

CENTRAL  
CONNECTICUT  
STATE  
UNIVERSITY



NEW BRITAIN  
1849

UNDERGRADUATE  
CATALOG

1991-1993

A CAMPUS OF  
CONNECTICUT STATE UNIVERSITY

NEW BRITAIN, CONNECTICUT

# CONNECTICUT STATE UNIVERSITY

Central Connecticut State University • New Britain  
Eastern Connecticut State University • Willimantic

Southern Connecticut State University • New Haven  
Western Connecticut State University • Danbury

Connecticut State University reaches throughout the state with major campuses in four metropolitan centers: Central Connecticut State University in New Britain, Eastern Connecticut State University in Willimantic, Southern Connecticut State University in New Haven, and Western Connecticut State University in Danbury. It enrolls more than 34,000 students who are taught by approximately 1,100 full-time faculty members and hundreds of part-time instructors.

Origins of Connecticut State University date back to 1849, with the founding of a school for teachers in New Britain. During their distinguished history, the campuses have evolved from normal schools to teachers colleges to multi-purpose state colleges and, finally, to universities. Today, after 140-years of growth and development, the four campuses of Connecticut State University are thoroughly diversified institutions. Among their alumni are physicians, teachers, lawyers, dentists, nurses, clergy, business people, journalists, scholars, librarians, artists, and a host of other professionals. The graduates of the campuses of Connecticut State University contribute to all aspects of Connecticut's economic, social, and cultural life.

The governance of Connecticut State University is the responsibility of a 16-member Board of Trustees. Fourteen of the Trustees are appointed by the governor, and two are students elected to the Board by their classmates. The president of Connecticut State University is responsible for the administration of the system. Each campus is given a considerable measure of autonomy and functions under the leadership of a president.

## BOARD OF TRUSTEES FOR CONNECTICUT STATE UNIVERSITY

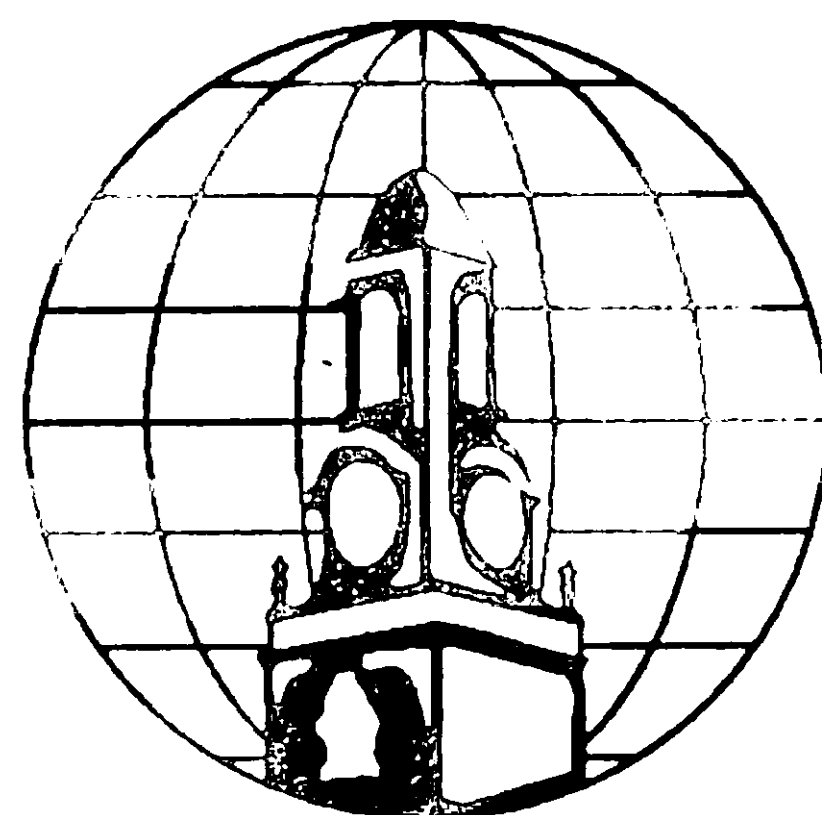
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CENTRAL  
CONNECTICUT  
STATE  
UNIVERSITY



NEW BRITAIN  
1849

# CENTRAL CONNECTICUT STATE UNIVERSITY

New Britain, Connecticut 06050

## Undergraduate Catalog 1991-93

*A Campus of Connecticut State University  
Board of Governors for Higher Education*

The content of this catalog is provided for the information of the student. It is accurate at the time of printing but is subject to change from time to time as deemed appropriate by Central Connecticut State University in order to fulfill its role and mission or to accommodate circumstances beyond its control. Any such changes may be implemented without prior notice and without obligation and, unless specified otherwise, are effective when made.

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Student Center.....	827-7335
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University Police.....	827-7396
Veterans Affairs.....	827-7387

Send Inquiries to:

Director of Admissions  
Central Connecticut State University  
New Britain, CT 06050

1-203-827-7543 Telex: 9102505958 CCSU CT; FAX: (203) 827-7200

## ACCREDITATION AND MEMBERSHIPS

The University is accredited by the New England Association of Schools and Colleges. In addition, programs in chemistry are accredited by the American Chemical Society. The Construction Engineering Technology and the Manufacturing Engineering Technology programs are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology. The Computer Science program is accredited by the Computer Science Accreditation Board.

The University is a member of the American Assembly of Collegiate Schools of Business, the American Council on Education, the American Association of Colleges for Teacher Education, the American Association of State Colleges and Universities, the Connecticut Council on Higher Education, the Council for Advancement and Support of Education, the Connecticut World Trade Association, the National Commission for Cooperative Education, and many other professional organizations related to the activities of individual departments at Central Connecticut.

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# UNIVERSITY CALENDAR 1991-94

## Fall Semester 1991

August 26	Academic Year begins
September 2	Labor Day Holiday
September 3	Faculty Meetings/Orientation
September 3	Last day to withdraw with 100% refund
September 4	Classes begin 8 a.m.
September 4-6, 9	Drop/Add period
September 10	Last day to declare Pass/Fail or Audit options
September 17	Last day to withdraw with 60% refund
September 27	Last day to drop first eight-week courses
September 27	Final date for undergraduates to apply for December 1991 graduation; Office of the Registrar
October 1	Last-day to withdraw with 40% refund
October 23	Mid-term: Last day to drop full-semester courses; First eight-week classes end
October 24	Second Eight-week courses begin
November 1	Final date for undergraduates to apply for May or August 1992 graduation; Office of the Registrar
November 15	Last day to drop a second eight-week course
November 26	Thanksgiving Recess begins 10 p.m.
December 2	Thanksgiving Recess ends 8 a.m.
December 13	Day classes end
December 14	Reading Day
December 14	Commencement (Undergraduate)
December 16-20	Examinations
December 21	Final examination/last class meeting for Saturday classes

## Intersession 1992

January 6	Wintersession classes begin
January 20	Martin Luther King Day Holiday
January 23	Wintersession classes end

## Spring Semester 1992

January 14	Academic Semester begins
January 24	Last day to withdraw with 100% refund
January 27	Classes begin 8 a.m.
January 27-30	Drop/add period
January 31	Last day to declare Pass/Fail or Audit options
February 7	Last day to withdraw with 60% refund
February 14	Lincoln's Birthday Holiday
February 17	Washington's Birthday Holiday
February 20	Last day to drop first eight-week courses
February 21	Last day to withdraw with 40% refund
March 2	Final Date for graduate students to apply for May 1992 degrees; Graduate School
March 17	Mid-term: Last day to drop full-semester courses; First eight-week classes end
March 18	Second eight-week courses begin
March 21	Spring Recess begins 1:30 p.m.
March 30	Spring Recess ends 8 p.m.
April 15	Last day to drop second eight-week courses
April 17	Holiday

May 1

Final day for undergraduates to apply for December 1992 graduation;

Office of the Registrar

May 13

Day classes end

May 14-15

Reading Days

May 18-22

Examinations

May 23

Final examination/last class meeting for Saturday classes

May 25

Memorial Day Holiday

May 28

Graduate Commencement

May 29

Undergraduate Commencement

## Summer Session 1992

June 1	First five-week session begins
June 1	Eight-week session begins
July 2	First five-week session ends
July 4	Independence Day Holiday
July 6	Second five-week session begins
July 23	Eight-week session ends
August 6	Second five-week session ends

## Fall Semester 1992

August 24	Academic Year begins
August 27,28	Faculty Meetings, Orientation
August 28	Last day to withdraw with 100% refund
August 31	Classes begin 8 a.m.
August 31-September 3	Drop/Add period
September 4	Last day to declare Pass/Fail or Audit options
September 7	Labor Day Holiday
September 11	Last day to withdraw with 60% refund
September 24	Last day to drop first eight-week courses
September 25	Last day to withdraw with 40% refund
October 19	Mid-term: Last day to drop full-semester courses; First eight-week courses end
October 20	Second eight-week courses begin
October 26,27	Reading Days
November 1	Final date for undergraduates to apply for May or August 1993 graduation; Office of the Registrar
November 16	Last day to drop a second eight-week course
November 24	Thanksgiving Recess begins 10 p.m.
November 30	Thanksgiving Recess ends 8 p.m.
December 12	Commencement (Undergraduate)
December 14	Day classes end
December 15	Reading Day
December 16-22	Examinations
December 19	Final examination/last class meeting for Saturday classes

## Intersession 1993

January 4	Wintersession classes begin
January 18	Martin Luther King Day Holiday
January 21	Wintersession classes end

**Spring Semester 1993**

January 13	Academic Semester begins
January 22	Last day to withdraw with 100% refund
January 25	Classes begin 8 a.m.
January 25-28	Drop/add period
January 29	Last day to declare Pass/Fail or Audit options
February 5	Last day to withdraw with 60% refund
February 12	Lincoln's Birthday Holiday
February 15	Washington's Birthday Holiday
February 19	Last day to withdraw with 40% refund
February 19	Last day to drop first eight-week courses
March 1	Final Date for graduate students to apply for May 1993 degrees; Graduate School
March 16	Mid-term: Last day to drop full-semester courses; First eight-week courses end
March 17	Second eight-week classes begin
March 20	Spring Recess begins 1:30 p.m.
March 29	Spring Recess ends 8 a.m.
April 9	Holiday
April 16	Last day to drop second eight-week courses
May 1	Final day for undergraduates to apply for December 1993 graduation; Office of the Registrar
May 12	Day classes end
May 13,14	Reading Days
May 17-21	Examinations
May 22	Final examination/last class meeting for Saturday classes
May 27	Graduate Commencement
May 28	Undergraduate Commencement

**Summer Session 1993**

June 1	First five-week session begins
June 1	Eight-week session begins
July 1	First five-week session ends
July 5	Independence Day Holiday
July 6	Second five-week session begins
July 22	Eight-week session ends
August 5	Second five-week session ends

**Fall Semester 1993**

August 23	Academic Year begins
August 26-27	Faculty Meetings, Orientation
August 27	Last day to withdraw with 100% refund
August 30	Classes begin 8 a.m.
August 30, 31	Drop/Add period
September 1, 2	
September 3	Last day to declare Pass/Fail or Audit options
September 6	Labor Day Holiday
September 10	Last to withdraw with 60% refund
September 22	Last day to drop first eight-week courses
September 24	Last-day to withdraw with 40% refund
October 18	Midterm: Last day to drop full-semester courses; First eight-week courses end
October 19	Second Eight-week courses begin
October 25, 26	Reading Days

November 1	Final date for undergraduates to apply for May or August 1994 graduation; Office of the Registrar
November 12	Last day to drop a second eight-week course
November 23	Thanksgiving Recess begins 10 p.m.
November 29	Thanksgiving Recess ends 8 a.m.
December 11	Commencement (Undergraduate)
December 13	Day classes end
December 14	Reading Day
December 15-21	Examinations
December 18	Final examination/last class meeting for Saturday classes

**Intersession 1994**

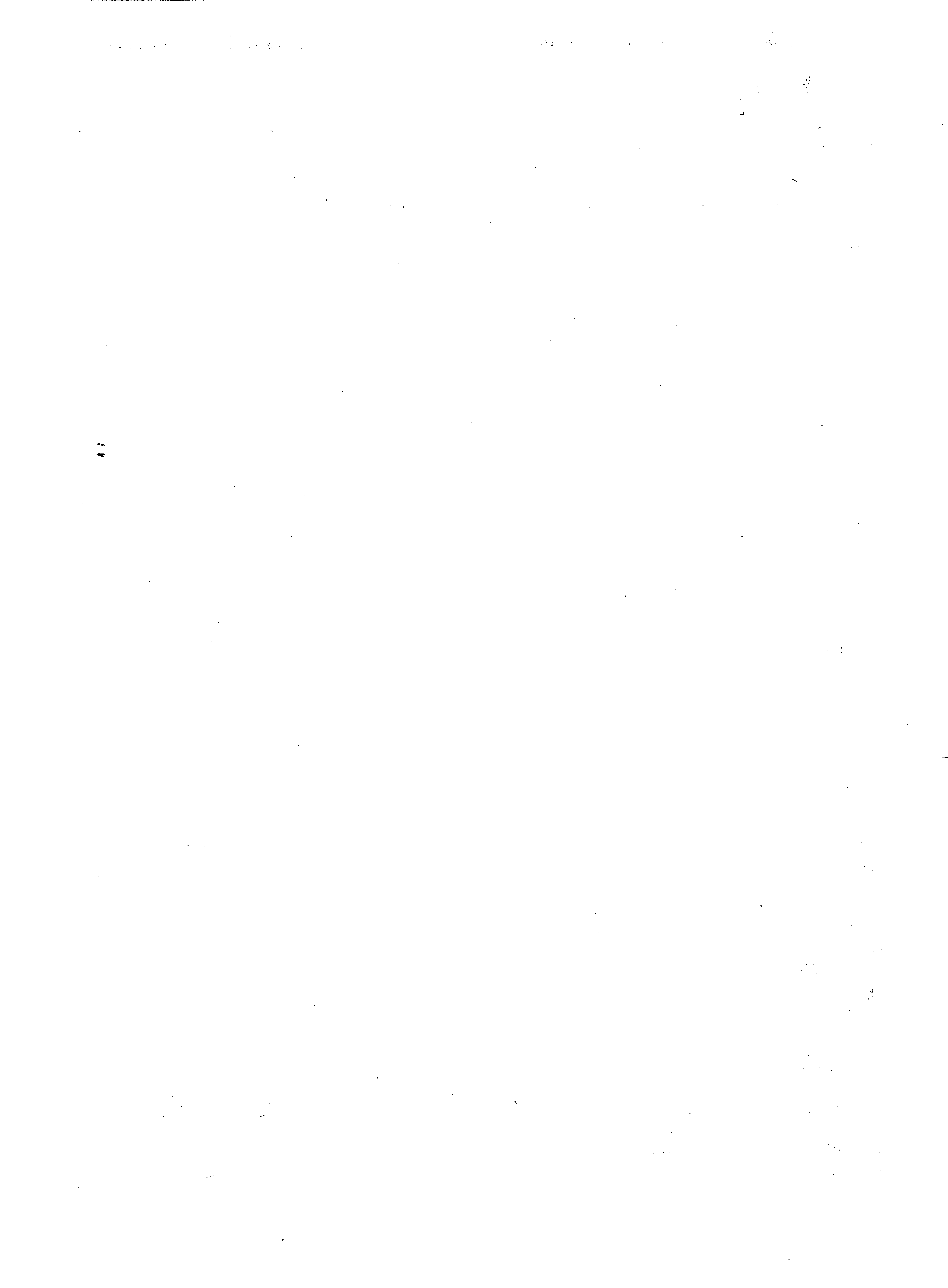
January 3	Wintersession classes begin
January 17	Martin Luther King Day Holiday
January 20	Wintersession classes end

**Spring Semester 1994**

January 12	Academic Semester begins
January 21	Last day to withdraw with 100% refund
January 24	Classes begin 8 a.m..
January 24-27	Drop/add period
January 28	Last day to declare Pass/Fail or Audit options
February 4	Last day to withdraw with 60% refund
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March 16	Second eight-week courses begin
March 19	Spring Recess begins 1:30 p.m.
March 28	Spring Recess ends 8 a.m..
April 1	Holiday
April 13	Last day to drop second eight-week courses
May 1	Final day for undergraduates to apply for December 1994 graduation; Office of the Registrar
May 11	Day classes end
May 12, 13	Reading Days
May 16-20	Examinations
May 21	Final examination/last class meeting for Saturday classes
May 26	Graduate Commencement
May 27	Undergraduate Commencement

**Summer Session 1994**

May 31	First five-week session begins
May 31	Eight-week session begins
June 30	First five-week session ends
July 4	Independence Day Holiday
July 5	Second five-week session begins
July 21	Eight-week session ends
August 4	Second five-week session ends





# GENERAL INFORMATION

## The University

Central Connecticut State University is a metropolitan, comprehensive, public University dedicated to learning in the liberal arts and sciences and to education for the professions. The University provides access to academic programs of high quality for all citizens of Connecticut. It also serves as a responsive and creative intellectual resource for the people and institutions of our state's dynamic capital region.

The University was established as the New Britain Normal School. Founded in 1849 to train teachers for the "common schools," the New Britain Normal School graduated its first class in 1850.

The 29-building, 152-acre suburban campus is located in New Britain, close to Connecticut's capital city of Hartford. The University enrolls nearly 7,000 full-time students and an additional 7,000 part-time students through its School of Business, School of Technology, School of Arts and Sciences, School of Education and Professional Studies, School of Graduate Studies and College of Continuing Education. About 3,000 graduate students attend Central Connecticut each semester, nearly 400 of whom are full-time.

Initially located in downtown New Britain, the school moved to its present campus in 1922. In 1933 the three-year Normal School became the Teachers College of Connecticut, authorized to grant a four-year baccalaureate degree. In 1959 the name was changed to Central Connecticut State College; in 1983 to Central Connecticut State University.

More than 75 programs are offered leading to the bachelor of arts, bachelor of fine arts, bachelor of science, master of science in organization and management, master of science, and master of arts degrees and the sixth-year certificate.

The University's curriculum blends an academically rich general education program with diverse opportunities for specialized and advanced study in the arts and sciences and in several strong and rapidly developing professional programs. The dynamic balance between liberal and professional education is intended to enable students to develop the knowledge and competency necessary for continual growth and to acquire the skills, breadth and openness needed for independent learning in a world of rapid change and increasing challenge.

The mission of Central Connecticut State University is to provide an accessible university education of substance and quality. Academic programs offer the breadth and depth of knowledge necessary to assure the

graduates skills for productive careers and continuing personal growth.

