidelines generated to meet the needs of diverse student populations in compliance with current judicial decisions and state legislation. The impact of precedent-setting cases is a major focus of this course.

### **Public School Finance**

**EDLM 8030** 3 cr.

This course addresses the fiscal and allocated functions of school administration. Students develop the skills and knowledge related to budgeting, accounting, and financing at the local, state, and federal levels. Resource acquisition and development of strategies for locating alternative revenue sources and, subsequently, allocating these resources efficiently and effectively are skills the student acquires.

### **Curriculum Leadership and Evaluation**

**EDLM 8040** 3 cr.

This course is designed for administrators who must become knowledgeable about curriculum development and program evaluation. The role of the administrator as a decision-maker and as an instructional leader is explored. Emphasis is placed on program development and evaluation, which reflects the various cultural and ethnic minority groups students represent. Additionally, practical applications of programs as well as the application of evaluation models and techniques are investigated. Prepracticum responsibilities are a part of this course.

### **Seminar: Research in Educational Leadership**

**EDLM 8050** 3 cr.

This course is designed to acquaint the student with the current research in Educational Administration and to teach the student how to evaluate the pertinence of this research to educational problems and issues. Students identify and use research sources and undertake projects that prepare them to address educational issues in an informed and lucid manner. Prepracticum responsibilities are a part of this course. This course may be taken in conjunction with the practicum EDLM 9110-9220.

### **Administration of Special Education Programs**

**EDLM 8800** 3 cr.

Service delivery models as they relate to legislation, general curriculum, and various handicapping conditions are presented. Emphasis is given to the services, organization, programs, personnel, and facilities as they relate to the exceptional child and young adult. Students are expected to be well-versed in the effects of Federal and State mandates for special education services as a result of this course.

### **The Principal: Organization and Administration of the Elementary, Middle, and Secondary School**

**EDLM 9000** 3 cr.

This course addresses the role of the principal as an effective manager of schools at various levels of education. The focus is on the development of the human, conceptual, and technical skills required of decision-making, communication, planning and recruitment, scheduling, public relations, evaluating, and contract management. Course assignments reflect the specific level of interest of the participants (elementary, middle, and senior high schools). Nine semester hours of prerequisite core courses (excluding EDLM 91XX) are required.

### **Cases and Concepts in Educational Administration**

**EDLM 9010** 3 cr.

A case study approach is used to address problems and issues encountered in school administration. Current managerial concepts and strategies are used to explore alternative solutions to and methods of dealing with administrative problems and issues. This course is normally taken by students when all core courses have been completed in order to maximize their integration of administrative knowledge and skills.

### **Public Relations Tools for Leaders**

**EDLM 9015** 3 cr.

Leaders are successful only when they win support for their programs. This course provides leaders with the tools to develop the public relations strategies, plans, and campaigns that bring success within reach. More practical than philosophical in its approach, this course emphasizes audience analysis and long range planning while providing proven techniques for using the news media, writing effective speeches, synchronizing community relations initiatives, and managing a bad news' crisis. At the end of the course, each leader will have a tailored action plan and the wherewithal to implement it.

### **Collegial Supervision**

**EDLM 9020** 3 cr.

The nature and function of supervision as it relates to both the teacher and the supervisor are studied. Also presented is a contemporary view of the concept of supervision from both a theoretical and practical perspective. The role of the “supervisor” is discussed as it has evolved from the traditional model to the instructional leadership model—a model that embraces collegiality and professional

development. Included are strategies and processes related to a variety of supervisory models, e.g.: clinical supervision, mentoring, differentiated supervision, cooperative development, and self-directed development. Emphasis is on studying ways in which the planning, organization, and evaluation of instruction may be effectively improved through the cooperative participation of school personnel.

### History of Higher Education

**EDLM 9026** 3 cr.

The course explores the major development in American education from the seventeenth century to the present. Emphasis is placed upon aspects of European education and how it impacted higher education as we presently know it. The philosophical as well as historical aspects of the modern system and its evolution are covered.

### Leadership Theory

**EDLM 9030** 3 cr.

This course covers the entire Leadership Theory Movement from its inception to present day thinking. All aspects of the discipline are covered, including leadership theory, findings of leading scholars, leadership techniques, case studies associated with successes and failures, and application to a modern society.

### Organizational Issues

**EDLM 9040** 3 cr.

This course covers the role of the modern organization in a changing environment with emphasis on key organizational issues of importance.

### College and University Teaching

**EDLM 9050** 3 cr.

This course explores the history, philosophy, and objectives of teaching at all levels of higher education. The teaching and learning process is covered in depth with a special emphasis placed upon developing an understanding of the student, teacher, and the interaction required for effective learning.

### Social Context

**EDLM 9060** 3 cr.

This course covers social issues in higher education in a changing environment with emphasis on key current issues.

### Strategic Planning in Higher Education

**EDLM 9070** 3 cr.

This course is a comprehensive review of strategic planning for higher education. All functional areas of strategic planning are covered with emphasis on its relationship to marketing, management, and finance. The course utilizes case studies.

### Practicum in Higher Education Administration

**EDLM 9080** 6 cr.

The practicum/internship position for the enrolled student provides all of the necessary experience for a particular position in administration. The experience is supervised by an experienced faculty member. The timing coincides with an academic semester. Specific educational outcomes are developed by the student with assistance from a designated faculty member. A total of 300 hours are required for the semester.

### Independent Study

**EDLM 9090** 3 cr.

This course utilizes a conference approach with an individual student placing emphasis on critical thinking, refinement of research skills, and ability to pursue topics independently. In some exceptional cases, students are permitted to utilize this course in lieu of core or specialization track courses due to completion time constraints or lack of course offerings.

*Prerequisite: permission of Advisor only.*

### The Dynamics of Planned Change

**EDLM 9100** 3 cr.

A study of planned change, essentially aimed at education, includes a review and analysis of sociological and psychological factors inherent in the change process. Topics reviewed include organizational behavior, intervention theory, intergroup relations, and management techniques.

### A Practicum in Educational Leadership and Management

**EDLM 9110/9220** 6 cr.

The culminating course in the Master's Degree program consists of an internship experience under the direct supervision of a principal and/or director. The graduate student is obliged to work in a school setting performing the kinds of responsibilities and duties for which he/she is preparing, i.e. principal—supervisor/director. The practicum can be arranged for full-time or part-time. Students must discuss proposed arrangements with their advisor early in their program. During the practicum, students meet with their college advisor and are visited at their practicum site. This practicum consists of a minimum of 400 clock hours earned at the practicum site.

### Clinical Experience in Educational Leadership and Management

**EDLM 9221** 6 cr.

The clinical experience is in the role and at the level of the certificate sought. It integrates content area knowledge, pedagogical theory, and practice. A clinical experience requires a minimum of 400 clock hours or one full semester as defined by the field site. Clinical experiences are fulfilled either under the auspices of a college or university, in which case supervision and evaluation are the responsibility of the college or university, or under the auspices of a school system authorized by the Bureau as a clinical experience site, in which case supervision and evaluation are the responsibility of the school system. Evaluation of all clinical experiences are based on the appropriate standards for the Administrative Certificate being sought.

### Thesis

**EDLM 9500** 3 cr.

The thesis is undertaken by students who are not seeking certification and in lieu of the practicum/internship in the Education Leadership and Management Program. (See Thesis description in the Education Leadership and Management program description).

### The Contemporary Educational Leader (Capstone)

**EDLM 9600** 3 cr.

This course explores the significant issues and relevant research affecting individual and systemic educational leadership. Students will actively investigate such topics of contemporary concern as diversity, reform movements, the profession of teaching, the poser of leadership, creative curricula, innovative learning environments, the promise and potential of new educational technologies, equity in funding and financial megatrends. The course will provide master teachers, administrators, and staff developers with new insights into the key ideas and critical components of proactive leadership.

## Educational Technology

### Impact of Technology on Education

**ETEC 7600** 3 cr.

This course includes content related to the impact of technology on education, especially as it relates to effective teaching and curriculum development. The use of technology as a change agent in schools is explored. Students are exposed to the variety of technologies used in schools.

### A Graphics Approach to Technology

**ETEC 7700** 3 cr.

This course explores the integration of visual learning and computers. Students explore the use of paint programs, hyperstudio, videos, and interactive videos. The MacIntosh computer's approach to software (pull down menus and use of the mouse) is investigated.

### Using the Computer as a Tool for Thinking Skills

**ETEC 7800** 3 cr.

This course integrates critical thinking skills and computers. Students explore the use of problem solving software, Logo, and Logo Writer. By using the computer as a tool for conducting research students are enabled to look at CD ROM, Database Applications, Hypercard, and Telecommunications.

### Topics

**ETEC 8000** 3 cr.

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

### Computers and Writing

**ETEC 8600** 3 cr.

This course provides teachers and administrators, at all levels and in all subject areas, with strategies for developing and implementing a computer-assisted process writing program in their classrooms and schools. Participants examine the process of writing (idea generating, drafting, responding, revising, editing, and publishing) and are introduced to ways of using the computer to facilitate writing growth at each stage. Working with current writing software programs, editing tools, and desktop publishing packages, participants devise a computer-assisted writing program for their own classrooms and schools. Previous computer experience is not required.

### Seminar in Educational Technology

**ETEC 9100** 3 cr.

Students have the opportunity to examine, in depth, current issues and future directions in educational technology. Discussions and readings focus on the relationship between the computer and teaching methodologies, as well as teacher effectiveness and curricula.

### Project in Educational Technology

**ETEC 9200** 3 cr.

Completion of a comprehensive project utilizing educational technology in elementary education, special education, or secondary education is required. The projects developed and implemented are evaluated by a review board of classmates and faculty.

## English

\*Asterisk indicates that the course may be offered less than once every two years.

### Children's Literature

**ENGL 7010** 3 cr.

Students in this class study the content of classic and contemporary children's literature plus various approaches for interpreting and teaching a wide variety of children's texts. Close attention is paid to emerging trends in children's literature as well as to the literature's enduring concerns.

### The Modern Secondary School

**ENGL 7012**

Required of all MAT candidates who do not have initial licensure to teach. Covers a broad range of issues faced by teachers in today's secondary schools. Students become familiar with the complexities and demands of secondary school teaching. Includes 75 hours of prepracticum experience.

### Advanced Methods of Teaching at the Secondary Level

**ENGL 8000** 3 cr.

Combines academic study with clinical practice and supervision. Theories and topics studied and demonstrated include learning styles, critical thinking, computer applications, and inclusive learning environments. Emphasis is placed on integrating culturally or linguistically diverse students and those with special needs. Interdisciplinary course development and implementation, student assessment including portfolio assessment and writing are studied for utilization across the curriculum.

*Prerequisite: ENGL 7012 or Initial Teacher Licensure.*

### Creative Writing

**ENGL 8020** 3 cr.

This course facilitates the writing of poetry and short fiction in a workshop atmosphere.

### The Robert Cormier Collection

**ENGL 8035** 3 cr.

This course is a study of the writings of Robert Cormier, the internationally acclaimed Leominster author, using materials in the Robert Cormier Manuscript Collection at Fitchburg State College. *The Chocolate War*, *I Am the Cheese*, *Tenderness*, *Heroes*, *Frenchtown Summer*, and other works by Cormier are examined.

### Theories and Principles of Language Learning

**\*ENGL 8040** 3 cr.

This course provides teachers of multilingual students with a theoretical background for the teaching and learning of languages. It introduces research into second language acquisition from perspectives of the fields of linguistics, psychology, and education. Topics included in the course are language acquisition; learning styles and strategies; effects of personality, age, motivation, and sociological factors; and the role of the first language. Discussions explore the relationship of theory to methodology and classroom practice.

### Methods and Materials in ESL

**ENGL 8042** 3 cr.

The major methodological approaches to teaching English as a Second Language (ESL), including a historical survey and a review of current applications, are explored in this course. The following topics are discussed: interactive, communicative classroom practices; teaching reading, writing, listening, oral communication, grammar, and vocabulary; testing; designing and evaluating classroom materials.

### Graduate Study & Research in English

**ENGL 8050**

Designed for students who are new to the English Graduate Program. This course promotes the student's ability to do independent and creative scholarly research and to become more competent in critical approaches to literature, research techniques, new methodologies, and technologies, as well as library and archival examination. Students in the MAT in English Certification program develop the research proposal for the classroom research project that they are required to carry out during their 400 hour Internship/Clinical experience.

### Literature in the Classroom: Readers, Text and Teachers

**ENGL 8070**

This course examines the place of literature in today's middle and secondary school classroom. Using the Standards for the English Language Arts (NCTE and IRA) and the Massachusetts English Language Arts Curriculum Framework as guides, we consider the choice of classic and contemporary literature for whole class and individual reading, strategies for creating responsive and reflective readers of literature, and means of assessing student

performance. The impact of new media and electronic technology on our thinking about literature, literature instruction, and the way people read is explored. Other topics include the application of multiple intelligence theory to the study of literature, the fostering of aesthetic experience of literature, ways of weaving women's literature and multicultural literature into the curriculum, and the teaching of Shakespeare. We experiment with and evaluate a variety of teaching approaches to engage students in active and critical response to literature. Class participants have the opportunity to develop teaching materials for use in their own classrooms.

### Literature for Young Adults

**ENGL 8071**

Literature for Young Adults is a survey of current books written especially for middle and secondary school students, as well as a study of strategies for teaching them. The emphasis is on the newest books available in paperback that are suitable for classroom use or recreational reading. Strategies for encouraging student engagement with literature, for pairing young adult novels with the classics, and for sharing responses are modeled by the professor and evaluated by students. Students develop skill in evaluating young adult literature in terms of literary quality, reader interest, and teaching value. Course participants may develop teaching materials for use in their own classrooms.

### Process Writing Across the Curriculum

**ENGL 8076** 3 cr.

Writing across the curriculum provides learners with the opportunity to investigate their own thinking as they go beyond the surface level of text or subject matter to arrive at meaningful connections and insights. Students investigate creative approaches to introduce current research journals into such areas as portfolios, audience, persona, and assessment. Working independently and in cooperative learning groups, participants immerse themselves in the reading/writing/thinking process, create their own portfolios, design mini-lessons, conduct research, and share their learning and thinking.

### Literature and Film

**ENGL 8085** 3 cr.

This is an introduction to the relationship between literature and film through the critical study of each medium. Special consideration is given to matters of characterization, narration, plot, setting, theme, and tone in written works and films. Students are introduced to conventions of the documentary and fictional film, principles of scriptwriting, and the elements of formal screen production.

### Practicum

**ENGL 8090** 6 cr.

Student teaching experience is offered to give practical classroom experience to those degree students who have not satisfied the state requirements for certification.

### Curriculum and Technology

**ENGL 8250** 3 cr.

This course looks at the integration of educational technology in the classroom, and its relationship to learning theories. Mac and IBM computer hardware, and interfaces for classroom inquiry including video and microscope cameras, digital image capture, scanners, and computer projection panels are examined. Students learn similarities between standard software programs available for writing, computation, and data analysis. It includes a survey of software for studies, ranging from Encyclopedias on CD-ROM to programs that are specific to the study of various topics in science, art literature, math, and language. The class explores the use of the internet as a classroom resource, the hardware and software necessary to get on line, search engines, browsers, URLs, online journals, education web sites, online interest groups, and how to design a web page.

### Curriculum Design & Development at the Secondary Level

**ENGL 8260**

This course combines academic study with clinical practice and supervision based on the clinical supervision-objective-feedback model. Provides students with knowledge and skills of the curriculum development-revision process. Examines societal demands on the curriculum and the role of the American school in a democratic and multicultural society as students assess, revise, and implement instructional programs and the curriculum in a systematic and logical way. Active participation in school-based curriculum teams, IEP teams, site-based management teams, and community groups teach effective delivery of services to all students and school

improvement/reform efforts. In collaborative groups students review, revise, and expand the curriculum and assessment procedures in order to integrate current research findings and education reform initiatives.

### Literary Theory: Practical Applications for Today's Readers

**ENGL 9000**

The course surveys theories of literature with emphasis on applying them to our readings of a wide variety of texts. Study includes a brief historical survey, but focuses on such contemporary practices as cultural studies and feminist theory. Texts and theoretical schools may vary from semester to semester. Practical applications in the classroom and in one's own reading guide class discussion.

### Chaucer

**ENGL 9010** 3 cr.

Students read Chaucer's major works, beginning with early poems and lyrics, then concentrating on *The Canterbury Tales* and *Troilus and Criseyde*. Focus is on the Middle English Language and critical approaches as well as literary analysis.

### The Literature of the Middle Ages

**ENGL 9011** 3 cr.

The course surveys selected texts from the Middle Ages, starting with Beowulf and Old English lyrics, and including representative Middle English, Celtic, Anglo-Norman, and French works. Various genres are covered, including epic, lyric, drama, Arthurian romance, legend, religious verse, and satire. All works except the Middle English are read in translation.

### The Practice of Poetry: Critical Reading, Creative Writing

**ENGL 9012** 3 cr.

The best way to study poetry is to write it. This active-learning course explores the contemporary poetry scene: productions, performances, and discussions of poetry as it is practiced today. Students compose original poems in a variety of styles and learn interactive methods of responding to poetry. Students read literary works representing major poetry trends, such as ethnic, confessional, formalist, experimental, feminist, and L=A=N=G=U=A=G=E. Students visit the computer lab, learning the basics of accessing online poetry groups and publications online. Students attend a live or taped reading, research several literary journals, and prepare either a final paper or a selection of original poems. Beginners as well as more experienced poets are welcome.

### Shakespeare's Major Plays

**ENGL 9020** 3 cr.

This course examines Shakespeare's plays in relation to the culture and interpretive concerns of both Shakespeare's world and our 20th century one. Special emphasis is placed on his works as read, taught, performed, and constructed in regard to power, gender, class, and literary aesthetics.

### Revisiting the Romantics

**ENGL 9035** 3 cr.

This course emphasizes the work of romantic era writers (1780-1830). Students examine the key aesthetic and political debates of the time through an analysis of essays, poetry, novels, and plays. Authors include such writers as Mary Wollstonecraft, Mary Shelley, William Godwin, and Dorothy and William Wordsworth.

### The Quiet Revolution: Nineteenth-Century American Women Writers

**ENGL 9036** 3 cr.

This course considers texts written by the "d---d mob of scribbling women," including Matilda Joslin Gage, Sarah Orne Jewett, Harriet Jacobs, Harriet Beecher Stowe, Ida B. Wells and others. Students learn how these women used essays, magazine and newspaper columns, novels, short stories, and slave narratives as a public forum for discussing issues of the day, which included sexism, racism, and the reform of labor, marriage, property, voting, and education.

### American Renaissance: Works by Hawthorne, Poe, and Others

**ENGL 9037** 3 cr.

This course looks at fiction and poetry by several great American writers of the mid nineteenth century. Readings will explore the interaction of value and style, the treatment of nature and science, and the differences between men and women in selected works.

### Mark Twain and American Humor

**ENGL 9040** 3 cr.

This course explores Southwestern humor leading up to the writings and career of Mark Twain. The humorists who share the Twain legacy are also studied.

### American Art and Literature 1800-1860

**ENGL 9046** 3 cr.

This course explores the relationship between the plastic art and the literary art of the new nation. Students learn to identify the forces that inspired imaginative production in both art forms during the period that attempted to define the "American" style. Slides of paintings as well as literary texts are studied.

### Women in European Literature

**ENGL 9047** 3 cr.

At the center of this course are texts by women authors from various European countries written during the eighteenth through the twentieth centuries. Students consider the kinds of writings published by women, the audiences women wrote for, their motivations for writing, and the accessibility or popularity of their writings. Close analysis and discussion of individual texts lead students to consider variations of these factors between countries and time periods.

### Multicultural Children's Literature

**ENGL 9048** 3 cr.

This course focuses on contemporary multicultural children's literature and requires students to learn and apply appropriate interpretive strategies for understanding the texts and cultural contexts. Students gain and demonstrate a firm understanding of the major critical issues regarding multicultural children's literature and formulate and support personal responses to these issues.

### The World Novel to 1914

**ENGL 9049** 3 cr.

This course examines significant novels outside the American/English literary canon representing the development of the form. Selected authors may include comic (Soseki), romantic (Sand), realist (Balzac, Flaubert), and psychological (de Assis, Michailis). Students explore the historical, cultural, political, and social milieu that shaped each writer and text.

### 20th-Century British and American Poetry

**ENGL 9052** 3 cr.

This seminar explores the works of poets such as Auden, H.D., Lowell, Plath, Roethke, Kinnell, Rich, Heaney, Bishop, Walcott, and Hughes. Students make presentations on assigned topics. Attendance at live and filmed poetry readings is a feature of the course.

**Modern Irish Literature****ENGL 9055** 3 cr.

This seminar concentrates on two of the following three groupings: major works by three Irish poets such as Yeats, Heaney, Muldoon; major works by three Irish fiction writers such as Joyce, O'Connor, O'Faolain; major works by three Irish playwrights such as Synge, O'Casey, Friel.

**Contemporary World Literature****ENGL 9058** 3 cr.

Particular emphasis in this course is placed on authors who write to effect changes in our perceptions of "the other" so we may understand "the otherness" of ourselves. Authors studied include: Conrad, Forster, Achebe, Gordimer, Fugard, et al.

**The Shapes of Modern Drama****ENGL 9059** 3 cr.

In this seminar students read plays from such traditions as the realist, the symbolist, and the expressionist, including works by Yeats, Pirandello, Beckett, Pinter, and Mamet.

**Women Writers Around the World: Stories of Maturation and Initiation****ENGL 9060** 3 cr.

Students take a global approach to women's stories of growing up found in autobiographies, novels, short stories, and poetry. An invigorating exploration, this course includes works by authors such as Toni Cade Bambara, Nawal El Saadawi, bell hooks, Clarice Lispector, Anchee Min, Georgina Valoyce Sanches, Esmeralda Santiago, Leslie Marmon Silko, Jeanette Winterson, and Banana Yoshimoto. Much of this literature is appropriate for use in the high school classroom.

**Africa Through the Novel****ENGL 9061** 3 cr.

Students read, examine, and discuss texts by African writers who have (re)constructed, in their imaginary worlds, specific and multiple visions of African life. All texts were written in the twentieth century, although some portray periods prior to that time. Emphasis is on characteristics of style, politics, and culture evoked in these works and aspects of contemporary literary theory pertaining to African literature today.

**Three American Literatures: Native American, African American, and Asian American****ENGL 9064** 3 cr.

The focus of this course is on relationships between culture and society as works by three groups of Americans are considered against historical, ethnic, and cultural backgrounds. Discussion may concern questions of identity, family, initiation, politics and ideology, education, gender, aggression, and violence. Special attention is paid to the novel as a popular art form in aesthetic and social terms.

**Women in Contemporary Society****ENGL 9065** 3 cr.

Women as a force in society are the focus of this cross-discipline course. The political, social, and economic issues concerning women are subjects for student research. Areas explored include anthropology, business, education, history, literature, philosophy, psychology, sociology, science, and the arts. Students also consider the role of cultural diversity (both nationally and internationally) in the scholarship of women.

**Latin American Novels****ENGL 9066** 3 cr.

The roles of church, politics, family and nature are discussed in this sampling of Latin American fiction. Comparisons will be made to North American and/or English Literature when useful. The course offers an introduction to the literature through the major themes of different geographical and cultural areas of Latin America.

**Asian English Literature in Cultural Context****ENGL 9067** 3 cr.

This course covers selected works, mostly fiction and memoir, of American, Canadian, and British writers of Chinese, Japanese, and Korean ancestry. We examine how the authors explore questions of identity and cultural and family dynamics, and how works by ethnic minorities relate to various literary traditions. We gain familiarity with the Asian cultural framework of the writers in order to understand differences with western traditions and expectations. Some introduction to poetry, drama, folktales, visual arts, music and film.

**Topics Course****ENGL 9075** 3 cr.

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

**Independent Study****ENGL 9080** 3 cr.

Independent study provides special individualized study under close supervision for students excelling in scholarship.

**Master's Thesis Research****ENGL 9100** 3 cr.

The student researches in depth a topic of his or her own interest in English. Students who successfully complete this course should enroll in ENGL 9200 Master's Thesis Writing.

*Prerequisite: Signed permission from the Graduate English Chair.*

**Master's Thesis Writing****ENGL 9200** 3 cr.

Using the research developed in the Master's Thesis Research course, the student will write a master's thesis under the guidance of a faculty member and following the *Graduate English Thesis Guidelines*.

*Prerequisite: Signed permission from the Graduate English Chair and Master's Thesis Research.*

**Clinical Experience****ENGL 9400** 6 cr.

See BIOL 9400 for course description.

**Internship****ENGL 9500** 6 cr.

The Internship is a clinical, capstone experience allowing full integration and application of content knowledge and pedagogical theory and practice. It should incorporate all standards specific to the discipline in which certification is sought as well as all common standards for classroom teachers (section 7.04). Students must fulfill a minimum of 400 clock hours or one full semester on site under the auspices of the college.

# History

## From Weimar to Hitler: Germany 1918-1945

**HIST 7010** 3 cr.

This class, run as a seminar with joint student/faculty leadership, traces the developments that led to the collapse of the Weimar Republic and the National Socialist acquisition of power in Germany. Issues covered include social and economic trauma after the First World War, the relationship between state and society in the Weimar Republic, political fragmentation, the reaction against modernist culture, the National Socialist power, everyday life in National Socialist Society, women and National Socialism, racist ideology, and extermination.

## The Modern Secondary School

**HIST 7012** 3 cr.

Required of all MAT candidates who do not have initial licensure to teach. Covers a broad range of issues faced by teachers in today's secondary schools. Students become familiar with the complexities and demands of secondary school teaching. Includes 75 hours of practicum experience.