The faculty of the University seeks to provide graduates with the underlying love of learning which will prepare them for the inevitable day-to-day challenges of career and personal life and for the larger challenge of living a meaningful life.

Beyond its role as an educator helping individuals fulfill their potential, the University serves as a hub of intellectual activity and expertise for the people and institutions of Connecticut's complex and dynamic capital region. Outreach at home and abroad and service to the community are among the University's special responsibilities.

The University is committed to the pursuit of knowledge by its students, undergraduate and graduate, and is dedicated to quality in instruction, in research and in the preparation of its students.

The University is accredited by the New England Association of Schools and Colleges (NEASC). In addition, chemistry programs are accredited by the American Chemical Society computer science by the Computer Science Accreditation Board and nursing by the National League for Nursing. The Construction Engineering Technology and the Manufacturing Engineering Technology programs are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC/ABET).

John W. Shumaker, a classics scholar and leader in public service and international initiatives, is the tenth chief executive of the institution.

## Affirmative Action Policy

Central Connecticut is committed to a policy of non-discrimination and equal opportunity for all persons regardless of race, color, religion, sex, age, national origin, marital or veteran status, or physical or mental handicap.

This policy is applicable to all employment practices, admission of students, programs and services to students, faculty, staff and the community.

Central Connecticut's affirmative action policy seeks to include minorities, women, veterans and the handicapped in its educational programs and in all job groups of its work force.

The University Affirmative Action Office is in Administration Building 111, 827-7495.

# Facilities

Central Connecticut State University is situated approximately two hours in driving time from Boston, New York City and southern Vermont. The campus, just fifteen minutes from downtown Hartford, can be reached from State Routes 9, 71, 72 and 175, and Interstates 84 and 91. It is approximately 25 miles south of Bradley International Airport which serves Hartford and Springfield, Massachusetts.

## Service Buildings

The **Administration Building** (1922), the oldest structure on campus, is a Georgian-style building with a columned front and a distinctive clocktower. Once housing the entire institution, it now contains administrative offices including President's and Vice Presidents', Student Affairs, Registrar, Financial Aid, University Bursar, Admissions, the Business Office, the Personnel Office, Ombudsman, Affirmative Action and the School of Graduate Studies. Also located in the Administration Building are the Modern Languages Department, the University Theatre and several classrooms.

**Marcus White Hall** (1923), the second-oldest building and originally a women's dormitory, is named for the seventh principal of the New Britain Normal School. It now houses faculty and administrative offices. The University Health Center, the Microcomputer Laboratory and the Department of Communication are located in the adjacent **Marcus White Hall Annex** which was built in 1938.

**Elihu Burritt Library** (1972), named for New Britain's "Learned Blacksmith" and advocate of international peace, holds over 400,000 volumes, subscribes to close to 3,000 periodical titles and seats 1,800. Its extensive microfiche and microfilm collections provide access to periodicals, newspapers, ERIC documents, corporate annual reports and specialized research collections. The Library serves as a partial federal documents depository and houses a 7,000-volume Polish Heritage Collection, a rare book collection of 15,500 volumes and an extensive curriculum laboratory. Access to research materials is facilitated through on-line database searching, CD-ROM, NELINET and OCLC.

**Memorial Hall** (1970), with a capacity of 1,400, is among the largest dining facilities on the East Coast. Meals are served cafeteria style to students on the meal plan. The first floor contains facilities for banquets, meetings and faculty dining. Educational Support Services is also located here.

The **Student Center** (1964), a meeting place for the campus community, offers a variety of formal and informal programs. There are lounges and TV rooms, a game

room, a ballroom, meeting rooms, and special facilities for photography, radio and student publications. The University Bookstore, the Devil's Den, and Semesters are popular facilities. The **University Bookstore** carries books, school supplies, cosmetics, stationery, college gifts and apparel, and a photography service.

**James J. Maloney Hall** (1989), named for the nationally known thespian and University alumnus and professor, houses the Art and Theatre departments for instruction, performances and exhibitions. It accommodates programs in painting, sculpture, ceramics, and art education and space for new program initiatives. The **Samuel Shih-Tsai Chen Art Center**, named for the professor emeritus of political science and distinguished international scholar, presents exhibitions, lectures and programs of educational and community outreach. The Theatre Department facilities include one of the best-equipped, flexible experimental stages in the region.

**Herbert D. Welte Hall** (1963), honoring the chief executive of this institution for 39 years, contains an auditorium seating nearly 1,900 and the classrooms and offices of the Music Department.

**Harrison J. Kaiser Hall** (1965) was named for the institution's first athletic director. It houses the Physical Education and Athletics departments, the William H. Detrick Gymnasium seating 4,500 spectators, the Jack Suydam Natatorium, and special function rooms which include a modern Nautilus and free weight training facility. **Arute Field** is the site of home football and soccer games and track meets. Other sports facilities include a 37,000-sq. ft. recreational/athletic air-supported structure, tennis courts and fields for archery, softball, touch football, and recreation.

## Classroom Buildings

**Henry Barnard Hall** (1953) is named for the champion of the common schools in the State and the nation and the first principal of the New Britain Normal School. Barnard Hall contains classrooms, the offices of the School of Education and Professional Studies, the Psychology Laboratory, and the Connecticut State University Board of Trustees' Executive Offices. The University Computer Center is also located in Barnard.

**Maria Sanford Hall** (1960) is named for the woman who, when appointed to the faculty of the Normal School in 1885, became the first woman college teacher in the United States. In addition to providing classrooms, Maria Sanford Hall houses the School of Business and the Department of Computer Science.

**Frank J. DiLoreto Hall** (1968), named for the late New Britain senator who avidly supported public education, is the Social Sciences building. In addition to classrooms, the building houses the departments of Geography, History, Political Science, Sociology and Anthropology.

**Emma Hart Willard Hall** (1953), named for the famous educator who was instrumental in the founding of the New Britain Normal School, houses both classrooms and offices. The third floor of Willard is the home of the English Department. The first floor houses the College of Continuing Education, Cooperative Education, the University Career Development Center, the University Counseling Offices and the Veterans Affairs Office. The ground floor accommodates the Media Center.

**Nicolaus Copernicus Hall** (1974), the campus's technology and science building, is named for the famous Polish astronomer. It houses the departments of Biological Sciences, Chemistry and Physics/Earth Sciences and the School of Technology and their laboratories. The Copernican Planetarium and Space Science Center is also located in Copernicus Hall.

### **Residence Halls**

There are eight undergraduate residence halls on campus; one is for men, two are for women, and five are coed.

**Clarence Carroll Hall** (1957) contains, with an annex, 104 rooms accommodating 208 men and women. **Mildred Barrows Hall** (1971) houses 236 women. **Seth North Hall** (1957) contains 62 student rooms for 120 men and women. **Catherine Beecher Hall** (1963) houses 130 men. **Samuel May Hall** (1963) houses 162 men and women. **Robert E. Sheridan Hall** (1967), a five-story residence hall, accommodates 226 women. **Thomas A. Gallaudet Hall** (1969) is a six-story residence hall for 270 men and women. **Robert Vance Hall** (1970) houses 396 men and women.

All residence halls have rooms for studying, reading and laundry facilities.

## **Special Centers**

The University operates several special purpose facilities, institutes and centers as integral parts of its programs.

### **International Affairs Center**

In recognition of the University's long-standing interest in international education, Central Connecticut was designated the Center for Excellence in International Affairs in 1986. The International Affairs Center in Burritt 101 conducts exchange programs for faculty and students, develops and manages international projects, and coordinates the University's various international initiatives. External funding has been obtained for a variety of programs to further the international identity of the University and increase the global awareness of the campus.

In March 1990, the CSU Board of Trustees asked the Center to assume a broader coordinating role on behalf of all CSU institutions. Working with representatives from the four CSU campuses, the Center now develops and conducts system-wide programs of student exchange and faculty development.

The director of the Center is Dr. Charles H. Lyons.

### **Institutes for European and American Studies and Asian and American Studies**

In order to promote international understanding and cooperation and to provide additional foreign study opportunities for its students, Central Connecticut and its sister Connecticut State University campuses have established institutes in Rastatt, Federal Republic of Germany and Atsugi, Japan. The institutes will promote educational opportunities in Connecticut, Europe, and Asia for courses, lectures, workshops, research, artistic activities, and conferences.

Dr. H. Peter Wallach of Central Connecticut's Department of Political Science serves as director of the Institute for European-American Studies. Dr. Ki Hoon Kim of Central Connecticut's Department of Economics is director of the Institute for Asian-American Studies.

### **School of Arts and Sciences Centers**

The Capital Region Center for Economic Education is a non-profit educational organization dedicated to improving the general level of economic understanding. As part of the Joint Council on Economic Education, including 50 State councils and over 300 centers for economic education, the Center sponsors a variety of programs for University students, elementary and secondary teachers, school administrators and members of the community.

The **Center for Urban and Regional Planning** provides internships and part-time employment opportunities for students to work for a variety of town, regional, state and private planning agencies. Coordinated through the Department of Geography (DiLoreto 208), the Center offers consulting services, workshops and short courses as part of its outreach program.

The **Connecticut Archaeological Survey** is a non-profit corporation run by professional archaeologists who perform archaeological surveys for State agencies and private companies. The Center is conducted through the Department of Anthropology (DiLoreto 110A).

The **Connecticut Indian Information Service** is a clearinghouse for Native American-related events and issues. It provides opportunities for students to participate in creating channels of communication between Native American communities, educators and the general public.

**Copernican Planetarium & Observatory**, (Copernicus Hall) includes a Planetarium and an Observatory. The Planetarium, a full-function optical planetarium seating 110 people, is used for classes and programs for the community. The Observatory is located on the roof of Copernicus Hall and provides astronomical instruction for Physics/Earth Sciences classes. It supports student research in astronomical photography and observation using a modern 16-inch Cassegrain reflector and other telescopes.

The **Institute for Science Education** is coordinated by the Biology and Chemistry departments and offers a summer institute for middle, junior high and high school science teachers.

The **Mathematics Center**, operated by the Department of Mathematical Sciences, provides counseling, tutorial assistance and diagnostic testing in mathematics for day and evening students. In particular, the tutorial service provides help for students in MATH 101 or MATH 125. Students are encouraged to drop in at the Math Center, southwest quad of Memorial Hall, for appointment scheduling or assistance.

**Polish Studies Center** (DiLoreto 208-23) was established in an effort to foster within both the Polish American and the American communities an awareness of Poland's culture, history and civilization. Academically, the Center offers courses in Polish history, politics, culture and civilization, language and the Polish community in America. The Center's other facets include: the Polish Heritage Book Collection; the Connecticut Polish American Archive; the Annual Fiedorczyk Lecture in Polish American Studies and Milewski Polish Studies lecture; educational materials for teachers, movies and exhibits; and scholarship aid for students pursuing Polish Studies and for Polish American students.

The **Weather Center** is a fully functional weather forecasting facility, including a satellite downlink to the National Weather Service, computer data retrieval capability, color weather radar and satellite access. It supports forecasting for the University community as well as faculty and student research in the atmospheric sciences.

The **Writing Center**, (Willard 305) helps students to improve their writing. Personnel diagnose writing skills and work on a one-to-one basis with students and others seeking to become more proficient writers. The Center is open weekdays.

## **School of Business Centers**

The School of Business has a **Management and Professional Development Center** which sponsors non-credit offerings in business and industry. Detailed information may be obtained by contacting the Entrepreneurial Support Center (229-8580).

The **School of Business Entrepreneurial Support Center**, located in the New Britain Chamber of Commerce, operates in conjunction with the Chamber of Commerce and the Municipal Action Council. The Center offers counseling support and business expertise to new and existing small businesses and provides a full spectrum of education and training activities for enterprise development. The Center is staffed by a full-time director who utilizes business student interns and graduate assistants in the learning laboratory environment to assist in the delivery of the Center's services. (229-8580)

The **Institute for Business Studies**, was established in 1991 to conduct research on international business and trade issues and to design and implement international management development programs. The Institute, in collaboration with Wroclaw Technical University, Wroclaw, Poland, is offering a program to introduce contemporary business principles and practices to faculty, students and alumni of Wroclaw Technical University. The Institute director is Dr. Patricia Sanders.

## **School of Education and Professional Studies Centers**

The **Early Childhood Education/Childcare Center** is located in Maloney Hall and operated by the University as a center for the study of early childhood education and for child care. Faculty of the Department of Teacher Education direct its operations. Pre-school children attend an open-space classroom, affording faculty and education and psychology students opportunities to observe.

The **Center for Professional Development** is sponsored by the School of Education and Professional Studies. A Center function is to provide in-service and CEUs

for individual educators, groups of educators and school systems. Consulting and research services are available to improve the skills and knowledge of educational personnel as well as to help produce new or different capabilities as programs and job responsibilities at the local setting change.

The **Reading Clinic** (Barnard 234) provides a setting for reading teachers to help children develop reading skills. Faculty of the Department of Reading and Language Arts direct the operations of the clinic and supervise the activities of students working in the clinic.

## **Center for Industrial and Engineering Technology**

CIET is the outreach function of the School of Technology. Located in Copernicus 159, it is a continuing, self-supporting, non-profit resource designed to serve the needs of businesses and industrial firms. The Center provides training workshops, consulting, technology transfer, networking among existing systems and a testing center for industrial and computer applications.

## **Student Development Center**

The Student Development Center includes three essential services that are designed to help students utilize the extensive resources the University has to offer to make their academic programs work for them: Advising Information Services, Career Services and Cooperative Education, and Educational Support Services. For detailed information, see the Student Development Center description on page 17 of this catalog.

## **Special Facilities**

The **Information Systems Department** (Computer Center) provides computer learning facilities for day and evening students. The Microcomputer Lab in the Marcus White Annex is the main center for students to do their computer work on campus, providing numerous networked microcomputers as well as remote terminals (connected to the mainframe computer). There are additional terminal rooms in Maria Sanford 109 and DiLoreto 200.

The Microcomputer Lab in Henry Barnard Hall is another computer facility available to day and evening students. It provides a variety of Apple and Macintosh computers for general student and faculty use.

Students must complete mandatory training classes in the use of computers before being permitted access to the labs. Training classes are given at the beginning of every semester. Self-paced, computer-aided instruction is also available to supplement or substitute for the training classes.

All students can have access to the mainframe computer and are encouraged to request a computer account and attend the training. Central Connecticut is also part of an international network of computers called Bitnet. This allows students with accounts on the mainframe to communicate with universities and research centers all over the world.

The **Media Center** coordinates all audio-visual and television services. The Center maintains reference files on instructional materials, film rental sources, film producers and media equipment. Facilities for making instructional materials are available during scheduled times. Faculty and students (with the approval of a faculty member) may request AV/TV equipment for class use.

The **Ruthe Boyea Women's Center** (Marcus White Hall 103, 827-7411), named for its founding director, is a multi-purpose program and service center for students, staff and faculty women. The Center offers a variety of services to women including peer education, re-entry counseling, support groups, crisis intervention, programming and research on women's issues, and a luncheon series. The staff of the Center also sponsors educational and cultural programs in response to the needs and interests of campus women. The Center is open Monday through Friday and evenings as posted to serve evening students. For information, call 827-7411 or drop in.

# ADMISSION

Hakim A. Salah-Din, *Director*  
Kenneth J. Poppe, *Associate Director*  
Charlotte Bisson, *Assistant Director*  
Michael Gilkes, *Assistant Director*  
Barbara R. Lukas, *Assistant Director*  
(Phone 827-7543)

Admission to Central Connecticut State University may be offered to qualified graduates of accredited high schools or preparatory schools or to holders of an equivalency diploma, and to qualified transfer applicants.

Application for Fall admission may be submitted beginning in October of the senior year of high school. Fall semester candidates are encouraged to apply for admission by May 1, and Spring candidates before November 1.

Applications from high school graduates, transfer and students formerly admitted to Central Connecticut (but not currently attending) may be accepted for either semester.

All credentials submitted by an applicant become part of the student's University permanent record and are not returned.

A non-refundable fee of \$20 must accompany each application.

The application fee may be waived if a request is made by recognized Talent Search or Upward Bound agency: Career Beginnings, College Board and Talent Search programs. All decisions on fee waivers must be approved by the Director of Admissions.

All correspondence and inquiries concerning undergraduate admission to the University should be addressed to this Office of Admission.

## Admissions Advising

The Office of Admissions is open from 8 a.m.-4:30 p.m. for admissions advising, Monday through Friday. Students and parents are encouraged to visit the campus for individual advising. It is best, however, to call or write two weeks in advance for an appointment. Several Admissions officers are available for consultation concerning educational plans at Central Connecticut.

The Office of Admissions is in the southwest corner of the Administration Building.

## High School Graduates

An undergraduate application for admission may be obtained from most Connecticut high schools or from the Office of Admissions. High School students should submit the completed application form to the high school principal or guidance counselor. The principal or guid-

ance counselor should then include an official transcript of the applicant's high school record-to-date with an estimate of the applicant's rank in the graduating class and submit it to the Office of Admissions. High School graduates are required to submit their scores from the Scholastic Aptitude Test (SAT).

Admission criteria include graduation from an approved secondary school with at least 13 units of college preparatory work in the following areas:

- **English** (four years) — courses should emphasize writing skills as well as literature.
- **Mathematics** (three years) — desired sequence is Algebra I, Geometry and Algebra II. Students intending to take Calculus I at Central Connecticut should take a fourth year of mathematics — trigonometry, analytical geometry or mathematical analysis.
- **Science** (two years) — courses should include at least one year of lab science.
- **Social Science** (two years) — courses should include U.S. history.
- **Foreign Language** — three years are recommended.

Students whose preparation does not follow this pattern may still qualify for admission if there is other strong evidence that they are qualified for college studies. Students who present a high school equivalency diploma will also be considered for admission. G.E.D. scores should be submitted.

Admission to Central Connecticut is based on an applicant's secondary school record, including class rank, scores on the Scholastic Aptitude Test, and, if necessary, an interview with a representative of the Admissions Office. It is desirable that high school graduate applicants rank in the top half of their high school graduating class, obtain at least a 400 on the verbal portion and a 400 on the mathematics portion of the SAT, and present at least a C average mean of the five preparatory areas.

## The Scholastic Aptitude Test

The Scholastic Aptitude Test (SAT) of the College Entrance Examination Board (CEEB) is required of all high school graduate applicants. Applicants should request the CEEB to forward their SAT scores to the Office of Admissions. Details and an application for the test are available from the high school principal or guidance counselor or from Educational Testing Service, Box 592, Princeton, NJ 08540. In special cases, the required submission of SAT scores may be waived at the discretion of the Director of Admissions (i.e., for applicants who graduated from high school several years before applying, veterans, adult learners).

## Advanced Placement

The University accepts for college credit advanced placement courses taken in high school under auspices of the College Entrance Examination Board's Advanced Placement Program provided the student scores a minimum 4 or 5 on the test.

When credit is awarded, it is entered on the transcript but the grade is not included in the college grade point average.

## Courses for Qualified High School Students

As space allows, mature high school students, recommended by their principals and approved by the University department chairpersons, may be admitted to appropriate courses at Central Connecticut. For more information, contact Continuing Education (827-7422).

## Transfer Students

Transfer students may send applications directly to the Office of Admissions. An official transcript must be sent directly from each institution attended to the Central Connecticut Office of Admissions. Hand-carried transcripts and transcripts sent by students are unofficial even though they may carry the college seal or signatures that are placed on official records.

A student wishing to transfer to Central Connecticut from another institution of higher learning must complete an application for admission and submit an official high school transcript and an official transcript from each post-secondary school attended. A minimum cumulative 2.0 post-secondary grade-point average is required for consideration. Failure to list all institutions or to provide transcripts may be considered sufficient reason for refusal of admission or dismissal. Transfer students who have earned a minimum of 12 semester hours and a 2.0 grade-point average at other higher learning institutions need not present scores on the Scholastic Aptitude Test (SAT).

After a transfer student is accepted, the official transfer credit evaluation is completed by the Office of Admissions. Transfer credits are accepted from appropriately accredited institutions. In general, accepted transfer students will receive credit for courses with grades of C- or better equivalent to those which are offered at Central Connecticut. The University will not automatically accept all courses which are listed on the transcript. Students may contact the Registrar concerning the application of transfer credits towards fulfilling degree requirements at Central Connecticut. Transfer applicants must complete their application process before the application deadline.

## State Community College Transfers

Graduates from transfer programs of the Community and Technical Colleges of Connecticut who have earned an Associate of Arts degree with a minimum 2.00 GPA.

are admissible to Central Connecticut. A minimum of two additional years of full-time study is required to complete a baccalaureate degree. Qualified students may also be admitted prior to conferral of the associate's degree.

Transfer applicants holding the associate's degree from the Board of State Academic Awards (Charter Oak College) also are admissible to the University. Such applicants, however, may be granted credit beyond the two-year level as acknowledged on their official transcripts from the Board of State Academic Awards. Students who consider transferring to Central Connecticut in the second semester are advised to note the application deadline as well as the date on which classes begin.

## Part-time Matriculants

Candidates for part-time matriculation are expected to meet the same criteria as students accepted for full-time study. Application for part-time matriculant study is made in the Office of Admissions (827-7543).

Upon acceptance, the student's previous college transcripts are evaluated for transfer credits by the Office of Admissions. Students should have an official transcript sent directly from each college attended to the Central Connecticut Office of Admissions. Application of transfer credits to major programs is determined by the academic deans.

For additional information concerning part-time study, please refer to the catalog section, "College of Continuing Education and Summer Session."

## Re-Entries

Students who were formerly matriculated at Central Connecticut and subsequently withdrew voluntarily or involuntarily must request reactivation of their files in seeking readmission. They must be in good standing as outlined in the catalog and must submit reactivation forms to the Office of Admissions prior to the application deadline for the semester in which they seek readmission.

## Fresh Start Policy

At the discretion of the Vice President for Academic Affairs or designee, a student whose college career has been interrupted three years or more may be considered for a "fresh start." Under this option, the Registrar initiates a new GPA for the student beginning with his or her second matriculation and uses this new figure for graduation purposes. Each case is decided on its own merits and each decision has advantages and disadvantages. Students returning to the University for full-time or part-time study after a long interval should consult the Office of Admissions.

Guidelines for the Fresh Start Program are:

a. At least three academic years shall have intervened between exit from Central Connecticut and re-entry at Central Connecticut.

b. The student shall not have attempted more than 60 semester hours at Central Connecticut.

c. The student's record will be treated as those of any transfer student.

d. During the first semester back at Central Connecticut, the student shall be restricted to 16 hours or less.

e. Graduation requirements shall be those in the catalog in force at the time of re-entry.

f. The option can be used only once.

## Special Student Services

Students with disabilities who wish to attend Central Connecticut are urged to contact Dr. George Tenney, Director of the Office of Special Student Services (Willard Hall 100, 827-7651) for assistance in making application and educational planning. (See Special Programs -- Special Student Services.) Early Application is recommended. The deadline for completed application is April 1 for the fall semester. For the spring semester, the deadline is November 1. Information relating to the Admissions Testing Program for Handicapped Students may be obtained by writing to Educational Testing Service, ATP Services for Handicapped, PO Box 6226, Princeton, NJ 08541-6226.

## Educational Opportunity Program

Educational Opportunity Program (EOP) is Central Connecticut's five-week summer program designed for students who have the potential to do college-level work, but who do not meet regular admissions standards. Students must be Connecticut residents with a high school diploma or G.E.D. and demonstrate a financial need.

EOP students spend one summer session in Central Connecticut's residence halls, all expenses paid -- books, tuition, room and board. Those accepted spend weekdays in mathematics, English, study skills, reading and personal growth courses. In the evenings, they receive one-on-one tutoring and counseling. Late afternoons and weekends are devoted to a variety of activities.

EOP students are interviewed and evaluated halfway through the program and at its conclusion. If successful in completing the program, they are admitted to the University as full-time students in good standing. Inquiries should be addressed to the Director of Educational Support Services (Memorial Hall, 827-7119).

## CONNCAP

Serving selected high school students from New Britain and Waterbury, the Connecticut Collegiate Awareness and Preparation Program is an Upward Bound-type program designed to help its students successfully complete high school and to enroll in a college or other post-secondary institution following graduation. Working cooperatively with the high schools in both cities, the CONNCAP program provides a range of activities and

services to help strengthen students academic skills, to provide educational and other enrichment activities, and to increase motivation and the desire to succeed.

CONNCAP activities and services take place on the Central Connecticut campus during the summer program, and in the high schools and on campus during the school year.

CONNCAP students are selected for the program during the spring of their eighth-grade year. Students who successfully complete four years of CONNCAP will be accepted by any of the universities within the Connecticut State University.

The Central Connecticut CONNCAP program is offered through the Office of Educational Support Services (Memorial Hall, 827-7119). For more information, contact the program director.

## International Students

Academically qualified students from other countries are considered for admission to Central Connecticut. They are expected to fulfill the same requirements as other students. Students applying for the fall semester (August-December) must submit the **Application for International Undergraduate Admission** and all supporting documents no later than April 1. Students applying for the spring semester (January-May) are required to have their application and credentials in by November 1. International students whose native language is not English must submit a Test of English as a Foreign Language (TOEFL) score of 500 or above indicating competence in the English language. International applicants must submit official copies of their secondary and post-secondary educational records. Records in languages other than English must be officially translated into English prior to submission. Student applicants must submit evidence of financial resources adequate for all expenses during the period of study. Information about TOEFL is available from Educational Testing Service, Box 6151, Princeton, NJ 08541, U. S. A. Also, before registering at Central Connecticut, international students must submit a medical history form, results of a complete physical examination, and the parents' or guardian's signed permission for medical treatment.

Central Connecticut is authorized under Federal law to enroll nonimmigrant alien students.

## New England Regional Student Program

Central Connecticut State University is a participant in the New England Higher Education Compact. This arrangement offers residents of the other New England states the opportunity to enroll at Central Connecticut for academic programs unavailable in their home state at the resident tuition rate plus 50 percent. Similarly, Connecticut residents may avail themselves of programs offered by schools in other New England states not available at state colleges or universities in Connecticut.



For more information about two-year, four-year and graduate programs at New England state colleges and universities, write: Office of the Regional Student Programs, The New England Board of Higher Education, 45 Temple Place, Boston, MA 02111, (617) 357-9620.

### **Persons 62 or Older**

The payment of tuition fees and certain other fees is waived for any person 62 years of age or older who has been accepted for admission and is enrolled in a degree-granting program or, if undertaking enrichment courses, on a space-available basis.

### **Veterans/Reservists**

Veterans who wish to attend Central Connecticut must file an application prior to any set deadlines with the Office of Admissions and enroll in a degree program. Upon acceptance, the veteran should register with the Office of Veterans Affairs to receive V.A. educational benefits. The Director is in Willard Hall Room 100 (827-7387). Eligibility for educational benefits lasts for 10 years from the date of separation and, in some instances, depends on whether contributions were made to an education program while on active duty.

An original certified copy of the DD Form 214 (separation papers--copy number 4) should be submitted to the Office of Veterans Affairs if applying for benefits for the first time. Transfer students need only complete the appropriate forms.

V.A. educational benefits are paid at the end of the month for which the veteran has enrolled. Any change in credit load and/or degree program must be reported to the Office of Veterans Affairs since it may affect future benefits.

The Connecticut tuition waiver is available for veterans who served on active duty in the U.S. Armed Forces during time of war. They must have been released from active duty having served at least 90 days under honorable

conditions. The periods of conflict are as follows: Vietnam Era (1-1-64 to 7-1-75), the Korean Hostilities (6-27-50 to 1-31-55), World War II (12-7-41 to 12-31-46) or engaged in combat or in a combat support role in the Grenada Invasion (10-25-83 to 12-15-83), the Lebanon Peace-Keeping Mission (9-29-82 to 3-30-84) or Operation Desert Shield and Operation Desert Storm (8-7-90-ending date to be established). The 100% tuition waiver for general fund students (50% of course fees if enrolled through the College of Continuing Education) is available for veterans if they were residents of Connecticut upon entry into service or became residents while in service during the periods indicated above, and are residents when accepted for admission to Central Connecticut. National Guard and tuition waiver students should contact the Office of Administrative Affairs (Administration Building 109, 827-7578).

Educational assistance is available for members of the Selected Reserve. The reserve components include those of the Army Reserve, Navy Reserve, Air Force Reserve, Marine Corps and Coast Guard Reserve, and the Army and the Air Force National Guard.

The Office of Veterans Affairs offers counseling to veterans applying for admission and guidance on how to apply for V.A. benefits.

### **Medical Exam**

The University requires that each full-time student submit a medical history (including current immunization record) and a physical examination form signed by a physician. Additionally, if the student is under 18, the parent or guardian must sign permission for medical treatment.

The completed form must be returned to the University Health Service in Marcus White Annex prior to the beginning of classes. See the Student Information section of the catalog for detailed information. The health form may be obtained from Health Services (827-7375).

# EXPENSES

(Fees and due dates are subject to change without notice)

## COSTS 1991-92

(1992-93 costs not available at time of printing)

The cost of attending Central Connecticut for Connecticut residents is \$1,207.00 per semester. Of this figure, \$690.00 is for tuition, \$260.00 is for general fee, \$220.00 is for State University fee and \$37.00 is for student activity fee.

Out-of-state students pay a higher tuition and State University fee: \$2,234.00 and \$541.00, respectively, per semester.

In addition, students are billed an annual sickness insurance fee of \$159.00 in the Fall semester. Those who already have adequate insurance may complete a waiver form and return it to the University Health Services.

Students residing on campus are charged \$1,032.00 per semester in residence hall fees (including social fee) and \$883.00 per semester for the 21-meal Board Plan or \$920 for the 14-meal plus bonus dollars Board Plan.

Cooperative Education students pay a Co-op fee of \$200.00 for each of eight of ten participating semesters--see under Cooperative Education.

Music students are assessed a special fee--see under Music Department.

## Payments of Tuition and Fees

All students when first accepted for admission or re-admitted to Central Connecticut must pay a non-refundable \$90 admission binder (applied to tuition) within the time specified on the bill. The balance of tuition/fees is due August 1 for the Fall and January 2 for the Spring.

## Room and Board

A \$100.00 housing deposit from those who are currently residing in the residence halls is due April 1 for the Fall semester and November 1 for the Spring semester. The balance of the room charges is due July 15 and January 2, respectively.

Students to be assigned to the residence halls following those due dates will receive notification of bills payable by the due date stated on the bill.

Failure to pay room charges by the due date indicated on the bill will cause cancellation of the student's housing.

All students residing in residence halls are required to participate in a Board Plan (either the 21- or 14-meal plan). The Board Fee is due August 1 for the Fall semester and January 2 for the Spring semester.

## Refund Policy for Full-time Students

Students contemplating withdrawal from the University must complete a formal application with the Associate Dean of Finance and Administration, (Administration 109). All applicable refunds are automatic upon formal withdrawal from the University.

## Fee Refund Policy

Admission Binder Fee, \$90	Non-refundable
Balance of Tuition and Fees	Upon withdrawal from the University, 100% of the balance paid will be refunded prior to first day of classes; 60% of balance during the first two weeks of classes; 40% of the balance during the third and fourth weeks of classes; no refund after the fourth week.
Housing Deposit, \$100	Non-refundable
Balance of Housing Fee	Upon withdrawal from the University, 100% of the balance paid will be refunded prior to first day of classes; 60% of balance during the first two weeks of classes; 40% of the balance during the third and fourth weeks of classes; no refund after the fourth week.
Board Fee	Refundable upon withdrawal from the University on a prorated basis. Full weeks will be used to prorate.

## Refund Policy for Continuing Education Students

See Continuing Education Bulletin for details on refunds.

## Refund Policy for Co-op Students

Refund of the Cooperative Education Fee is the same as refund of regular tuition and fees except formal application for withdrawal from the Co-op Program must be submitted to the Director of Cooperative Education (Willard Hall 100) 827-7482.

## Non-refundable Fees

For all students the application fee, admission binder, housing deposit, late fee and returned check service charges are non-refundable.

## Off-Campus Room Rent

Students living off-campus will pay their room rent directly to the landlord. Such students may arrange with the Cashier's Office for participation in the University Board Plan at the same rate as for on-campus students.

# FINANCIAL AID SERVICES

## Late Fee

A late fee of \$25 is assessed a student paying tuition/fees after the due date.

Students who do not pay fees by the due date will be dropped as full-time students and will forfeit all prior accommodations (such as housing).

## Returned Checks

A service charge of \$15 is assessed for any check returned by the maker's bank for any reason. The University will not accept any future personal checks presented by persons who have previously submitted non-negotiable checks.

## Certificate of Residence

Tuition and fees are determined for each student on the basis of Connecticut or out-of-state residency.

Failure to disclose fully and accurately all facts related to residence shall be grounds for disciplinary action.

To be considered for in-state tuition, incoming non-resident students who feel that they have met residency requirements prior to the start of the semester must complete residency reclassification affidavits obtained from the Admissions Office.

Non-resident students who feel that they have met residency requirements occurring after the start of their first semester must complete residency reclassification affidavits obtained from the Registrar's Office.

## Unpaid Obligations

The Bursar will take appropriate administrative action which may include, but not be limited to, any or all of the following measures against individuals who have an unpaid financial obligation to the University:

- a. Withholding of University services, course registration materials, transcripts of grades or other official papers.
- b. Bar against re-admission.
- c. Deny Continuing Education course registration.
- d. Referral of the unpaid financial obligation to the University's collection service.

The office of the Bursar will serve notice to the student, and failing to receive full payment within five (5) days of the date of such notice, the appropriate sanction will be implemented.

## How to Qualify

Financial aid at Central Connecticut is awarded on the basis of demonstrated financial need and the availability of funds. Financial need is determined through an assessment of a student's family financial situation. This assessment follows a standardized methodology defined by federal regulations and uses need analysis services provided by the College Scholarship Service (CSS) and the U.S. Department of Education (Pell Grant).

To be eligible to receive assistance from federal and/or state financial aid programs, a student must be a U.S. citizen or an eligible non-citizen, have demonstrated financial need, be matriculated, carrying six credit hours per semester, and be making satisfactory academic progress as defined by the University.

*An application and all supporting documents must be filed each year that assistance is requested. Central Connecticut requires several forms before considering a student's application for financial assistance.*

## Major Sources of Financial Assistance

All financial aid programs can be divided into three basic types:

**Scholarships or Grants**—Scholarships or grants are funds awarded to students that do not require repayment. The awards primarily are based on financial need, but some have special qualifications that may consider other factors such as academic ability, athletic ability or other specific talents. (See Honors Scholarships and list of University Scholarships elsewhere in this section.)

**Loans**—Loans are specific sums of money that are awarded to students on the condition that they be repaid by them or, in some cases, by their parents at a predetermined interest rate and over a specific period of time. Specific repayment terms are usually agreed on when the loans are made; education loans generally have a low interest rate with extended repayment periods.

**Employment Opportunities**—Part-time employment or full-time jobs (during the summer or vacation periods), either on- or off-campus, provide income that students may use for their education. The principal aid programs administered by Central Connecticut include:

## Grants or Scholarships

Pell Grant

Supplemental Educational Opportunity Grant (SEOG)

Connecticut Aid for Public College Students Grant (CAPS)

Connecticut State University Grant (CSUG)

Central Connecticut Institutional Scholarships/Grants

## Loans

Perkins Loan (formerly NDSL)

Stafford Loan, formerly Guaranteed Student Loan Program (GSLP)

Supplemental Loan

PLUS (Auxiliary) Loan Program

## Employment

College Work-Study Program (CWSP)

State Work-Study Program (SWSP)

In addition to these major aid programs, applicants are encouraged to explore other sources of financial assistance, including private scholarships, Veteran's/G.I. Bill benefits, and National Guard with Army Reserve. The Financial Aid Office and the University's Career Development Office provide students with listings to a wide variety of part-time jobs, both on- and off-campus.

Central Connecticut also has a Cooperative Education program to help finance a student's education. Students interested in this program should contact the University's Co-op Education Office.

## Financial Aid Award Notification

Financial aid award packages are made up of a combination of the various types of aid programs. Students are notified of awards by mail by late June or mid-December in the case of Spring semester awards.

Questions regarding procedure or awards should be directed to the University's Financial Aid Office, Administration Building, Room 107, 827-7330.

## Satisfactory Academic Progress Policy

Students receiving financial assistance under the federally supported Title IV programs must comply with the *following set of standards to be eligible for such assistance.*

A. Quality of academic performance: Students must be matriculated and must maintain that quality of academic performance required to remain a matriculated undergraduate or graduate student in the University.