## The Vietnam War and U.S. Society

**HIST 7020** 3 cr.

Course is a graduate seminar, which examines the Vietnam War and its impact on US society as well as surveys the historical background to conflict. Major themes include the history and culture of Vietnam, earlier conflict with China, the era of French colonialism and the First Indochina War, US diplomatic involvement in Vietnam, issues of leadership, military aspects of war, the internal struggle within Vietnam, the impact of war on the US military, the anti-war movement, the effect of the war on presidents from Eisenhower to Ford, prisoner of war issues, women's issues and the diplomatic efforts to ending the conflict, as well as the post-war memorialization of the war in Vietnam and in America.

## American Civil War and Reconstruction

**HIST 7030** 3 cr.

Examines the American Civil War through lectures and comparative readings in order to understand the causes of sectional conflict, the war, and its aftermath. Major themes include abolition, African-American resistance to slavery, war strategy, and the social and political impact of Reconstruction.

## Introduction to Public History

**HIST 7040** 3 cr.

Examines the central issues involved in the various fields of public history. Students learn how to apply their academic history training to a broader range of professional and educational applications – museums, historical agencies, and historic preservation organizations. Students learn about specific functional strategies employed by public historians including oral history, exhibition planning and design, and collections management as they develop an understanding of the ethical debates about collecting, exhibiting, and interpreting historical materials.

## The U.S. Women's Rights Movement Since 1820

**HIST 7150** 3 cr.

The class, run as a seminar with joint student/faculty leadership, traces the development of the women's rights movement from its roots in the abolitionist movement to its present status in the feminist movement. Issues covered are abolitionism, woman suffrage, temperance, labor, peace, reproductive rights, and general rights. Students investigate issues, ideologies, strategies, tactics, and personalities. Research involves biographies, organizational histories and/or analysis of political theories and strategies. The course provides students with the knowledge to incorporate new teaching materials about women's history into U.S. History courses and to gain a broader understanding of women as actors in U.S. politics.

## Beyond Antiques: Artifacts and History

**HIST 7200** 3 cr.

American material culture—personal and domestic artifacts, buildings, and historic landscapes can tell us much about life in the past. Through a combination of readings, object studies, and field trips, students survey different modes of investigation: social and cultural history, history of technology, cultural geography, historical archaeology, folklife studies, art history, and decorative arts studies. The seminar tests the applicability of these disciplines, methods, and theories to specific spheres of activity and thought, including community, class, work, house and household, clothing, dining, landscape, and play.

## Judaism and Early Christianity

**HIST 7250** 3 cr.

This course offers an overview of the formative period of development of both Judaism and Christianity, from 300 BCE to 500 CE. It explores a variety of factors that led Christianity to break away from Judaism and its transformation into the single most powerful religious movement in the Mediterranean region. Readings in both primary and secondary texts (translated into English) provide vantage points to examine various aspects of the spread of Jesus movement within the contexts of social unrest, competition among ethnic minorities, and the socio-economic reasons that led to the dissolution of the Roman Empire.

## Middle East History

**HIST 7260** 3 cr.

This course surveys Middle Eastern History from its beginnings to the present. The course explores religion, politics, social institutions and gender history of Muslim civilizations as its expansion and confrontation with other civilizations sharpened its own self-image. The methodology of this course is interdisciplinary, including archeology, comparative literature, cultural and social history, and religious studies. Particular attention will be paid to the countries of the Middle East as they developed after World War I and how the various coalitions of the Arab nations were formed in response to Western European interventions. Emphasis will be placed on international politics and the hidden agendas involving defense, oil, economics, and security between Western Europe and the Middle Eastern alliances.

## Amerindian History

**HIST 7270** 3 cr.

This course studies Amerindian history from the earliest settlement through the nineteenth century, including, religion, politics, social institutions, and gender history of Amerindian cultures. The methodology of this course is interdisciplinary, including archeology, linguistics and comparative literature, cultural and social history and religious studies. We shall examine the social reasons for the first migrations and local developments in many regional areas using archeology and social histories of various archeological cultures and historic tribes.

### Irish History

**HIST 7280** 3 cr.

This course examines the history of Ireland from its beginnings to the present. It focuses on the cultural history of Ireland as it evolved through a series of waves of immigration since ancient times, which created new cultural mixes and confrontations. The course explores religions, social and political institutions and gender history of this island, which provided a haven for a variety of immigrants from ancient times. The methodology of this course is interdisciplinary, including archeology, comparative cultural and social history, and religious studies. We shall examine the diversity of Irish social and cultural origins and investigate how these contribute to the formation of an Irish identity. The story of competing mores will be examined in the tensions, which are apparent in the modern history of Ireland today.

### Modern Russia: Rebirth and Renewal

**HIST 7300** 3 cr.

The course is a survey of several major historiographical problems in modern Russian history from the reign of Peter the Great through the revolutions of the 20th century with a focus on cultural and political history. Also emphasized, however, are teaching strategies and tactics at the secondary level designed to prepare students for the MCAS history examinations.

### Historiography

**HIST 7450** 3 cr.

Historiography or the historian's craft is addressed by considering how a historian discovers facts and formulates them into hypotheses; how the historian's craft has changed over the course of time; and how different historians handle the same era or subject matter. The course enables students to read a piece of secondary source writing and analyze the author's perspective and biases; analyze and understand a primary source document; write a paper using primary source material; understand historians' work within their own historical era; appreciate the subjective as well as objective nature of historical research. In any particular semester, the instructor chooses one of two forms for the course : a) a survey and analysis of various historians' work; their approaches and their tools, or b) a study of historians' methods and a research paper based on primary source research putting these methods into use.

### Advanced Methods of Teaching at the Secondary Level

**HIST 8000** 3 cr.

Combines academic study with clinical practice and supervision. Theories and topics studied and demonstrated include learning styles, critical thinking, computer applications, and inclusive learning environments. Emphasis is placed on integrating culturally or linguistically diverse students and those with special needs. Interdisciplinary course development and implementation, student assessment including portfolio assessment and writing are studied for utilization across the curriculum.

*Prerequisite: HIST 7012 or Initial Teacher Licensure.*

### Modern Japan and East Asia

**HIST 8010** 3 cr.

Examines modern Japan from the Tokugawa shogunate and Meiji Restoration to the present. Major themes include the interaction between Japan and East Asia, its relationship with the U.S., the impact of industrialization and militarization, as well as the economic dominance of the post-WWII era and the collapse of the "bubble economy" in the nineties.

### Practicum

**HIST 8090** 1-6 cr.

Student teaching experience is offered to give practical classroom experience to those degree students who have not satisfied the state requirements for certification.

### Curriculum and Technology

**HIST 8250** 3 cr.

This course looks at the integration of educational technology in the classroom, and its relationship to learning theories. Mac and IBM computer hardware, and interfaces for classroom inquiry including video and microscope cameras, digital image capture, scanners, and computer projection panels are examined. Students learn similarities between standard software programs available for writing, computation, and data analysis. It includes a survey of software for studies, ranging from Encyclopedias on CD-ROM to programs that are specific to the study of various topics in science, art, literature, math, and language. The class explores the use of the internet as a classroom resource, the hardware and software necessary to get on line, search engines, browsers, URLs, online journals, education web sites, online interest groups, and how to design a web page.

### Curriculum Design and Development

**HIST 8260** 3 cr.

This course is designed to provide students with knowledge and skills of the curriculum development-revision process. In collaborative groups students review, revise and expand the curriculum and assessment procedures in order to integrate current research findings and education reform initiatives. Students articulate a general curriculum map contextually appropriate for grade-level content as they plan for integrating content with social, behavioral, processing, thinking skills and curriculum frameworks. Students design an integrated 9-12<sup>th</sup> grade curriculum that aligns content standards across disciplines. Finally, interdisciplinary groups design an integrated curriculum unit.

### Topics in History

**HIST 9000** 3 cr.

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

### Clinical Experience

**HIST 9400** 6 cr.

See BIOL 9400 for course description.

### Internship

**HIST 9500** 6 cr.

The Internship is a clinical, capstone experience allowing full integration and application of content knowledge and pedagogical theory and practice. It incorporates all standards specific to the discipline in which certification is sought as well as all common standards for classroom teachers. Students must fulfill a minimum of 400 clock hours or one full semester on site under the auspices of the college.

## Interdisciplinary Studies

### Women in Contemporary Society

**IDIS 9065** 3 cr.

This course is an introductory graduate level course on issues of concern to women. The class examines women's economic, social, and political roles in society. Ethnic diversity and international comparisons are also discussed.

### Seminar and Internship in Interdisciplinary Studies

**IDIS 9400** 6 cr.

The Internship is a capstone experience allowing full integration and application of content knowledge and pedagogical theory and practice. Students must fulfill a minimum of 400 clock hours or one full semester on site under the auspices of the college.

### Seminar and Graduate Thesis

**IDIS 9500** 6 cr.

Students meet the requirements of the Graduate Division's Thesis Program. In order to complete this phase of the program, a faculty committee is to be established by the student under the guidance and supervision of the graduate advisor. Note: See thesis description under Program of Study section of the Interdisciplinary Studies Program Description.

## Management

### Quantitative Methods for Business

**MGMT 7001** 3 cr.

The course provides an overview for students with a limited quantitative background. The focus is on statistics and includes algebra and an introduction to calculus. Topics include: sample distribution, confidence intervals, hypothesis testing, analysis of variances, derivatives, logs, linear programming, and regression analysis.

### Accounting for Graduate Students

**MGMT 7002** 3 cr.

The course provides an intensive study of financial and managerial accounting for students with no previous background in accounting. Topics include: collection, reporting, and interpreting of financial information and statements, break even analysis, budgets, manufacturing and standard costing, and variance analysis.

### Foundations of Finance/Economics

**MGMT 7003** 3 cr.

Topics of Finance/Economics include mathematics of finance, liquidity management, capital budgeting, liability management, and value creation. Fundamental concepts of micro- and macroeconomics are rigorously developed.

### Foundations of Management/Marketing

**MGMT 7004** 3 cr.

Foundations of Marketing/Management provide a broad conceptual background of fundamental knowledge in management and marketing for graduate students who have not completed academic work in these subjects.

### Management of the Global Environment

**MGMT 9002** 3 cr.

The course provides students with the background to understand global strategic business problems; demands and pressures from governments, unions, consumers, and others in foreign countries as well as from domestic stockholders. Studies emphasize U.S. control of multinational and foreign companies and the effect upon international competition.

### Quality Management Theory

**MGMT 9008** 3 cr.

This course studies the concepts, practices, and methods of modern quality management in both manufacturing and services. Topics include: history, concepts, dimensions of quality, measurement and control, statistical quality control, information systems, and auditing for quality.

*Prerequisite: BSAD 3200.*

### Economic Theory and Managerial Decision Making

**MGMT 9020** 3 cr.

This course presents the principles, concepts, and tools of economic analysis that are necessary for proper management planning. Its aim is to improve the understanding of how a market economy operates and to familiarize students with the tools that are useful in making economic decisions and in solving economic problems. *Prerequisites: BSAD 2110, ECON 1200.*

### Accounting Theory

**MGMT 9030** 3 cr.

The course develops an understanding of the theories and concepts which provide the foundation for accounting.

*Prerequisite: admission to Accounting Track or 24 undergraduate credits in Accounting.*

### Advanced Financial Accounting Issues

**MGMT 9032** 3 cr.

This course affords students the opportunity to examine current issues including ethics, accounting and auditing research techniques, international accounting issues, and other relevant current topics.

*Prerequisite: admission to Accounting Track or 24 undergraduate credits in Accounting.*

### Selected Topics in Advanced Managerial Accounting

**MGMT 9034** 3 cr.

Students are introduced to issues in the current environment, such as international influences on U.S. management practices, business ethics, and technology changes and their impact on the managerial structure through a series of readings and cases.

*Prerequisite: admission to Accounting Track or 24 undergraduate credits in Accounting.*

**Accounting Information Systems****MGMT 9036** 3 cr.

This course integrates the accounting process into the total information system. Students analyze the problems involved in the design and installation of information systems, including computer feasibility studies and systematizing the clerical functions of an organization. Course material describes the inter-relationship of internal controls, classification of accounts and functions, and reporting to provide relevant information and yet optimize the control function.

*Prerequisites:* BSAD 1700, MGMT 7002.

**Organizational Behavior and Development****MGMT 9040** 3 cr.

This course relates the knowledge of human behavior to the problems of organizational life. It examines individual behavior as well as group and social behavior in organizations. The course encourages discussion of the methods of changing behavior through organizational development.

*Prerequisite:* BSAD 3200.

**The Human Resource Function and the Manager****MGMT 9050** 3 cr.

This course provides knowledge of the human resource from the manager's perspective. The student develops an understanding of the role of personnel specialists. Topics covered include: job analysis, employee selection, training, appraisal, promotion, and discipline within the context of recent legal developments.

*Prerequisite:* BSAD 3200.

**Management Information Systems****MGMT 9060** 3 cr.

This course provides insight into the problem of identifying an organization's informational requirements to facilitate the decision-making process. Topics presented include: an analysis of information systems, communication theory, information flow, methods and procedures for gathering, disseminating, and controlling information.

*Prerequisite:* BSAD 1700.

**Legal Issues in Human Resources Management****MGMT 9070** 3 cr.

This course is designed to provide human resources professionals and other managerial professionals with an understanding of labor and employment law, the sources of this law and how they may apply in the employment setting.

**Management Theory and Process****MGMT 9080** 3 cr.

This course examines management theory as an evolving body of knowledge influencing managerial practices. Management theories are compared and contrasted with the goal of understanding the assumptions and applications of each. Within the context of theoretical models, attention is directed to the differences in the environment in which firms must operate.

*Prerequisite:* BSAD 3200.

**Production and Operations Management****MGMT 9090** 3 cr.

The course covers system design and layout, job design and work methods, plant location and product development, scheduling and methods of control. The quantitative management techniques of capital budgeting, forecasting inventory methods, program evaluation review techniques (PERT), and decision theory are utilized.

*Prerequisite:* BSAD 3200.

**Business and Society****MGMT 9100** 3 cr.

The course studies the various external environmental factors which affect managerial decisions. The course views the environment as a complex set of interrelated economic, legal, political, social, and cultural influences, which impact the organization through its public or constituencies. Through case analysis the student gains insight into the complicated interrelationships that exist between the organization and its environment.

*Prerequisites:* BSAD 3500, ECON 1200.

**Legal Environment of Business****MGMT 9130** 3 cr.

This course considers the legal questions arising out of doing business nationally and internationally. It is a study of the interrelationships among laws as they affect individuals and business organizations. The course provides the student with an awareness of how legal problems and their solutions can influence the direction of a business.

*Prerequisite:* BSAD 3500.

**Marketing Management****MGMT 9160** 3 cr.

The course embarks on a detailed study of concepts and procedural alternatives in the delineation of the market target. In addition, the course covers the development and implementation of the marketing mix and the control and analysis of the total marketing effort.

*Prerequisite:* BSAD 3300.

**Corporate Finance****MGMT 9170** 3 cr.

The course examines principles of decision analysis in management of current assets, estimation of requirements for short term funds, and valuation of capital budgeting and merger proposals.

*Prerequisite:* BSAD 3400, MGMT 7001, MGMT 7002.

**Accounting Practices for Managers****MGMT 9180** 3 cr.

The course provides a study of financial reporting systems. Emphasis is given to the interpretation and uses of information contained in financial reports.

*Prerequisite:* MGMT 7002.

**Financial Analysis****MGMT 9310** 3 cr.

This course provides for an intensive examination of financial accounting theory and practice. It includes the valuation of assets and liabilities, accounting for stockholders' equity, measurement and reporting of earnings, the flow of funds, an investigation of the evolution and current status of accounting theory and financial reporting.

*Prerequisites:* MGMT 9170, MGMT 9180.

**Labor Management****MGMT 9320** 3 cr.

This course analyzes the development and impact of collective bargaining on the work force and the organization. Consideration is given to public policy as well as environmental forces. The negotiation and administration of labor agreements is covered.

*Prerequisite:* MGMT 9080.

**Marketing Communications****MGMT 9330** 3 cr.

This course presents the elements in the marketing mix that deal with the promotion of goods or services. The course covers advertising, sales promotion, public relations, and publicity. The characteristics of each form of promotion are evaluated with respect to varying market situations. The focus of the course is on the managerial aspects of communication design, development, implementation, and appraisal.

*Prerequisite:* MGMT 9160.

## Selected Topics in Management

**MGMT 9450** 3 cr.

This course emphasizes trends, current research, and contemporary problems in management. Students research, discuss, and present reports on problems in management. (Course may be repeated twice with different topics with approval of chair. MBA Graduate Committee.)

*Prerequisite: core requirements.*

## Strategic Management

**MGMT 9500** 3 cr.

This course provides a study of administrative processes dealing with the formulation of policy. Topics covered include strategy formulation, the role of the general manager, and the design of strategic planning systems. Attention is focused on problem identification, problem solving and decision-making. Extensive examination is made of cases involving a variety of institutions in both the public and private sectors.

*Prerequisite: at least 21 graduate hours completed or permission of Chair.*

## E-Commerce

**MGMT 9600**

The Electronic Business course develops students' understanding and management of new ways of strategic thinking, marketing and doing business in the digital economy. The course is targeted to individuals who will pursue leadership positions in Electronic Business and Internet Marketing groups, whose business and strategic models are changing dramatically. Students should have a familiarity with the Internet and have completed courses in marketing and management.

## Internship in Management

**MGMT 9700** 3 cr.

Students will intern in a business or other administrative body in a managerial role. The course is intended to expand the student's knowledge of managerial practices and may not be a continuation of an existing position.

*Prerequisite: Completion of 21 graduate level semester hours in MBA program.*

# Mathematics

## Number Theory

**MATH 7000** 3 cr.

A formal study of the classical theory of numbers including such topics as divisibility, primes, congruency, Diophantine equations, number theoretic functions, and quadratic reciprocity.

## The Modern Secondary School

**MATH 7012** 3 cr.

Required of all MAT candidates who do not have initial licensure to teach. Covers a broad range of issues faced by teachers in today's secondary schools. Students become familiar with the complexities and demands of secondary school teaching. Includes 75 hours of practicum experience.

## Technology in the Classroom

**MATH 7100** 3 cr.

A study of the various ways in which technology can be used in the K-12 classroom. Students will perform and develop lessons based on calculators, graphing calculators, computer graphing and algebra software (e.g.: Mathematica, Geometer's Sketchpad), and become familiar with the uses of the Internet in the K-12 setting.

## History of Mathematics

**MATH 7200** 3 cr.

The development of mathematical ideas, from ancient to modern times and their relevance for other fields of knowledge. Special attention is given to several of the most important original writings in mathematics.

## Geometry

**MATH 7300** 3 cr.

A formal study of basic and advanced concepts of Euclidean, non-Euclidean and projective geometry.

## Mathematical Modeling

**MATH 7400** 3 cr.

The designs of mathematical models for solving problems in the physical, social, and life sciences. Emphasis is on the use of mathematics in such problems as traffic flow, group decision making and queuing.

## Discrete Algebraic Structures

**MATH 7450** 3 cr.

A study of discrete algebraic structures. Topics include: Set theory, Boolean algebra, partial orders, equivalence relations, recursions, functions, graph theory, finite automata and combinatorics.

## Advanced Methods of Teaching at the Secondary Level

**MATH 8000** 3 cr.

Combines academic study with clinical practice and supervision. Theories and topics studied and demonstrated include learning styles, critical thinking, computer applications, and inclusive learning environments. Emphasis is placed on integrating culturally or linguistically diverse students and those with special needs. Interdisciplinary course development and implementation, student assessment including portfolio assessment and writing are studied for utilization across the curriculum.

*Prerequisite: MATH 7012 or Initial Teacher Licensure.*

## Practicum

**MATH 8090** 3 cr.

See BIOL 8090 for course description.

## Analysis

**MATH 8100** 3 cr.

A careful development of the core analysis topics of limits, continuity, differentiation, integration, and sequences and series. Both the real number setting and the complex numbers will be considered.

## Probability

**MATH 8200** 3 cr.

Topics include discrete and continuous random variables, expectations, variance, covariance, probability density functions, moment generating functions, and classical probability distributions.

## Curriculum and Technology

**MATH 8250** 3 cr.

This course looks at the integration of educational technology in the classroom, and its relationship to learning theories. Mac and IBM computer hardware, and interfaces for classroom inquiry including video and microscope cameras, digital image capture, scanners, and computer projection panels are examined. Students learn similarities between standard software programs available for writing, computation, and data analysis. It includes a survey of software for studies, ranging from Encyclopedias on CD-ROM to programs that are specific to the study of various topics in science, art literature, math, and language. The class explores the use of the internet as a classroom resource, the hardware and software necessary to get on line, search engines, browsers, URLs, online journals, education web sites, online interest groups, and how to design a web page.

## Curriculum Design and Development

**MATH 8260** 3 cr.

This course is designed to provide students with knowledge and skills of the curriculum development-revision process. In collaborative groups students review, revise and expand the curriculum and assessment procedures in order to integrate current research findings and education reform initiatives. Students articulate a general Curriculum map contextually appropriate for grade-level content as they plan for integrating content with social, behavioral, processing, thinking skills and Curriculum frameworks. Students design an integrated 9-12<sup>th</sup> grade curriculum that aligns content standards across disciplines. Finally, interdisciplinary groups design an integrated curriculum unit.

## Abstract Algebra

**MATH 8300** 3 cr.

A study of algebraic structures including groups, rings, integral domains and fields. Topics include homomorphisms, factor rings, and factorization domains.

## Topics in Advanced Mathematics

**MATH 8900** 3 cr.

Courses having a more narrow focus or those taught on an irregular basis may be offered. New courses may be taught on an experimental basis under this title.

## Clinical Experience

**MATH 9400** 6 cr.

See BIOL 9400 for course description.

## Internship

**MATH 9500** 3 cr.

See BIOL 9500 for course description.

## Nursing

Graduate nursing courses are open to matriculated nursing majors only, or by special permission of the graduate chairperson.

### Nursing with Diverse Populations

**NURS 7000** 1 cr.

This course focuses on concepts of culture, ethnocentrism, and diversity. The impact of cultural sensitivity on role enactment as an advanced practitioner is explored. Case studies are used to facilitate examination of values and beliefs.

### Nursing Theory

**NURS 7200** 3 cr.

The course examines the process of theory development in nursing as a necessary tool to provide guidelines for advanced practice, as well as to foster a deeper understanding of the discipline as a whole. The concept of diversity in relation to theories is also included. Students have the opportunity to evaluate current theories in nursing and to explore one theory in depth.

### Advanced Clinical Concepts

**NURS 7300** 3 cr.

This course provides the opportunity to validate current clinical skills and develop advanced professional decision-making. Clinical issues, such as performance evaluation, collaboration, physical assessment, and ethical considerations are addressed. A clinical component provides the opportunity to increase skills in critical thinking, processing data, and clinical decision-making. (Clinical Component of 60 hrs.)

*Prerequisite:* NURS 7000.

### Contexts and Roles for Advanced Practice

**NURS 7400** 3 cr.

Students acquire a framework for understanding the interplay of political, social, and economic factors in health service delivery and their relationship to the advanced practice role in nursing. The focus is on initiating and facilitating change in health care and nursing systems. Topics include: health care economics, health planning and policy, diversity in health care delivery, use of health status indicators for risk assessment of individuals and groups, informatics, role theory application to role assimilation, role creation, role negotiation, and educator advocate, consultant, and researcher.

## Nursing Research

**NURS 7700** 3 cr.

This course provides students with an overview of the design and methodology of qualitative and quantitative research as applied to professional nursing practice. Topics of study include: critical analyzing and evaluating research literature, non-experimental, quasi experimental research design, phenomenological, grounded theory, and ethnographic qualitative design, analysis and interpretations of findings including the application of statistical methods in quantitative data analysis. Ethical considerations will be discussed along with implications for professional practice.

### Introduction to Forensic Nursing

**NURS 8000** 3 cr.

This course establishes the foundation for forensic decision making in advanced nursing practice with an emphasis on a holistic approach to living victims and perpetrators. The relationship between sociocultural factors and violence is explored. This course also includes an incisive exploration of the principles and philosophies of clinical forensic nursing as well as the role of the forensic nurse in the scientific investigation of violence, trauma, medical-legal and ethical-legal issues. Prerequisite: majority of core courses.

### Scientific Foundations for Forensic Nursing Interventions

**NURS 8130** 3 cr.

This course provides a comprehensive overview of specialized topics in clinical forensic practice as a foundation for the advanced practice nursing role. Areas of exploration will include physical assessments and autopsy findings in forensic pathology, clinical laboratory tests, and pharmacological usage. The complimentary roles of different professions in medical-legal investigative systems in relation to trauma and causes of death will also be identified.

(Clinical Component of 60 hrs.)

### Forensic Nursing: Caring for Victims and Perpetrators, I

**NURS 8200** 3 cr.

This is a two-course sequence identifying the role of the forensic nurse in the care of victims and their significant others. Attention is given to understanding what happens to victims of assault and trauma. Interventions to prevent and treat are also explored. The legal, ethical, clinical, and

advocacy responsibilities of the advanced practitioner are key concepts emphasized throughout these courses. (Clinical Component of 60 hrs.)

*Prerequisites:* NURS 7200, NURS 7300, NURS 7400, NURS 7500, and NURS 8000.

### **Forensic Nursing: Caring for Victims and Perpetrators, II**

**NURS 8300** 3 cr.

This is a two-course sequence identifying the role of the forensic nurse in the care of perpetrators. Attention is given to understanding the etiology of perpetrators and interventions in current practice. The legal, ethical, clinical, and advocacy responsibilities of the advanced practitioner are key concepts emphasized throughout these courses. (Clinical Component of 60 hrs.)

*Prerequisites:* NURS 7200, NURS 7300, NURS 7400, NURS 7500, NURS 8000, and NURS 8100.