B. Speed of completion of the bachelor's degree objective, i.e., satisfactory progress:

1. For full-time undergraduate students, satisfactory progress is defined as the successful completion of a minimum of 24 credit hours of academic work per academic year for students who enroll in the fall and 12 semester hours of academic work for those initially enrolling in the spring or enrolling only in the fall or summer term. An academic year runs from the beginning of the fall term to the end of the spring term. Non-credit developmental courses recommended by the student's academic adviser will count on a semester-hour equivalent basis determined by the University as part of the 24 or 12 semester hours specific above. Failed courses or audited courses will not be counted. Students will be eligible for financial assistance for no more than 10 semesters of full-time attendance or until the student is certified for graduation by the University, whichever comes first.
2. For part-time undergraduate students, satisfactory progress is defined as the successful completion of a minimum of 12 semester hours of academic work per

## FORMS USED TO APPLY FOR FINANCIAL AID

**THE FINANCIAL AID PROCESS:** The Financial Aid process is a form-driven process. Therefore, in order to begin to understand it, a brief description of these forms is required.

A student must apply for all available programs first and then he/she will be notified of eligibility for a Guaranteed Student Loan, Supplemental Loan or PLUS Loan.

FORM	PURPOSE	SOURCE	SEND TO	RECEIVED BY
FINANCIAL AID FORM (FAF)	To establish eligibility for Financial Aid including Stafford Loan	Financial Aid Office or your High School	CSS Princeton, NJ 08541	April 1
PREVIOUS YEAR IRS TAX RETURN & ALL SCHEDULES	To validate information provided on the FAF and SAR	Make copies before mailing to the IRS	Financial Aid Office	April 1
STUDENT AID REPORT (SAR)	To establish eligibility for a Pell Grant	Sent to student by Pell Grant Processing Center	Financial Aid Office	May 1
VERIFICATION WORKSHEET	To validate information	Financial Aid Office	Financial Aid Office	2 weeks after you receive it
FINANCIAL AID TRANSCRIPT	To determine student's financial aid history	Postsecondary schools previously attended	Have it sent to the Financial Aid Office	May 1

**NOTIFICATION OF AWARDS.** On-time applicants are notified by the end of June, or by mid-December in case of Spring semester-only attendees. Those not eligible for financial aid will also be notified. Students who miss the April 1, 1992 deadline will be considered for financial aid only if funds are available after all on-time applicants have been awarded.

**INCOMING STUDENTS** must be accepted for admission and pay the binder fee, by May 1, on time, to be considered for financial aid.

academic year for students who enroll in the fall and 6 semester hours for those initially enrolling in the spring or enrolling only for the fall or summer term. An academic year runs from the beginning of the fall term to the end of the spring term. Non-credit developmental courses recommended by the student's academic adviser will count on a semester-hour equivalent basis determined by the University as part of the 12 or 6 semester hours specific above. Failed courses or audited courses will not be counted. Students will be eligible for assistance for no more than 20 semesters of part-time attendance or until the student is certified for graduation by the University, whichever comes first.

C. Speed of completion of the graduate objective, i.e., satisfactory progress:

1. For full-time graduate students, satisfactory progress is defined as the successful completion of a minimum of 18 semester hours of academic work toward completion of a graduate degree or planned program per academic year for students who enroll in the fall and 9 semester hours for students initially enrolling in the spring or enrolling only for the fall or summer term. Failed courses or audited courses will not be counted. Students will receive financial assistance for no more than 4 semesters of full-time attendance or until the student is certified for program completion by the University, whichever comes first.
2. For part-time graduate students, satisfactory progress is defined as the successful completion of a minimum of 12 semester hours of academic work toward completion of a graduate degree or planned program per academic year for students who enroll in the fall and 6 semester hours for students initially enrolling in the spring or only the fall or summer term. Failed courses or audited courses will not be counted. Students will receive financial assistance for no more than 8 semesters of part-time attendance or until the student is certified for program completion by the University, whichever comes first.

The Satisfactory Academic Progress Policy will be implemented as follows:

- A. For purposes of this policy, Satisfactory Academic Progress will be measured against credits earned during the prior academic year (September through May).
- B. Students who do not attain the appropriate levels of satisfactory progress may complete the needed semester hours during the summer session. Those who do not complete the needed hours during the summer session will not be eligible for any financial assistance for the following academic year.
- C. Upon presentation of evidence of medical emergencies or other legitimate personal or family exigencies, students who have been denied financial assistance under this policy may appeal to the campus officer designated by the President.
- D. Financial Aid programs under this policy are:
  1. Pell Grant (Pell)
  2. Supplemental Educational Opportunity Grant (SEOG)
  3. College Work-Study Program (CWSP)
  4. Carl D. Perkins National Direct Student Loan (NDSL)
  5. Connecticut Aid for Public College Students Grant (CAPS)
  6. Connecticut State University Grant
  7. Stafford Loan — Guaranteed Student Loan Program (GSLP)
  8. PLUS/Supplemental Program

## Honors Scholarships

Approximately two dozen grants-in-aid may be awarded annually to freshmen entering and remaining in the Honors Program.

These grants-in-aid are in the amount of the total of in-state tuition and fees (currently approximately \$2,414 per year).

Standards of high performance in high school are required, and candidacy is by invitation from the Director of the Honors Program.

## University Scholarships

The following scholarships are administered by the CCSU Foundation, Inc. Unless indicated to the contrary, inquiries should be made in writing to the CCSU Foundation, Inc., P.O. Box 612, New Britain, CT 06050.

### General Institutional

**Aetna Life & Casualty Scholarship**—this award is made from funds provided by the Aetna Life & Casualty Foundation. Selection is from students from the CCSU Educational Opportunity Program who are enrolled or are considering enrollment in the Cooperative Education Program. (Inquire Office of Cooperative Education Office.)

**Alpha Phi Omega National Service Fraternity Scholarship** — the student chapter of A.P.O. provides a scholarship to an undergraduate student or entering freshman who demonstrate a record of service to their community and school.

**Jack Arute Sr. Scholarship** — awarded every four years in memory of John Arute Sr. to a graduate of a parochial, private or public school in the New Britain area. (Inquire Office of Financial Aid.)

**Ruthe Boyea Scholarship** — nominated by the Committee for the Concerns of Women, student must show promise of outstanding academic and career potential.

**Business and Professional Women's Club Loan Fund** — through the auspices and generosity of the Business and Professional Women's Club of New Britain, modest, short-term, interest-free loans are available.

**Class of 1971 Scholarship** — established for members or the children of members of the Class of 1971. (Inquire Office of Financial Aid.)

**Connecticut State Employees Association, Chapter 31** — award is made to a student whose parent is a faculty employee of Central Connecticut State University.

**CCSU Foundation Scholarships** —10 four-year renewable scholarships are awarded to incoming freshmen on the basis of a competitive math/English examination.

**Helpers of Youth Scholarship**—scholarships are available annually from this organization for undergraduates or graduates involved in international studies.

**C. J. Huang Scholarship** — to support exchanges with Outang Yu Middle School in Hunan Province, People's Republic of China.

**John T. Huntington Athletic Training Scholarship** — an award is provided for a senior completing requirements for athletic training certification.

**Richard L. Judd Scholarship** — awarded annually to a student from greater New Britain who has demonstrated outstanding service to the community.

**Al Martin Scholarship** — this scholarship is available through the efforts of the Organization of African-American and African Students.

**Robert E. Sheridan Scholarship** — established in memory of Robert E. Sheridan for students who have talent and interest in the fields of public relations, writing and politics. (Inquire Office of Financial Aid.)

**Herbert D. Welte Scholarship Fund** — established for students in international studies who need financial assistance. (Inquire Office of Financial Aid.)

**Alvin B. Wood Scholarship** — awarded to a minority student with a minimum of 24 credits completed, a minimum cumulative grade-point average of 2.8, and demonstrated leadership and service to Central Connecticut State University.

#### **School of Education & Professional Studies**

**Justus Beach Scholarship** — awarded to a full-time minority student in any teacher preparation program.

**Class of 1940 Scholarship** — an annual award is made through the auspices of the Class of 1940 to a junior or senior majoring in teacher preparation.

**DeLott M. Garber Scholarship** — through the efforts of friends, this scholarship is available to a junior or senior in the School of Education.

**Geary Memorial Fund** — awarded to a junior-level student majoring in elementary education, special education or engineering technology.

**Judd Trust Scholarships** — scholarships granted annually to minority students from Hartford who graduate from approved high school programs. (Inquire Office of Financial Aid.)

**Lester Levine Memorial** — an annual award granted to a junior or senior majoring in education.

**Florence Widger Lohse Scholarship** — this award in honor of Mrs. Florence Widger Lohse is made annually to a major in education.

**James A. & Mary Hayes Lord Scholarship** — this scholarship is available to a full-time junior or senior with financial need in either the School of Education or the School of Technology.

**William McInerney/Class of 1938 Scholarship** — awarded to a junior or senior enrolled in any teacher preparation program.

**William & Josephine (Bertino) Tansey Scholarship**—awards made annually to full-time students majoring in Mathematics Education (mathematics teacher preparation program).

#### **School of Technology**

**Stephan and Marie Burg and Family Scholarship**—this scholarship is awarded annually to a junior or senior in the School of Technology.

**William D. Chatfield Memorial** — this award is made annually to a major in Technology Education.

**G. Wesley Ketcham Scholarship** — provides an annual award for a full-time junior or senior in Technology Education.

**Geary Memorial Fund** — awarded to a junior-level student majoring in elementary education, special education, or engineering technology.

**Litton Industries Scholarship** — awarded to junior or senior students in the School of Technology based on scholarship achievement and character.

**James A. & Mary Hayes Lord Scholarship** — this scholarship is available to a full-time junior or senior with financial need in either the School of Education or the School of Technology.

**Raymond N. & Ellen D. Martinsen Scholarship** — one scholarship is awarded annually to a student in the School of Technology.

**Otis Elevator Minority Scholarship** — a four-year scholarship to a minority student of outstanding academic potential studying engineering technology or business.

**Paul K. Rogers Scholarship** — an award given by the Fluid Controls Institute to a full-time student with a long-term career interest in a recognized technological field.

#### **Athletics**

**Joseph Bellomo Scholarship**—annual awards are made to varsity athletes in the sports of softball and wrestling.

**William Detrick Scholarship** — awarded to members of the men's or women's varsity basketball teams.

**Edward K. Owen Scholarship** — this award is made to a student who is a member of the varsity cross country or track teams.

**Jack Suydam Scholarship** — awarded to sophomore-level or higher students who are active members of the men's or women's varsity swimming teams.

#### **School of Arts & Sciences**

**Martin & Sophie Gryzb Memorial Fund** — in memory of Martin and Sophie Gryzb, a prize is awarded for excellence in Polish Studies.

**Joseph Award** — awarded annually to a student who excels in instrumental organic analysis.

**Kwang Lim & Hesung Chun Koh Scholarship** — annual scholarships are available to Korean students.

**Miano Memorial Fund**—an award to a junior chosen alternately from science or mathematics majors and arts or humanities majors.

**Tomestic Scholarship** — through the efforts of students and faculty in the Theatre Department, a scholarship is awarded annually.

**Jerome Vigdor Memorial Fund** — given to a graduating senior enrolled for graduate study in economics.

**Paul Vouras Social Sciences Award** — an award which recognizes a graduating senior in the area of social sciences.

#### **School of Business**

**Business Education Graduate Award** — through the efforts of the Business Education Department faculty, the award is made annually to a current or former graduate student who has completed his or her bachelor's degree requirements at Central Connecticut State University.

**Frank D. Cannata Scholarship** — scholarships awarded to graduating students with the highest cumulative grade-point average majoring in the departments of Accounting and Business Education.

**Middlesex Mutual Assurance Company Scholarship**—this scholarship is awarded to a junior in the School of Business expressing a commitment to a career in the insurance field.

**Otis Elevator Minority Scholarship** — a four-year scholarship to a minority student of outstanding academic potential studying engineering technology or business.

**Stanley Scholar Program** — one four-year scholarship is made to a minority student who is a resident of the New Britain area and is graduating from an approved high school program.

**Stella Willins Scholarship**—an award made to a Business Education major.

#### **ALUMNI ASSOCIATION**

The Alumni Association offers all possible aid and cooperation in promoting and advancing the mission of the University. The Association, in cooperation with the CCSU Foundation, supports programs benefitting Central Connecticut and assists many students through scholarship and academic enrichment programs.

Undergraduates are invited to stop in at the Alumni House, 18 Francis St., opposite Barrows Hall.

# STUDENT INFORMATION

## Orientation

An extensive orientation program for new students is held in late summer, prior to the beginning of classes. The program is designed to introduce students to campus and academic life, and uses peer orientation leaders and small groups to establish a framework for a successful first year at Central Connecticut.

An orientation for parents of traditional-age students is included as part of the program to familiarize parents with the Central Connecticut community and to assist in supporting their son's or daughter's transition to university life.

Special orientation programs are also provided for transfer students. Orientation programs are coordinated by the Student Affairs Office.

## University Counseling Services

The University Counseling Services provides quality individual, family and group counseling and therapy services to students who may be experiencing ongoing or situational psychological or behavioral difficulties. Outreach programs focus on the developmental needs of students, including professionally led groups and workshops and self help groups. Consultative service, research, evaluation and training of new professionals are also provided. Counseling services are private and confidential and no fee is charged. Every effort is made to help students feel safe, welcome and able to discuss their concerns. Call (203) 827-7655 or visit the University Counseling Services Office in Willard Hall 105.

## Campus Ministry

The Campus Ministry Association, located in Marcus White Hall 201, seeks to promote personal and communal growth and well-being at Central Connecticut. Towards this end, campus ministers are available for personal counseling, participation in discussion, and a variety of spiritual, social-action and educational programs. Students are encouraged to call 827-7960 for more information.

## Women's Center

The Ruth Boyea Women's Center (Marcus White Hall 103, 827-7411) named for its founding director, is a multi-purpose program and service center for students, staff and faculty women. The Center offers a variety of services to women, including peer education, support groups, crisis intervention, programming and research on

women's issues, and a luncheon series. The staff of the Center also sponsors educational and cultural programs in response to the needs and interests of campus women. The Center is open Monday through Friday and evenings as posted to serve evening students. For information, call 827-7411 or drop in.

## Drug Education and Prevention Programs

Central Connecticut has been nationally recognized as a leader in alcohol and drug abuse prevention and education. The Connecticut Institute for the Prevention of Alcohol and Other Drug Abuse, staffed by Central Connecticut, provides programs on campus, in the community, and at other colleges and universities, which train students and professionals in alcohol and other drug abuse prevention. The underlying philosophy of the Institute is that a balanced, integrated and healthy lifestyle prevents health problems, including problems related to alcohol and drug abuse. Programs on campus include peer educators' training, a Student Assistance Program, symposia and awareness activities, and "On Campus Talking About Alcohol" workshops. Confidential assessment and referral services are also available.

## Faculty Advising

Each student is assigned a faculty adviser for consultation on course selection and approval of each semester's program of studies. Undeclared majors seeking information should consult the Student Development Center. The academic deans, as well as faculty advisers, assist students on a wide range of academic matters. The Registrar's Office helps resolve problems concerning evaluation of credits, transfer credits, change of program and course conflicts.

## Housing

Since demand for campus residence often exceeds space available, acceptance to Central Connecticut does not automatically guarantee a student a room. Information on University housing is forwarded shortly after official notification of acceptance from the Admissions Office. Applications for rooms, on the forms provided by the University, are considered in the order of acceptance. Because of the housing shortage, students are urged to return housing applications promptly. These applications should be mailed to the Director of Residence Life Mildred Barrows Hall (827-7427).

The Residence Life Office, in Mildred Barrows Hall, assists students in University housing matters. The Living Guide brochure details residence hall policies. Listings of off-campus rentals are also available from the Residence Life Office.



## Rooms for Outstanding Students

Residence hall spaces for Outstanding Students may be reserved for first-time applicants who are in the 80th percentile or higher in their graduating class and who earned scores of 1000 or better on the Scholarship Aptitude Test. Housing spaces will be made available to students meeting the above criteria who have applied to the University prior to January 1.

## Study Abroad Programs

Central Connecticut provides a number of opportunities for students to engage in study abroad for one or two semesters. A variety of summer programs are also available. Special arrangements have been made through various programs to ease credit transfer, housing arrangements and costs. Opportunities are available in more than 35 countries worldwide.

Students interested in applying for overseas study should contact the coordinator, International and Study Abroad Programs, International Affairs Center, Elihu Burritt Library 103.

## Student Center

The Student Center, as a student union, is the "living room" or "hearthstone" of the campus, providing community service, student development opportunities, and various services that support student life.

Lounges, conference rooms, a multi-purpose ballroom, The Devil's Den Cafeteria, the Bookstore, a game room, information services, facilities scheduling, duplicating services, a periodical library, a typing center, a box office, fax machine and other services are available to the campus community. The Student Center also recognizes its role as the primary provider of many services to the commuting student and emphasizes this role in the delivery of these services to the campus.

One of the most exciting services of the Student Center is the University Club, Semesters. Located next to the Devil's Den Cafeteria, Semesters provides a social gathering place for the entire University community day and night. In addition to a high-tech large screen video system, Semesters, with one of the best audio systems in the area, is used each week for dances and social activities. Semesters is also home to a weekly film series, the Kickbacks Coffee House, and Groucho's Comedy Club, all sponsored by the Student Center Program Council.

Students take part in the operation of the Student Center at nearly every level. The Center employs more than 50 students on a part-time basis to operate its various service areas. Students can experience valuable developmental opportunities in leadership and other life skill areas through this employment or through volunteer positions available on the Student Center Board of Governors and its committees. In these positions students interact closely with other students, staff and the

administrative and teaching faculty who are involved in the Student Center's mission of service to the campus community.

Whether one gets involved in its operation or merely uses its many services, the Student Center can enhance a student's experience at the University by expanding horizons or just making life a bit easier and more pleasant.

## Student Activities and Leadership Development

Student activities programming is a valuable part of the educational experience to which every University student is entitled, and is available to every student as a participant/planner and audience/observer.

The Department of Student Activities and Leadership Development is responsible for the delivery of many educational, recreational, social and cultural opportunities.

It is a major function of this office to create the opportunities for student leaders to develop. This will be done in a variety of ways that include workshops, seminars, instruction, and the Second Transcript Program, and a recognition program. Furthermore the Volunteer Assistance Program is also coordinated out of this office. Students are encouraged to volunteer either on campus or in the greater community as part of their university experience.

This office is also responsible for advising the Student Center Program Council and for the general coordination of student activities. It is located on the second floor of the Student Center.

## Student Development Center

The Student Development Center is the umbrella for three essential services that are designed to help students to utilize the extensive resources of the University to their best advantage and to make their academic programs work for them. The service activities of the Student Development Center focus on students at key transition points in their University experience — as they enter the University; when they need additional academic support; and as they plan for entering future careers.