### **Research Thesis (Option 1)**

**NURS 9010** 3 cr.

This course focuses on the application of the research process in clinical practice related to the student's specialty area. Emphasis is on the completion of a research thesis under the guidance of faculty.

### **Research Project (Option 2)**

**NURS 9100** 2 cr.

This course focuses on the application of the research process in the clinical practice related to the student's specialty area. Emphasis is on the completion of a research project under the guidance of faculty.

### **Practicum in Forensic Nursing**

**NURS 9500** 3 cr.

In this capstone course students select one (or more) area(s) of nursing practice to pursue in greater depth after consultation with faculty. Students find a clinical placement that gives them the opportunity for role negotiation and role development in the forensic nursing practicum. During the practicum priority is placed on the development of leadership roles and interpersonal and psycho-motor skills needed to serve a selected client population under the preceptorship of an advanced practice nurse or related professional. (Clinical Component of 180 hrs.)

*Prerequisite:* all courses, corerequisite, Nursing Research Thesis or Project.

## **Occupational Education**

### **Seminar and Practicum in Vocational Education/Special Education**

**OCED 6002** 3 cr.

Students complete a practicum or internship in an approved setting for individuals with special needs. Students are assisted in implementing the various facets of their role within a given setting. Visitations by student advisor are planned not only to observe the competencies being demonstrated but to meet with school administrators in defining the role and functions. Practicum seminar is designed to assist the total group in dealing with current concerns and issues and to allow students to learn from the experiences of each other.

### **Promoting Positive Social Behavior for Students with Special Needs in Vocational Education**

**OCED 6003** 3 cr.

The course provides familiarity with the continuum of services required for students with special needs in all school settings. The modifications of approach and teaching techniques that make vocational education accessible to all students are discussed in depth. A case study is required of each student in the course.

### **Students with Special Needs in Vocational Technical Education**

**OCED 6004** 3 cr.

The course traces the development of Special Needs Programs with emphasis on the identification and understanding of special needs students in vocational schools. Particular attention is given to teaching techniques and administrative organization patterns utilized in a vocational school.

Note: This is a required course for candidates seeking either Massachusetts Department of Education approval as a vocational technical instructor or Special Ed/Voc Ed Mini-approval.

### **Strategies and Methods for Teaching Students with Special Needs**

**OCED 6005** 3 cr.

The course uses a practical approach to planning instruction for special needs students in the regular class within a vocational school setting. Using a framework for applying theory in practice, teachers develop and/or attempt strategies that are applicable to their classrooms.

### **Implementation and Evaluation of Education Plans for Students with Special Needs**

**OCED 6006** 3 cr.

The course provides experience in interpreting educational prescriptions for implementation within vocational training programs. Each student designs an individualized instructional plan describing all materials, recommended methodology, and techniques of evaluation.

### **History and Philosophy of Occupational Education**

**OCED 7000** 3 cr.

The course studies the leaders, organizations, and movements that have contributed to the development of occupational education in the United States. Particular attention is given to the philosophies of past and present, along with the issues and problems that have affected occupational education.

### **Seminar in Occupational Education**

**OCED 7050** 3 cr.

The seminar is a critical study of selected current problems in occupational education. Participants apply recent readings, reports, products, and research as tools to analyze strategies for strengthening the delivery of occupational education within a variety of settings. The group may also accept appropriate field-based projects which impact or otherwise address critical occupational education concerns.

### **Supervision in Occupational Education**

**OCED 7100** 3 cr.

This course deals with several aspects of the role of supervisory personnel to demonstrate how educational supervision is a carefully structured leadership with responsibilities related to the improvement of instruction. In the context of a supervisory role, students examine in-service training, inspection, staff guidance, research, and evaluation of personnel and curriculum concerns. Various levels of supervision and organization patterns are analyzed.

### **Evaluation in Occupational Education**

**OCED 7150** 3 cr.

This course in educational evaluation is designed for graduate students who are pursuing an advanced degree in the field of industrial technology education, vocational technical education, or a related area. Students receive instruction relating to the development and evaluation of written achievement tests. Further teaching is presented relative to basic descriptive statistics and parametric techniques.

**Public School Laws Relating to Occupational Education****OCED 7200** 3 cr.

The course is a study of federal and state laws pertaining to occupational education. Particular attention is given to the legislative process as it relates to current school law and to the judicial process in its interpretation of school law.

**Research and Statistics in Occupational Education****OCED 7250** 3 cr.

This course is designed to enable occupational educators to plan research, write research reports, and interpret statistical occupational education data. Each student is expected to demonstrate proficiency in educational research by designing a research project pertaining to one or more components of occupational education.

**Curriculum Development in Occupational Education****OCED 7300** 3 cr.

In this class, emphasis is placed upon the teacher as an innovative designer of strategies for planning curriculum. The process of designing and accessing model curriculum projects in occupational education is examined and explored in depth. Various curriculum development models are reviewed, evaluated, and discussed.

**Public School Finance in Occupational Education****OCED 7350** 3 cr.

This course examines the basic accounting systems, state laws pertaining to finance, federal funding, and laws and procedures regarding funding application approval. The course also offers information on central reimbursements from federal and state levels that affect education.

**Advanced Methods of Teaching in Occupational Education****OCED 7400** 3 cr.

The course is designed to review a detailed treatment of the nature of occupational education, the findings of modern learning theory, and the impact these considerations have upon modern occupational education teaching.

**Organization and Administration of Vocational Guidance****OCED 7410** 3 cr.

This course provides the administrator, counselor, and teacher with a working knowledge of the various tools, techniques, and practices which comprise a unified guidance organization.

**Administration of Cooperative Education Programs****OCED 7420** 3 cr.

This course analyzes current policies, practices, and methods of conducting cooperative occupational education programs. An examination of national, state, and local program administrative procedures is made through an analysis of literature related to cooperative occupational education.

**Effective Teaching of Special Needs Students in the Vocational Environment****OCED 7430** 3 cr.

This course is designed to review and focus on issues in vocational education that are equated with quality education and quality teaching. Although these issues are presented individually, the topics, when combined in practice in actual classrooms and shops, give a clear understanding of teaching and learning in a vocational situation.

**Professional Development Workshop****OCED 7440** 2 cr.

This state-of-the-art workshop is for Occupational/Vocational Educators seeking to fulfill the thirty hour Professional Development requirement of the Division of Occupational Education.

**Vocational Special Needs Seminar****OCED 7450** 3 cr.

This course deals with current issues related to Vocational Special Needs. Class discussions are also concerned with local, state, and national special needs topics.

**Computer Aided Drafting I****OCED 7600** 3 cr.

A basic course in automated drafting emphasizes the utilization of computer assisted drafting (CAD) to generate typical manufacturing drawings. Knowledge gained through this course allows students to apply computer-assisted drafting to a wide range of technical drawings used in other fields such as architecture and topography.

**Computer Aided Drafting II****OCED 7610** 3 cr.

A continuation of OCED 7600.

**History of Technology****OCED 7620** 3 cr.

The identification, definition, and understanding of technology as the subject matter of industrial arts is analyzed. Special emphasis is placed upon the implementation of a technology-based industrial arts program at the secondary level.

**Principles of Automated Manufacturing****OCED 7630** 3 cr.

The course studies the automation in manufacturing emphasizing computer control of production functions. Automated and manual approaches are compared and techniques for implementing automation are reviewed. Students are provided with the necessary computer background to support hands-on experience with assembly robots.

**Principles of Automated Manufacturing II****OCED 7640** 3 cr.

This course provides further consideration of automated manufacturing including production processes. More detailed study of present generation robots and potential advances is included.

**Quality Control****OCED 7650** 3 cr.

The principles and techniques of statistical quality control are developed and applied to typical manufacturing situations. Special consideration is given to quality control in automated manufacturing environments.

**Material and Process Cost Estimating****OCED 7660** 3 cr.

The philosophy, principles, and practices of material and process cost estimating are studied, stressing data development and application methods for operation, product, and project analysis. Topics such as labor analysis, material analysis, operation, and product estimating are included.

**Independent Study****OCED 9000** 1-6 cr.

Individualized study under close supervision for superior students.

*Prerequisite: permission of Advisor.*

## Physical Education

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### Developing Health Education Materials in the Schools

***PHED 7001***                      ***3 cr.***

The purpose of the workshop is to acquaint school personnel with materials and resources available for the development of health education programs. Health topics include: nutrition, personal hygiene, bicycle safety, drugs, smoking, alcohol, cancer, heart disease, physical therapy, podiatry, physical fitness, and certification in basic cardiopulmonary resuscitation. These topics are discussed by several guest speakers representing national and local health organizations.

## Professional Development

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### Effective Instructional Processes: Theory to Practice

***PDEV 9000***                      ***6 cr.***

Participants study current research on transdisciplinary, multi-cultural curricula that incorporate tactics for teaching critical thinking in the curricula. Practical application in the classroom is facilitated through the study and practice of cooperative learning strategies and peer coaching techniques. Through its design, implementation, and evaluation, this course models and examines effective practices for adult learners.

### Staff Development Programs: Design, Management, and Evaluation

***PDEV 9200***                      ***6 cr.***

Students study the varied purposes and potential outcomes of staff development and in-service programs offered to teachers in a public school setting. The steps involved in needs assessment, program design, adult instructional methodologies, and program monitoring and evaluation procedures are studied and practiced. Each student, functioning as a member of a team, designs a twelve week staff development course to implement in the parent school system. The staff development courses offered by the graduate students carry system assigned, in-service credits and are related to the goals and objectives of the parent school system. Participants enrolled in these staff development courses are fellow teachers in the school system.

### Research Seminar in Education

***PDEV 9300***                      ***3 cr.***

The purpose of this course is to enable students to have a working knowledge of educational research. The content areas covered include the nature of social science research, methods, procedures, related statistics, interpretation of research, and research plans. Students learn through a variety of methods, including selected readings, written homework, assignments, class lectures, presentations and discussions, and research.

### Seminar and Internship in Staff Development

***PDEV 9400***                      ***6 cr.***

During this final academic/application phase, the graduate students implement a professional development program for teachers and support staff in their school system. The intern assesses the needs of the staff, consults with peers and colleagues about the design of a professional development program, designs and implements the program, and evaluates its effectiveness. In addition to the internship, the students participate in seminars, which take place on-location throughout the semester program.

### Graduate Thesis

***PDEV 9500***                      ***3 cr.***

Students must meet the requirements of the Graduate Division's Thesis Program. In order to complete this phase of the program, a faculty committee is established by the student under the guidance and supervision of the graduate advisor.

# Psychology

## Applied Statistics for Counselors

**PSY 6010** 3 cr.

*A prerequisite undergraduate course for students applying to the M.S. in Counseling Program.*

Students are introduced to basic concepts in statistics and probability with emphasis on the testing of statistical hypotheses using the methodology of inferential statistics.

*Prerequisite: PSY 1100. Does not count for Psychology major or minor.*

## School Counseling: Professional Practice, Standards and Ethics

**PSY 7000** 3 cr.

The philosophy, structure and dynamics of schools and the school systems will be explored. The roles of various school personnel, especially School Counselors, in providing and coordinating services to children will be studied. Consulting services to children will be emphasized. Legal and ethical issues involved in the practice of Counseling in schools will be examined. *Prerequisites: PSY 1100, PSY 2350, and a course in the Psychology of Development.*

## Mental Health and Family Counseling: Professional Practice, Standards and Ethics

**PSY 7005**

This course addresses the professional orientation, including the history of mental health counseling and marriage and family and family counseling within the context of health and human services systems; mental health public policy and legislation; consumer needs assessment and advocacy; and the role of professional associations. Professional standards of training, practice and licensure are covered. The legal and ethical issues that affect the professional practice of counseling; such as reporting, confidentiality, duty to warn and ethical standards are explored. Professional practice issues such as malpractice, dual-relationships, client rights and professional responsibilities are examined. *Prerequisite: PSY 1100, PSY 2350, and a course in the Psychology of Development.*

## Counseling Theories

**PSY 7010** 3 cr.

Participants in this course examine the major paradigms and theoretical approaches to counseling, including Organic-Medical, Psychoanalytic, Person-Centered, Behavioral, Rational-Emotive/Cognitive, Systemic/Family, and Group. In addition to increasing participants' understanding of the

therapeutic process, the course focuses on increasing self-awareness of personal characteristics that may influence professional effectiveness. Students submit a Personal Statement Paper and compile a Counseling Referral Directory.

Note: performance in this course is part of the pre-candidacy screening process for matriculation into the Graduate Program in Counseling.

*Prerequisite: PSY 1100.*

## Group Dynamics

**PSY 7020** 3 cr.

This course explores the cognitive, affective, and behavioral processes within the context of groups. Part one of the course is experientially based and requires students to participate in an actual group process. Part two provides an analysis of group dynamics including an examination of the experiential component. Course emphasis is on the experiential and theoretical bases of group dynamics with the development of participant intra- and interpersonal awareness.

Note: performance in this course is part of the pre-candidacy screening process for matriculation into the graduate program in counseling.

*Prerequisite: PSY 1100.*

## Issues in Development: Counseling Children and Adolescents

**PSY 8010** 3 cr.

This course equips students with a strong background in developmental events of childhood and adolescence in order to enhance their understanding of a young client's point of view. Students are asked to relate developmental issues to the kinds of problems children and adolescents present to the counselor. Theories of personality are reviewed, and students are required to apply concepts from theory to case material.

*Prerequisites: PSY 1100 and a course in the Psychology of Development.*

## Issues in Development: Counseling Adults

**PSY 8020** 3 cr.

The course emphasizes adult development and counseling issues of adult life, especially as they relate to an individual's developmental progress. Students consider clients in light of their developmental history, which influences present behavior. The instruction presumes that helping clients gain greater understanding of these influences aids them in their efforts to solve problems and become more satisfied in their daily lives.

*Prerequisites: PSY 1100 and a course in the Psychology of Development.*

## Life Span Development

**PSY 8030** 3 cr.

This course examines human physical, cognitive, personality, and social cultural development from conception to death. Emphasis is upon the understanding of the theories of human development across the life span, the understanding of empirical research associated with these theories, the enhancement of critical thinking skills, and the application of understanding to current issues in development.

*Prerequisites: PSY 1100 and a course in the Psychology of Development.*

## Issues in the Psychology of Death and Dying

**PSY 8040** 3 cr.

This course explores theories, research, and literature related to death, grief, and loss. The student is encouraged to examine personal reactions to these dynamics, to relate them to ongoing development, and to apply them to the counseling relationship.

*Prerequisite: PSY 1100. (offered every two years)*

## Theories of Personality: Applications to Counseling

**PSY 8050** 3 cr.

This course surveys the major theories of personality. Emphasis is placed upon the student's ability to integrate the study of personality within the context of normal developmental issues and psychopathology. *Prerequisite: PSY 1100. (offered every two years)*

## Psychology of Women: Counseling Implications

**PSY 8060** 3 cr.

This course examines how being female impacts the behavior and perception of women. A variety of topics are covered, including development of identity, hormonal determinants of behavior, sex differences in personality, women's roles in societies, and woman as a counseling client.

*Prerequisite: PSY 1100. (offered every two years)*

### **Divorce: Process and Issues**

**PSY 8090** 3 cr.

This course is designed for students interested in increasing their understanding of marital separation and divorce. Students review the effects of this action on children and parents as well as the changes divorce imposes on personal, interpersonal, and societal levels. The various stages each family member goes through coupled with developmental issues are discussed. Strategies for helping families “grow” through the experience are demonstrated, using individual and family therapy techniques as well as support group dynamics. Remarriage and the blended family are addressed, and current research in the area is reviewed.

*Prerequisite: PSY 1100. (offered every two years)*

### **Childhood Trauma and Its Impact on School Based Services**

**PSY 8100** 3 cr.

This course explores the principles and practices of etiology, diagnosis (Diagnostic and Statistical Manual criteria, etc.), treatment, and prevention of emotional and dysfunctional behaviors (physical abuse and neglect, sexual abuse, substance abuse, sexuality issues, AIDS, mental illnesses, violence, etc.) and the legal and ethical dilemmas faced by educators in schools today. The course is designed to teach the educator to respond to children and families in crisis, provide referrals, work as part of an interdisciplinary team, and take a proactive stance against child abuse and related problems.

*Prerequisites: PSY 1100, PSY 2350, and a course in the Psychology of Development.*

### **Sexual Abuse of Children and Adolescents**

**PSY 8120** 3 cr.

This course emphasizes the diagnosis and humanistic treatment of the victim and the perpetrator, as well as significant others in the sexual abuse of children and adolescents. The psychodynamics of each role are discussed with an exploration of a variety of treatment modes. Case studies and speakers are used to enhance students’ learning. Affective as well as cognitive approaches are used. This course is geared toward the practitioner and potential practitioner or teacher. Prior completion of a course in child abuse and neglect, experience in protective services, or exposure to abuse/neglect situations is helpful.

*Prerequisite: PSY 1100.*

### **Psychopathology I: Diagnosis and Assessment**

**PSY 8130** 3 cr.

This course explores major categories of emotional and behavioral disturbance utilizing the DSM-IV diagnostic classification system. Case vignettes are used to provide students with practice in differential diagnosis using the DSM-IV. The course reviews the following for each category of psychopathology: essential features, associated features, diagnostic criteria, and multiaxial classification. Clinical interviewing and assessment is addressed, as well as legal and ethical issues related to assessment and diagnosis.

Note: A field experience (25 hours minimum) is required for this course.  
*Prerequisites: PSY 1100, PSY 2350, and a course in the Psychology of Development.*

### **Psychopathology II: Treatment Planning and Outcome**

**PSY 8132** 3 cr.

This course is an advanced graduate counseling psychology course, which assumes familiarity with patterns of emotional and behavioral disturbances and competency in utilizing the DSM-IV to determine differential diagnosis. In addition to discussing psychopathology and diagnosis, this course focuses on differential treatment planning and outcome effectiveness. Treatment planning examines various interventions, including psychopharmacology and modalities of categories of psychopathology. Students explore the role of the multidisciplinary team and the need for consultation and/or referral. Treatment termination indication is also covered.

*Prerequisite: PSY 8130.*

### **Psychopharmacology for Counselors**

**PSY 8135** 3 cr.

This course teaches counselors, residential specialists, and teachers how to collaborate with physicians to maximize the benefits of psychiatric medications for their clients. Students review the genetic and biological factors that shape personality and psychopathology. Particular emphasis is placed upon the use of psychiatric medications in the treatment of anxiety disorders, attention deficit disorder, sexual dysfunction, substance abuse, episodic rage, sleep disturbances, Tourette’s syndrome, mood disorders, and schizophrenia. Other biological therapies are discussed, including the use of artificial sunlight for winter depression.

*Prerequisites: PSY 1100, PSY 2350, a course in the Psychology of Development, or permission of Instructor. (offered every two years)*

### **Alcohol Abuse and Other Addictive Disorders**

**PSY 8140** 3 cr.

The course is a survey of the use and abuse of alcohol and other commonly used psychoactive drugs. An understanding of the basic principles of pharmacology is reviewed along with the psychosocial correlates of substance abuse and other addictive disorders. The course provides a functional analytic framework for assessing addictive behaviors. Participants visit various substance abuse programs such as A.A., N.A., AL Anon, and an area detoxification program.

*Prerequisites: PSY 1100, PSY 2350.*

### **Intervention and Rehabilitation Services for Substance Abusers**

**PSY 8142** 3 cr.

This course gives the participant an overview of intervention and rehabilitation issues and the various systems that provide these services to substance abusers. The course considers the methods that counselors use to determine the level of care and the appropriate facilities that are most helpful to the substance abuser. In addition, the course considers the role of the criminal justice system in the rehabilitation of the substance abuser. Participants have the opportunity to learn by completing a twenty-five hour practicum in a substance abuse program. Part of this practicum includes on-campus group process supervision.

*Prerequisite: PSY 8140. (offered every two years)*

### **Impact of Alcohol Abuse and Other Addictive Disorders on Family Systems**

**PSY 8143** 3 cr.

This course focuses on the effects of alcohol abuse and other addictive disorders on the entire family system, including children of alcoholics. Systems theory as applied to families are reviewed. The effects of trans-generational patterns of alcohol abuse and other addictive disorders on family members (including the roles that are adopted) are examined. Self help programs, for example, A.A., Al Anon., N.A., A.C.O.A. and O.A., are explored.

*Prerequisite: PSY 8140. (offered every two years)*

### Case Management in Substance Abuse Services

**PSY 8144** 3 cr.

This course prepares students for working with difficult clients including those who have a substance abuse problem and a mental illness. Specific management issues such as medication, suicide risk, resistance, and denial are explored. The importance of case management and maintaining good relationships with the referral source and other components of the service delivery system is emphasized. Participants learn by completing a twenty-five hour practicum in a substance abuse program or a mental health agency that has a program for clients with dual diagnosis.

*Prerequisite: PSY 8140. (offered every two years)*

### Counseling the Substance Abuser

**PSY 8148** 3 cr.

The course offers participants an opportunity to become familiar with the techniques and strategies associated with successful treatment of the addicted individual. Participants receive instruction and supervised practice in counseling procedures and skills of working with the substance abuser in a variety of modalities (i.e. individually, groups, couples, and families). Intervention strategies, including techniques for working with difficult clients in groups, are presented.

*Prerequisite: PSY 8140. (offered every two years)*

### Case Management and Treatment of Victims

**PSY 8150** 6 cr.

This course helps the student develop skills in engaging, advocating for, and treating the victim of child abuse and neglect. Both the child victim and the adult survivor are considered. Students explore work done by case managers, victim witness advocates, and therapists as they help the victim on his/her road toward healing. Practitioners who currently work with victims are invited to share their expertise. Students are also aided in examining their own counter-transference issues around victimization.

*Prerequisites: PSY 8100 and permission of C.P.I. (offered every two years)*

### Psychology and Treatment of Offending Behavior

**PSY 8160** 3 cr.

In this course the perpetrator of child maltreatment is discussed with particular emphasis on the child sexual abuse perpetrator. Theories to explain offending behavior are examined. Students are asked to consider ethical dilemmas surrounding the reporting and punishment/treatment of sexual abusers. Legal statutes as they apply to offending behavior are discussed. Treatment of offenders in a variety of settings (eg. outpatient, inpatient, prison, residential treatment, etc.) are considered. Both adult and juvenile offenders are studied.

*Prerequisites: PSY 8100, 8150 and permission of C.P.I. (offered every two years)*

### Family Treatment With Abusive/Neglectful Families

**PSY 8170** 3 cr.

This course helps the student recognize the necessity of treating the entire family in abuse cases and develops skills in family therapy as it applies to abusive families. It is recommended that the student have completed a basic family therapy course.

Note: A field experience (25 hours minimum) is required for this course.

*Prerequisites: PSY 8100, PSY 8150, PSY 8160 and permission of C.P.I. (offered every two years)*

### Criminal Psychopathology

**PSY 8172** 3 cr.

This course reviews the psychodynamics, as well as familial and ecological dynamics, of situational offenders, recidivist offenders, and sociopathic offenders. Students explore the interface between traditional notions of mental health, criminal behavior, and addiction theory. Students develop an understanding of the psychological impact of criminal behavior on the offender's family, the victim, the community, and the criminal justice system.

*Prerequisites: PSY 1100, PSY 2350, SOC 1100, HMSV 1100 or permission of Instructor.*

### Systems, Laws, and Issues in Forensic Case Work

**PSY 8174** 3 cr.

This course examines the philosophies and social/legal mandates governing the criminal justice, mental health, and social service systems as they affect criminal offenders. The challenges confronting the professionals in these systems are explored in relation to their legal options to service and manage behavior. Topics such as dangerousness, domestic violence, and involuntary treatment are considered.

Note: a field experience (25 hr. minimum) is required for this course.

*Prerequisite: PSY 8172. (offered every two years)*

### Treatment Issues and Interventions in Forensic Case Work

**PSY 8175** 3 cr.

This course reviews traditional and innovative therapeutic techniques and institutional considerations for treating offenders in outpatient, inpatient, and correctional settings. Students explore strategies for dealing with resistant clients, and they learn how to develop collaborative relationships with probation and parole officers. Discussions focus on legal, therapeutic, and systems issues in counseling victims, family members of offenders, and criminal justice professionals. Note: a field experience (25 hr. minimum) is required for this course.

*Prerequisite: PSY 8172. (offered every two years)*

### Mental Status Examination

**PSY 8176** 1 cr.

This course helps students to develop a working knowledge of the technical language and content of reports from hospitals, schools, and court records. Student learn to evaluate a patient's current mood and thought processes and to judge their tendency towards suicide and public danger. The administering of a brief screening for possible neurological and physical problems is discussed. To benefit professionals outside the field of mental health, students master the translation of psychological jargon into understandable reports.

*Prerequisite: PSY 2350 or PSY 8172.*

### **Social and Cultural Foundations: Issues in Counseling**

**PSY 8190**                      **3 cr.**

This course covers the multicultural and pluralistic trends as well as the characteristics and concerns of diverse groups. The attitude and behaviors based on such factors as age, gender, race, religious belief, physical disability, sexual orientation, ethnicity, language, culture, family pattern, socio-economic status, and intellectual ability are explored in the context of client population and a student's own background. Individual family and group counseling strategies for working with these diverse populations are examined while taking into consideration ethical issues.

*Prerequisite: PSY 1100.*

### **Principles of Guidance and Counseling**

**PSY 8200**                      **3 cr.**

This course addresses the roles, activities, and problems of school counselors. Counselor relations with parents, students, teachers, administrators, and with other professionals in the pupil services field are examined. Techniques for effectively reaching and serving target populations in a school setting are explored.

*Prerequisite: PSY 1100.*

### **Psychology of Learning: Theory and Applications**

**PSY 8205**                      **3 cr.**

The study of the human learning process with emphasis on learning theories, concepts, principles, applications, and implications. Among the topics addressed are information processing, attention, perception, metacognition, thinking, memory, forgetting, transfer, concept learning, principle learning, learning disorders, study skills, expository techniques, classical conditioning, operant conditioning, social learning, and motivation.