The Student Development Center maintains a resource library in Willard 100 which includes information on careers related to majors, graduate school and career opportunities, and information on major employers and job hunting. The Resource Library also contains job listings and internship opportunities. The services of the Student Development Center are:

### Advising Information Services

The primary mission of Advising Information Services is to assist incoming freshmen and transfer students with planning and to assist undeclared or undecided majors with making choices. This office assists students with evaluating interests through testing and computer-

assisted career search programs such as SIGI Plus, and also provides information on career areas related to major fields and graduate school opportunities.

### **Career Services and Cooperative Education**

The University Career Services Office provides a comprehensive program of career services to all students. Graduating students are provided assistance with making the transition to employment through a program which includes workshops on resume writing, interviewing techniques, job search strategies and information on employment. Recruiters from major area corporations, government agencies and school systems visit the campus as a part of the year-long campus recruiting program. In addition the office maintains listings of full- and part-time jobs. Experiential education is a major focus for undergraduate students, and Career Services coordinates the University's sizeable Cooperative Education program which is described in detail elsewhere in this catalog.

### **Educational Support Services**

Educational Support Services helps students to improve their thinking and study skills. Through assessment of learning styles, workshops and individual counseling students develop learning strategies that work to improve their academic performance. ESS also provides direct referrals to other campus tutorials. The Educational Opportunity Program for entering students and Connecticut Collegiate Awareness and Preparation (CONNCAP) program for students from Waterbury and New Britain high schools are also under the direction of this office.

### **Health Services**

The University Health Service, located in the Marcus White Annex, provides a variety of services to full-time students, undergraduate and graduate. It also serves part-time students, staff and faculty for urgent medical care and makes appropriate referrals where indicated.

Services provided at no cost include treatment of minor illnesses, first aid care, certain treatment of gynecologic and urologic problems, allergy immunization, some on-site diagnostic tests, weight and blood pressure monitoring.

Some treatments require a fee, including, but not limited to, the following: certain laboratory or diagnostic evaluations, prescriptions (starter doses of some are available free) and the cost of a consultation by a specialist.

During the fall and spring semesters the Health Service is open Monday through Friday, 8:30 a.m.-9:45 p.m. (Hours subject to change). Summer hours are Monday through Friday, 8 a.m.-4 p.m.

In keeping with state law and University policy all full-time students are required to submit a MEDICAL

HISTORY, CURRENT IMMUNIZATION RECORD and PHYSICAL EXAMINATION FORM signed by a physician. If the student is under 18, a parent or guardian must sign permission for medical treatment. Rubella immunization guidelines require vaccination after one's first birthday or a laboratory blood test indicating immunity. Measles immunization guidelines require two vaccinations: one after one's first birthday, and a second dose after January 1980. This guideline applies to all those born after December 31, 1956. Additional information regarding immunization requirements will be sent with the health form.

Part-time students are required to submit up-to-date measles and rubella verification (see above).

**FAILURE TO PROVIDE COMPLETE MEDICAL AND IMMUNIZATION RECORDS WILL PLACE A STUDENT ON A RESTRICTION TO REGISTER.**

Matriculated students absent from classes more than five consecutive days for medical reasons should notify the Office of Student Affairs if they have been treated by other than the University Health Service.

The University offers a health insurance policy to full-time students only. Students are urged to read the brochure carefully. The policy is divided in two parts, accident and sickness. The accident portion is a secondary carrier: bills must be submitted to the student's primary carrier first, and the unpaid portion can be submitted through the University Health Service to the insurance company for payment. The sickness portion is a primary carrier and covers medical, surgical, and mental health benefits. A student must be seen by the University Health Service staff for referrals to outside medical facilities in order to guarantee payment through this policy.

### **Student Government**

It is considered to be ideal for the students of a university to have a student association to serve their needs and desires as students. The undergraduate students at Central Connecticut have such a student association called the Student Government Association (SGA).

As members of the SGA, all full-time undergraduate students and all part-time undergraduate students (if the part-time undergraduate student population is charged the student activity fee) have the right to vote in SGA elections. The voting membership of the SGA elects the Student Senate (the SGA's legislature), and high executive officials of the organization.

The undergraduate student body charges the SGA with the responsibility for ensuring the protection of the students' rights, for ensuring that the decisions affecting the students as students are as favorable as possible to the students, for working toward the improvement of the educational process, for enhancing and protecting the students' welfare, and for anything else that they choose for the SGA to pursue.

To finance the operations of their SGA, each voting member of the SGA contributed into the funds under its management through the student activity fee. The SGA spends these funds on the fulfillment of its responsibilities by utilizing them directly, and by financing the activities of numerous student clubs and organizations.

For further information about the SGA, contact the SGA Office, Student Center second floor, room 202 (225-9313).

## Student Regulations

Regulations of the University are contained in the University Catalog, the Student Handbook (available at the Office of Student Affairs) and the Living Guide (available at the Housing Office). Students having questions regarding the regulations may consult the appropriate office.

The student must know and abide by the rules and regulations of the University concerning conduct, attendance, etc. Violators are subject to disciplinary action.

## Student Organizations

Clubs and organizations provide students opportunities for social interaction, recreation, leadership training and enhancement of academic interests. Involvement in organizations for most students is an important aspect of their education. Information about clubs can be obtained at the Activities Carnival or through assigned student organization mailboxes at the Campus Post Office in the Student Center.

Participation in a club or organization can be included in the student's personal transcript through the Second Transcript Program. For more information on this or other aspects of student organizations contact the Student Center, Student Activities Office or Student Affairs Office.

The organizations:

### ACADEMIC RELATED

Accounting Society, Administrative Management Society, American Chemical Society, American Society of Civil Engineers, Anthropology Club, Associated General Contractors, Athletic Trainers Association, Biology Club, Caducean Club, Communications Club, Computer Club, Co-op Education Student Association, Council for Exceptional Children, Distributive Education Clubs of America, Economics Forum, Education Club, Financial Management Association, Geography Club, History Club, Industrial Technology Club, LeSalon—Art Club and Marketing Simulation Club, Marketing Club, Meteorology Club, Minority Business Students Association, Music Educators' National Conference, Nurses Association, Philosophy Club, Photography Club, Physical Education Majors Association, Political Science Forum, Psychology Club, Science Club, Society of Manufacturing Engineers, Sociology Club, Student Peace Education Action Committee, Student Social Workers Organization, Technology Education — collegiate association.

### ETHNIC AND INTERNATIONAL CULTURE

American and Japanese Club, American Indian Cultural Organization, Association for East Asian Studies, Chinese Club, French Club (Le Circle Francais), International Relations Club, Italian Club (Il Circolo Italiano), O.A.A.A.S. — Organization of African-American and African Students, Indian Students Organization, Korean-American Club, Latin American Students Organization, NAACP Organization, Polish-American Club, Vietnamese-American Club, Western Culture Club.

### FRATERNITIES AND SORORITIES

Alpha Pi Omega Fraternity, Gamma Sigma Sigma Sorority, Nu Beta Gamma Sorority.

### GOVERNMENTAL

Senior Class Committees, Graduate Student Government Association, Inter-Residence Council, Residence Hall Councils, Student Center Board of Governors, Student Center Program Council and Student Government Association.

### HONOR AND PROFESSIONAL

Alpha Nu Gamma, Delta Phi Chapter, Foreign Language Honor Society; American Society of Safety Engineers; Delta Mu Delta, National Business Honors Society; Epsilon Pi Tau, Alpha Eta Chapter, International Honorary Professional Fraternity for Education in Technology.

Gamma Theta Upsilon, Honorary Society—Geography; Kappa Delta Pi, Honor Society—Education; Omicron Delta Epsilon, International Honor Society—Economics; Lambda Mu Mu—Mathematics Club; Phi Alpha Theta, National Honor Society—History; Phi Mu Alpha Sinfonia, Music Honor Society; Psi Chi, National Honor Society—Psychology; Upsilon Pi Epsilon, Beta Chapter, Computer Science Honor Society.

### MEDIA AND PUBLICATIONS

CENTRAL RECORDER, newspaper; DIAL, yearbook; HELIX, literary journal; Video Club, WFCS-FM 98, radio.

### PERFORMING GROUPS

Cheerleaders, DanCentral, Ebony Choral Ensemble, Pep Dancers, DrumCorps, Theatre Unlimited.

### RELIGIOUS

Christian Students at Central, Hillel Jewish Student Organization, Muslim Students Organization, Newman Club.

### SPECIAL INTEREST

Alliance of Humans for Non-human Animals, CCSUniverse and Central's Women Student Organization, Dialogues Club, PRIDE — lesbian, gay and bisexual students, ROTC, Student Peace Education Action Committee, Students Promoting Athletics, Whole Earth Club.

### SPORTS AND RECREATION

Bicycle Racing Club, Boxing Club, Chess Club, Crew Club, Fencing Club, Flying Club, Hang Gliding Club, Ice Hockey Club, Karate Club, Lacrosse Club, Outing Club, Rugby Club — Men's, Sailing Club, Scuba Club, Ski Club, Ski Racing Club, Soccer Club — Women's, Weight-Lifting Club and Wrestling Club.

## Cancellation of Classes

If it is necessary to cancel or delay day classes due to inclement weather, the University will notify radio station WTIC-AM, Hartford (1080). If no announcement is made by WTIC-AM of cancellation of classes at Central Connecticut, day classes will be held. Other radio stations will also be contacted.

## **Parking**

Improperly parked motor vehicles may be ticketed or towed from the campus at the owner's expense. Information on traffic and parking regulations can be found in the Student Handbook or from the University Police Department, Sefton Drive, 827-7396.

## **Sports and Recreation**

Central Connecticut encourages a balanced program of sports and recreation consistent with the educational responsibilities of the student.

Intercollegiate athletics are a tradition at Central Connecticut. Varsity contests are scheduled in basketball, cross country, softball, swimming, indoor and outdoor track, tennis, and volleyball for women; baseball, basketball, cross country, football, golf, soccer, swimming, indoor and outdoor track, tennis, track and wrestling for men.

Central Connecticut's Blue Devils have gained national recognition on the playing fields. The University is a member of the National Collegiate Athletic Association, the Eastern College Athletic Conference and East Coast Conference, conducting its athletic programs under the rules of these organizations.

Students may also take advantage of indoor and outdoor facilities for recreational use and intramural programs.

## **Cultural Opportunities**

Many cultural opportunities are available to students at Central Connecticut, both on campus and in the New Britain and Hartford areas.

On campus students will find the new Samuel Shih-Tsai Chen Art Center, featuring an array of international, national and regional artists presenting exhibits of fine arts, design and scholastic arts. Students may also take advantage of concerts, theater, choral performances and dance presentations by student groups, faculty and professional companies from around the world in Maloney Hall.

The Student Center Program Council Arts Committee is a student-run committee committed to presenting a variety of visual and performing arts. Students interested in being involved behind the scenes can contact the Program Council in the Student Activities Office of the Student Center.

Locally students will find two nationally known art museums, the New Britain Museum of American Art and the Wadsworth Atheneum in Hartford. Area theatres include the Hartford Stage Company, the New Britain Repertory Theatre, the Goodspeed Opera House in East Haddam and the Bushnell Memorial Auditorium in Hartford which provides a variety of music, drama and dance offerings.

# ACADEMIC STANDARDS AND REGULATIONS

## Average Program

An average study program for a Central Connecticut student in good standing is considered to be 15 to 17 credits per semester of academic work, depending on classification and major.

A full-time student must carry a minimum of 12 credits per semester. Exceptions to this policy are permitted only through approval of the Academic Dean or Dean of Student Affairs.

Students who fall below the 12-hours load during a semester will be classified as part-time students in the College of Continuing Education and will be charged Continuing Education fees.

Undergraduate students are expected to invest a minimum of four hours per week per credit hour, including class time, for courses which meet for a full semester. For courses which meet for a shorter duration, a corresponding increase in the time invested is expected.

## Classification

Membership in a class is determined solely by total earned credits as follows:

Freshman	0-30 credits
Sophomore	31-60 credits
Junior	61-90 credits
Senior	91+ credits

## Grading System

Central Connecticut uses the letter grading system as follows: A, superior; B, above average; C, average; D, passing but below average; and F, failure. A grade of INC may be recorded, at the discretion of the instructor, for a course in which a student, because of circumstances beyond his or her control, has not completed certain work or has been absent from the final examination. An INC not changed to another grade by the instructor within the first eight weeks of the subsequent major semester will be changed to an F. Responsibility for removing an INC within this time limit rests with the student.

**Grade-Point Average**—For computing grade-point average, grades are evaluated as follows: for each semester hour of credit: A, 4.0 quality points; A-, 3.7 quality points; B+, 3.3 quality points; B, 3.0 quality points; B-,

2.7 quality points; C+, 2.3 quality points; C, 2.0 quality points; C-, 1.7 quality points; D+, 1.3 quality points; D, 1.0 quality point; D-, 0.7 quality points; and F, no quality points.

For example, a student receives an A in two courses one carrying 3 credits and one carrying 1 credit; a B in a 3-credit course; a B- in a 3-credit course; a C- in a 2-credit course; D in a 3-credit course; and an F in a 2-credit course. The grade-point average is computed as follows:

A or 4 quality points per hour x 4 credits	=	16 quality points
B or 3 quality points per hour x 3 credits	=	9 quality points
B- or 2.7 quality points per hour x 3 credits	=	8.1 quality points
C- or 1.7 quality points per hour x 2 credits	=	3.4 quality points
D or 1 quality point per hour x 3 credits	=	3 quality points
F or 0 quality points per hour x 2 credits	=	0 quality points
<b>17 credits for a total of 39.5 quality points</b>		

To calculate this student's semester grade-point average, the quality point total is divided by the total number of credits taken:  $39.5 \div 17 = 2.32$ .

The cumulative grade-point average (CGPA) for a student's record is determined by adding the credits taken and dividing this total into the total number of quality points. The cumulative grade-point average indicates the academic record of the student for the time enrolled at the University.

**Good Standing**—To remain in good standing students must maintain cumulative grade-point averages no lower than these minima:

(1-18 credits)	1.50
(19-36 credits)	1.60
(37-53 credits)	1.80
(54-69 credits)	1.90
(70- Graduation)	2.00

Students are expected to strive for the highest cumulative grade-point averages possible. Those who fall below the minimum averages listed above will be placed on probation or dismissed from the University. Probationary status is limited to one semester.

All courses taken at Central Connecticut, including summer courses, are included in calculating the student's cumulative GPA. Courses taken at other institutions are not included in the student's Central Connecticut GPA.

**Probation**—Students who fall below good standing but not below the following minima will be granted probation for one semester only:

1-18 credits	1.00
(1st semester freshmen only)	
1-18 credits	1.40
19-36 credits	1.50
37-53 credits	1.70
54-69 credits	1.80
70+ credits	1.95

Transfer students who fall below good standing at the end of their first semester but attain at least 1.50 will be placed on probation for the following semester regardless of total credits taken.

Students who are placed on academic probation are encouraged to meet with their academic dean. A student whose grade-point average falls below the minima for probation, or who is already on probation and does not achieve good standing, will be academically dismissed.

**Academic Dismissal**—An academically dismissed student may enter the College of Continuing Education as a non-matriculated student and seek to bring the cumulative grade-point average back to the good standing level. The cumulative average earned at Central Connecticut will not be affected by subsequent work completed at other colleges.

After re-attaining good standing as a result of work in the College of Continuing Education, a student may request readmission to Central Connecticut on a full-time or part-time basis. Consultation with the Admissions Office concerning deadline for reactivation is advised.

Students concerned about their academic progress should consult their academic adviser.

## Honor Requirements

### Dean's List:

*Full-time students.* Dean's list recognition for a semester is granted to students who carried at least 12 academic credits, earned a 3.50 GPA, and did not have any incompletes for the semester at the time grade reports were issued.

*Part-time matriculated students* who have earned a minimum of 12 semester hours for the academic year, and who have achieved a 3.50 cumulative average for Fall and Spring semesters of that school year, and have no "Incompletes" listed on their record are eligible for Spring Semester Dean's List honors.

### Graduation Honors for baccalaureate degree:

<i>Cumulative Grade Point Average</i>	
Cum laude	3.50-3.69
Magna cum laude	3.70-3.89
Summa cum laude	3.90-4.00

For these honors students must earn a minimum of 62 credits in residence at Central Connecticut. Graduation honors are awarded on cumulative earned G.P.A. as of the semester preceding graduation.

## Graduation Standards

For graduation a student must maintain a minimum cumulative grade-point average of 2.00, and receive grades of C- or better in all courses required for the major, minor or concentration with a minimum cumulative grade-point average of 2.00 in the major, minor or concentration.

**Residence Requirements for Degree**—A minimum of 45 credits "in residence" is required for a bachelor's degree. Students transferring from any college are required to take at least 15 credits in their major field and 9 credits in their minor/concentration field at Central Connecticut. Major and minor/concentration minimums are included in the 45-credit residence requirement. "In residence" means attending classes conducted on campus or under supervision of Central Connecticut State University.

Programs in the School of Business require that students must complete at Central Connecticut:

1. At least 24 credits in the business common core and major requirements combined, AND
2. At least 9 credits in their major program as it is defined in the University catalog (i.e., Accounting, Business Education, Finance, Management, Marketing, Management Information Systems).

In no case will a degree be granted unless a student is matriculated for a minimum of one year at the time of graduation.

**Application for Graduation**—A graduating student must file an Application for Graduation in the Office of the Registrar. Those expecting to complete degree requirements in May or August must file by November 1, and those completing in December by May 1. Teacher trainees must file at the same time, in the Registrar's Office, an Application for Teacher Certification.

## Registration

Continuing students register during their current semester for the semester ahead.

**Adding a Course**—Students may add courses on a space-available basis during the first four days of the semester.

**Dropping a Course**—Dropping courses will be allowed up to the end of the chronological mid-point in the course being attempted. Courses dropped by the deadline do not appear on the student's transcript. Forms are available in the Registrar's Office.

**Withdrawal from Courses**—After the deadline for dropping courses has passed (mid term), withdrawal from a course may be granted and recorded on the student's

permanent record as "W" if extenuating circumstances are found to justify withdrawal. Poor academic performance is not considered an extenuating circumstance.

Withdrawals are initiated with the student's academic dean and require the signatures of the instructor, the chairperson of the department offering the course, and the dean of the school offering the course. A grade of "W" does not affect the student's grade point average.

If a student stops attending and fails to officially withdraw from a course, a grade of "F" will be recorded on the student's record.

**Pass-Fail Option**—A limited pass-fail option in courses not required for the major, minor, concentration or general education program is available at the University for students who have completed at least 34 credits. Intent to take a course pass-fail must be filed in the Registrar's Office in the first five days of the semester. Contact the Registrar's Office for more information.