*Prerequisites: PSY 1100.*

### **Occupational Information and Career Counseling**

**PSY 8210**                      **3 cr.**

This course presents an overview of the nature of work in the technological society. Emphasis is placed on career development theories, vocational interest and educational admissions tests, and sources of occupational and educational information. Students learn about career counseling techniques and placement services in high schools, colleges, and adult career service agencies.

Note: a fieldwork experience (25 hours minimum) is required for this course.

*Prerequisite: PSY 1100.*

### **Lifestyles and Career Development**

**PSY 8215**                      **3 cr.**

The purpose of this course is to familiarize students with work force issues and how they impact lifestyles and career development. It includes the examination of the global economy, technological changes, demographic shifts, ethics, and changes in the labor market. The interrelationships among work, family, and other life roles as well as the effects of diverse cultures, genders, and special populations are examined for their impact on career counseling and career development. Students are exposed to career decision making models; career counseling competencies; career development theory; corresponding assessment tools; and career, vocational and educational information resources and systems. Students also learn to facilitate the career development process over the lifespan.

*Prerequisite: PSY 1100.*

### **Counseling in the Elementary School**

**PSY 8220**                      **3 cr.**

This course provides applications of counseling strategies as they relate to the development levels exhibited by elementary school students. Emphasis is placed on counseling methods and referral skills appropriate to working in school settings, with professional colleagues and parents.

Note: a fieldwork experience (25 hours minimum) is required for this course.

*Prerequisite: PSY 1100.*

### **Working with Individuals with Special Needs**

**PSY 8230**                      **3 cr.**

The needs, levels of functioning, and contributions of individuals with special needs are examined. Educational issues and strategies for understanding and working with individuals with learning disabilities, physical disabilities, social emotional issues, medical needs, and mental disabilities are explored.

*Prerequisites: PSY 1100, PSY 2350, and a course in the Psychology of Development.*

### **Intervention Methods for School Adjustment Counselors**

**PSY 8240**                      **3 cr.**

This course focuses on the implementation of effective strategies for working with children, families, schools, agencies, and communities. Building upon a theoretical and conceptual framework, the techniques of consultation, crisis-intervention, conflict resolution, inter-school/agency/community collaboration, and referrals are examined and applied. Didactic approaches, including case studies, role playing, and case presentations, are utilized.

*Prerequisites: PSY 1100, PSY 2350 and a course in the Psychology of Development.*

### **Psychological Testing and Assessment: Theory and Practice**

**PSY 8300**                      **3 cr.**

This course is designed to give students a broad understanding of the theory and use of psychological testing and assessment. Methods of test evaluation, analysis, and interpretation, including psychometric statistics, standardization, correlation, validity, reliability, standard errors, and types of assessment scores are presented. Students examined standardized testing instruments used to measure human cognitive and affective factors, as well as environmental, performance, behavioral, and computer-assisted assessments. Age, gender, ethnicity, language, disability, cultural factors, and ethical considerations related to assessments and evaluation are explored.

Note: a fieldwork experience (25 hours minimum) is required for this course.

*Prerequisite: PSY 1100, PSY 2120 or PSY 5530.*

### Psychological Testing and Assessment: Individual Measurement of Intelligence

**PSY 8310** 3 cr.

This course covers the history, development, and organization of the Wechsler and Stanford-Binet tests of intelligence.

Considerable time and emphasis are placed on the administration and scoring of these tests and on the interpretation and reporting of results. A certificate is awarded upon successful completion of the course. Testing materials must be purchased during the course. Field experience required.

*Prerequisites: PSY 1100, PSY 2120 or PSY 5530, PSY 8300.*

### Psychological Testing and Assessment: Projective Techniques

**PSY 8320** 3 cr.

This course covers techniques of measuring human personality through human figure drawings, informal projective sentence completion tests, and apperception testing. Students develop skills in administering these techniques and integrate findings into psychological reports.

*Prerequisites: PSY 1100, PSY 2120 or PSY 5530, PSY 8300.*

### Informal Clinical Assessment of Children and Adolescents

**PSY 8330** 3 cr.

The emphasis of this course is on developing a conceptual framework for simultaneously observing multiple dimensions of child and adolescent functioning, then translating these observations into clinical inferences to derive clinical hypotheses and treatment recommendations from these inferences. This is an advanced course necessitating familiarity with abnormal behavior and diagnosis.

*Prerequisite: PSY 1100, PSY 2350 and a course in the Psychology of Development. (offered every two years)*

### Counseling Techniques and Case Analysis: Individuals and Families

**PSY 8500** 6 cr.

This course investigates the variety of counselor skills necessary in a helping relationship to move a client from an initial interview through the processes of information gathering, assessing, goal setting, and intervention (both individually and family system oriented) to establishing an effective termination. Students practice basic and active listening skills, such as paraphrasing, clarification, probing, and confrontation. They analyze and interpret client information and problem solve. Students also learn to develop an ecosystemic map of the client system, which

includes a family or origin genogram and map of the relevant contextual levels impinging on the client system. Further, the course addresses such topics as crisis intervention, individual and group intervention strategies, couple and family assessment and interventions, and case conference techniques.

Note: a field experience (25 hour minimum) is required for this course.

*Prerequisites: candidacy and twenty-one credits of phase II course work, including PSY 8010 or PSY 8020; and PSY 8130 or PSY 8200 and PSY 8210 or PSY 8220, and PSY 8300 or permission of Instructor.*

### Psychotherapeutic Techniques, Treatment and Modalities

**PSY 8615** 3 cr.

This advanced course addresses, in depth, two or more dominant approaches to counseling, which may include: Rational Emotive/Cognitive, Insight-Oriented/ Interpersonal, Behavioral/Reality.

*Prerequisites: PSY 1100, PSY 2350, PSY 7010, and PSY 7020. Students should check the semester's Course Bulletin to learn which approaches are included. (offered every two years)*

### Crisis Intervention for Counselors

**PSY 8625** 3 cr.

This course examines a number of sophisticated and challenging obstacles counselors face in evaluating and working with individuals who are in crisis. Counselors are prepared to perform effective mental health assessments, develop appropriate emergency intervention treatment strategies, and develop appropriate discharge planning for crisis involved individuals. Topics covered include emergency psychiatric evaluations, mental status examinations, crisis intervention techniques, legal issues, managed care systems, discharge planning, etc. Role playing situations and written assignments are utilized.

*Prerequisites: PSY 1100, PSY 2350, PSY 7010, and PSY 7020. (offered every two years)*

### Group Work and Leadership

**PSY 8700** 3 cr.

This course examines utilizing group as a modality of intervention in working with adults and children. Theories and approaches to group work including support groups, psycho-educational groups, and therapy groups are covered. The course focuses on group leadership, group process and stages of group development, and group membership issues. Practical considerations in planning a group, screening and

selections of group members, leading and/or co-leading a group, dealing with problems encountered in group work, and methods of evaluation of group effectiveness are examined.

*Prerequisites: PSY 1100, PSY 2350, PSY 7010, PSY 7020, or permission of Instructor.*

### Group Work and Leadership in School Counseling

**PSY 8705** 3 cr.

This course examines the theories and models of group counseling, with an emphasis on group leadership skills, utilized by school counselors. The course examines utilization groups as a modality of intervention in working with the school age population.

*Prerequisites: PSY 7010 and PSY 7020.*

### Family and Systems, Models and Interventions

**PSY 8710** 3 cr.

This course focuses on family dynamics, personal and systematic change in the therapeutic relationship, and treatment/intervention for various clinical issues related to children and families. Consideration is also given to theoretical models of development and psychopathology with regard to treatment planning, referrals, and consultation. Experiences are offered to learn appropriate professional and ethical strategies of family intervention.

*Prerequisites: PSY 1100, PSY 2350, PSY 7010, PSY 7020, or permission of Instructor.*

### Helping Parents Help Their Children

**PSY 8730** 3 cr.

This course provides strategies and skills for workers who offer guidance, counseling, and/or therapy to parents of children or adolescents. Parenting issues such as enhancing self-esteem, developing and accepting responsibility, adjusting to families in transition, dealing with issues related to divorce, blending families, disciplining, sharing quality time, and becoming meaningfully involved in a child's education are explored.

*Prerequisites: PSY 1100, PSY 2350, PSY 7010, PSY 7020, or permission of Instructor. (offered every two years)*

## Systems Theory

**PSY 8740**                      **3 cr.**

This course begins by tracing the historical roots of Family Systems Therapy from its biological, anthropological, philosophical, and semantic origins by examining the works of von Bertalanffy, Kant, Locke, Bateson, and Korzybski. Emphasis is placed on the ways in which systems generate meanings and subsequent organizational structure across the following contexts: organizations, communities, schools, ethnic groups, and families.

*Prerequisites: PSY 1100 and PSY 2350. (offered every two years)*

## Family Models, Organization, and Process I

**PSY 8750**                      **3 cr.**

Through an integration of experiential and cognitive learning approaches, this intensive process seminar builds a thorough and systematic understanding of the dynamics of family systems. The theoretical frameworks include those of Kantor-Constantine, structural, and systematic family therapy. This course emphasizes developmental processes in families, especially individuation in relation to family organization and style. It is organized as a weekly process seminar supplemented by all day workshops.

*Prerequisites: PSY 1100, PSY 2350 and PSY 7005, or PSY 8710, or PSY 8740, or permission of A&FT Faculty. (offered every two years)*

## Family Models, Organization and Process II

**PSY 8755**                      **3 cr.**

This course continues the understanding of the dynamics of a family system through integrating the models of family learned in Family Models, Organization and Process I, with those models of Olson and Beavers. Emphasis is also given to constructivism and how this school of thought applies to family process.

*Prerequisites: PSY 8750 or permission of A&FT Faculty. (offered every two years)*

## Advanced Systemic Intervention I

**PSY 8770**                      **3 cr.**

This course focuses on the process of family systems therapy by translating various systemic schools of thought into well defined treatment approaches. Students explore the therapeutic constraints of the model, the context, the therapist, and the family through role play, video, and live supervision.

*Prerequisites: PSY 8755 or permission of A&FT Faculty. (offered every two years)*

## Advanced Systemic Intervention II

**PSY 8780**                      **3 cr.**

This course follows Advanced Systemic Intervention I with an increased emphasis on the therapist's personal "model for change" and its integration with the more traditional schools of family therapy. Students' "personal boundary profile" is identified and developed as it relates to students' preferred "model for change." Role play, video, and live supervision are used extensively.

*Prerequisites: PSY 8770 or permission of A&FT Faculty. (offered every two years)*

## Independent Study

**PSY 8910**                      **1 cr.**

**PSY 8920**                      **3 cr.**

**PSY 8930**                      **6 cr.**

The content of these courses is designed by a student with the guidance of a faculty member to provide in-depth exposure to a topic for which no regular course is available. A plan of study must be submitted to the Behavioral Sciences Committee on Graduate Programs and the Dean of Graduate and Continuing Education during the semester preceding the term of the proposed course. Independent Study is available by permission of the Instructor only.

*Prerequisites: PSY 1100 and as determined by Instructor.*

## Research and Program Evaluation

**PSY 8950**                      **3 cr.**

This course provides students with an overview of the design and methodology of social research and program evaluation as applied to mental health counseling and education. Topics of study include: critical analyzing and evaluating of research literature, experimental research design, survey research, program evaluation, treatment strategies evaluation, needs assessments, participant observational research, and ethics in research evaluation. Student learn how to plan, conduct, and document a research and/or evaluation study in a field setting.

Note: a field work experience (25 hours minimum) is required for this course.

*Prerequisites: PSY 1100, PSY 2120 or PSY 5530.*

## Topics in Counseling

**PSY 8971**                      **1 cr.**

**PSY 8972**                      **3 cr.**

**PSY 8973**                      **6 cr.**

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

*Prerequisite: PSY 1100 and as determined by Instructor.*

## Internship in Counseling

**PSY 9062**                      **3 cr.**

Students are placed in agencies for supervised contact with clients. Each student maintains a case load, participates in the operation of his/her agency, and meets regularly with his/her on-site supervisor to discuss case planning and counseling techniques. Students meet at the college for group supervision and conferences, and to present one of his/her client cases in detail. The faculty supervisor visits each internship site during the semester to confer with students and their on-site supervisors. The Internship requires a minimum of 150 hours of on-site experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

*Prerequisites: candidacy and PSY 8500.*

## Internship in Forensic Case Work

**PSY 9065**                      **3 cr.**

This capstone experience allows the student to develop her/his skills in a forensic setting under the supervision of a forensic worker who has worked in the field of Forensic Case Work for a minimum of two years and has earned at least a Master's degree. Seminar classes meet on campus bi-weekly. The Internship requires a minimum of 150 hours of on-site experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

*Prerequisites: PSY 8100 or PSY 8120, PSY 8140, PSY 8172, PSY 8174, PSY 8175, and PSY 8176.*

**Internship in Child Protection****PSY 9070**      **6 cr.**

The Internship is the culminating experience in the student's acquisition of skills for working with victims, offenders, and families who abuse/neglect. The student is placed in an agency which treats one or more of the above. The student is supervised by an agency supervisor knowledgeable in child protection. In addition the student is expected to attend a bi-weekly seminar with the college field instructor. The Internship requires a minimum of 300 hours in the field.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

*Prerequisites: PSY 8100 or PSY 8120, PSY 8150, PSY 8160, PSY 8170 and permission of C.P.I.*

**Internship in Substance Abuse Services****PSY 9072**      **6 cr.**

This capstone experience allows the student to develop her/his skills in a licensed substance abuse services facility under on-site supervision. In addition, the student is expected to attend a bi-weekly seminar with the faculty seminar instructor. The Internship requires a minimum of 150 hours of on-site field experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

*Prerequisites: PSY 8140, PSY 8142, PSY 8143, PSY 8144, and PSY 8148.*

**Internship in Counseling****PSY 9075**      **6 cr.**

Students are placed in agencies for supervised contact with clients. Each student maintains a case load, participates in the operation of his/her agency, and meets regularly with his/her on-site supervisor to discuss case planning and counseling techniques. Students meet at the college for group supervision and conferences, and to present one of his/her client cases in detail. The faculty supervisor visits each Internship site during the semester to confer with students and their on-site supervisors. The Internship requires a minimum of 300 hours of on-site field experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

*Prerequisites: candidacy and PSY 8500, or PSY 8755 (for the Adolescent and Family Therapy Certificate).*

**Internship in School Counseling****PSY 9085**      **fall 4 cr./spring 5 cr.**

The Internship is an intensive two semester experience in an actual counseling setting. Students are placed in elementary or secondary school guidance offices, depending on the student's desired certification level (PreK-8 or 5-12). Each student maintains a regular case load (some short term, some long term), participates in regular guidance activities (e.g. core evaluations, articulation with other schools, scheduling), and meets weekly with his/her on-site supervisor. Students meet at the college with their college supervisor in a seminar setting (six meetings in the fall, six in the spring). During these meetings students present cases and discuss issues as they arise in the Internship. The faculty supervisor visits each internship site (once in the fall, twice in the spring) to confer with students and their on-site supervisors. The Internship requires a minimum of 450 hours of on-site field experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

*Prerequisites: candidacy, all required courses in Phase II of the Social Guidance Counseling course of study and successful completion of the Communications and Literacy Test.*

**Internship in Marriage and Family Therapy****PSY 9087**      **fall 6 cr./spring 6 cr.**

The Internship is an intensive two semester experience in an actual counseling setting. Students are placed in agencies where they maintain a regular case load (some short term, some long term) and participate in regular Marriage and Family therapist activities. Students meet at the College with their college supervisor in a seminar setting (six meetings in the fall, six in the spring). During these meetings students present cases and discuss issues as they arise in the Internship. The faculty supervisor visits each Internship site (once in the fall, twice in the spring) to confer with students and their on-site supervisors. The Internship requires a minimum of 600 hours of on-site field experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

*Prerequisites: candidacy, PSY 8500 and PSY 8755.*

**Internship in Mental Health Counseling****PSY 9090**      **fall 6 cr./spring 6 cr.**

The Internship is an intensive two semester experience in an actual counseling setting. Students are placed in agencies for supervised contact with clients. Each student maintains a case load, participates in the operation of the agency, and meets regularly with his/her on-site supervisor to discuss case planning and counseling techniques. Students meet at the College with their college supervisor in a seminar setting (six meetings in the fall, six meetings in the spring) and for other group supervision activities and conferences. During these meetings students present cases, (one client case in detail) participate in other seminar activities, and discuss issues as they arise in Internship. The faculty supervisor visits each Internship site (once in the fall, twice in the spring) confer with students and their on-site supervisors. The Internship requires a minimum of 600 hours of on-site field experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

*Prerequisites: candidacy and PSY 8500.*

**Internship in School Adjustment Counseling****PSY 9092**      **12 cr.**

The Internship is an intensive experience in an actual counseling setting. Students are placed in schools where they maintain a regular case load (some short term, some long term), participate in regular school adjustment counseling activities, and meet weekly with their on-site supervisor. Students meet at the College with their college supervisor in a seminar setting (seven meetings in the fall, three or four in the spring). During these meetings students present cases and discuss issues as they arise in the Internship. The faculty supervisor visits each Internship site during the semester to confer with students and their on-site supervisors. The Internship requires a minimum of 900 hours of on-site field experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

*Prerequisites: candidacy, all required courses in Phase II of the Social Adjustment Counseling course of study and successful completion of the Communications and Literacy Test.*

### **Clinical Internship (School Guidance Counseling)**

**PSY 9095**

**6 cr.**

This Internship is available only to those who possess a School Guidance Counselor Provisional Certificate with Advanced Standing. Students will be placed in an elementary or secondary School Guidance Office, forty hours per week in one semester or twenty hours per week in two consecutive semesters, fall to spring, (600 total hours) depending on level of certification (N-9 or 5-12). Each student will maintain a regular case load and participate in other guidance and counseling related activities. In order to demonstrate clinical expertise, students will present a case to a joint meeting of student, cooperating practitioner and college supervisor. In order to demonstrate advanced understanding of professional expertise in School Guidance and counseling competencies, students will plan and carry out a project acceptable to both the cooperating practitioner and the college supervisor. The project must demonstrate an understanding of current trends in School Guidance and Counseling. Attendance at six seminars during the Internship is mandatory. College supervisors will visit students at their respective sites. Students already working in a guidance and counseling capacity may petition to use that site for Internship. Permission to do so will depend upon whether or not the counselor can meet the requirements of the Internship. Note: Students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements for Internship  
*Prerequisite: Student must have Provisional Certificate in School Guidance Counseling with Advanced Standing.*

## **Science Education**

### **Independent Study**

**SCED 8001**

**1-6 cr.**

The Independent Study gives the student an opportunity for independent development of teaching techniques, laboratory procedures, written work, science curriculum, job-related document or of some other activity agreed upon by the student and the graduate faculty advisor. The final product of this study is a written or otherwise permanent documentation of the work accomplished.

### **Internship**

**SCED 8002**

**1-6 cr.**

The Internship provides laboratory or field experience in conjunction with established research programs at cooperating off-campus governmental, industrial, or private institutions. Supervision is shared by the institutional program directors and faculty from Fitchburg State College. A comprehensive paper describing the Internship activities is required upon completion of the experience.

### **Practicum in Science**

**SCED 8003**

**1-6 cr.**

The practicum provides student teaching experience in area schools and in the college campus school, designed to meet the state requirements for teacher certification.

### **Methods in Teaching Biology and Earth Science**

**SCED 9000**

**3 cr.**

The emphasis of the course is upon developing a working philosophy of science teaching for the master teacher. The course focuses on the design of activities to foster scientific inquiry, ethical decision-making, and critical thinking as well as research on alternative assessment, classroom management and the use of technology in the science classroom.

### **The Modern Science Curriculum**

**SCED 9001**

**3 cr.**

The course provides an up-to-date survey of the science teaching curriculum materials available for use in schools, K-12. Each student develops a model science curriculum based on psychological and pedagogical principles.

### **Research in Science Education**

**SCED 9002**

**3 cr.**

Students undertake research designed to explore some phase of science teaching in detail. This study may include teaching methodology, curriculum development, and/or other activities agreed upon by the student and supervising research advisor. An element of experimentation must be included in the project. The final product is a written documentation of the research and results.

### **Science, Ethics, and Technology**

**SCED 9003**

**3 cr.**

The purpose of this course is to communicate the process of ethical reasoning. Students gain a better understanding of how cooperation between people concerned with the human application of science and the makers of public policy must become a working hypothesis. By examining current literature students uncover some of the facts and general principles of ethical reasoning and relate the short- and long-term consequences to moral positions.

### **Research in Science**

**SCED 9004**

**3 cr.**

Students undertake research in a specific field of science that involves an in-depth exploration of a well defined problem. The student must develop a hypothesis for the possible solution of the problem, then devise the experimental technique to test the hypothesis, and, ultimately conceive a logical conclusion based upon the data collected. The final product is a written documentation of the research and results. The study is completed under the supervision of graduate faculty.

### **Thesis**

**SCED 9010**

**6 cr.**

Students conduct a research project resulting in a thesis. Thesis develops under the guidance of a thesis advisor and committee.

### **Special Topics**

**SCED 9100**

**3 cr.**

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

Note: many other science courses are offered from time to time. Some are cross-listed under Biology, Earth Science, and Chemistry. See specific course-listings for each semester for details. Other courses from Biology, Earth Science, or Chemistry may be used as electives or requirements.

## Secondary Education

### Advanced Methods of Teaching at the Secondary Level

**SEED 8000 3 cr.**

Combines academic study with clinical practice and supervision. Theories and topics studied and demonstrated include learning styles, critical thinking, computer applications, and inclusive learning environments. Emphasis is placed on integrating culturally or linguistically diverse students and those with special needs. Interdisciplinary course development and implementation, student assessment including portfolio assessment and writing are studied for utilization across the curriculum.

Prerequisite: The Modern Secondary School or Initial Teacher Licensure

### Curriculum and Technology

**SEED 8250 3 cr.**

This course looks at the integration of educational technology in the classroom, and its relationship to learning theories. Mac and IBM computer hardware, and interfaces for classroom inquiry including video and microscope cameras, digital image capture, scanners, and computer projection panels are examined. Students learn similarities between standard software programs available for writing, computation, and data analysis. It includes a survey of software for studies, ranging from Encyclopedias on CD-ROM to programs that are specific to the study of various topics in science, art literature, math, and language. The class explores the use of the internet as a classroom resource, the hardware and software necessary to get on line, search engines, browsers, URLs, online journals, education web sites, online interest groups, and how to design a web page.

### Master's Thesis

**SEED 9100 3 cr.**

Student conduct research which will result in a thesis. The thesis is developed under the supervision of an advisor. This capstone experience allows full integration and application of content knowledge and pedagogical theory and practice. The study is completed during the duration of the course. Requires the signature of both the advisor and the Graduate Program Chair.

## Special Education

### Early Intervention

**SPED 6600 3 cr.**

This course focuses on assessing and working with children at risk for special needs or identified as having special needs. Current issues and concerns about infant stimulation and the role of parents and agencies in providing services are addressed.

### Sign Language and Deafness

**SPED 6700 3 cr.**

In this class students acquire a basic sign language vocabulary (SL) as used by the majority of deaf adults, including structure, grammatical principles, and vocabulary development. Issues in deaf education as well as deaf cultures and the needs of deaf individuals in the school and community are studied.

### Topics in Special Education

**SPED 7000**

**SPED 7001 1 cr.**

**SPED 7002 2 cr.**

**SPED 7003 3 cr.**

Course content varies from semester to semester, reflecting contemporary issues in Special Education and depending upon student and faculty interest.

### Working with Individuals with Disabilities

**SPED 7004 3 cr.**

Course content covers the characteristics and needs of children and adults with disabilities. The total special education service delivery system; problems, issues, and controversies in the field; and relevant legislation are examined. The course is intended for regular educators, students beginning in special education and, it provides an update for experienced special educators and administrators.

### Modifying and Adapting Curriculum: Math, Science, and Social Science Studies

**SPED 7020 3 cr.**

In this course students develop skills in observation techniques, learning style assessment, classroom organization, and lesson planning. This course is a prerequisite course for the Clinical Master's Degree and is required for students who wish to enter the clinical program but do not have teacher certification. Students complete a 25 hour practicum (field-based) experience as part of the course.

### Pedagogy in Reading/Language Arts

**SPED 7025 3 cr.**

In this course students demonstrate an understanding of the curriculum areas of reading, language arts, mathematics, science, and social studies. They develop lesson plans which are implemented during a 25 hour practicum (field-based) experience. This course is a prerequisite for the Clinical Master's Degree. It is required for students who wish to enter the clinical program but do not have teacher certification, and for students with secondary certification only.

### Students with Disabilities: Issues in Assessment and Education of Bilingual and Non English Speaking Students

**SPED 7110 3 cr.**

The purpose of this course is to provide both regular and special education teachers with the background information necessary to skillfully handle the referral and assessment process and work collaboratively with others in providing optimal service for the target population. Participants will explore their own experiences and belief systems to see how these impact their professional behavior.

### Technology in Special Education

**SPED 7250 3 cr.**

This course provides an overview of the application of computers to special education. The role of computers for diagnostic, instructional, and administrative purposes in special education settings is examined. Students evaluate existing hardware, software, and peripherals in terms of their applicability for individuals with special needs. Students utilize tool software (word processing, data base) and commercial software to develop and increase their computer skills.

### Working with Families that Include Children with Disabilities

**SPED 7300 3 cr.**

This course defines and discusses issues of families with one or more children with special needs. The focus is on the effects a child with disabilities has on the family system and on the roles of individuals in the family. Strategies for working effectively with families are emphasized.