**Audit Option**—Students are permitted to audit courses provided they are taking a minimum of 12 credits in addition to the courses audited. Intent to audit a course requires the written approval of the instructor and must be filed in the Registrar's Office in the first five days of the semester. Courses taken on an audit basis do not affect grade point average and do not apply toward any graduation requirement. The Registrar's Office has details.

**Eligibility for Extra Courses**—A student who wishes to register for more than the customary semester program of academic work should apply in writing to the appropriate academic dean at least one week prior to registration for the semester in which the additional course is to be taken. Credit overload forms are available in the Registrar's Office. A full-time student may take 12 to 18 semester credits without special permission. Students wishing to take 16-week courses along with student teaching must complete the credit overload form.

In general, the only applications approved are from students whose cumulative grade-point average is 2.50 or above, or whose average for the preceding semester is at least 3.00. No student will be permitted to take more than the normal program of study in the first semester.

**Graduate Courses**—Undergraduate students who desire to enroll in graduate courses are required to have a 2.7 GPA and senior standing. Students are also required to obtain the written permission of their adviser, chairperson of the department offering the course, and the graduate dean prior to registration. The necessary form is available in the Graduate Office and Continuing Education.

**Credit by Examination**—Central Connecticut students may earn up to 30 credits by examination. If approved by the department, Subject Examinations from the College-Level Examination Program (CLEP) of the College Entrance Examination Board or any nationally standardized examination will be recognized. A student is permitted one trial for each examination and must achieve a score equal to, or higher than, the national norm for that particular examination to receive credit. When credit is awarded, it will be entered on the transcript, but will not be included in the cumulative grade point average.

Credit is given for United States Armed Forces Institute (USAFI) credit courses taken after 1945 if validated by a certified USAFI center. Credit may also be awarded for certain military service schools.

**Non-Credit Courses**—Non-credit courses are offered by the College of Continuing Education within its academic and community service programs.

The symbol "S" on the transcript will indicate satisfactory completion of a non-credit course. The symbol "U" will indicate unsatisfactory performance or non-completion of the course.

**Placement Testing and Remedial Courses**—All entering freshmen are required to take placement examinations in English, mathematics and foreign language prior to Freshman Registration in order to determine their eligibility for ENG 110 (Freshman Composition) and appropriate mathematics and foreign language courses. Entering students need not take the English placement exam if the English Department or Admissions Office has received their TSWE score from the SAT. The foreign language placement exam is not required of students who have successfully completed three years of a single language in high school. (The high school transcript must be received by the Admissions Office.)

If a student requires remediation in an area, whether the deficiency is determined before or after admission, the student is responsible for making up the deficiency. Remedial courses are not provided as part of the regular offerings at Central Connecticut. A student may make up the deficiency by taking a remedial course at another institution, through private study and re-examination, or by enrolling at the student's own expense in non-credit remedial programs which the University provides from time to time.

The University reserves the right to deny enrollment in any course to students who do not possess the appropriate skills or knowledge.

Transfer students also are required to take the placement tests unless they meet the following conditions:

- Students who transfer credit for ENG 110 or have completed more than 60 credit hours are

- exempt from the English placement exam.
- Students receiving transfer credit for ECM 099, MATH 101, 115, 121, 122, 125, 131, or a 200-level calculus course need not take the Mathematics Placement Exam (MPE). Students with transfer credit for MATH 103, STAT 104 and/or 105, **ONLY**, must take the Mathematics Placement Exam. Students receiving credit for a "math elective," or any other mathematics course, should contact the Mathematical Sciences Department on the need for the MPE.
- The foreign language requirement does not apply to transfer students until fall 1992.

Students planning to study French, Italian or Spanish must also take a placement examination for enrollment in the appropriate level course.

Placement testing dates are published on a regular schedule, and notices are sent to admitted students. Students transferring from other campuses of CSU should request forwarding of their Mathematics Placement Exam to Central Connecticut's Mathematical Sciences Department.

**Mathematics Placement Examination** — The Mathematics Placement Exam (MPE) is administered to all entering and transfer (when appropriate) students, both full- and part-time. There is no passing or failing grade on this examination — its only purpose is to determine the student's background, for placement purposes, in mathematics. It is given a minimum of six times a year (dates/times available from the department). A student may take the MPE any number of times under the following conditions: a) there must be at least one semester gap between each sitting for the exam (e.g. a student taking the exam during the summer is next eligible to take the exam during the winter intersession), and b) since the purpose of the exam is initial placement, once a student has started his/her mathematics course sequence, he/she is no longer eligible to take the exam. While the results of the exam are deemed to be valid for the career of the student while at Central Connecticut, practical experience indicates that the mathematics sequence/courses should be started within one year of taking the MPE. The examination is provided free of charge as part of the department's commitment to the quality of its course offerings.

**State University Student Interchange**—Full-time students at Central Connecticut may take courses not available on campus at one of the other Connecticut State Universities with grades for these courses being treated as though earned at Central Connecticut.

Advance approval to take such courses during the academic year is required. Such students will continue to be registered at Central Connecticut, to which all tuition and fees will be paid.

**Attending Other Institutions**—Students enrolled at Central Connecticut who wish to take courses at other accredited institutions will not receive transfer credits unless prior approval in writing is obtained from the Registrar's Office. Forms for requesting approval to take courses elsewhere are available in that office.

### **Declaration of Major**

A student should select a major after consultation with an adviser. Forms to declare the major are available in the Registrar's Office. See requirements for majors under separate departmental listings.

**Change of Major or Degree Objective**—To change or declare a degree program, major, minor or concentration, a student must initiate a Major and Program Change Form in the Registrar's Office, obtain the necessary signatures and return it to that office.

**Admission to the Professional Education Program**—See School of Education and Professional Studies.

**Course Substitution**—Departmental chairpersons may approve the substitution of one course for another within the major, minor or concentration. The student obtains the appropriate form from the Registrar's Office, has it signed by the chairpersons involved and submits the completed form to the student's academic dean.

### **Withdrawal from the University**

A full-time student wishing to withdraw from the University must confer with the Associate Dean of Finance and Administration (Administration 109) and have the appropriate forms completed and approved by that office **no later than four weeks before the last day of the final examination period**. The dean will assist in filing the form necessary for withdrawal.

Withdrawals after this date will be permitted only under extenuating circumstances and will require consultation and approval of the Associate Dean of Finance and Administration.

Readmission is contingent upon the student's academic standing at the time of re-entry. The student must complete a reactivation form with the Admissions Office to initiate readmission.

### **Other Regulations**

**Attendance**—Regular class attendance is expected by the University. The following attendance regulations are in effect:

- A student is responsible for class attendance although each instructor should establish his/her policy and inform the class.



- A student absent from class for five consecutive days or less should, upon return, explain the absence to the instructor.
- A student, absent for more than five consecutive days for medical reasons, should notify the University Health Center in advance of return. On return, the student obtains a form from the Health Center to show the instructor. If absent for non-medical reasons, the student notifies the Office of Student Affairs, which notifies the instructor.
- Absences for official University trips to conferences, intercollegiate athletic events, musical performances and other events are authorized in advance by the Office of Student Affairs.
- Make-up work is the responsibility of the student.

**Eligibility for Extra-Curricular Activity**—A full-time undergraduate student is eligible for participation in, election and/or appointment to committees and recognized Central Connecticut student organizations, and for participation in extracurricular activities such as intercollegiate athletics, band and theatre, provided the student is matriculated and is not under disciplinary sanction prohibiting same.

This is a minimum requirement for the University and does not replace any conditions established by individual organizations.

**Transcript Policy**—A University transcript is a complete unabridged academic record, without deletions or omissions, providing information about a student from

one institution to another. Central Connecticut issues only official transcripts.

An official transcript includes the signature of an authorized official and bears the legal seal of the University. All transcripts cost \$2. No transcript is issued without the student's written request.

**Change of Address**—A student must notify the Registrar's Office of a change of address. Students living off campus and not at their permanent addresses should register their local address in the Housing Office.

### **Public Access to Student Records**

In accordance with appropriate federal and state laws, the University has designated certain types of student information as public or "directory" information. While the University respects the student's right to privacy and will do its best to protect that privacy, such information may be disclosed. The following is directory information: Student's name, address, phone number, dates of attendance, class standing, academic major, and degree(s) earned. Additional information is also deemed directory information, including participation in officially recognized activities and sports, weight and height of members of athletic teams, and awards received.

Currently enrolled students have the right to request that the University not release address and phone information to individuals or organizations outside the University (though we are required to provide information to organizations which have provided the student any type of financial aid, including loans). A student who wishes to have his/her address and phone number restricted should contact the Registrar's Office. Such protection is provided for currently enrolled students only.

The University assumes that failure on the part of any student to specifically request withholding of certain directory information indicates approval of disclosure.

# ACADEMIC PROGRAMS

The University offers undergraduate programs in liberal arts, teacher education, professional nursing, technology and business administration leading to degrees in Bachelor of Arts, Bachelor of Fine Arts, Bachelor of Science, Bachelor of Science in Nursing, Bachelor of Science in Engineering Technology, and Bachelor of Science in Industrial Technology. A summary of these programs appears on the following pages of this section.

These academic programs are offered in the University's five schools: The School of Arts and Sciences, the School of Business, the School of Education and Professional Studies, the School of Technology and the School of Graduate Studies. Courses applicable to most degree programs are also offered in the College of Continuing Education and the Summer Session.

Certain new or complex courses of study are listed elsewhere under the heading "Special Programs."

At the graduate level, Central Connecticut offers programs leading to Master of Arts and Master of Science degrees and the Master of Science in Organization and Management as well as sixth-year programs. Consult the School of Graduate Studies section of the catalog for more information.

## Requirements for Bachelor's Degree Programs

The General Education program is required of all students. A total of 62 credits of General Education studies must be completed as part of all baccalaureate degree programs. Six credits must be taken in Modes 2-8, three credits in Mode 1, six credits in Areas A and C, three credits in Area B and two credits in Area D. See the General Education section following.

A **Major**, or primary field of study, is required of all students. Certain majors, leading to the B.S. degree, are certifiable for teaching by the Connecticut State Board of Education. Other B.S. programs are not certifiable. B.A. majors in the liberal arts program are not certifiable for teaching. Requirements for the majors are listed individually under the appropriate schools.

A **Minor or Concentration**—a secondary field of study—is required with all majors except those specifically noted in the individual program listings. Minors are certifiable for teaching by the Connecticut State Board of Education and are taken only in conjunction with certifiable majors in the B.S. program. Concentrations are not certifiable and may be taken in conjunction with either B.S. or B.A. majors. Students should consult with the chairperson of their major department on minor and concentration requirements.

In addition to these requirements, most bachelor degree candidates are able to include a number of free elective courses in their programs.

**Business Credit Towards Non-Business Degrees** — No more than 30 semester hours of business courses may be applied to a degree program other than a business degree.

Bachelor's degree candidates must complete the following total number of credits:

B.A.	122
B.F.A.	122
B.S. (Teacher Education)	130
B.S. (Business Administration)	122
B.S.	
(Computer Science and Chemistry)	122
B.S.N. (Nursing)	123
B.S.E.T. (Engineering Technology)	130
B.S.I.T. (Industrial Technology)	122

## General Education

In addition to offering baccalaureate degrees, Central Connecticut aims to provide students with the basic foundation for life-long development as rational members of society, to awaken in them the pleasures of intellectual support, and to elevate their aesthetic sensibilities. This commitment to personal development depends heavily on the acquisition and expansion of formal and tacit knowledge, intellectual processes and techniques. The General Education program is dedicated to this end.

The General Education program seeks to develop in all students skills in communication, an understanding of the cultural, literary, historical, behavioral, artistic and scientific achievements of the past, and an awareness of the various modes of thought which have produced these achievements. The modes are indicated in the organization of the General Education curriculum.

Essentially, college courses, whether for purposes of a major or general education, focus attention on the subject matter. But there is also a place in any curriculum for concentrating on the process of learning and therefore on the student. In this respect certain courses are devoted to self-expression and self-discovery. In recognition of this approach to personal development, the program includes search courses—small personalized classes for those who are curious about the "how" as well as the "what."

## General Education Program

A total of 62 credits of General Education studies must be completed as part of all baccalaureate degrees. Credits must be taken in each of eight modes and four areas as follows:

### Modes of Thought

- |   |           |
|---|-----------|
| 1. Philosophical/Religious  | 3 credits |
| 2. Mathematical/Logical<br>(One MATH or STAT required)  | 6 credits |
| 3. Literary   | 6 credits |
| 4. Artistic   | 6 credits |
| 5. Historical<br>(No more than one non-history course may be taken in Mode 5)                   | 6 credits |
| 6. Behavioral   | 6 credits |
| 7. Social Scientific  | 6 credits |
| 8. Natural Scientific<br>(At least 3 credits in a laboratory science is required <sup>1</sup> ) | 6 credits |

### Areas

- |   |                   |
|---|-------------------|
| A. Communication Skills<br>(ENG 110 is required <sup>2</sup> )  | 6 credits         |
| B. Foreign Language/<br>International<br>(A second foreign language course would count under Area A or C)                           | 3 credits         |
| C. Supplemental<br>(Specifically approved courses in business, education, technology and/or any course in the above Modes or Areas) | 6 credits         |
| D. Physical   | 2 credits         |
| <b>Total</b>  | <b>62 credits</b> |

A list of courses applicable to each Mode and Area will appear at the start of the Course section of the 1991-93 catalog. Where appropriate, courses will also bear a modal number in the description.

All courses required by the major/concentration with modal and area designation may be credited toward both the General Education requirements and major/concentration, up to a maximum of 6 credits under any subject label (e.g. CS, MATH, ENG, etc.)

### Writing Requirement

Where appropriate to subject matter, methodology and class size, all courses designated for General Education, in particular courses in literature, philosophy, the humanities, history and the social and behavioral sciences, will require writing, including assigned papers and essay examinations.

## Foreign Language Proficiency Requirement

Proficiency in a foreign language must be demonstrated before graduation from Central Connecticut. This requirement may be met by 1) three years of one foreign language at the high school (9-12) level; 2) demonstrated elementary proficiency, by completing a second-semester-level Central Connecticut course (112 or 114) or passing a standardized examination, or 3) completing two college-level courses in one foreign language.

## International Requirement

Students are required to take 6 credits of courses designated as international in content (which will be designated "I" in the catalog).

<sup>1</sup> When the credits for two courses exceed 6 credits, the excesses may be ascribed to Area C.

<sup>2</sup> An acceptable CCSU English Placement Test score or an appropriate equivalent is required to be eligible for ENG 110. See under Skills Testing and Remediation Policy.

The requirement of ENG 110 may be waived for a student by the English Department, but the 6-credit requirement will not be reduced.

Students who have not completed their ENG 110 requirement prior to achieving 61 credits are required to take ENG 202 instead.

## ACADEMIC PROGRAMS—Undergraduate

FIELD OF STUDY	MAJOR AND DEGREE		MINOR		CONCENTRATION	
	All Programs Except Teaching 122 Credits	Teaching Programs 130 Credits	Teaching Programs	Teaching Programs	All Programs Except Teaching With BS	All Programs Except Teaching With BA
Accounting	BS					
Accounting Education		BS			Yes	Yes
African-American Studies					Yes	Yes
Anthropology	BA				Yes	Yes
Archaeology	BA				Yes	Yes
Art	BA	BS			Yes	Yes
Biology	BA	BS		Yes	Yes	Yes
Bio. Environmental Science	BA				Yes	Yes
Business					Yes	Yes
Chemistry	BS	BS		Yes	Yes	
Chem.: Biology	BS					
Chem.: Business	BS					
Chem.: Clinical	BS					
Chem.: Computer Science	BS				Yes	Yes
Chinese					Yes	Yes
Communication	BA				Yes	Yes
Computer Science	BS				Yes	Yes
Corrections					(Transfer Credits Accepted)	
Criminal Justice					Yes	Yes
Drug and Alcohol Rehab.					(Transfer Credits Accepted)	
Earth Science	BA	BS		Yes	Yes	Yes
East Asian Studies	BA				Yes	Yes
Economics/Economics-Oper. Res.	BA				Yes	Yes
Elementary Education					(Students major in a subject matter or an interdisciplinary major. Contact departments for details.)	
Engineering					(First two years at Central)	
Engineering Technology	BS*				(Various specializations)	
English	BA	BS			Yes	Yes
Finance	BS					
French	BA	BS		Yes	Yes	Yes
General Science		BS		Yes		
Geography	BA				Yes	Yes
Geog.: Planning	BA				Yes	Yes
Geology					Yes	Yes
German	BA	BS		Yes	Yes	Yes
Health Occup. Ed.		BS				
History	BA	BS			Yes	Yes
Industrial Technology	BS				(Various specializations)	
Italian	BA	BS		Yes	Yes	Yes
Journalism					Yes	Yes
Latin American Studies					Yes	Yes
Library Science (Instr. Tech.)	BS					

\*130 Credits

## ACADEMIC PROGRAMS—Undergraduate

FIELD OF STUDY	MAJOR AND DEGREE		MINOR		CONCENTRATION	
	All Programs Except Teaching 122 Credits	Teaching Programs 130 Credits	Teaching Programs	Teaching Programs	All Programs Except Teaching With BS	All Programs Except Teaching With BA
Linguistics					Yes	Yes
Management	BS					
Mgt. Info. Systems	BS					
Marketing	BS					Yes†
Marketing Education		BS				
Mathematics	BA	BS			Yes	Yes
Math. Actuarial Science	BA					
Math. Operations Research	BA					
Math. Statistics	BA				Yes	Yes
Meteorology					Yes	Yes
Music	BA	BS			Yes	Yes
Nat. Sci. Environ. Interp.	BA					
Nat. Sci. Med. Tech.	BA					
Nat. Sci. Phys. Sci.	BA					
Nursing	BSN*					
Office Education		BS				
Office Systems Mgt.	BS				Yes	Yes
Philosophy	BA				Yes	Yes
Physical Education	BS	BS			Yes	Yes
Physics	BA	BS		Yes	Yes	Yes
Political Science	BA				Yes	Yes
Pol. Sci.: Public Admin.	BA				Yes	Yes
Psychology	BA				Yes	Yes
Reading					Yes	Yes
Religion					Yes	Yes
Russian					Yes	Yes
Science					Yes	Yes
Social Science		BS				
Sociology	BA				Yes	Yes
Social Work	BA					
Soviet—East European Studies					Yes	Yes
Spanish	BA	BS		Yes	Yes	Yes
Special Education		BS			Yes	Yes
Special Studies	BA	BS				
Speech Pathology					Yes	Yes
Statistics					Yes	Yes
TESOL**					Yes	
Technology Education		BS				
Theatre	BFA				Yes	Yes
Vocational-Technical Education		BS			(Special Certification-see Dept. Desc.)	
Women's Studies					Yes	Yes
Writing					Yes	Yes

\*123 Credits

\*\*Teaching English to Speakers of Other Languages

†For Communication Majors only

# SCHOOL OF ARTS AND SCIENCES

George A. Clarke, *Dean*

June B. Higgins, *Assistant Dean*

Scott R. Olson, *Assistant to the Dean*

The School of Arts and Sciences offers programs leading to the bachelor of arts degree, the bachelor of science degree and the bachelor of fine arts degree. These programs are designed to provide a broad liberal education and, in the case of particular bachelor of science programs, to prepare students for teaching careers. The programs also provide appropriate bases for graduate work in a number of academic fields and further professional studies, such as law and medicine.

The School of Arts and Sciences offers programs in the fine arts, the humanities, mathematics, computer science, the natural sciences, and the behavioral and social sciences.

Certain of the following programs are marked "certifiable" for teaching. These programs all have additional requirements which are found in the catalog description of the School of Education and Professional Studies.

*Students planning majors, minors or concentrations must consult with department chairpersons or directors and be assigned a faculty adviser.*

## Anthropology

D. A. Kideckel, *Chairperson*; K. L. Feder, J. A. Lucas, M. A. Park, F. W. Warner. (*Dept. phone 827-7484 or 827-7459*)

Anthropology means "the study of people." It assumes that generalizing about human life takes an integrated study of human biology and culture, past and present, and simple and complex lifeways. Anthropology is comprised of four sub-fields. Cultural anthropology describes and explains variation in human cultural and social types. Physical anthropology explains the physical nature and development of humankind. Archaeology considers past human life and how societies grow, change and become extinct. Linguistics examines human communication processes.

The Anthropology major at the University provides students with a broad social and behavioral science background and prepares the student for a range of careers, from public service to marketing and international management. The Department also offers concentrations in cultural anthropology, archaeology and physical anthropology. These programs give the student a holistic and cross-cultural perspective to complement most majors.

The Anthropology Department has a number of special programs and resources. A biennial summer archaeological field school provides experience in archaeological excavation and analysis. The Connecticut Archaeological Survey also enables participation in archaeological research. The Connecticut Indian Information Service is a clearing house of Indian-related events and issues. The microfiche Human Relations Area Files in the Burritt Library Serials Department is an easy-to-use system for cross-cultural research. We have an extensive collection of human skeletal materials and fossil casts for education in physical anthropology. The editorial office of the *Anthropology of East Europe Review* is also based here.

### Major in Anthropology, B.A.

39 credits in Anthropology and related disciplines, including ANTH 140, 150, 160, 225, 375, 430; one additional upper-level course in physical anthropology, one in archaeology, and two in cultural anthropology. Individual programs will differ according to the particular needs of the student and must be developed jointly with the student's adviser.

### Concentration in Anthropology, B.A. or B.S.

18 credits, including ANTH 140, and 15 credits in Anthropology. Individual programs will differ according to the particular needs of the student and must be developed jointly with the student's adviser.

### **Concentration in Archaeology, B.A. or B.S.**

24 credits including ANTH 140, 150, 318, 320, 329 and 450, with additional courses selected from ANTH 210, 265, 322, 375 and 460. For Anthropology majors, six hours of this concentration may be applied to the major.

### **Concentration in Physical Anthropology, B.A. or B.S.**

18 credits including ANTH 140, 160, 265, 365 and 465, and one from ANTH 270, 325, 345, Bio. 111, ESCI 116 or PSY 452. For students also majoring in Anthropology, three hours of this concentration may be applied to the major.

### **Concentration in Cross-Cultural Comparison, B.A. or B.S.**

18 credits including ANTH 140, 225, 430, one from ANTH 270 or 325, and one from ANTH 422, 426, 475, plus one course from ANTH 250, 320, 370, 339, 440, 445. For students also majoring in Anthropology, three hours of this concentration may be applied to the major.

### **Interdisciplinary Subject Matter Major — Behavioral Science with Anthropology Core, B.S.**

39 credits. Anthropology Core (18-21 credits): Required, ANTH 140, 160 or 225, 250 or 270, 265 or 365, 320 or 339, 325 or 430, 417 or 422 or 426. Psychology (9-12 credits): PSY 112, 200, 235 or 236, 351. Sociology (9-12 credits): Soc. 110, 233, 234, 339.

## **Art**

M. R. Cipriano, *Chairperson*; M. Bassett, M. H. Bornstein, S. Fafunwa, J. Fuller, F. Hentschel, E. M. Hoffman, W. A. Kendra, R. Siporin, R. Todd, S. Vial. (*Dept. phone 827-7326*)

### **Major in Art, B.A.**

39 credits in Art as follows:  
Foundation (18 credits) including ART 112, 113, 120, 124, 130 and 230. Specialization (21 credits) as listed below. The remaining electives to be used in an academic concentration or major-related courses with consent of adviser.

Specialization (21 credits), chosen from the following areas:

- 1) Painting: ART 250, 251, 352, 431, 414, 416, 465
- 2) Printmaking: ART 340, 343, 344, 445, 414, 416, 465
- 3) Sculpture: ART 261, 361, 462, 463, 414, 416, 465
- 4) Crafts: ART 260, 263, 366, 464, 414, 416, 465
- 5) Ceramics: ART 260, 360, 460, 468, 414, 416, 465

- 6) Design/Graphic Design (21 credits): ART 222, 233, 322, 323, 431, 436, and 438 plus 18 credits of electives with consent of adviser.

### **Major in Art Education, B.S.**

(Certifiable for K-12 teaching)

42 credits in Art, as follows:

- a. Required (24 credits), including ART 112, 113, 120, 130, 251, 259, and 6 credits in crafts, including ART 263.

b. Electives (18 credits), may be chosen from the following areas, or a student may choose an emphasis in any one area. The areas are:

**Area 1, Art History:** ART 409, 410, 412, 416, 418, 490.

**Area 2, Design:** ART 122, 222, 322, 405, 421, 422, 436, 442, 447, 465.

**Area 3, Printmaking:** ART 340, 343, 344, 440, 443, 444, 445, 446, 465.

**Area 4, Drawing and Painting:** ART 230, 250, 252, 323, 324, 431, 432, 450, 465.

**Area 5, Sculpture:** ART 422, 462, 463, 465.

**Area 6, Crafts:** ART 260, 264, 360, 366, 460, 464, 465, 466, 467, 468.

In addition, the student must take 30 credits of professional education, including ART 200, 201, 300 and 401, EDF 401, EDSC 375 and 429, SPED 470 and EDSC 256.

### **Portfolio Requirement**

All Art majors (B.A. and B.S. candidates including transfer and certification students) must submit a portfolio of at least 10 works for consideration by the Art faculty. Students whose portfolios do not meet standards will be required to take supplemental courses. No student will be allowed to proceed beyond a 200-level Art course without a successful portfolio review.

### **Interdisciplinary Major — Fine Arts with Core in Art, B.S.**

(Acceptable for certification in elementary education.)

39 credits. For course listing, contact department.

### **Concentration in Art, B.S.**

Elementary Education majors: In addition to ART 110 or 100 in General Education, a minimum of 15 credits in Art is required. These must include ART 120 or 122 and ART 130, and 6-9 credits of Art electives approved by an Art adviser.

Majors in Secondary Education Programs: 18 credits in Art are required grouped according to the recommendations of the Art Department.

### **Concentration in Art, B.A.**

18 semester hours in Art are required, grouped according to the recommendations of the Art Department.

### **Concentration in Art History, B.A. and B.S.**

18 credits in Art History (including ART 110 or both ART 112 and ART 113) are required.

**Concentration Options:** Specialization without a concentration requires at least 12 additional credits in Art or major-related courses with approval of adviser; otherwise a concentration within another academic department is required.

## **Biological Sciences**

L. J. Gorski, *Chairperson*; R. A. Booth, L. M. Carluccio, D. Carter, R. L. Davis, D. J. DeNuccio, C. Fiore, W. Fu, T. W. Lee, K. Martin, R. P. Ostrander, R. Rollin, T. S. Scheinblum, K. Wilson, R. P. Wurst.  
(Dept. phone 827-7279)

The Biological Sciences Department has a full-time faculty representing the major specializations within the broad field of biological sciences. Copernicus Hall houses 13 laboratories for introductory and advanced undergraduate and graduate courses and research in biology.

The Department also has a wide range of modern research equipment and maintains specialized facilities including a greenhouse, apiary, orchard, herbarium, fossil-cutting room, electron microscopy suite, isotope laboratory, darkrooms, experimental gardens and controlled environment rooms.

Through the academic and extracurricular opportunities which the Department offers, students are prepared to understand the living world and to enter various careers in biology.

### **Major in Biology, B.S.**

(Certifiable for Secondary teaching)

37 credits in Biology as follows: BIO 121, 122, 221 or 222, 226 or 227, 306, 316, 405, 411 and either 412 and 413 or 449 or 318 or 410, and Biology electives. Credit for both 412 and 318 is not allowed. In addition, the student must take CHEM 121, 122, 450 and 451; PHYS 121 and 122; SCI 417 and MATH 125.

For students contemplating graduate work a year of French or German is advised. A student who majors in Biology is not required to complete a minor but is urged to minor or concentrate in one of the other laboratory sciences or General Science.

### **Minor in Biology, B.S.**

(Certifiable for Secondary teaching)

20 credits in Biology is required including: BIO 121, 122, 221, 227 and 318. In addition, the student must take SCI 417, MATH 125 and CHEM 121. The Department strongly recommends BIO 306.

### **Major in Biology, B.A.**

(a) General Program

30 credits in Biology, as follows: BIO 121, 122, 306, 390, 411 and two courses chosen from among BIO 221, 222, 226 and 227, and 5-7 credits of Biology electives. In addition, the student must take CHEM 121, 122, 311 and 312; PHYS 121, 122 and MATH 125, and with an adviser's approval, either MATH 126 or STAT 215 or CS 113 or CS 213. Completion of a concentration is required and it is recommended that the student concentrate in one of the other laboratory sciences.

(b) Specialization in Environmental Science

61 credits of Biology and related sciences as follows: 31 credits in Biology including BIO 121, 221, 226, 316, 390, 405, 410, 434 and 468. In lieu of a concentration the student must take CHEM 121, 122, 311 and 312 or 450 and 451, 301, 406; PHYS 121 and 122; ESCI 121 and 123 or 450. In addition, MATH 125 is required and BIO 306 is strongly recommended. A search course in Mode 8 is not recommended.

(c) Chemistry-Biology Specialization

34 credits in Chemistry as follows: CHEM 121, 122, 301, 311, 312, 321, 322, 402, 454 and elective(s). In addition, the student must take 27 credits in Biology as follows: BIO 121, 122, 306, 411 and 11 credits chosen from BIO 316, 318 or 412, 410, 449, 463. Also required are PHYS 125, 126 and MATH 121, 122 and 221.

### **Interdisciplinary Major — Science with Core in Biology, B.S.**

(Acceptable for certification in elementary education.)

39 credits. For course listing, contact department.

### **Concentration in Biology, B.A.**

20 credits in Biology, including BIO 121 and 122. BIO 100, 111, 132 and 211 may not be counted toward a major, minor or concentration in Biology.

For concentration in **Environmental Studies, B.S. Elementary**, see Special Programs. For **B.A. Major in Natural Sciences, specialization in Medical Technology or Environmental Interpretation**, see Science and Science Education and Special Programs.

# Chemistry

J. Mantzaris, *Chairperson*; J. V. Arena, P. R. Douville, R. H. Groth, C. A. Jones, A. W. Kozlowski, G. A. Page, T. D. Shine, H. Slotnick. (*Dept. phone 827-7293*)

The Chemistry Department has been approved by the American Chemical Society Committee on Professional Training. Students wishing to meet American Chemical Society certification requirements should consult with the chairperson.

## Major in Chemistry, B.S.

(Certifiable for Secondary teaching)

This program is designed for those students seeking State certification for teaching chemistry at the secondary level and includes a student-teaching component in the senior year at an area school.

36 credits in Chemistry, as follows: CHEM 121, 122, 301, 311, 312, 321, 322, 323, 402 and 460. In addition, the student must take BIO 121; PHYS 125, 126; SCI 417 and 420; MATH 121, 122 and 221, and 4 credits of science electives approved by the chairperson.

For students contemplating graduate work, a year of German or Russian is recommended. A student who majors in Chemistry is not required to complete a minor, but is urged to minor in General Science. MATH 222 is also recommended for students planning graduate work in chemistry.

## Minor in Chemistry, B.S.

(Certifiable for Secondary teaching)

18 credits in Chemistry, including CHEM 121, 122, 301, 311 and one Chemistry elective from courses numbered 300 and above. In addition, the student must take PHYS 121, 122; BIO 121; SCI 417 and MATH 121.

## Major in Chemistry, B.S. (Non-Teaching)

(a) General Program

This program is designed for students wishing to go on to graduate-level studies in chemistry, or those who expect to enter professional chemistry at the bachelor's level.

40 credits in Chemistry, as follows: CHEM 121, 122, 301, 311, 312, 313, 321, 322, 323, 402, 432, 460, 462 and 472. In addition, the student must take PHYS 125, 126 and MATH 121, 122, 221, 222. Computer literacy and experience in the use of chemical literature are recommended. For students contemplating graduate study, a year of German or Russian is recommended. Completion of a concentration is required and it is recommended this be taken in a laboratory science or mathematics.

(b) Specialization in Clinical Chemistry (For a limited number of students, with approval of the director of the program.)

This program is designed for students wishing to work in a clinical chemistry laboratory.

48 credits in Chemistry, as follows: CHEM 121, 122, 301, 311, 312, 321, 322, 323, 402, 432, 454, 458, and 485 (topic as approved by adviser). In addition, the student must take PHYS 125, 126; MATH 121, 122, 221; and BIO 121, 316 and 318 (PHYS 331 may be taken in place of BIO 316). For students contemplating graduate study, a year of German or Russian is recommended. No concentration is required. MATH 222 is also recommended for students planning graduate work in chemistry.

(c) Chemistry-Business Specialization

This program is designed for students wishing to apply their chemistry background to the business management or marketing facet of the chemical industry.

40 credits in Chemistry, as follows: CHEM 121, 122, 301, 311, 312, 313, 321, 322, 323, 402, 432, 460, 462 and 472. In addition, the student must take PHYS 125, 126 and MATH 121, 122, 221, 222. In place of a concentration the following courses are required: ECON 200, 201; AC 201, 202; and either the Marketing or Management sequence. Students in the Marketing sequence must take MKT 303, 307, either MKT 304 or 413, and Law 401 or MGT 301. Students in the Management sequence must take AC 303, MGT 301, either MGT 305 or 307, and Law 401 or MKT 303. Computer literacy and experience in the use of chemical literature are recommended.

(d) Chemistry-Computer Science Specialization

A strong background in computer science has become increasingly important in chemical work. This program affords the student a measure of this needed background.

40 credits in Chemistry, as follows: CHEM 121, 122, 301, 311, 312, 313, 321, 322, 323, 402, 432, 460, 462 and 472. In addition, the student must take PHYS 125, 126 and MATH 121, 122, 221, 222. In place of a concentration, the following courses are required: CS 151, 152, 254 and one elective in Computer Science approved by the Department of Computer Science. Experience in the use of chemical literature is recommended.

(e) Chemistry-Biology Specialization

This program is designed for students who desire a broad background in chemistry and biology or are considering a health-related field upon graduation.

34 credits in Chemistry, as follows: CHEM 121, 122, 301, 311, 312, 321, 322, 402, 454 and elective(s). In addition, the student must take 27 credits in Biology, as follows: BIO 121, 122, 306, 411 and 11 credits chosen from BIO 316, 318 or 412, 410, 449, 463. Also required are PHYS 125, 126 and MATH 121, 122 and 221.



## **Interdisciplinary Major — Sciences with Core in Chemistry, B.S.**

(Acceptable for certification in elementary education.)

39 credits. For course listing, contact the department.

## **Concentration in Chemistry, B.S. (Non-Teaching)**

21 credits in Chemistry, including CHEM 121, 122, 301, 311 and two Chemistry electives selected from courses numbered 300 or above.

# **Communication**

S. S. King, *Chairperson*; N. Asuncion-Lande, R. M. Fischbach, C. Kuo, Y. Ju, S. Mendez-Mendez, A. Moemeka, S. R. Olson, B. Sevitch, J. Parrish Sprowl, D. O. Wardwell, P. E. Wenger. (*Dept. phone 827-7491, 827-7492, 827-7840*)

The Department of Communication offers courses leading to the Bachelor of Arts degree which are designed to challenge students interested in the study of human communication. Communication, broadly conceived, is the purposeful exchange of symbolic information. Communication viewed as human behavior can be examined both in terms of its process and its outcomes and effects. The program of study defines a range of communication problems; determines the appropriate method of inquiry; and searches for answers to the important questions involving the role of communication in individual relationships, in societal settings, in corporate structures and in global interdependence.

The major in Communication, B.A., consists of 39 credits in the department and related courses including COMM 215, 230 and 310. Students must take a total of 21 credits from 300/400-level courses with a minimum of 9 credits from 400-level courses.

These courses are grouped according to certain emphases within the broad field of communication allowing the student the choice of an emphasis that is compatible with his or her aims and interest. These emphases are: (1) **interpersonal communication** for those students interested in a career in communication services; (2) **mass media** for students interested in careers in radio, television or film; (3) **promotion/public relations** for students who wish to develop communication skills for commercial as well as non-commercial employment in advertising or community services; (4) **political communication** for students interested in developing communication skills necessary for working in state or local government; (5) **organizational communication** for students interested in pursuing consulting or in serving as managers for private and public institutions; and (6) **interpreting/deaf and hearing impaired** (a new emphasis) geared for

students who will be working towards gaining knowledge and skills needed by interpreters to work in the professional community as well as educational settings. In addition to these educational and occupational opportunities, a student could choose to pursue directions which could lead to an advanced degree in any of these areas, including the area of communication disorders.

Each student wishing to major in Communication will complete a Preliminary Data Sheet in the Department office. To be admitted to the Department of Communication major, a student must complete at least 30 hours of general education courses with a minimum grade point average of 2.0. Any student refused access to the major may appeal to a committee to be composed of faculty from the Department of Communication. This committee will determine if the student with a below minimum grade-point average possesses a record which warrants special admission to the major.

Curriculum guide sheets listing recommended courses for each emphasis are available in the Department. A maximum of 6 credit hours in related courses may be counted towards the major with permission of adviser and Department chair. Signatures of approval are required prior to registering for these courses. In addition, completion of a concentration in a related field of study in another department at the University is required.