### **Emotional Disturbances: Theory and Practice**

**SPED 7400** 3 cr.

This course is designed to examine the major theoretical frameworks that conceptualize and explain emotional disturbance. Students utilize these conceptual frameworks to focus on identification, assessment, and the development of effective treatment approaches for children.

### **Advanced Strategies for Teaching School-Age Children with Emotional and Behavioral Problems**

**SPED 7410** 3 cr.

This course builds upon theoretical perspectives of SPED 7400. Students explore their own responses to conflict and stress and identify and practice strategies suited for teaching troubled children and youth. In addition, students examine issues pertinent to the education of this population. *Prerequisite: SPED 7400.*

### **Inclusion of Students with Disabilities in Regular Education**

**SPED 7650** 3 cr.

Students will analyze barriers to inclusion and develop effective strategies for integration of individuals with disabilities into all aspects of the community including home, school, and work setting. Students will define and redefine their role as professionals as it relates to their philosophy of integration.

### **The High School Environment— Challenges In Educating Students with Disabilities**

**SPED 7709** 3 cr.

The high school environment is undergoing dramatic change shaped by social, political, technological, methodological, and philosophical issues and controversies. Students will analyze the external forces pressing for redesign of administrative structure, delivery of education, the learning environment and how those changes impact students with special needs. Research-based methods for teaching to a wider range of abilities, and models for curriculum modification and staffing reallocations will be discussed.

### **Physical and Medical Aspects of Working with Children with Disabilities**

**SPED 7950** 3 cr.

The course provides an overview of the basic neurological and physiological systems of the body while exploring typical and atypical development. Disabilities common in infants, children and adolescents (e.g., seizures, cerebral palsy) are examined with a focus on educational adaptations and accommodations. Various models of service provision are contrasted. Collaborative strategies for working with students with physical disabilities and health impairments are developed.

### **Screening and Assessment of At-Risk Infants and Toddlers**

**SPED 8140** 3 cr.

The course describes the purpose, importance and limitations of early identification, screening, and evaluation of infants and toddlers at risk for development delays and disorders. Valid and reliable Department of Public Health (DPH), approved screening and evaluation tools will be reviewed and administered.

### **Behavioral Issues In Inclusive Classrooms**

**SPED 8180** 3 cr.

A framework is provided for thinking about and resolving behavioral issues teachers encounter in today's classrooms. Various theoretical approaches are presented. Teachers are required to implement strategies in their classrooms and report and discuss results.

### **Language Development, Differences and Disorders**

**SPED 8300** 3 cr.

This course addresses normal development of receptive and expressive language in terms of phonology, morphology, syntax, semantics and pragmatics. It focuses on the language performance exhibited by different populations of children/adults with disabilities. The language of bilingual-bicultural children and language disordered adolescents are addressed. Students develop an understanding of the principles and practices related to assessment and intervention for children with language disorders. Students assess language needs and plan appropriate strategies. Field experience (25 hours) required for testing and program planning.

### **Fieldwork (Severe Disabilities)**

**SPED 8801** 1 cr.

This course provides students enrolled in the Clinical Master's Program who already hold Standard Certification, or Provisional with Advanced Standing in Special Education (Intensive) with the opportunity to work with students who have severe disabilities in connection with Clinical Coursework I & II. Students are involved in schools 3-5 hours a week (minimum) as they implement assignments related to Clinical Coursework and they begin to develop skills in working with diverse learners.

### **Clinical Course Work I Severe Disabilities: Foundations in Assessment, Curriculum, and Program Development; Collaboration to Support Change**

**SPED 8814** 6 cr.

The philosophical underpinnings of the Clinical Master's Program: Severe Disabilities are identified in this course. The need for educational programs to be provided in inclusive settings is explored. Students examine curriculum development processes and models, as well as various theoretical approaches to assessment. The theoretical framework for analyzing behavior is examined. Various strategies for increasing appropriate behavior, decreasing inappropriate behavior, and teaching new behaviors are introduced. Students identify specific behaviors, analyze the context of those behaviors, design interventions, and monitor behavioral changes. Students learn supportive models of consultation for working with peers and parents and the associated skills of active listening, joint problem solving, giving and receiving feedback, and self evaluation. Semester-long collaboration projects offer students the opportunity to practice skills and receive feedback.

### **Clinical Course Work II Severe Disabilities: Assessment, Curriculum, Strategies and Program Development in Functional Domains; Collaboration for Families and Advocacy**

**SPED 8824** 6 cr.

The course focuses on student application of program development and implementation strategies established in SPED 8814. Assessment strategies that relate specifically to the areas of community, domestic, vocational, and recreational skills are addressed. Students assess an individual with severe disabilities needs and develop an IEP. Students develop and implement additional behavioral change and

instructional projects as well as practical quantitative and qualitative data collection strategies. The analysis of data is used to guide program modification. Students work collaboratively with a family that includes a child with severe disabilities.

Communication and collaboration skills learned in the previous semester continue to be developed and refined.

**Clinical Course Work III Severe Disabilities: Assessment, Curriculum, and Strategies Re: Language, Physical and Medical Issues and Collaboration for the Educational Team**  
**SPED 8834 6 cr.**

Students build on their knowledge of normal language development and language disabilities to assess and plan for students with severe language and communication limitations. They evaluate assessment tools and procedures for determining a student's language abilities and functional needs. Strategies for promoting language development are identified along with an examination of augmentative communication methods. Classroom implications of various physical and medical conditions are addressed. Appropriate feeding, positioning, and handling strategies are presented. Concerns regarding seizure disorders, cardiovascular problems, neuromuscular problems, etc., are addressed. Particular attention is given to using appropriate assessment techniques, and developing strategies to modify curriculum for the education of students with intensive communication, physical and/or medical needs in inclusive settings. Collaboration and communication skills learned in the previous semesters are applied within the educational team. Students learn how to work cooperatively and collaboratively as they function as a member of a team to resolve conflicts and to develop a collaborative IEP.

**Clinical Course Work IV Severe Disabilities: Assessment, Curriculum Strategies for the Academic Areas; Transition from School to Adult life; Collaboration for Inclusion and Ethical Issues**  
**SPED 8844 6 cr.**

In this course students address assessment and strategies that relate specifically to the areas of functional academics. Curriculum modification approaches relevant to inclusive settings are highlighted. Students assess an individual with severe disabilities and develop an IEP within the academic areas. A review is conducted of human services agency policies, individual transition planning strategies, and secondary

work program designs for enhancing the opportunities of students with severe disabilities graduating from special education to adult life. Communication and collaboration skills learned in the first three semesters of the clinical program are applied to specific team projects. Students learn to motivate individuals for inclusion, to move them past resistance, and to help them resolve differences.

**Practicum (Severe Disabilities)**  
**SPED 8861 6 cr.**

This course is the "student teaching" experience for students in the first year of the clinical program who do not have a prior certificate or license. Through a 150 hour field based experience, students are provided an opportunity to develop skills and demonstrate competency in the area of certification they are seeking. This course is one of the requirements for Initial Licensure.

**Clinical Experience (Severe Disabilities)**  
**SPED 8862 6 cr.**

This course provides students in the second year of the clinical program with an opportunity to demonstrate skills they are learning in the clinical coursework as well as demonstrating competencies required for Professional Licensure. The experience is designed to be a supportive one, with clinical supervisors providing students with guidance and support needed to enhance their development as teachers.

**Early Intervention Practicum**  
**SPED 8900 6 cr.**

This 150 hour field based experience provides students with a supervised opportunity to develop skills and demonstrate competencies necessary in early intervention settings. The practicum is designed to be a supportive experience, with supervisors providing the guidance and support needed to enhance students' development as early intervention specialists.

**Fieldwork Credit (Moderate Disabilities)**

**SPED 8901 1 cr.**

This course provides students enrolled in the Clinical Master's Program who already hold Standard Certification, or Provisional with Advanced Standing in Special Education with the opportunity to work with students who have moderate disabilities in connection with Clinical Coursework I and II. Students are involved in schools 3-5 hours a week (minimum) as they implement assignments related to Clinical Coursework and they begin to develop skills in working with diverse learners.

**Clinical Course Work I Moderate Disabilities: Assessment, Curriculum, Strategies in Reading Language Arts**  
**SPED 8914 6 cr.**

Focus in on understanding of the processes for developing reading and language arts skills with students who have special needs. Alternative and traditional assessment strategies are addressed and applied to students with moderate disabilities in the clinical experience. Adaptation strategies, including the use of educational technology for teaching language arts and social studies is addressed. Concepts of measurement are studied to enable students to establish criteria for selecting appropriate assessment tools. Students evaluate assessment devices for technical quality.

**Clinical Course Work II Moderate Disabilities: Assessment, Curriculum and Strategies for Math/Science**  
**SPED 8924 6 cr.**

Students learn current approaches for teaching math and science as well as appropriate strategies for modifying instruction when necessary. The standards of the National Council for the Teaching of Mathematics (NCTM) and the Massachusetts Curriculum Frameworks are presented. Specific computer programs are studied to demonstrate the integration of computers into units of study. Students with special needs are evaluated using formal and informal assessment tools, background information, and observation. Alternative assessment techniques are emphasized and applied in the clinical experience.

**Clinical Course Work III Moderate Disabilities:** Assessment in Cognition/Achievement; Curriculum for Social Skills and Affective Development; Strategies for Behavior Management; Collaboration Skills for Inclusion  
**SPED 8934** 6 cr.

Graduate students evaluate students with disabilities to determine cognitive skills, achievement in all areas and affective assessment. Curriculum and instructional strategy modifications that develop social skills and enhance affective development are a focus. Behavior management strategies for the classroom are addressed. Special attention is given to the diverse population of today's schools, especially to students at risk. Students learn collaborative models of consultation and effective communication skills for working with peers and parents. Semester long collaboration projects offer students opportunities to practice skills and receive feedback from a number of sources.

**Clinical Course Work IV Moderate Disabilities:** Legal and Ethical Issues in Assessment; Curriculum Theory and Development; Transitions; Collaboration with Families, and the Educational Team  
**SPED 8944** 6 cr.

This course focuses on the legal and ethical considerations in assessment. The philosophical underpinnings of effective curriculum development are addressed. The need for educational programs to be provided in inclusive settings is explored and emphasized. Students examine and then develop a curriculum development and education process. The strategies strand focuses on reflective teaching and the strategies used to implement changes in schools relative to providing services to students with special needs. Students work collaboratively with a family that includes a child with special needs and other members of the professional team. Using person centered planning, a transition plan is developed for a student facing a transition in school.

**Assessment Practices for Children with Disabilities**  
**SPED 8950** 3 cr.

This course examines the use of formal and informal assessment devices as well as criterion referenced and non-referenced techniques. Students use various assessment strategies as they observe, analyze and interpret children's learning needs. Varied test instruments are reviewed and current issues in assessment are researched and discussed.

**Practicum (Moderate Disabilities)**  
**SPED 8961** 6 cr.

This course is the "student teaching" experience for students who do not have a prior certificate or license. Through a supervised field based experience students are provided an opportunity to develop skills and demonstrate competency in the area of certification they are seeking. This course is one of the requirements for Provisional with Advanced Standing certification status.

**Clinical Experience of Moderate Disabilities:**

**SPED 8962** 6 cr.

This course provides student with an opportunity to demonstrate skills they are learning in the clinical coursework as well as demonstrating competencies required for Standard Certification. The experience is designed to be a supportive one, with clinical supervisors providing students with guidance and support needed to enhance their development as teachers.

**Research in Special Education**

**SPED 9000** 3 cr.

In this course students learn specific skills necessary to read and interpret relevant research. Students write critiques of current articles and discuss alternative interpretations in class. Students also design and implement a research prospectus.

**The Adult Learner**

**SPED 9010** 3 cr.

The course focuses on the nature of the developing adult as a learner. An understanding of how the adult learner processes experience, how learning is best structured, and how to provide feedback is emphasized. An extension of this focus includes an investigation of human relations, gender uniqueness, as well as relations within diverse populations as they impact the personal competence of the adult learner. Journals and readings are the basis for guided reflection and introspection.

**Special Education and the Law**  
**SPED 9120** 3 cr

Students will review policy and program regulations associated with Massachusetts Chapter 766, IDEA, Section 504 of the Rehabilitation Act, and Americans with Disabilities Act, as they apply to implementation of services in school-based settings. Precedent setting court decisions associated with those laws will also be examined. New legislation affecting educational practices in general, and therefore, affecting special education practices, will be explored. Students will have the opportunity to explore case studies and challenge their own ability to think critically about various situations.

**Advanced Identification and Remediation of Reading/Language Based Learning Disabilities**

**SPED 9130** 3 cr.

The focus of the course is on severe reading and written language problems. Dyslexia and related problems are analyzed in terms of theory and practice. Orton-Gillingham (phonology) and Project Read (comprehension) techniques are addressed. Field experience required.  
*Prerequisites: a reading and a language course or permission by the Instructor.*

**Woodcock/Johnson—III**

**SPED 9150** 3 cr.

This course focuses on the WJIII. Students will demonstrate knowledge of theories of intellectual processing and skill in administering, scoring and interpreting the Cognitive and Achievement batteries of the WJIII. An understanding of the early childhood, elementary or secondary school curriculum is necessary. Previous preparation in educational assessment and basic knowledge of statistical terminology related to norm-referenced testing are prerequisites. Student Profiles will be analyzed. A field-based component is required. Kits need to be obtained from the students' school systems.

**Consultation and Collaboration Strategies**

**SPED 9200** 3 cr.

Students study theory and practice skills related to communication skills and processes as well as effective consultation strategies for working with school personnel. The process of collaborative consultation is practiced in class in addition to peer coaching and mentoring. Students learn how to evaluate their consultation skills and maintain themselves as a consultant.

## Educational Strategies

**SPED 9250** 6 cr.

Given the context of the adult learner and the process of implementing educational change studied in the previous courses in the CAGS sequence, the focus of this course is on effective and promising strategies which improve teaching and, thereby, learning for all children. Students become proficient at critiquing the design, analysis, and results of research to determine which strategies hold promise for improving teaching. Students also study current effective strategies in the field, such as cooperative learning, social interaction, peer mediation, teaching/learning styles, cross cultural competency, apprenticeship models, reciprocal teaching, and project approach. Lastly, students learn how to implement these strategies in their schools.

## Internship and Reflective Analysis Seminar

**SPED 9350** 6 cr.

This internship is designed to advance the development of self-directing educators who initiate, facilitate, participate in, and evaluate all aspects of educational practice. The Internship is a year-long experience which offers interns an opportunity to practice communication skills and apply collaborative skills with one or more colleagues in the field. The experience includes opportunities to plan, organize, and evaluate ways of improving instruction through the cooperative participation of school personnel and to implement educational change through such peer leadership structures and practices as mentoring, collaborative supervision, peer coaching, and team teaching. All work is carried out under the supervision of faculty. Ongoing internship projects are analyzed during biweekly seminars.

The Reflective Analysis Seminar serves as the capstone course for the CAGS program in Consultation and Peer Leadership: A Program for Teachers. Opportunities are provided which allow students to analyze their course work and their internship through an integrated and reflective process. Each session is accompanied by discussion formats with other students, by reading, and research. Students are encouraged to present “ideas” on the role of instructional leadership and its purpose in improving instruction. The instructor’s role in the course is that of a facilitator.

## Current Issues in Special Education

**SPED 9400** 3 cr.

Students consider the context for special education and examine current and controversial issues such as inclusion, cost-effectiveness, educational reform, and grading. The course format gives students the opportunity to examine and debate these issues from multiple perspectives. Particular attention is given to the ways in which current issues and controversies affect classroom teachers and their students.

## Independent Study

**SPED 9500** 3 cr.

Students who wish to pursue an area of interest in Special Education that is not offered through course work may develop a program of study with a member of the graduate faculty. Faculty use a conference approach with the individual students, which places emphasis on critical thinking and sensitivity to the process of resolving issues.

*Prerequisite: with permission of Advisor only.*

## Administration of Special Education Programs

**SPED 9800** 3 cr.

In this course emphasis is given to services, organization programs, personnel, and facilities as they relate to the needs of the child and adult with special needs. Students are expected to be well-versed in the effects of Federal and State mandates for special education services as a result of this course.

## Technology Education

### Computers in Industrial Technology

**ITEC 7010** 3 cr.

This course familiarizes students with computers through presentation of selected hardware and software concepts. Opportunities for extensive hands-on practice with application programs are provided. CAD topics are also included.

### Implementing Technology/Engineering Education in Public Schools

**ITEC 7020** 3 cr.

The course provides guidelines and experience in developing and implementing Technology Education course units in the area of communication, construction, manufacturing, power/energy, and transportation. Students experiment with and develop new units for classroom implementation.

### Automated Drafting Systems

**ITEC 7030** 3 cr.

This course is designed to teach the general concepts related to automated drafting with a special emphasis on technical drawing. Specialized applications of industrial practices for drafting are emphasized in this course. One semester of technical or mechanical drafting is a prerequisite.

### Advanced Methods of Teaching at the Secondary Level

**ITEC 8000** 3 cr.

Combines academic study with clinical practice and supervision. Theories and topics studied and demonstrated include learning styles, critical thinking, computer applications, and inclusive learning environments. Emphasis is placed on integrating culturally or linguistically diverse students and those with special needs. Interdisciplinary course development and implementation, student assessment including portfolio assessment and writing are studied for utilization across the curriculum.

*Prerequisite: Initial Teacher Licensure.*

### School to Career Components Seminar

**ITEC/PDEV 8050** 1 cr.

The seminar will provide current information and insight into the general structure of school to career programs, and the twenty required elements of a STC program. It will also introduce the relationship of STC with the SCANS competencies and Tech. Prep.

### **STWOA Federal Legislation and State Plan**

**ITEC/EDLM 8100**      **2 cr.**

The course provides for the study, analysis and examples of the Federal School to Work Opportunities Act (STWOA) and the Massachusetts Plan for a comprehensive System of School to Work Transition regarding expectations of STC school programs.

### **School to Career in the Public School Curriculum**

**ITEC/EDUC 8250**      **3 cr.**

The course provides the curriculum base for STC specialists to aid other teachers in the school to implement and include STC activities within their classes. The elements to be studied include the MA Common Core of Learning, the MA framework Common Chapters, the six discipline chapters of the MA Curriculum Framework, and the Eight aspects of the industry identified in the STWOA. Emphasis is on how to integrate STC activities and concepts into the school curriculum.

### **Developing STC Industry/Business/Community Partnerships**

**ITEC/PDEV 8300**      **3 cr.**

The course will study and examine the changing labor market and requirements, the MA Occupational Projections, and Occupational skill standards in relation to Goals 2000 and SCANs. With this background, strategies for creating and sustaining partnerships will be identified for work based and connecting activity components of STC.

### **Career Assessment , Mentoring, Portfolios and Coordination of work Based Learning Experiences**

**ITEC/PDEV 8350**      **3 cr.**

The course identifies approaches and techniques used for student mentoring, job shadowing career interest assessment, and career portfolio development. The operation and responsibilities for work based learning experiences for students away from the school setting are examined.

### **Communications in Technology Education**

**ITEC 8400**      **3 cr.**

The course provides exposure to the State framework area of communications using an integrated systems approach. The process of communication, approaches to technology in the laboratory, historical perspective, and social issues are addressed. Materials and programs for the Middle and High school level are integrated throughout the course and application of concepts found in the public school technology lab is stressed. The course includes lab work.

### **Power/Energy in Technology Education**

**ITEC 8500**      **3 cr.**

The course is organized around an energy system point of view. Various sources are covered, and for each source the technologies involved in the production, transmission, utilization, and related environmental/social impacts are addressed. An effort to relate material for the public school lab/classroom according to the State organizational framework is integrated throughout the course. This course includes lab work.

### **Manufacturing in Technology Education**

**ITEC 8600**      **3 cr.**

The course addresses the State framework area of manufacturing. The various systems of manufacturing used, the process involved in the production of goods and services, and the support areas for the manufacturing enterprise are covered. The integration of manufacturing principles in the Middle and High school lab environment is developed throughout the course. The course includes lab work.

### **Construction in Technology Education**

**ITEC 8700**      **3 cr.**

The course develops outcomes related to the scientific principles, engineering concepts, and technical approaches to the areas of residential, commercial, and industrial construction as identified in the State organizational framework for Technology Education. The area of construction, the processes and materials used, the techniques performed, and the planning and development of structures are studied and adapted for lab and classroom use in the public schools. The course includes lab work.

### **Transportation in Technology Education**

**ITEC 8800**      **3 cr.**

The course emphasizes the importance of transportation and identifies the modes used for people and goods in various environments. The structure, support, propulsion, guidance, control, and infrastructure systems for various forms of transportation are addressed. Materials adapted to the State framework for Technology Education for classroom and lab use are integrated throughout the course. The course includes lab work.

### **Curriculum Development for Technology/Engineering Education**

**ITEC 8900**      **3 cr.**

The course is designed for those seeking standard certification in Technology Education. Students learn to design courses and curriculum that include current trends in Technology Education. Several approaches for implementing problem solving, concept learning, habits of the mind, and integration of math/science concepts into the State framework areas of construction, communication, manufacturing, and power/energy in Technology Education are covered. The implementation of the State framework competencies for Technology are addressed.

### **School to Career Clinical Internship**

**ITEC/EDLM 9400**      **3 cr.**

The semester long internship provides the opportunity to develop and implement components of a school to career program in the public school setting. Emphasis will be placed on establishing new components into current programs.

### **Clinical Internship in Technology Education**

**ITEC 9500**      **6 cr.**

The internship is a clinical, capstone experience allowing full integration and application of content knowledge and pedagogical theory and practice. It should incorporate all standards specific to the discipline in which certification is sought as well as all common standards for classroom teachers (section 7.04). It must be a minimum of 400 clock hours or one full semester on site under the auspices of the college.

# Professional Development Courses

The Professional Development Center and Graduate and Continuing Education through Extended Campus Programs offer both graduate and undergraduate courses to working professionals in schools, agencies and at work sites. Such courses are developed in collaboration with the requesting agency or business and the appropriate academic department. These courses are usually 6000 level courses and carry the prefix of PDEV or the prefix of the academic department, for example, EDUC, SPED, BUS, etc. Since these courses are responsive to the needs of professionals in the field they are designed as requested, so all courses offered may not be listed here. The following list represents those courses regularly offered.

## Phono-Graphix

**PDEV 6012 1 cr.**

A teacher-training course in reading decoding. Phono-Graphix is a rapid, innovative, research-based method which focuses on teaching phonological processing skills and using the sound symbol code to teach decoding to both beginning and remedial readers.

## Teaching Smarter: Assessment Course

**PDEV 6016 3 cr.**

This course is designed for teachers who would like to teach smarter using current research strategies in assessment. It will focus on efficient and effective ways to provide students' feedback and improve student performance. Both theoretical and practical aspects of assessments will be combined. Participants will have the opportunity to develop strategies to ensure student responsibility for learning.

## Instructional Strategies and Practices in the Middle School

**PDEV 6035 3 cr.**

Offers an in-depth look at a variety of instructional practices and strategies appropriate for effective teaching and learning of the early adolescent. Topics include building a sense of community, classroom management, differentiated instruction and alternative assessment. Attention will be given to addressing the needs of diverse student populations, including but not limited to children with different learning abilities, exceptional talent, different culture/ethnic background, or at-risk characteristics. Active and interactive learning strategies will be emphasized.

## The Responsive Classroom: Elementary

**PDEV 6078 3 cr.**

The Responsive Classroom is an approach to classroom management and curriculum delivery developed by the Northeast Foundation for Children. This course will enable students to implement the social constructivist strategies taught in an elementary classroom and will increase their knowledge of child development and developmentally appropriate instructional practices.

## Project Read- Phonology

**PDEV 6094 1 cr.**

Project read is a total language arts program for students who have difficulty learning to read and spell and whose teachers need to know more than one way to present the curriculum.

## Differentiated Learning: Finding Successful Pathways for All Students

**PDEV 6137 3 cr.**

This course helps students understand the diverse needs of learners in their classroom and provides strategies and techniques to meet their various styles, readiness levels and interests.

## Palms Educational Technology for Math and Science

**PDEV 6157 3 cr.**

This course enables students to apply educational technology in the development of math and science curricula.

## Project Read- Written Expression

**PDEV 6174 1 cr.**

Project read is a total language arts program for students who have difficulty learning to read and spell and whose teachers need to know more than one way to present the curriculum.

## The Craft of Teaching

**PDEV 6185 3 cr.**

This course is designed for educators who are interested in developing and refining their teaching skills. The course will provide practical training, support, resources and opportunities to develop useful classroom strategies and materials. Teachers will develop an awareness and understanding of their roles and responsibilities as educators. Opportunities to work with colleagues and develop a collegial and supportive network.

## Reading Strategies for the 21<sup>st</sup> Century

**PDEV 6208 3 cr.**

This course will provide an overview of the federal and state legislation dealing with education, and the impact they have on the teaching in today's classroom.

## Orton-Gillingham: Advanced Seminar

**PDEV 6309 2 cr.**

The Advanced Orton-Gillingham course, which includes a supervised practicum, of at least 190 hours.

## Technology Basics for Today's Teachers

**PDEV 6337 3 cr.**

This course is designed for teachers who do not feel comfortable with the technology available to them in their schools. It will focus on the basics of the Operating System in use whether MAC or Windows, and software such as word processing, spreadsheets, databases, presentation software and the Internet. Teachers also learn to work with Graphics.

## Project Read: Reading Comprehension

**PDEV 6339 1 cr.**

Project read is a mainstream language arts curriculum specifically designed for students having difficulty learning to read and write. Project read has three strands: phonology, reading comprehension, and written expression.

## Science Frameworks and the Middle School

**PDEV 6379 3 cr.**

Participants interested in teaching space science in preparation for state mandated MCAS testing receive several methods of instruction on curriculum topics identified in the science & technology section of the MCAS testing booklet.

### **School Law: A Practical Guide**

**PDEV 6475** 3 cr.

This course will examine the unique and often confusing relationship between the law and public education. Special emphasis will be placed on the following: student rights and responsibilities under the law, teacher rights and responsibilities under the law, the impact of the education reform act on teachers and special education and the law.

### **Astronomy for Elementary and Middle School Teachers**

**PDEV 6492** 3 cr.

The students will learn scientific, mathematical and curriculum aspects of astronomy.

### **Project Read Reading Comprehension**

**PDEV 6618** 2 cr.

The Project Read curriculum is divided into Report Form (expository text) and Story Form (narrative text) written information. The teaching approach is direct concept instruction using multisensory strategies and materials. If teachers the process of analyzing the underlying structure of expository and narrative writing and is presented in a sequential, dependent order of concepts and skills. This process transfers to other curriculum areas to give the students a level of language independence. The curriculum is designed primary for Grade 4 through adult learners, however it can be modified for primary students.

### **Black Yankees, New England's Hidden Roots: Intellectual Traditions and the Evolution of Community, 1750-1910**

**PDEV 6619** 3 cr.

Using a variety of humanistic expression- speeches and writings of scholars and activists, slave narratives, poetry, fiction, music, and fine arts- the content illumines the ways in which African Americans, during the 17<sup>th</sup>-19<sup>th</sup> century New England influenced American thought, cultural expressions, and traditions of freedom and democracy. Covers themes such as the role of the black church, the strong but under-recognized influence of black women writers, activist and artist, economic life and work, the black abolitionist movement, and the pictorial representation of African Americans.

### **Four Ancient River Valley Civilizations**

**PDEV 6625** 3 cr.

Introduces teachers to the ancient societies of China, Egypt/Nubia, the Indus River Valley, and Mesopotamia. In order to compare and contrast these ancient civilizations (both with each other and with modern civilizations), a thematic approach to teaching culture is utilized in the classroom. Archaeologists, historians, and experienced teachers provide participants with scholarly material and hands-on opportunities to get their students engaged in thinking about life in ancient civilizations.

### **Leading the Learning: Supervision and Evaluation in a Standards Based Environment**

**PDEV 6631** 3 cr.

This course is for superintendents, principals, curriculum directors and other administrators. The purpose of this course is to empower administrators to engage in their practice with a belief that they can make a difference in teacher practice and student learning through the supervision and evaluation process. The course explores an ever expanding repertoire of skills for supervising and evaluating staff in ways that promote professional growth and student learning, clearly articulated and communicated high expectations for educators and students and a commitment to engage in, model and promote collaborative practice.

### **Learning and the Brain, New Knowledge and Understanding**

**PDEV 6643** 3 cr.

This course is designed for teachers, principals, and administrators for the purpose of focusing on new knowledge and understanding of how the brain functions in order to improve schooling and learning.

### **Developing Mathematical Ideas: Making Meaning for Operations**

**PDEV 6657** 2 cr.

This course is designed to help experienced k-6 teachers examine the actions and situations modeled by the four basic operations.

### **The Responsive Classroom: Middle School**

**PDEV 6667** 3 cr.

The Responsive Classroom is an approach to classroom management and curriculum delivery developed by the Northeast Foundation for Children. This course is designed to provide middle school teachers with advanced knowledge in child development, social interaction and constructive theory as well as direct and practical application of the theory to current classrooms.

### **Modern Intellectual Theory and Cognitive Abilities: Moving from Assessment to Strategies and Support for the Student in the Inclusive Classroom**

**PDEV 6681** 3 cr.

This graduate education course is designed for special education teachers and classroom teachers who want to broaden their understanding of cognitive abilities.

### **Advanced Reading and Study Skills- Readak**

**PDEV 6703** 3 cr.

Readak Educational Services has offered a specialized reading and study skills course for Grades 5-14 in private schools nationally and internationally since 1957.

### **Semple Math: Beyond Manipulative- the Mnemonic Road to Math Literacy**

**PDEV 6705** 1 cr.

Jan Semple, author of Semple Math will introduce and demonstrate a system of mnemonic teaching strategies that goes beyond manipulative and enables students to achieve success in all areas of mathematics.

### **Explore the Spoken and Written Language Connection: Phonemes Through Text Structure**

**PDEV 6706** 1 cr.

The focus of this course will be on systematically analyzing the relationships between spoken and written language.

**Net Course Instructional Methodologies****PDEV 6730** 6 cr.

In NIM, participants learn about the philosophy and pedagogy of net courses, fostering community-building and collaborative learning in an online course, facilitating an online dialogue to deepen the learning experience, using the web as a resource for an online course, installing lotus notes and using learning space software to modify and existing course and using LS to assess and evaluate students' progress in an online course.

**Moving Out of the Middle at the Concord Consortium****PDEV 6734** 3 cr.

Moving out of the middle is a 12-week net course that widens the set of online teaching strategies instructors bring to the role of moderating for learning.

**Special Topics in Library Media Studies****PDEV 6743** 3 cr.

This topics course has been designed for veteran library media specialists who want to update their skills and knowledge, begin to prepare for re-certification, and accumulate salary schedule increment credits.

**Finding Walden****PDEV 6745** 3 cr.

This intensive nine-day interdisciplinary course will help middle school teacher address the need for students to gain a depth of understanding about and build a sense of respect for their home communities.

**Linking the Curriculum with the Internet****PDEV 6755** 3 cr.

This course is designed for classroom teachers, library media specialists, computer teachers and interested administrators. Instruction will be given on the use of internet browsers, search engines, e-mail, and strategies for identifying sites to support current curriculum. Students will collect web sites for classroom portfolios and develop web-quests to publish their curriculum-related websites on the Internet. Strategies will be discussed and developed to integrate these resources into classroom activities.

**Accelerating Middle School Mathematics****PDEV 6773** 3 cr.

This course's primary objective is to provide teachers with a solid foundation in the subject matter of middle school mathematics while at the same time incorporating activities appropriate for the inclusive classroom.

**Literature from the Frameworks and Across the Curriculum****PDEV 6900** 3 cr.

This course will examine children's literature for teachers including picture books, expository books, poetry, and chapter books.

**Instruction for All Students****PDEV 6914** 3 cr.

The purpose of this course is to empower educators to engage in their practice with a sense of self-efficacy, a focus on clearly articulated standards and objectives, a repertoire of skills for teaching and assessing diverse learners, a passion for engaging all students in the learning process and a commitment to collaborate with colleagues and parents.

**Developing Mathematical Ideas: Building a System of Tens****PDEV 6927** 2 cr.

This is designed to help experienced k-6 teachers explore the structure of our base-10 number system and examine how children develop an understanding of it.

**Thoreau's World and Ours****PDEV 6990** 3 cr.

This two-week summer seminar offers high school English, history and science teachers a multidisciplinary study of ecological, environmental, literary and cultural histories of Concord. Studying the interconnections of Concord's varied histories provides participants with models for approaching inquiry-based studies of their home communities. The course is held at the new Thoreau Institute in Walden Woods.

**Portfolios- a Digital Approach****PDEV 6995** 3 cr.

The course is used to follow a student through their education and give clear indications of both effort achievements in a new way—digitally.

**Media Education and the Arts****PDEV 7070** 3 cr.

The course will examine the various elements of art, television and film, and demonstrate techniques for integrating these elements into the curriculum in satisfaction of the need to develop thinking skills within each student.

**Studying Skillful Teaching****EDUC 6033** 3 cr.

The purpose of this course is to stimulate thinking about teaching options, to expand the range of options teachers have at their disposal, and to enhance decision-making.

**Observing and Analyzing Teaching****EDUC 6035** 3 cr.

This is a project/course for all those interested in expanding their understanding of teaching. Participants learn to observe and write up comprehensive analyses of teaching—their own or someone else's—and develop a consistent vocabulary and concept system for doing so.

**Understanding Teaching II****EDUC 6092** 3 cr.

In this course students will study current research related to classroom practice. They will analyze their own classroom practice in light of current research, learn new strategies and practice them in the course and back in the classroom.

**Observing & Analyzing Teaching II****EDUC 6128** 3 cr.

In this course designed for administrators who have taken Observing & analyzing Teaching I students will study current research in three areas: classroom practice; supervision & evaluation; and school culture.

# Faculty, Trustees, Administration



# Faculty, Trustees, Administration



# Full Time Faculty and Librarians

## Key

- ★ Graduate Faculty Appointments
- ◆ Associate Graduate Faculty Appointments

### ★ ADAMS, Roberta E.

BA University of Michigan  
MA Indiana University  
MA University of Massachusetts  
PhD Indiana University  
Chairperson and Associate Professor,  
English. 1988

### AHMED, Fazal

LLB University Law College  
MA University of Punjab  
MA University of Pennsylvania  
PhD University of Pennsylvania  
Assistant Professor, Criminal Justice. 2000

### ★ ALBERGHENE, Janice M.

BA University of Massachusetts  
PhD Brown University  
Professor, English. 1988

### ALICATA, James

BS University of Arizona  
MPA Clark University  
PhD University of Massachusetts  
Assistant Professor, Industrial Technology.  
2002

### ANDREWS, James

BSEd Fitchburg State College  
MEd Fitchburg State College  
CAGS University of Connecticut  
Assistant Professor, Industrial Technology. 1975

### ANTAYA, David

BS University of Massachusetts  
MA University of No. Colorado  
EdD University of Massachusetts  
Chairperson and Associate Professor,  
Physical Education. 1981

### ARCHAMBEAULT, Frank

BS Worcester Polytechnic Institute  
MS Worcester Polytechnic Institute  
MS Worcester State College  
Associate Professor, Computer Science. 1986

### ARMSTRONG, Cheryl

BA Boston College  
MA University of Connecticut  
PhD University of Connecticut  
Professor, Psychology. 1994

### ★ AUSTIN, Kevin

BS Polytechnic Institute of New York  
MS Rensselaer Polytechnic Institute  
PhD Worcester Polytechnic Institute  
Assistant Professor, Computer Science.  
2000

### ARYEE, Augustine

BA Northeastern University  
MA Northeastern University  
PhD Boston University  
Professor, Sociology. 1982

### ★ BABICH, George

AB Atlantic Union College  
MS Loma Linda University  
MS University of New Hampshire  
PhD University of New Hampshire  
Professor, Biology. 1978

### ★ BARBATO, James

AB Assumption College  
MA Clark University  
PhD Boston University  
Chairperson and Professor, Geo/Physical  
Sciences. 1972

### BATEMAN, Anne

BS Worcester State College  
MSN University of Massachusetts  
EdD University of Massachusetts  
Assistant Professor, Nursing. 2001

### BATTINELLI, Thomas

AA Boston University  
BS Boston University  
MEd Boston College  
CAGS Boston University  
EdD Boston University  
Professor, Physical Education. 1960

### BECHAR, Magda

BA University of Massachusetts  
MS John Hopkins University  
PhD University of Massachusetts  
Assistant Professor, Nursing. 2001

### BECHIS, Donna

BFA Hunter College  
MFA University of Pennsylvania  
Professor, Art. 1974

### BENTLEY, Robert

BA Wayne State University  
MA Wayne State University  
Assistant Professor, Mathematics. 1977

### ★ BERNSTEIN, Alan

BA Hofstra University  
MA University of New Hampshire  
PhD Tufts University  
Professor, Psychology. 1969

### BLAKE, Simone E.

BA Fitchburg State College  
MS Simmons College  
Librarian, Library. 1991

### ★ BLOOMFIELD, Michael

BS Cornell University  
MEd Antioch University  
EdD University of Massachusetts  
Assistant Professor and Graduate Program  
Co-Chair, Psychology. 1996

### BOERSMA, Rachel

BSN Boston College  
MS Fitchburg State College  
Instructor, Nursing. 2002

### ★ BOHRER, George F.

BA SUNY at Fredonia  
MAT Keene State College  
PhD University of Massachusetts  
Professor and Undergraduate Evening  
Program Manager,  
Communications/Media. 1985

### ★ BOND, George

AB Dartmouth College  
MS University of Rhode Island  
PhD University of Rhode Island  
Professor, Biology. 1973

### ★ BREEN, G. Jefferson

AB Clark University  
MA Clark University  
EdD Clark University  
Professor, Psychology. 1971

### ★ BUCHOLC, Stanley

BA Glassboro State College  
MA W. Virginia University  
EdD W. Virginia University  
Chairperson and Professor and Graduate  
Program Chair,  
Industrial Technology. 1976

### BUDD, Eric

BA Brandeis University  
MA University of Chicago  
PhD University of Chicago  
Associate Professor, Political Science. 1994

### BUDZ, Judith

BA University of Michigan  
MA Tufts University  
MBA Clark University  
PhD Northwestern University  
Professor, English. 1974

### BERNETT, Robert W.

BS Purdue University  
MA Rensselaer Polytechnic Institute  
PhD Emory University  
Assistant Professor, Clinical Lab Sciences.  
2002

### CAGGIANO, Diane P.

AA Cape Cod Community College  
BS Babson College  
MBA Babson College  
Associate Professor,  
Business Administration. 1983

### ★ CAMMUSO, Barbara

AS Quinsigamond Community College  
BSN Worcester State College  
MSN University of Lowell  
PhD Dunsbush University  
PhD Clark University  
Professor and Graduate Program Chair,  
Nursing. 1992

### CANIATO, Michele

BA Berklee College  
MA Boston University  
PhD Boston University  
Assistant Professor, Music. 2000

### CARR, Robert

BS Eastern Michigan University  
BGS University of Michigan  
MA Eastern Michigan University  
PhD Wayne State University  
Assistant Professor, Communications/  
Media. 2002

### CHAMPION, Lynne

BS Douglass College  
MS University of Massachusetts, Amherst  
PhD University of Massachusetts, Amherst  
Assistant Professor, Exercise and Sport  
Science. 2000

- CHARLAND, Sylvia**  
BS University of Massachusetts  
MBA University of Massachusetts  
Associate Professor and Undergraduate  
Evening Program Manager,  
Business Administration. 1984
- CHEN, Xuzhou (Brady)**  
BS Shanghai Teachers University  
MS Shanghai Teachers University  
MCS North Carolina State University  
PhD North Carolina State University  
Assistant Professor, Computer Science.  
2002
- CHENOT, David Keith**  
B Architecture Ohio University  
Instructor, Industrial Technology. 2002
- CHETRO-SZIVOS, John**  
BA Assumption College  
MBA Anna Maria College  
PhD University of Massachusetts, Amherst  
Assistant Professor, Communications/Media.  
2000
- ★ **CHISUNKA, Chola**  
BA University of Zambia  
MA Syracuse University  
PhD Syracuse University  
Associate Professor and Graduate Program  
Chair, English. 1991
- CHRISTY, Rodney**  
BA Knox College  
MA Northern Illinois University  
PhD Northern Illinois University  
Assistant Professor, Political Science. 1999
- CIOTTONE, Judith L.**  
BS College of St. Elizabeth  
MA Clark University  
PhD Clark University  
Professor, Chemistry. 1982
- COLBERT, James, Jr.**  
BA Lateran University, Rome, Italy  
MA University of Barcelona, Spain  
PhD University of Navarre, Pamplona, Spain  
Professor, Philosophy. 1967
- ★ **COLBERT, Ronald**  
BSEd Fitchburg State College  
MEd Fitchburg State College  
EdD Boston University  
Professor, Education. 1989
- CONROY, Thomas**  
MA University of Massachusetts, Amherst  
BA Salem State College  
Instructor, Social Sciences. 2001
- CORDUAN, Ellen (CAP)**  
BFA Central Connecticut State University  
MFA University of Illinois, 1982  
Assistant Professor, Industrial Technology,  
1999.
- ★ **COSGROVE, Christine**  
AB Mt. Holyoke College  
MS Georgetown University  
PhD Georgetown University  
Professor, Mathematics. 1971
- CRATSLEY, Christopher**  
BA Brown University  
PhD Tufts University  
Assistant Professor and Graduate Program  
Chair, Biology. 2000
- ★ **DECHENE, Lucy I.**  
BS University of San Francisco  
MS University of California at Riverside  
PhD University of California at Riverside  
Professor, Mathematics. 1978
- DEROSA, Laurie J.**  
EdD University of Massachusetts  
BA Bridgewater State University  
MA University of Massachusetts  
Assistant Professor,  
ECEMS. 2000
- DEVINE, Christine**  
BS St. Anselm College  
Instructor, Nursing. 2002
- DINDA, Robin D.**  
AB Davidson College  
MMus University of Cincinnati  
DMA University of Michigan  
Professor, Music. 1991
- ★ **DUMAS, Robert**  
BS Salem State College  
PhD University of Arizona  
Assistant Professor, Nursing. 2000
- DUYNSTEE, Patricia**  
BA Merrimack College  
BS University of Utah  
MS University of Massachusetts  
PhD University of Massachusetts  
Assistant Professor, Nursing. 2001
- ERRISHI, Ali**  
BA University of Benghazi  
MAS University of Benghazi  
PhD Boston College  
Professor, Philosophy and Geo/Physical  
Science. 1988
- FAUST, Kimberly**  
BA University of Pennsylvania  
MS University of North Carolina, Chapel Hill  
PhD University of North Carolina, Chapel Hill  
Associate Professor, Sociology. 1998
- ★ **FIorentino, Michael**  
BSEd Fitchburg State College  
MEd Boston University  
EdD University of Massachusetts at Amherst  
Professor, Special Education. Graduate  
Program Co-chair, Education Leadership  
and Management. 1974
- FISKE, Jane**  
BM New England Conservatory  
MM New England Conservatory  
DMA Boston University  
Chairperson and Associate Professor,  
Music. 1989
- FLINT, Petri**  
AB Harvard University  
BFA Massachusetts College of Art  
MFA School of the Museum of Fine Arts  
Assistant Professor, Art. 1999
- ★ **FLIPPO, Rona F.**  
BS Florida Atlantic University  
MEd University of North Florida  
EdS University of Florida  
EdD University of Florida  
Professor, Education. 1986
- ★ **FRANCIS, Elaine E.**  
BSEd Fitchburg State College  
MS Lesley College  
EdD University of Massachusetts  
Professor, Special Education. 1978
- FREDETTE, Sheila**  
BSEd Fitchburg State Teachers College  
MS University of Massachusetts  
EdD University of Massachusetts  
Professor, Nursing. 1974
- GARDULA, Robert J.**  
BSEd Bridgewater State College  
MA Clark University  
PhD Clark University  
Chairperson and Professor, Geo/Physical  
Sciences. 1973
- ★ **GIM, Lisa**  
BA Georgetown University  
MA University of California at Berkeley  
PhD Brown University  
Assistant Professor, English. 2000
- ★ **GIOVINO, Rosemarie**  
BSEd Lowell State College  
EdM Boston University  
EdD Boston University  
Professor, Special Education. 1972
- ★ **GIRLING, Paul**  
AB Ottawa University  
BD Andover Newton Theological School  
STM Andover Newton Theological School  
MA University of No. Colorado  
EdD University of No. Colorado  
Professor, Psychology. 1968
- ★ **GLOBIANA, Carol**  
BA University of Chicago  
PhD Washington University  
Professor, Psychology. 1977
- GODIN, Jeff**  
BS Bridgewater State College  
MS Bridgewater State College  
PhD University of Connecticut  
Assistant Professor, Exercise and Sport  
Science. 2002
- GOLDMAN, Cheryl**  
BA University of Louisville  
MS University of Connecticut  
PhD University of Connecticut  
Assistant Professor, Psychology. 2000
- GOODLETT, Sean**  
BA University of Texas  
MA Texas Tech University  
MA University of Oregon  
PhD University of Oregon  
Assistant Professor, History, 2001
- ★ **GORDENSTEIN, Arnold**  
BA University of Massachusetts  
PhD Harvard University  
Professor, English. 1989

- GOVINDAN, Meledath**  
BSC University of Calicut  
MSC University of Calicut  
MS University of Kentucky  
PhD University of Georgia  
Associate Professor, Chemistry. 1996
- GRAY, Patrice**  
BA University of Massachusetts, Amherst  
MA Emory University  
PhD Emory University  
Associate Professor, English and Writing  
Across the Curriculum Coordinator.  
2000
- GUTH, Lawrence R.**  
BS Michigan Technological University  
MS University of Utah  
PhD Rice University  
Associate Professor, Geo/Physical Science,  
Earth Science. 1993
- ★ **HANCOCK, John**  
BS Ohio Northern University  
MA Assumption College  
CAGS Assumption College  
PhD Professional School of Psychology  
Chairperson and Associate Professor,  
Psychology. 1992
- HARRIS, David**  
PhD University of Maryland  
MA Glasboro State College  
BA Montclair State College  
Assistant Professor, ECEMS. 2001
- HARRIS, Robert**  
BA Colgate University  
MFA University of California  
Assistant Professor, Communications/  
Media. 2000
- HAYES, Patricia**  
BA Simmons College  
MA Northeastern University  
PhD Northeastern University  
Associate Professor, Sociology. 1973
- HEROLD, Renee**  
MS Fitchburg State College  
BS Fitchburg State College  
Instructor, Clinical Lab Sciences. 2001
- ★ **HETZEL, Charles**  
BA Beloit College  
MS University of Wisconsin  
PhD University of Wisconsin  
Professor, Education. 1987
- ★ **HIGDON, Gerald**  
AB Villa Madonna College  
MA University of Kentucky  
PhD Lehigh University  
MBA Northeastern University  
Associate Professor, Graduate Program Chair,  
Mathematics. 1977
- ★ **HILL, Pamela**  
BA Framingham State College  
MAT Bridgewater State College  
EdD Boston University  
Assistant Professor and Graduate Program  
Chair, Education. 1998
- HILL-VASQUEZ, Heather**  
BA Mount Holyoke College  
MA University of Washington  
PhD University of Washington  
Assistant Professor, English. 2002
- HOBERMAN, Michael**  
BA Reed College  
MA University of Massachusetts  
PhD University of Massachusetts  
Assistant Professor, English. 2001
- ★ **HOEY, Margaret T.**  
BS Emory University  
PhD University of North Carolina  
Associate Professor, Biology. 1993
- ★ **HOGAN, Peter**  
BA University of Wales, U.K.  
PhD University of Bradford, U.K.  
Professor, Psychology. 1982
- HOOS, Gunther**  
BA Lawrence University  
Assistant Professor,  
Communications/Media. 1980
- ★ **HOWARD, Anne**  
BS University of Connecticut  
MEd Boston College  
PhD Brandeis University  
Professor and Graduate Program Co-Chair,  
Special Education. 1992
- HOWE, Randy**  
BS Fitchburg State College  
MS Fitchburg State College  
EdD Boston University  
Assistant Professor and Graduate Program  
Chair, Communications/Media. 2000
- JARAMILLO, Maria**  
BA Universidad del Valle  
MA Syracuse University  
PhD Syracuse University  
Professor, Spanish. 1986
- JEFFKO, Walter**  
BS University of Bridgeport  
MA Fordham University  
PhD Fordham University  
Professor, Philosophy. 1970
- JELLISON, James**  
BS Northeastern University  
MEd Fitchburg State College  
Associate Professor,  
McKay Campus School. 1972
- KARBASIOUN, Keyvan**  
BA University of Kansas  
BS University of Massachusetts, Amherst  
MA University of Kansas  
EDD University of Massachusetts  
Assistant Professor, Languages. 2000
- KAUL, Sanjay**  
BS University of Jammu  
MS University of Jammu  
MS University of Pennsylvania  
PhD Indian Institute of Technology  
Associate Professor,  
Industrial Technology. 1991
- KELLNER, Lynne A.**  
BA City College of New York  
MEd University of Massachusetts, Amherst  
PhD University of Massachusetts, Amherst  
Assistant Professor, Human Services. 1994
- ★ **KELLY, Nancy**  
PhB Wayne State University  
MAT Fitchburg State College  
PhD University of Massachusetts  
MEd-Secondary Education Chair  
Professor, English. 1992
- ★ **KEMPERS, Margot**  
BA Brandeis University  
MA Stanford University  
PhD Brandeis University  
Professor, Sociology. 1986
- ★ **KIM, Kwahng**  
BS Chung-Ang University  
MBA Chung-Ang University  
MBA University of Bridgeport  
PhD University of New Haven  
Assistant Professor, Business  
Administration. 2000
- ★ **KING, Mary A.**  
BSEd Worcester State College  
MA Anna Maria College  
CAGS Anna Maria College  
EdD University of Massachusetts  
Professor, Human Services. 1980
- KLAR, Robin**  
BSN Fitchburg State College  
MSN Boston College  
DNSC Yale University  
2001
- KOKERNAK, Robert**  
BS Worcester Polytechnic Institute  
MS Stanford University  
PhD Worcester Polytechnic Institute  
Professor, Industrial Technology. 1974
- KOURTONINA, Natasha**  
PhD Moscow State University  
PhD University of Utrecht and University of  
Amsterdam  
Assistant Professor, Computer Science. 1999
- KRANE, Stanley**  
BS City College of New York  
MS Michigan State University  
PhD California Institute of Technology  
Professor, Biology. 1975
- KRASNER, Jon**  
BA Muehlenburg College  
MFA Boston University  
Assistant Professor, Communications/Media.  
2000
- LANDER, Frits**  
Academy Engineer  
Engineering Academy of Denmark  
Associate Professor, Computer Science. 1982

Key

- ★ Graduate Faculty Appointments
- ◆ Associate Graduate Faculty Appointments

- LAYTIN, Peter**  
BA University of Wisconsin  
MA State University of New York at Buffalo  
Professor, Communications/Media. 1977
- LEBLANC, Linda**  
BS Bentley College  
MS University of Rhode Island  
Assistant Librarian. 2000
- LEVE, James**  
BA State University of New York, Fredonia  
MPh Yale University  
PhD Yale University  
Assistant Professor, Music. 1999
- LEVINE, Sara**  
BA Brandeis University  
MS University of Massachusetts, Amherst  
PhD University of Massachusetts, Amherst  
Assistant Professor, Psychology. 2000
- LEVINE, Susan**  
BA Keene State College  
MFA Smith College  
Assistant Professor, Exercise and Sport  
Science, 2001
- ★ **LIEBERMAN, Benjamin**  
BA Yale University  
MA University of Chicago  
PhD University of Chicago  
Associate Professor, History. 1993
- ★ **LIGHT, Barry**  
BA Lebanon Valley College  
MA Louisiana State University  
EdD Pennsylvania State University  
Chairperson and Professor, Mathematics.  
1973
- LU, Da-hong**  
Diploma, University of Science and  
Technology of Shanghai, China  
PhD Wayne State University  
Associate Professor, Chemistry. 1991
- ★ **LWAMUGIRA, Pirudas L.**  
BA University of East Africa  
MBA St. Joseph's University  
PhD Temple University  
Associate Professor, Economics. 1991
- ★ **McALOON, Joseph**  
BA University of New Hampshire  
MBA University of South Dakota  
MSPA University of Massachusetts  
Associate Professor, and Graduate Program  
Chair, Business Administration. 1984
- ★ **McANDREW, Claire**  
BA Marywood College  
MA Georgetown University  
EdD Lehigh University  
Associate Professor, Mathematics. 1983
- McELVAIN, Richard C.**  
BA Marquette University  
MFA Boston University  
Associate Professor, English/Theater. 1997
- McKAY, Linda**  
BSN St. Anselm's College  
MS Russell Sage  
Associate Professor, Nursing. 1981
- McKEON, John J.**  
ABA Worcester Junior College  
BS Southern Illinois University  
MS Southern Illinois University  
Associate Professor,  
Business Administration. 1979
- McSHEEHY, Bruce R.**  
AA Worcester Jr. College  
BA American International College  
MLS University of Rhode Island  
MA Assumption College  
Senior Librarian, Library. 1979
- ★ **MAHADEV, Nadimpalli**  
MMath University of Waterloo  
PhD University of Waterloo  
Chairperson and Associate Professor and  
Graduate Program Chair, Computer  
Science. 1999
- MALONEY, David**  
BS Worcester State College  
MA Assumption College  
CAGS Assumption College  
EdD Clark University Professor,  
Psychology. 1970
- ★ **MARTENS, Edward**  
BS Massachusetts Institute of Technology  
MS Massachusetts Institute of Technology  
PhD Massachusetts Institute of Technology  
Associate Professor,  
Industrial Technology. 1971
- ★ **MARTYNIUK, Irene**  
BA Kent State University  
MA Kent State University  
PhD University of South Carolina  
Assistant Professor, English. 1996
- MAY, Barbara**  
BS Boston College  
MEd Fitchburg State College  
MS Boston University  
Associate Professor, Nursing. 1974
- MAY, Elizabeth**  
BSED Fitchburg State Teachers College  
MS Boston College  
Associate Professor, Nursing. 1970
- MILATOVIC, Ognjen**  
BS Framingham State College  
MS Northeastern University  
PhD Northeastern University  
Assistant Professor, Mathematics. 2002
- ★ **MILLER, George**  
BA Eastern Michigan University  
MA Eastern Michigan University  
PhD University of Michigan  
Professor and Graduate Program Chair,  
General Studies, Education. 1972
- MISSUD, Jean**  
BA Brown University  
MA Clark University  
MLS University of Rhode Island  
Librarian. 1999
- MOORE, Jeanne**  
BS Millersville State College  
Certificate, Marburg University, Germany  
MA Tufts University  
PhD Tufts University  
Professor, French and German. 1970
- MORGAN, Kelly C.**  
AA Casper College  
BA Viterbo College  
MFA Case Western Reserve University  
Associate Professor, English/Theater. 1997
- MORRISON, Francis D.**  
AB University of Massachusetts  
JD Boston College  
Assistant Professor,  
Business Administration. 1979
- ★ **MRVICA, Ann R.**  
BA Ryerson Polytechnical Institute  
MEd Worcester State College  
EdD University of Massachusetts  
Associate Professor,  
Communications/Media. 1983
- ★ **MUNSON, Wayne**  
BFA University of Connecticut,  
School of Fine Arts  
MA University of Connecticut,  
School of Fine Arts  
PhD New York University  
Chairperson and Professor,  
Communications/Media. 1991
- ★ **MURRAY, Thomas**  
BA Iona College  
MA Harvard University  
PhD Harvard University  
Professor, English. 1986
- NASTASEE-CARDER, Angela**  
BA West Chester State College  
MA Ball State University  
PhD Penn State University  
Assistant Professor, English/Speech. 1999
- NESS, Margorie**  
B Music Obelrin College  
MM Northwestern University  
DMA University of Iowa  
Assistant Professor, Humanities. 2002
- NOLE, Barbara**  
BSED Bridgewater State College  
MSPE University of North Carolina  
Assistant Professor, Physical Education. 1970
- ★ **NOMISHAN, Daniel A.**  
NCE University of Lagos  
BS Morgan State University  
EdD Indiana University of Pennsylvania  
Chairperson and Graduate Program Co-  
Chair, Education Leadership  
Management and Associate Professor,  
Education. 1991
- ◆ **NOONAN, James**  
BS Suffolk University  
MBA Suffolk University  
MSBE Suffolk University  
PhD Southern California University  
Chairperson and Professor,  
Business Administration. 1981

- NOSEK, Michael T.**  
BS University of Lowell  
PhD Tufts University  
Assistant Professor, Biology. 2000
- NWANKWO, Jason**  
BS University of Nigeria  
MS University of Wisconsin  
PhD University of Wisconsin  
Associate Professor, Sociology. 1995
- OBERMEYER-SIMMONS, Helen**  
BFA Stephens College  
MFA Rochester Institute of Technology  
Professor, Communications/Media. 1981
- O'CONNELL, Denise**  
BS Fitchburg State College  
MEd Fitchburg State College  
EdD University of Massachusetts  
Assistant Professor and Graduate Program  
Co-Chair, Special Education. 2001
- O'MALLEY, Alice T.**  
BA Anna Maria College  
MA Clark University  
PhD Clark University  
Associate Professor, Biology. 1965
- QUELLETTE, Glenda**  
BA Lowell State College  
MEd University of Massachusetts  
MEd Rivier College  
EdD University of Massachusetts  
Assistant Professor, ECEMS Education.  
2001
- QUELLETTE, Janice A.**  
BSE Westfield State College  
MLS SUNY Albany  
Associate Librarian, Library. 1981
- ★ **PAUL, John J.**  
BRE William Tyndale College  
MA Trinity Evangelical Divinity School  
MA University of Wisconsin  
PhD University of Wisconsin  
Professor, History. 1991
- PELLEGRINI, Jill**  
MEd Worcester State College  
BA Anna Maria College  
Instructor, Special Education. 2001
- POWERS, Barbara**  
BS University of North Carolina  
MS Boston College  
Assistant Professor, Nursing. 1974
- PURCELL, Janette M.**  
AAS Ulster County Community College  
BS University of Colorado at Boulder  
PhD University of Colorado at Boulder  
Professor, Business Administration. 1995
- REEVES, Rene**  
AS Community Technical College  
BA University of Connecticut  
MA University of Wisconsin  
PhD University of Wisconsin  
Assistant Professor, History. 2000
- ROBERTS, Charles**  
BA Goddard College  
MFA Tufts University  
Assistant Professor, Communications/Media.  
1999
- ROBINSON, Daniel**  
BS Fitchburg State College  
PhD University of the Pacific  
Professor, Chemistry. 1977
- ROGUSKI, Wanda**  
BS Quinnipiac College  
MS Long Island University  
DA The Catholic University of America  
Chairperson and Associate Professor,  
Clinical Laboratory Sciences. 1990
- ROUMAS, Margarite**  
BS Columbia University  
MA Columbia University  
PhD Columbia University  
Assistant Professor and Undergraduate  
Evening Program Manager, English.  
2001
- ★ **RUWE, Donelle**  
BA Boise State University  
MA Boise State University  
PhD University of Notre Dame  
Associate Professor, English. 1996
- SAADI, Mary Ann**  
BA University of Rhode Island  
MS University of Rhode Island  
PhD University of Rhode Island  
Assistant Professor, Mathematics, 2001
- SCANNELL, Ann**  
BSN Villanova University  
MSN Catholic University  
ND Case Western Reserve University  
Professor, Nursing. 1996
- SCHILLING, Thomas, H.**  
BS Fitchburg State College  
ALM Harvard University  
PhD University of Massachusetts  
Assistant Professor, Psychology, 1998
- SCHMIDT, Doris**  
BA State University of New York at  
Binghamton  
MA New York University  
PhD New York University  
Assistant Professor, English. 1998
- SCHONBECK, Harold**  
BS University of Connecticut  
MBA Clark University CPA  
Associate Professor,  
Business Administration. 1977
- SHAW, Elizabeth**  
BS Skidmore College  
MS Boston University  
Assistant Professor, Nursing. 1982
- SIDES, Charles**  
BA Clemson University  
MA Clemson University  
PhD University of Massachusetts  
Professor, Communications/Media. 1990
- ★ **SNYDER, Mark A.**  
BS M.I.T.  
MS Columbia University  
PhD Yale University  
Assistant Professor, Mathematics. 1993
- SORENSEN, Jonathan**  
BS University of Texas  
MA Sam Houston State University  
PhD Sam Houston State University  
Assistant Professor, Criminal Justice. 2001
- ★ **SPENCER, Richard**  
BA Alfred University  
MA Alfred University  
PhD State University of New York at Buffalo  
Professor and Graduate Program Co-Chair,  
Psychology. 1972
- STASSEN, Natalie**  
BA Earlman College  
PhD Indiana University  
Assistant Professor, Biology. 2001
- ★ **STOKES, Shari**  
BA Oberlin College  
MA Columbia University  
MEd Columbia University  
EdD Columbia University  
Professor, Special Education. 1991
- SUSKIND, Diana**  
BS State University of New York  
MS Syracuse University  
EdD University of Illinois  
Associate Professor, Education. 1991
- SZYMCZAK, Elizabeth G.**  
BS University of Rhode Island  
MS Northeastern University  
Assistant Professor,  
Clinical Laboratory Sciences. 1987
- ★ **TAPPLY, Robert**  
BSEd Fitchburg State Teachers College  
EdM Fitchburg State Teachers College  
Associate Professor, English. 1966
- TAYLOR, Stephen**  
AB Harvard College  
MS Worcester Polytechnic Institute  
PhD Worcester Polytechnic Institute  
Assistant Professor, Computer Science. 2002
- THERRIEN, Steven P.**  
BSE Fitchburg State College  
MNS Worcester Polytechnic Institute  
Assistant Professor and Nypro Program  
Coordinator,  
Industrial Technology. 1981
- THOMAS, Edmund**  
BS John Carroll University  
MA Kent State University  
PhD Clark University  
Professor, History. 1967
- ★ **THOMAS, Howard**  
BS State University of New York at Geneseo  
MS Adelphi University  
PhD Northeastern University  
Professor, Biology. 1981

#### Key

- ★ Graduate Faculty Appointments
- ◆ Associate Graduate Faculty Appointments

★ **THOMAS, Teresa**  
BS Fitchburg State College  
MA Clark University  
PhD Clark University  
Assistant Professor and Graduate Program  
Chair, Social Sciences. 1998

**TRIFILO, Richard**  
BA Fitchburg State College  
BS University of Massachusetts  
MS Boston College  
Assistant Professor, Nursing. 1983

**TURK, Michael**  
AB Princeton University  
MA Harvard University  
PhD Harvard University  
Chairperson and Associate Professor,  
Economics. 1982

**VALANEJAD, Esmail**  
BSC University of Birmingham (England)  
PhD Princeton University  
Professor, Geo/Physical Sciences. 1968

★ **VOSTOK, Gary**  
BS Clark University  
MBA Babson College  
CPA, CMA, CFM, Assistant Professor,  
Business Administration. 1979

**WADSWORTH, Susan**  
AB Colby College  
MA Tufts University  
MFA Cranbrook Academy of Art  
Associate Professor, Art. 1992

**WAGNER, A. Lynne**  
BS University of Massachusetts  
MS University of Lowell  
EdD University of Massachusetts  
Associate Professor, Nursing. 1985

★ **WALLEN, Andrea**  
BSN San Francisco State University  
MSN University of California  
EdD University of Massachusetts  
Chairperson and Professor,  
Nursing. 1977

**WARMOUTH, Jeffrey**  
BA University of Michigan  
MFA Tufts University  
Assistant Professor, Communications/Media.  
2000

**WEINMANN, Leon**  
PhD University of Illinois  
MA University of Illinois  
BA University of Massachusetts, Amherst  
Assistant Professor, English. 2001

**WEIZER, Paul**  
BA Temple University  
MA Temple University  
PhD Temple University  
Assistant Professor, Political Science and  
Graduate Program Chair, Criminal  
Justice. 1998

**WELLENS, Charles H.**  
BS San Diego State University  
MBA Bryant College  
Associate Professor,  
Business Administration. 1983

**WELLMAN, Robert**  
BA University of California  
MS Long Island University  
PhD University of Connecticut  
Associate Professor, Behavioral Sciences. 1995

★ **WIEGERSMA, Nancy**  
BS University of Maryland  
MA University of Maryland  
PhD University of Maryland  
Professor, Economics. 1979

★ **WILLIAMS, Susan**  
BA University of Denver  
PhD University of Delaware  
Associate Professor, History. 1993

**WORFOLK, Jean B.**  
BSN Medical College of Virginia  
MS Western Connecticut State College  
MS Boston University  
EdD University of Massachusetts  
Professor, Nursing. 1985

**YU, Jiang**  
BS University of Science and Technology  
of China  
MS Western Michigan University  
PhD Western Michigan University  
Associate Professor,  
Geo/Physical Sciences. 1996

★ **ZEKERIA, Abdulkeni**  
BS University of Asmara  
MS University of Wyoming  
PhD Howard University  
Associate Professor, Mathematics. 1987

★ **ZIVIC, Louis**  
BA Michigan State  
MS Cornell University  
EdD Vanderbilt University  
Professor, Business Administration. 1989

## Part-Time Faculty

---

**KRESSY, Jean**  
BS Columbia University  
MS University of Massachusetts  
Part-time Instructor, Nursing. 1973

**LISTON, Gail**  
MSN Boston University  
BSN Texas Christian University  
Part-time Instructor, Nursing. 1977

**MARIOLIS, Tara**  
BS Hartwick College  
MS Boston University  
Part-time Instructor, Nursing. 1992

**MIZHIR, Judith**  
BS Boston University  
MS Boston University  
Part-time Instructor, Nursing. 1974

## Clinical Faculty

### **CHAMPEY, Arlene**

Holy Family Hospital  
BS University of Lowell  
MS University of Lowell

### **BOTTI, Terry**

Heywood Hospital  
BS Fitchburg State College  
MS Fitchburg State College

### **DIMEO, Carol**

Cambridge Hospital  
BS Pennsylvania State University

### **GORDON, Deborah Beth**

Heywood Hospital  
BS Tufts University  
MD Tufts University

### **HOUDE, Carol**

Emerson Hospital  
MT Burbank Hospital

### **IRONS, Denise**

Worcester Medical Center  
BS University of Rhode Island  
MBA University of New Haven

### **MARCH, Robert**

Worcester School for Professional Crafts  
BFA Rhode Island School of Design  
MFA Rochester Institute of Technology,  
School for American Craftsmen

### **MILLER, Carlotta**

Worcester School for Professional Crafts  
MFA University of Massachusetts at  
Dartmouth

### **MITCHELL, Michael**

MD Yale University

### **NELSON, Sarah**

Worcester School for Professional Crafts  
BFS Mankato State University  
MFA University of Wisconsin, Madison

### **O'MALLEY, Thomas**

Worcester School for Professional Crafts  
BFA Alfred University  
MFA Rhode Island School of Design

## Adjunct Graduate Faculty

### Key

▼ Residency Faculty

Membership on the Adjunct Graduate Faculty is open, by invitation, to qualified and competent experts, external to the Fitchburg State College faculty, who possess skills, education, and experience in academic and/or professional areas which complement the Graduate and the Associate Graduate Faculties, and who have had two successful department evaluations.

### **AHERNE, John**

BS Boston State College  
MEd Bridgewater State  
CAGS Northeastern University  
EdD University of Massachusetts, Amherst  
Education Leadership and Management. 1998

### **ALLEY, Sharon**

BS University of Utah  
MS University of Utah  
Visiting Lecturer, Geo/Physical Science.  
1996

### **AMBURGEY, Leonard**

BS Fitchburg State College  
MEd Fitchburg State College  
EdD University of Massachusetts at  
Amherst  
Visiting Lecturer, Geo/Physical Science. 1995

### **BAIL, Paul L.**

BS University of Massachusetts  
AM, PhD University of Michigan  
Visiting Lecturer, Psychology. 1989

### **BRADY, Kathryn**

BS Fitchburg State College  
MA University of Northern Colorado  
Visiting Lecturer, Special Education. 1989

### **BOTHWELL, Ian**

BA Andrews University  
MA Loma Linda University, Riverside  
EdD University of California Berkeley  
Visiting Lecturer, Education. 1995

### **BOTHWELL, H., Roger**

BA Andrews University  
MAT Andrews University  
PhD Drake University  
Visiting Lecturer, Education. 1995

### **BOUVIER, David**

BS Fitchburg State College  
MEd Rhode Island College  
MEd Fitchburg State College  
Visiting Lecturer, Technology Education. 1995

### **CAHILL, Gail**

BS Fitchburg State College  
MEd University of Massachusetts at Boston  
MEd Boston University  
EdD University of Massachusetts at Lowell  
Visiting Lecturer, Special Education. 1998

### **CHASE, Valerie**

BA St. John's University  
MEd Bridgewater State College  
Visiting Lecturer, Special Education. 1986

### **COLEMAN, Steven**

BA Fitchburg State College  
PhD Cornell University  
Visiting Lecturer, Psychology.

### **CONROY, Charles**

BA Fordham University  
MS Iona College  
MS Manhattan College  
EdD Columbia University  
Visiting Lecturer, Educational Leadership  
and Management. 1988

### **CREEDON, Chandler**

BA St. Anselm College  
MA, CAGS, Anna Maria College  
Visiting Lecturer, Psychology. 1989

### **CULVER, Henry**

BS Worcester State College  
MA Assumption College  
EdD University of Massachusetts at Amherst  
Visiting Lecturer, Psychology, 1994  
and Criminal Justice, 1996.

### **DENIG, William**

BS Siena College  
MS Utah State University  
PhD Utah State University  
Visiting Lecturer, Geo/Physical Science. 1995

### **DUPREY-GUTIERREZ, Irene**

BS Bridgewater State College  
MEd California State  
EdD University of Massachusetts at Amherst  
Visiting Lecturer, Education. 1997

### **FRECHETTE, Stephen**

BS Central New England College  
MS Fitchburg State College  
Visiting Lecturer, Computer Science. 1990

### **FURTADO, Stephen**

BA Bridgewater State College  
MA Bridgewater State College  
PhD LaSalle University  
Visiting Lecturer, Educational Leadership.

### **GALLO, Melanie**

BA University of Massachusetts  
MEd Fitchburg State College  
Visiting Lecturer, English. 1997

### **GARVIN, E. Arthur**

AB Antiod College  
MS Tulane University  
PhD Washington University  
Visiting Lecturer, Psychology. 1998

### **GAUVIN, William**

BS Fitchburg State College  
MS Fitchburg State College  
Visiting Lecturer, Computer Science. 1988

### **GUTIERREZ, Irene Duprey**

BS Bridgewater State College  
MEd California State University  
EdD University of Massachusetts, Amherst  
Visiting Lecturer, Educational Leadership.

**HANLEY, Mary Ann**

BA College of St. Catherine  
MEd California State College  
EdD Boston University  
Visiting Lecturer, Psychology. 1998

**IPPOLITO, Michael**

BS New Haven State Teachers College  
MA Fairfield University  
EdD University of Bridgeport  
Visiting Lecturer, Educational Leadership  
and Management. 1995

**JOHNSTON, Christine**

BA Regis College  
MAT Fitchburg State College  
Visiting Lecturer, English.

**LUZZETTI, Anthony**

BA Trenton State College  
MEd Lehigh University  
EdD Lehigh University  
Visiting Lecturer, Educational Leadership.

**LUCCHESI, Peter**

BS University of New Hampshire  
MS Fitchburg State College  
Visiting Lecturer, Computer Science. 1985

**LAWRENCE, James**

AB Central Michigan University  
MA Boston College  
Visiting Lecturer, Psychology.

**MADDEN, Barbara**

BS Boston College  
MS Boston College  
EdD Northeastern University  
Visiting Lecturer, Nursing. 1989

**MARA, John**

BS Fitchburg State College  
MEd Fitchburg State College  
CAGS Fitchburg State College  
Education Leadership and Management. 1998

**McCARTHY, John E.**

BA Providence College  
MEd Bridgewater State College  
CAGS Boston University  
Visiting Lecturer, Educational Leadership

**MEDIEROS, Sherry A.**

BS Stonehill College  
MEd Rhode Island College  
CAGS Fitchburg State College  
Visiting Lecturer, Educational Leadership

**MAGUIRE, Russell**

BA State University of New York at Buffalo  
MA Northeastern University  
Visiting Lecturer, Special Education. 1987

**MCGUIRE, Ronald**

BDIC in Music Psychology-UMASS  
Amherst  
MED Fitchburg State College  
Visiting Lecturer, MAT Programs. 1995

**MURRAY, Anne**

BA Tufts University  
MEd Fitchburg State College  
EdD University of Massachusetts, Amherst

**O'MALLEY, Kevin P.**

BSEd Boston State College  
MEd Suffolk University  
EdD University of Massachusetts. 1990

**PAWLOUSKI, Paul**

BA Fitchburg State College  
MEd West Virginia University  
EdD West Virginia University  
Visiting Lecturer, Technology Education. 1996

**PREGOT, Michael**

BA St. Francis College (NYC)  
MAT Assumption College  
MA Framingham State College  
EdD Boston University  
Education Leadership and Management. 1998  
Visiting Lecturer, Educational Leadership  
and Management. 1996

**ROBBINS, Patricia**

BS Washington State University  
BA Eastern Washington State University  
MEd Eastern Washington State University  
MEd Central Washington State University  
EdD University of San Francisco  
Visiting Lecturer, Educational Leadership  
and Management.

**REED, Margaret**

BS Maryhurst College  
MA Framingham State College  
EdD Clark University. 1990

**ROSSNER, Albert**

BS Fitchburg State College  
MEd Bowling Green State University  
Visiting Lecturer, Technology Education. 1996

**RYAN, Carol**

BS Fitchburg State College  
MEd Fitchburg State College  
Visiting Lecturer, Psychology.

**SCARANO, Richard F. Esq.**

BS Stonehill College  
MA Suffolk University  
JD Southern New England School of Law  
Visiting Lecturer, Educational Leadership

**▼ SEMERJIAN, Harry**

BM Boston University College of Music  
MA Boston University  
EdD University of Massachusetts. 1960

**SEMERJIAN, Helena**

BS Fitchburg State College  
MEd Boston University  
MEd Fitchburg State College  
Visiting Lecturer, Humanities.

**SCHOFIELD, Ronald**

BS Worcester State College  
MA Assumption College  
Visiting Lecturer, English. 1992

**SQUARCIA, Paul**

BS Boston University  
MEd University of New Hampshire  
CAGS Boston University  
EdD Boston College  
Visiting Lecturer, Educational Leadership  
and Management. 1995

**SNYER, Kristen, Esq.**

BA College of the Holy Cross  
JD Suffolk University Law  
Visiting Lecturer, Educational Leadership  
and Management. 1994

**TARDANICO, Anne**

BS Fitchburg State College  
MEd Fitchburg State College  
Visiting Lecturer, Educational Leadership

**THIBADEAU, Susan**

BS Emmanuel College  
MEd Rhode Island College  
PhD University of Kansas. 1990

**TYNAN, Edward**

BA Stonehill College  
MEd Bridgewater State College  
EdD Boston College  
Educational Leadership and Management.  
1998

**VAN DE CARR, Therese**

BSEd State University College, Genesco  
MEd Boston College  
EdD Boston University. 1993

**WEAVER, James**

BS Creighton University  
MS Fitchburg State College  
Visiting Lecturer, Computer Science. 1995

**WILLIAMS, Miriam**

BA Brandeis University  
MA Clark University  
Visiting Lecturer, Psychology. 1997

**WU, Alan**

BSEE University of Tennessee at Knoxville  
MSEE University of Tennessee at Knoxville  
Visiting Lecturer, Computer Science. 1995

**ZOLLO, Felix**

BS Suffolk University  
MEd University of Massachusetts  
EdD Southeastern Nova University  
Visiting Lecturer, Educational Leadership  
and Management. 1995

## Adjunct Undergraduate Faculty

All Fitchburg State College Undergraduate Faculty members by virtue of their college appointment are eligible to teach in the Division of Continuing Education. In addition, membership on the Undergraduate Adjunct Faculty is open, by invitation, to qualified and competent experts, external to the Fitchburg State College faculty, who possess skills, education, and experience in academic and/or professional areas, and who have taught a minimum of eight undergraduate courses during the previous three academic years.

### **BROWNLEE, Charles**

BS California State University  
JD Boalt Hall School of Law  
Visiting Lecturer,  
Business Administration. 1988, and  
Criminal Justice, 1996.

### **BURNS, William**

BA Lowell State College  
MEd University of Lowell  
Visiting Lecturer, Industrial Technology.  
1984

### **CRAITE, John**

BS Fitchburg State College  
MS Bentley College  
Visiting Lecturer, Business Administration.  
1995

### **CRAWLEY, John**

BS Central Connecticut State University  
MS Lesley College  
JD New England School of Law  
Visiting Lecturer,  
Business Administration. 1990

### **DEPROSPO, Helen**

BS, BA Clark University  
MBA University of Massachusetts  
Visiting Lecturer,  
Business Administration. 1989

### **DLOUGHY, Ralph**

BS Southeastern Massachusetts University  
Med Fitchburg State College  
Visiting Lecturer, Industrial Technology.  
1992

### **DZERKACZ, John**

BA Framingham State College  
Med Boston College  
Visiting Lecturer, Industrial Technology.  
1993

### **FRANTISKA, Joseph**

BA Westfield State College  
BS Fitchburg State College  
MS Fitchburg State College  
MBA Western New England College  
Visiting Lecturer, Computer Science. 1990

### **KELLEY, Timothy**

BA Holy Cross College  
MS University of Lowell  
Visiting Lecturer, Mathematics. 1986

### **LENT, Richard**

BS University of Massachusetts at Amherst  
MS University of Vermont  
PhD State University of New York at Stony  
Brook  
Visiting Lecturer, Computer Science. 1999

### **L'HEUREUX, Michael**

BA Assumption College  
MA Western Kentucky University  
Visiting Lecturer, Geo/Physical Sciences.  
1989

### **LONGEY, Suzanne**

BS University of Connecticut  
MEd Fitchburg State College  
Visiting Lecturer, Humanities. 1992

### **LORING, Hillary**

BA Smith College  
MAT Wesleyan University  
MA Brandeis University  
PhD Brandeis University

### **MATALKA, Edward**

BS Rensselaer Polytechnic Institute  
MS, PhD University of Florida  
Visiting Lecturer, Psychology. 1989

### **MCCLINTOCK, Russell**

BA Siena College  
MA Providence College  
PhD Clark University  
Visiting Lecturer, Social Sciences. 1999

### **MESSIER, Eugene**

BS Southeastern Massachusetts University  
Med Fitchburg State College  
Visiting Lecturer, Industrial Technology.  
1994

### **OLSON, Anthony**

BS Fitchburg State College  
MBA Rivier College  
Visiting Lecturer,  
Business Administration. 1989

### **PACKARD, Robert**

BS Fitchburg State College  
Med Fitchburg State College  
CAGS Fitchburg State College  
Visiting Lecturer, Industrial Technology.  
1995

### **PEACH, Robert**

BS, MEd Salem State College  
Visiting Lecturer, Industrial Technology.  
1992

### **PRONOOST, Stephen**

BS Boston University  
Med Boston University  
Visiting Lecturer, Industrial Technology.  
1995

### **QUINN, Dennis**

BA Worcester State College  
MA Assumption College  
PhD University of Massachusetts at Amherst  
Visiting Lecturer, English. 1987

### **SCAPPARONE, Renee**

AA Mount Wachusett Community College  
BS Fitchburg State College  
MBA Anna Maria College  
Visiting Lecturer,  
Business Administration. 1990

### **SCHILLING, Hildur**

BA Southern Methodist University  
MA Southern Methodist University  
PhD University of Mass-Amherst  
Visiting Lecturer, Behavioral Sciences.  
1999

### **STANFORD-POLLOCK, Meredith**

BA University of Illinois  
Med Boston University  
EdD Boston University  
Visiting Lecturer, Behavioral Sciences. 1997

## Professors Emeriti

---

**ANTILLA, Faith**

Emerita Librarian

**ARNOLD, Lawrence**

Professor Emeritus of History

**ANGELINI, Joseph A.**

CAGS Professor Emeritus of Mathematics

**BANNON, Lillian**

MA Professor Emerita of Nursing

**BARBARESI, Patricia**

PhD Professor Emerita of Education

**BARKER, William**

PhD Professor Emeritus of English

**BESNIA, Howard J.**

MFA Professor Emeritus of Industrial Technology

**BOURN, Colin**

MA Professor Emeritus of English

**BROWNING, Grainger**

PhD Professor Emeritus of Sociology

**BURKE, John**

PhD Professor Emeritus of Foreign Languages

**CARPENTER, Joseph**

MEd Professor Emeritus of Industrial Technology

**CARSON, Norman**

MS Professor Emeritus of History

**CASEY, Elizabeth Ross**

Edd Professor Emerita of Education

**CASEY, William**

Emeritus of Library

**CONDIKE, George**

PhD Professor Emeritus of Chemistry

**CONDON, Richard**

EdM Professor Emeritus of Mathematics

**COX, Catherine**

AM Professor Emerita of Geography

**CROWLEY, Harry L.**

Edd Professor Emeritus of Behavioral Science

**CUNNINGHAM, Lee**

DPE Professor Emeritus of Physical Education

**DECESARE, Richard A.**

PhD Professor Emeritus of Philosophy

**DEAN, Veva K.**

PhD Professor Emerita of Geography

**DENIKE, Lee**

PhD Professor Emeritus of Communications/Media

**DRISCOLL, Edward F.**

PhD Professor Emeritus of Industrial Arts

**DRISCOLL, Rita D.**

Edd Professor Emerita of Nursing

**DUFAULT, John**

PhD Professor Emeritus of Behavioral Science

**FANDREYER, Ernest**

Edd Professor Emeritus of Mathematics

**FARIAS, Joseph C.**

MEd Professor Emeritus of Industrial Arts

**FISK, Elizabeth**

MSN Professor Emerita of Nursing

**FITZGIBBON, William H.**

EdM Professor Emeritus of Communications/Media

**FREDETTE, Norman**

Edd Professor Emeritus of Physics

**GAUMOND, John**

MEd Professor Emeritus of Education

**GOLDMAN, William J.**

Edd Professor Emeritus of Special Education

**GRABAR, Terry**

PhD Professor Emerita of English

**GUINDON, Francis X.**

Edd Professor Emeritus

**HANLEY, Mary Ann**

Edd Professor Emerita of Psychology

**HANSON, Erling**

EdM Professor Emeritus of Industrial Technology

**HARRIS, Irene**

PhD Professor Emerita of English

**HASKINS, Elizabeth M.**

MS Professor Emerita of Mathematics

**HOROWITZ, Lillian**

EdM Professor Emerita of English

**HOTCHKISS, Anita**

PhD Professor Emerita of Psychology

**JAMES, George**

Edd Professor Emeritus of Industrial Technology

**KRAWIEC, Bernice M.**

MS Professor Emerita of Nursing

**LEE, Robert R.**

Edd Professor Emeritus of Humanities

**LOCKE, Norman C.**

MEd Professor Emeritus of Communications/Media

**LORENZEN, Louis**

MFA Professor Emeritus of Art

**LYSTILA, Doris V.**

MEd Professor Emerita of Education

**McAVOY-WEISSMAN, Muriel G.**

PhD Professor Emerita of History

**McGRAIL, John P.**

MA Professor Emeritus of English

**MADDEN, Barbara**

Edd Professor Emerita of Nursing

**MARION, Mildred**

MS Professor Emerita of Nursing

**MAZEIKA, John J.**

MEd Professor Emeritus of Counseling

**MELVIN, Harold**

ThD Professor Emeritus of Sociology

**MERRIAM, George H.**

PhD Professor Emeritus of History

**MICCICHE, Pasquale**

PhD Professor Emeritus of History

**MILLER, Frederick R.**

MEd, CAGS Professor Emeritus of Industrial Technology

**MOON, John V.**

PhD Professor Emeritus of History

**MORELAND, Hattie W.**

Edd Professor Emerita of Special Education

**MURPHY, George**

MBA Professor Emeritus of Business Administration

**MURPHY, Caroline A.**

PhD Professor Emerita of Economics

**NEUNHERZ, Rose Marie**

MS Professor Emerita of Biology

**NORTON, Donald**

PhD Professor Emeritus of History and Political Science

**O'CONNOR, Katharine**

CAGS Professor Emerita of Nursing

**PASSIOS, Irene**

MEd Professor Emerita of Education

**POWERS, Francis P.**

Edd Professor Emeritus of Education

**RAPP, Donald**

Edd Professor Emeritus of Special Education

**ROACHE, Mary L.**

EdM Professor Emerita of Education

**RYDER, David**

Edd Professor Emeritus of Communications/Media

**SCHMIDT, Donald**

PhD Professor Emeritus of Biology

**SEMERJIAN, Harry**

Edd Professor Emeritus of Music

**SHAUGHNESSY, Robert**

MNS Professor Emeritus of Computer Science

**SIMMONS, Anna G.**

AM Professor Emerita of Geography

**SIPILA, Signe Antila**

EdM Professor Emerita of Education

**TAYLOR, Margaret S.**

DNSc Professor Emerita of Nursing

**TAYLOR, Rowena**

MS Professor Emerita of Nursing

**THOMAS, Rene**

MEd Professor Emeritus of Industrial Technology

# Trustees and Administrators

## Board of Trustees

**GEORGE L. ALCOCK, JR.**

3/1/04, Chair

**CHARLES A. GELINAS**

3/1/00, Vice Chair, (Reappt.) 3/1/05

**RICHARD P. BURKE**

3/1/04, Secretary

**MARY E. BONIN**

3/1/99, (Reappt.) 3/1/04

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3/1/02, Secretary

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4/1/07

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3/1/01

**GREGG LISCOTTI**

3/1/06

**ROBERT PONTBRIAND**

3/1/07

**JAMES P. HONAN**

3/1/07

**NATHAN MACKINNON**

6/30/03, Student

## Office of the President

**MICHAEL T. RIVARD**

Interim President

AA Worcester Junior College

BS Boston University

MA Anna Maria College. 1966

**GAIL WYATT**

Administrative Assistant to the President

**TERRANCE J. CARROLL**

Director, Planning

AB Northeastern University

MEd Fitchburg State College. 1974

**JESSICA RICE**

Assistant Director, Human Resources

AS Mount Wachusett Community College

**MARYLOU SANBORN**

Staff Assistant, Administrative Assistant to the President

AS Mount Wachusett Community College

BS Fitchburg State College. 1985

## Academic Affairs

**REBECCA DILIDDO**

Interim Vice President, Academic Affairs

BS Milligan College

PhD Ohio State University. 2001

**SHIRLEY A. WAGNER**

Associate Vice President, Academic Affairs

BA State University of New York at Buffalo

MA University of Massachusetts

PhD University of Massachusetts. 1977

**DOROTHY BOISVERT**

Dean of Graduate and Continuing Education

BS Merrimack College

MEd University of Lowell

CAGS University of Lowell

Edd University of Massachusetts, Lowell. 1983

**STANLEY BUCHOLC**

Interim Dean of Undergraduate Studies

BA Glassboro State College

MA W. Virginia University

Edd W. Virginia University

**MICHAEL G. CARUSO**

Associate Dean of Education

AA Nassau Community College

BA New York University

MA New York University

PhD New York University. 2000

**PATRICK BAROSY**

Staff Assistant/Counselor Access

BA/BS Fitchburg State College. 1998

**CINDY CAMPBELL**

Admissions Counselor

BA Mount Union College

MEd Worcester State College. 1995

**CATHERINE CANNEY**

Assistant Dean, Graduate and Continuing Education

BS Bridgewater State College

MEd Fitchburg State College. 1984

**JAMIE B. COCHRAN**

Staff Assistant/Counselor, ACCESS

MS Educational Fellowship

BS Fitchburg State College. 1995

**LISA M. DAVID**

Director, Expanding Horizons

BS Fitchburg State College. 1997

**MELISSA DEMEREST**

Staff Assistant, Assistant to the Vice President

BS Fitchburg State College. 1992

**MICHAEL D. FERREIRA**

Staff Assistant,

Academic Computing/Media Services

BS Fitchburg State College. 1988

**DONNA L. FOLEY**

Co-Coordinator, Academic Advising Center

BS Fitchburg State College

MS Fitchburg State College. 1988

**ROBERT A. FOLEY**

Director of the Library

AB Stonehill College

MSL Western Michigan University. 1979

**SCOTT J. GAUTHIER**

Assistant Director, Admissions

BS Franklin Pierce College

MS Fitchburg State College. 1986

**ABIGAIL KELLY**

Admissions Counselor

BS Truman State University

**MARION KARANJA**

Registrar

MS Simmons College. 1999

**CHRISTINA KING**

Staff Assistant, Expanding Horizons

BA State University of New York

MS Hunter College. 1999

**AMY LEE**

Adult/Transfer Coordinator

BA University of Massachusetts, Amherst

**KAREN FRANK MAYS**

Grants Development Coordinator

BS Skidmore College. 2001

**CAROL McFARLAND**

Director, Upward Bound Program

BS State University of Buffalo

MEd Fitchburg State College. 1991

**RONALD MCGUIRE**

Media Specialist-Library

BDIC in Music Psychology-UMASS-Amherst

MEd Fitchburg State College. 1990

**LECIA MOREY**

Staff Assistant, Enrollment Services

**PIERINA MURRAY**

School Nurse, McKay Campus School

BS Fitchburg State College. 1992

**DAVID NEWTON**

Director, Grants Center

BA Syracuse University

MA Tufts University. 1993

**JOAN NIEHAUS**

Co-Coordinator, Academic Advising Center

AS Becker College. 1986

**CLARE O'BRIEN**

Coordinator, International Education

PhD Boston College

MS University of Wisconsin Oshkosh

BA Fordham University. 2001

**HEATHER J. PELLERIN**

Multi-media Specialist,

Academic Computing/Media Services

BS Fitchburg State College. 1998

**WILLA S. PETERSON**

Director, Expanding Horizons

BA Boston University

MA/CAGS Assumption College. 1994

**JULIE PRIMEAU**

Staff Assistant, Upward Bound

BSED Fitchburg State College. 2000

**CAROLYN POIRIER**

Human Resource Coordinator, Graduate

and Continuing Education. 1995

AS Mount Wachusett Community College

**KATHY RADLEY**

Coordinator, Extended Instruction Programs

BS Fitchburg State College. 1998

**ALVIN T. RILEY, JR.**

Director, ACCESS

BS Bentley College

MRE Gordon-Conwell Theological Seminary

MDiv The Interdenominational Theological

Center and Turner Theological Seminary

MA Atlanta University. 1987

**THOMAS ROUSSEAU**

Coordinator, Peer Tutor Center and  
Assessment Center  
BS Fitchburg State College  
MEd Springfield College. 2000

**GERALD J. SAWYER**

Staff Assistant,  
Academic Computing/Media Services  
AS Mt. Wachusett Community College  
BS Fitchburg State College. 1994

**PEGGY WEAVER**

BA Wester College for Women  
MEd Worcester State College  
Director, Professional Development Center.  
2001

**MICHAEL WILCOMB**

Associate Registrar  
BS US Military Academy  
MA University of Connecticut  
MA Fitchburg State College. 2000

**ROBERT WILSON**

Staff Associate, Image Systems  
BS University of Nebraska  
MS Fitchburg State College. 1986

**COLIN W. YOUNG**

Director, Academic Computing/Media  
Services  
BA Beijing University United  
Med Lehigh University  
MS Lehigh University. 1996

**Student Affairs****KATHLEEN E. SIMONS**

Dean of Students  
BA University of Northern Colorado  
MA University of Kansas  
PhD Illinois State University. 2001

**SUE E. LAUDER**

Director, Athletics  
BS State University of New York at Cortland  
MS Syracuse University. 1996

**CHARLES EGGEN**

Assistant Athletic Director/Sports  
Information Director  
BS Slippery Rock University. 1999

**REBECCA SHERSNOW**

Staff Assistant, Athletic Trainer  
BS Castleton State College  
MS University of New Hampshire. 2000

**TODD SOULIERE**

Staff Associate/Head Athletic Trainer  
BA Lyndon State College  
MS Springfield College. 2000

**MATTHEW T. GALLANT**

Staff Assistant/Equipment Manager  
BS Bridgewater State College. 1999

**MARTHA FAVRE**

Director, Health Services  
BS Tufts University  
BSN Salem State College  
MS U-Mass, Amherst. 1991

**ROBERT NEE**

Physician, Health Services  
BS St. Anselms College  
MD St. Louis University School of Medicine.  
1997

**W. BRIAN MCCULLOUGH**

Director, Public Safety  
AA Philadelphia Community College  
BS Ursinus College  
MSW University of Pennsylvania. 1998

**JAMES HAMEL**

Staff Assistant, Assistant Director of Public  
Safety  
AA Mt. Wachusett Community College  
BS Springfield College. 1994

**JAY D. BRY**

Director of Campus Living/  
Associate Dean of Students  
BS Purdue University  
MS Purdue University. 1999

**KRISTIN ROWE**

Associate Director of Campus Living  
BS University of Massachusetts Amherst  
MS University of Massachusetts Amherst

**MARY BETH MCKENZIE**

Assistant Director of Operations  
BA Berea College  
MA Bowling Green State University. 2000

**DANIEL FAGAN**

Area Coordinator  
BS Fitchburg State College. 2001

**ELAYNE MAZZARELLA**

Director, Career Services  
BA Manhattenville College  
MA Columbia University  
EdM Columbia University. 1999

**JAMES B. BICKFORD**

Assistant Director, Career Services  
BS Fitchburg State College  
BA St. Leo College  
MS Fitchburg State College. 2000

**ROBERT A. HYNES**

Director of Counseling Services  
BA Rutgers University  
MA Hofstra University  
PhD Hofstra University. 2001

**ELIZABETH FINEBERG**

Associate Director of Counseling Services  
BA Indiana University  
MSW Simmons School of Social Work.  
2001

**TULLIO Z. NIEMAN**

Associate Dean and Director, Campus  
Center/Student Activities  
BA University of Maine/Farmington  
MA University of Maine/Orono. 1996

**LISA DUBOSE**

Associate Director, Campus Center/Student  
Activities  
BS Southern Methodist University  
MA Oregon State University. 1995

**CYNTHIA FLYNN**

Staff Assistant, Campus Center/Student  
Activities  
AS Mt. Wachusett Community College. 1998

**JEFFREY T. GODIN**

Staff Assistant, Fitness Director  
BS Bridgewater State College  
MS Bridgewater State College  
PhD University of Connecticut. 2001

**MCDOWELL, JAMES**

Facility Manager for Campus Living  
AS State University of New York at  
Morrisville

**NOAH W. YANNIE**

Director of Recreational Services  
BA Ohio State  
MA Ohio State. 2001

**MATTHEW R. MILLER**

Assistant Director, Recreational Services  
BS Ohio University  
MA Purdue University. 2001

**PETER J. MURRAY**

Intramural Coordinator/Evening Facility  
Manager  
BS Springfield College. 2001

**Finance****CHERYL GROENEVELD**

Vice President for Finance and Treasurer  
BA University of Massachusetts  
MA University of Massachusetts  
MBA Western New England College. 2002

**MARY LYNN LEARY**

Comptroller  
AA Mount Wachusett Community College.  
BS Fitchburg State College. 1972

**DOREEN ARES**

Staff Assistant, Treasurer's Office  
AA Mount Wachusett Community College.  
BS Fitchburg State College. 1978

**MARIANN CASTELLI HIER**

Director of Business Operations, Treasurer's  
Office  
AS Mount Wachusett Community College  
BS Fitchburg State College  
MEd Antioch University. 1995

**CATHLEEN M. DAGGETT, CPA**

Director of Accounting, Treasurer's Office  
BS Fitchburg State College. 1999

**VIRGINIA BILOVEAU**

Staff Assistant, Administrative Assistant to  
the Vice President for Finance. 2001

**PATRICIA CARROLL**

Staff Assistant, Programmer Analyst  
BS Worcester State College  
MS Fitchburg State College. 1980

**RODNEY GAUDET**

Staff Assistant, Technical Services  
BS Fitchburg State College. 1984

**JANE LEWICKE**

Staff Assistant, Programmer Analyst  
BS Lowell Technological Institute  
MAM Worcester State College. 1984

**JOHN BROMBACK**

Director, Management Information Systems  
BS Fitchburg State College. 1980

**SHERRY HOREANOPOULOS**

Staff Assistant, User Trainer and Support  
Specialist  
BA Montserrat College of Visual Art. 1997

**JOSEPH TURNER**

Staff Associate, Networking Coordinator  
AS Middlesex Community College. 1997

**PAMELA McCAFFERTY**

Director, Financial Aid  
BA Colgate University  
MA Tufts University. 1997

**LYNN BEAUREGARD**

Staff Assistant, Student Accounts Manager  
1998

**ALCIRA ZADROGA**

Associate Director, Financial Aid  
BS Worcester State College, 1996

**DEBORAH NICHOLS**

Staff Assistant, Financial Aid  
BS Anna Maria College  
MBA Anna Maria College. 1999

**PAMELA SULLIVAN**

Staff Assistant, Financial Aid  
BS Newbury College. 2000

**HEATHER THOMAS**

Staff Assistant, Financial Aid  
BA Fitchburg State College. 1997

**JAYNE SAMBITO**

Director, Payroll  
AS Mount Wachusett Community College.  
1996

**Advancement****MICHAEL V. SHANLEY**

Director of Public Relations  
BA Providence College. 1985

**DONALD G. LIGHTFOOT**

Director of Development  
BA Washington and Jefferson College. 1997

**CHRISTOPHER P. HENDRYS**

Assistant Director of Development  
BS Fitchburg State College. 2002

**ELIZABETH M. RODENHISER**

Staff Associate, Administrative Services  
Certificate, Salter Secretarial School. 1976

**LENORE J. ROBERTSON**

Director of Alumni Relations  
BA UMass-Lowell  
MS Fitchburg State College. 1995

**JAMES ROGER**

Director, FSC Press  
Journeyman. 1984

**MARY CHAPIN DURLING**

Coordinator, Cultural Affairs  
BA Keene State  
MEd Fitchburg State College. 1995

**Facilities****STEVEN LANCIANI**

Vice President, Facilities Management  
BS Lowell Technological Institute. 1983

**ARTHUR W. TRENOWETH**

Director, Facilities  
AA Northshore Community College  
BS Salem State College. 1982

**HEIDE MESSING**

Staff Assistant, Planning and Design  
BS Fitchburg State College. 1986

**President Emeritus****VINCENT J. MARA**

President, 1976-1995  
BSEd Worcester State College  
EdM Worcester State College  
PhD University of Connecticut

# Academic Glossary and Index



# Academic Glossary

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## ***Advanced Placement Credit***

AP credit is given to students who score three or higher on the Advanced Placement Examinations in Biology, Advanced Placement Science A, English Composition and English Literature, English Language and Composition, any of the foreign languages, Calculus AB or BC exams, U.S. History, European History, Psychology, and American Government and Politics. Contact the Registrar for the credits assigned.

## ***Baccalaureate***

The Bachelor's Degree; traditional first step on the ladder of higher education. It is characterized by a four year program which blends courses aimed at promoting the acquisition of broad knowledge through a solid foundation in the Liberal Arts and Sciences as well as courses designed to give depth of understanding in the major field.

## ***Carnegie Unit***

The unit of work expected of students for each college credit. The college expects students to spend 45 hours of work for each credit. The most common break down for one credit is one hour of class work and two hours of homework for fifteen weeks each semester. A three-credit course demands nine hours of work each week.

## ***CLEP***

The College Level Examination Program by which up to 60 semester hours of credit may be earned towards your degree. Contact Career Services for specific details.

## ***Credits***

Arithmetic representation of the value of completed course work towards the degree requirements. One classroom hour and two hours of homework for the nominal fifteen-week semester usually counts for one credit. As the usual course responsibility requires three classroom hours per week, per semester, and six hours of work per week outside the classroom, the normal yield per course is three credits. Tradition and practice in the case of laboratory, studio, shop, and other practica awards proportional credit for hours of attendance.

## ***Department***

An administrative subdivision of the faculty. Sometimes the department is identical with a discipline category such as English or Mathematics. Departments such as Behavioral Sciences, Humanities, and Social Sciences represent an association of faculty members of related disciplines.

## ***Electives***

Those course selections by the candidate which are not predetermined by graduation, major, or minor requirements.

## ***Liberal Arts and Sciences***

Befitting the Baccalaureate tradition and current practice, the Fitchburg State College candidate is required to complete a minimum of 60 credits in a college. For details, see "Liberal Arts and Sciences Program."

## ***Major***

That structured experience in an academic field which constitutes the candidate's specialization. All degree programs require a major. As considerable variation exists as to prerequisites and total credits, the candidate must carefully study the structure of the major of her/his choice. For details of major requirements, see "Courses and Programs."

## ***Minor***

That structured experience in a related discipline/field which is recognized by the major department as supportive of the candidate's specialization. Minors are defined by the Academic Department offering them. As considerable variation in requirements exist, the candidate should study carefully the minor offerings, see "Courses and Programs."

## ***Prerequisite***

Those courses which must be satisfactorily completed before admission to certain other courses. Prerequisite courses are listed in the course description of the course requiring them. Again, see "Courses and Programs."

## ***Program***

That construct of Liberal Arts and Sciences, major, minor, and/or professional courses which satisfies the requirements for a particular degree.

## ***Self-Help***

Self-Help is in the form of loans and work.

## ***Track***

That subdivision of academic programs which constitutes a unit of professional competence. Suggestive of the complexity of identifications involved in only one department, consider the example of Business Administration. This program includes tracks in Accounting, Management, and Marketing. The candidate should clarify with his/her advisor and major department the track which he/she is interested in pursuing.

## ***Waiver of Regulations***

Recognizing the inappropriateness of rigidity in endeavors to promote its goals, the college provides for waiver procedure relative to its baccalaureate rules, regulations, and programs. All petitions for waiver of regulations begin with the Office of the Dean of Undergraduate Studies if they involve undergraduate requirements and the Office of the Dean of Graduate Studies for graduate requirements. The student should note that reasons for waiver must be as exceptional as the grant.

# Index

## Key

- UG Disciplines offered on an undergraduate basis only
- G Disciplines offered on a graduate basis only
- T Programs offered as a track within a degree program
- C Offered as a certificate program
- M Offered only an undergraduate minor

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