## **Concentration in Communication, B.A. or B.S.**

21 credits in Communication, including COMM 115 or 140; 215; 230; 310 and 9 credits in courses, 6 of which must be numbered 300 or 400.

## **Concentration in Communication, Secondary, B.S.**

21 credits in Communication, including COMM 115 or 140; 215; 230; 285; 310 and 6 credits in courses, numbered 300 or 400.

## **Concentration in Communication, Elementary, B.A.**

18 credits in Communication, including COMM 115 or 140; 215; 230 and 9 credits in courses numbered 300 or 400.

## **Concentration in Speech Pathology, Elementary, B.S.**

18 credits in Communication, including COMM 115 or 140 and 15 credits from COMM 266, 325, 381, 395, 495 or 496.

## **Concentration in Speech Pathology, B.A. or B.S. including B.S., Secondary**

21 credits in Communication from COMM 266, 325, 381, 385, 395, 490, 495, 496.

# Computer Science

C. L. Pelletier, *Chairperson*; F. Abdollahzadeh, J. M. Calvert, H. Z. Chao, J. P. Dichter, W. C. Jones, A. Z. Leibowitz, M. R. Neilforoshan, C. W. Neville, R. L. Thornton. (*Dept. phone 827-7568*)

The Department of Computer Science offers a program of study leading to a bachelor of science degree in Computer Science, one of the first such programs offered in New England. The Computer Science program is fully accredited by the Computer Science Accreditation Board (CSAB). Accredited programs must meet or exceed CSAB criteria for faculty, curriculum, laboratory and computing resources, students and institutional support. Central Connecticut's Computer Science program is the first in the state to receive CSAB accreditation.

All undergraduate students take a common core of courses covering program design, data structures, assembly language programming, digital design and systems programming. Five different emphasis areas are offered to focus on a particular area of the discipline. Topics courses, which allow the department's offerings to keep pace with the rapid advancement of computer technology, are offered for elective credit on a regular basis.

In addition to the regular course work, CS majors may participate in the cooperative education internship program. This program, open to juniors and seniors, allows the student to put her/his skills to use in a real life setting, receiving academic credit for work in a real-world environment.

The computer facilities at the University include a VAX 9000-210, a VAX 8000-550, with numerous remote terminals in several clusters around campus, three VAX station 3100s, five VAX Station 2000s running UNIX, several microcomputer labs — three of which are networked, connecting over 150 IBM-compatible computers around the campus. The main Microcomputer Lab contains over 80 PCs, more than half of which are Intel 80386 based. Plans are in the works to link the Macintosh Lab into the existing PC network.

Central Connecticut is linked to BITNET, an international network of colleges, universities and research institutions. Plans are underway to link the University to Internet.

## Major in Computer Science, B.S. (Non-Teaching)

69 credits. Core (21 credits): CS 151, 152, 253, 254, 354, 355, 376 and PHYS 338. Emphasis (15 credits): Completion of one of the following sequences together with at least one course from each of two of the remaining sequences — 1) CS 464, 465, 481, 2) CS 385, 485, 486, 3) CS 410, 420, 473, 4) CS 423, 462, 490, 5) CS 460, 463, 483. Electives (4 credits): Electives from other

courses listed in the sequences above and CS 290, 300, 398, 407, 450, 495, 498, 499, PHYS 339, 340.

Mathematics and statistics (15 credits): MATH 122, 221, 281 and STAT 215 or 315 plus one elective applicable to a degree in mathematics. MATH 228 or 477 is recommended. Science and quantitative methods (14 credits): One of the following sequences: BIO 121 and 122; CHEM 121 and 122, ESCI 121, 122, 123; PHYS 125 and 126. An additional 6 credits in science and/or courses with a strong emphasis on quantitative methods is required. ECON 485, GEOG 476 and 477, PSY 221 and 222, SOC 400 and 410, and STAT 456 satisfy this requirement.

Computer Science majors are not required to complete a concentration.

## Concentration in Computer Science, B.A. and B.S.

18 credits as follows: CS 151, 152, 253, 254 and 4 semester hours of Computer Science electives which are applicable to the B.S. degree in Computer Science.

# Economics

R. R. Daigle, *Chairperson*; P. L. Altieri, K. H. Kim, C. L. Lawson, J. C. Loughlin, K. T. Pae, A. Papathanasis, A. J. Zottola. (*Dept. phone 827-7626*)

## Major in Economics, B.A.

30 credits including ECON 200, 201, 300, 305 and 310. Three credits toward the 30 credits will be granted for either GEOG 344 or HIST 430 or 465. In addition the student must take MATH 125 and STAT 104, PHIL 120 or MIS 201.

## Major in Economics, B.A. with Specialization in Operations Research

57 credits of Economics and related courses, including ECON 200, 201, 305, 460, 485, MATH 470, CS 271; and either ECON 300, 310, 311, MATH 125, 126, STAT 215, 216 (total 21 credits) or ECON 300, 310, MATH 121, 122, 221, 222, STAT 315, 416 and either MATH 321 or Econ 311 (total 27 credits). The remaining 9 or 15 credits may be elected from Economics courses acceptable for the B.A. Economics major (ECON 470 strongly recommended), MATH 140, STAT 455, 456, CS 285, 372, 450, 473; at least two of these courses must be labeled Economics.

A maximum of 3 credits may be waived from the requirements for this program upon completion of an appropriate cooperative work experience. No concentration is required for students choosing this major.

## **Interdisciplinary Major — Social Science with Core in Economics, B.S.**

(Acceptable for certification in elementary education.)

39 credits. For course listing, contact department.

### **Concentration in Economics, B.S., Elementary**

15 credits including ECON 200, 201, and 9 credits of electives in Economics.

### **Concentration in Economics, B.A. or B.S., Secondary**

18 credits as follows: ECON 200, 201 and 12 credits of electives in Economics. GEOG 344, HIST 430 or HIST 465 may be credited toward the concentration in the B.S. program.

## **English**

R. J. Baiera, *Chairperson*; N. S. Asbridge, G. Belanger, R. L. Bonaccorso, A. Cannella, D. Caswell, W. B. Connolly, J. D. Conway, D. Cook, W. Cook, G. S. Coulter, J. F. Gabriel, D. R. Gallo, B. Galvin, D. Gerstein, J. A. Heitner, A. M. Hirsh, A. Hoffman, L. Jestin, G. Jones, K. Kinyalolo, B. H. Leeds, D. M. Lynch, K. M. Lynch, D. P. McDonough, A. G. Osburne, D. P. Shugert, R. Spiegel, G. J. Tullai, R. S. Vinson, G. J. Weinberger. (*Dept. phone 827-7556*)

### **GENERAL PREREQUISITE**

ENG 110 is a prerequisite for all other English courses.

### **Major in English, B.S.**

(Certifiable for Secondary teaching)

42 credits in English, as follows: ENG 110, 200 or 400, 205, 206, 210, 211, 401, 420 and 492. In addition, 15 credits on the 300-400 level\* as follows: Four courses (12 credits) in British Literature, one in each of the following areas--I. 700 A.D.-1660, II. 1660-1880, III. 1880-1945, IV. Major Figure (Chaucer, Shakespeare, Milton); one course (3 credits) in American Literature. Also, RDG 440 is required for certification.

### **Major in English, B.A.**

39 credits in English, as follows: ENG 110, 205, 206, 210, 211, and one course from the following: ENG 200, 230, 400, 430, 431. In addition, 21 credits on the 300-400 level\* as follows: four courses (12 credits) in British Literature, one each in the following areas--I. 700 A.D.-1660, II. 1660-1880, III 1880-1945, IV. Major-Figure (Chaucer, Shakespeare, Milton); two courses (6 credits) in American Literature — one in a period preceding 1865, one in a period following 1865; one course (3 credits) in World Literature.

\*There is one exception to this statement that the remaining 15 credits must be on the 300-400 level: ENG 220 may be taken as fulfillment of the appropriate area requirement. Also, if a student takes two major figure courses, the second may count as an area fulfillment: Chaucer or Shakespeare for Area I, Milton for Area II. Further substitutions within area requirements are permitted only with prior approval of the of the adviser and the department chairperson.

### **Major in English, B.S.**

(Appropriate for certification in elementary education.)

39 credits as follows: Core (18 credits): ENG 205, 206, 210, 211, 491, 492; Linguistics (6 credits): ENG 230, 300; Composition (6 credits in one sequence): Expository Sequence ENG 202, 401, or Creative Sequence ENG 371 or 372, ENG 373 or 374, ENG 376, 377, or Journalism Sequence ENG 235, 380; Oral Performance (3 credits): COMM 200 or ENG 270 or ENG 274; Literature (6 credits): Two 300/400-level courses in British, American or World literature (ENG 220 may be elected to fulfill 3 credits in this category).

### **Concentration in English, B.A. and B.S., Secondary**

21 credits in English, as follows: ENG 110, 205, 210, and 12 credits of literature electives, with at least 9 credits on the 300-400 level.

### **Concentration in Writing, B.A. and B.S.**

21 credits as follows: ENG 110, 230†, 401, and 12 credits elected from ENG 235, 236, 371, 372, 373, 374, 376, 377, 380, 381, 403; MC 207.

†Students wishing to specialize in Creative Writing should substitute ENG 260 or ENG 262 for ENG 230.

### **Concentration in Journalism, B.A. and B.S.**

21 credits as follows: ENG 110, 235, 236, and 12 credits elected from ENG 380, 381, 412, 416, 418, 495.

### **Concentration in Descriptive Linguistics, B.A. and B.S.**

21 credits as follows: ENG 200, 230, 400, 430, 431 and either a) 6 credits of a foreign language at the intermediate level; or b) CS 271 and 285; or c) SPED 106 and either EDEL 498 or ENG 490 (for independent study in manual sign systems).

## **Geography**

J. N. Snaden, *Chairperson*; J. E. Harmon, I. Kopf, T. J. Rickard, A. R. Smith. (*Dept. phone 827-7218*)

The Geography Department is concerned with the science of location. Geography faculty teach students to use maps, air photos, computers and information about places in understanding how people use the land they live on and what makes that land different from other areas. Geography students learn about the nature of places, human impacts on environment and the proper use of the land. Career opportunities include travel and tourism,

environmental protection, urban, regional and transportation planning, map making, site selection, area studies and computer applications.

#### **Major in Geography, B.A. or B.S.**

36 credits in Geography, as follows: A 21-hour basic core including GEOG 110 or 120; 3 credits in physical geography; 3 credits in cultural geography; 3 credits in geographic techniques; 3 credits in planning; and 6 credits in regional geography courses.

Also, completion of one of four programs as follows:

**Environmental:** 9 credits in physical geography; 9 credits in geographic techniques; GEOG 433; and GEOG 430 or a substitute course. 9 credits of this program may be used to fulfill the requirements of the core.

**Techniques:** GEOG 256, 266, 276; 6 credits from GEOG 442, 476, 477; and GEOG 430 or a substitute course. 3 credits of this program may be used to fulfill requirements of the core.

**Tourism:** GEOG 290, 330, 332, 434; 6 credits in regional geography courses; GEOG 430 or a substitute course. 6 credits of this program may be used to fulfill the requirements of the core.

**General/Regional:** 15 credits of Geography electives.

**Geography Course Groups.** Physical geography courses: GEOG 272, 274, 275, 474. Cultural geography courses: GEOG 220, 222, 290, 344. Geographic techniques courses: GEOG 256, 266, 276, 442, 476, 477. Planning courses: GEOG 241, 420, 433, 439, 440, 441, 443. Regional geography courses: GEOG 120, 330, 332, 337, 339, 348, 434, 436, 438, 459, 480, 490.

Acceptable substitutes for GEOG 430 will be jointly determined by student and adviser. When approved in advance by the student's adviser, up to 6 credits of cognate courses in one or two other disciplines may be applied toward the major in Geography.

Completion of a concentration in another discipline is required, except for elementary education students. Certain concentrations are especially recommended by the Department, depending on the career track chosen by the student. We also encourage participation in Central Connecticut's Cooperative Education program.

#### **Major in Geography with a Specialization in Planning, B.A.**

36 credits as follows: GEOG 110, 241 and 441; 15 credits in geographic techniques; 3 credits from GEOG 440 or 443; 3 credits from GEOG 433 or 439; 3 credits from GEOG 272, 275, 344 or 490; and GEOG 420. A concentration in another discipline acceptable to the student's adviser is required. Students will use CS 113 and STAT 104 or 215 to fulfill their Mode 2 General Education requirement, and will also take ENG 403 to partially fulfill their Area A General Education requirement.

#### **Concentration in Geography with a Specialization in Planning, B.A.**

18 credits in Geography as follows: GEOG 110 and 241; 6 credits from GEOG 256, 266, 272, 476 or 477; 6 credits from GEOG 433, 439, 440, 441 or 442.

#### **Concentration in Geography, B.A., or B.S.**

18 credits in Geography as follows: GEOG 110 or 120; and 15 credits of Geography electives. We recommend these electives include one course from each group listed in the Geography Course Groups above.

#### **Interdisciplinary Major in Mathematics/Science/Geography for Elementary Teachers, B.S.**

(Acceptable for certification in elementary education.)

39 credits in Mathematics, Science and Geography including: MATH 103, 203, STAT 104 and 9-12 credits selected from MATH 115, 121, 125, 305, 306, 309, 446; and either BIO 111 or 132 or 221; and either ESCI 111 or 117; and either SCI 115 or PHYS 111 or CHEM 111, and 0-3 credits from science courses listed in previous science groups; GEOG 110, 120, and 3-6 additional credits in Geography. (Major consists of 18-21 credits in Mathematics, 9-12 credits in Science, and 9-12 credits in Geography.)

**NOTE:** Please consult with the School of Education and Professional Studies concerning additional requirements.

**NOTE:** Geography is not a certifiable subject in Connecticut. Those who wish to teach the subject at the secondary level in the state should major in social science and complete a concentration in Geography as part of the major's requirement.

## **History**

D. G. Sanford, *Chairperson*; A. B. Baker, F. O. Best, S. Blejwas, H. H. Brown, W. F. Donovan, W. S. Hommon, E. Kapetanopoulos, M. Katzman, N. H. Mezvinsky, N. G. Papp, A. C. Richard, C. W. Stephenson, P. Tolis, J. P. Walsh, R. A. Williams. (Dept. phone 827-7469)

#### **Major in History, B.S.**

(Certifiable for Secondary teaching)

39 credits in History, as follows: HIST 121 or 142 and 122 or 143; HIST 261 and 262; 12 credits in the primary area of concentration; 6 credits in the secondary; 3 credits senior seminar (either HIST 493 or 495); and six credits of elective (above 100 level). An optional History Honors Seminar (HIST 494) may be included in the elective category.

History majors must complete 12 credits in 400-level courses. SCI 420 may be taken as an elective when of-

ferred as a 3-credit course. All History majors must take at least one course dealing with the non-western world. This requirement may be met through appropriate basic courses, a course within an area of concentration, or through an elective.

The areas of concentration are: Ancient and Medieval, Medieval and Modern European, American, East Asian, and Latin American. Students in the B.S. program must, in addition, take SSCI 420, EDSC 372/373, EDSC 413, SPED 470, EDF 400 or 401, PSY 235 and EDSC 256 or PSY 250.

This major qualifies a student for certification to teach only history in the secondary schools. History majors, however, may obtain certification to teach all the social studies by taking 15 credits of additional courses distributed among at least four of the following disciplines: anthropology, economics, geography, political science, psychology and sociology.

#### **Interdisciplinary Major — Social Science with Core in History, B.S.**

(Acceptable for certification in elementary education.)  
39 credits. For course listing, contact department.

#### **Major in History, B.A.**

39 credits in History, as stated above for the B.S.

#### **Concentration in History for B.S. Elementary Education Majors**

18 credits of History, for those not fulfilling an Intermediate Grades component in History, as follows: HIST 121 or 142 and 122 or 143; HIST 261 and 262 and 6 credits of History electives.

#### **Elementary Education—Intermediate Grades, History component, B.S.**

18 credits as follows: HIST 121 or 142 and 122 or 143; 261 and 262 and 6 credits of History electives. In addition, students must take RDG 344 and SSCI 315.

#### **Concentration in History, B.A. or B.S.**

18 credits of History, including HIST 121 or 142 and 122 or 143. 6 credits must be taken in 400-level courses at Central Connecticut.

#### **Concentration in Latin American Studies for History Majors, B.S. and B.A.**

(See under International and Area Studies.)

*Phi Alpha Theta* offers the Theodore Paullin Prize for historical scholarship.

## **Mathematical Sciences**

W. J. Driscoll, *Chairperson*; S. A. Bacon, W. W. Boelke, W. E. Boykin, G. L. Chester, P. A. Coe, D. J. Kelly, R. M. Kennedy, S. H. Lewis, R. D. Marzi, D. S. Miller, G. B. Miller, N. Padma, J. K. Piorkowski, M. G. Pronga, E. J. Riel, C. D. Smith, V. Sung, M. W. Swinsick, F. Van Dyke, C. Waiveris. (Dept. phone 827-7374)

#### **Major in Mathematics, B.S.**

(Certifiable for Secondary teaching)

43 credits in Mathematics, as follows: MATH 121, 122, 218, 221, 222, 228, 323, 327, 366, 411, 413; STAT 315, MATH 308 or 328; and 6 credits of Mathematics and/or Statistics electives. In addition, CS 213 is required. It is recommended that students who major in Mathematics elect one year of a laboratory science as part of their General Education program. A plan of study listing the Mathematics courses to be taken to complete the major requirements must be approved by the student's major adviser and filed with the adviser and the Department chairperson prior to the student's acceptance into the Professional Program.

#### **Major in Mathematics, B.A.\***

36 credits in Mathematics and related courses including: MATH 122, 218, 221, 222, 228, 321, and 366. The remaining 15 credits may be selected from MATH 300, 333, 398, 463, 466, 468, 469, 470, 477, 478, 479, 483, 486, 491, 495; STAT 315, 416, 451, 455, 456, 465, 467, 475; ACTL 400, 410, 420, 430, 435, 440, 444, 450, 480. In addition, two laboratory science courses are required; CS 151 or the knowledge of a high-level programming language is highly recommended.

#### **Major in Mathematics with Specialization in Actuarial Science, B.A.\***

58 credits in Mathematics and related courses including: MATH 122, 218, 221, 222, 228, 366; STAT 315, 416; ACTL 400; two credits chosen from ACTL 410, 420, 430, 435, 440, 450; ECON 200, 201; and AC 201. The remaining credits chosen from MATH 300, 231, 335, 470, 477; STAT 455, 475; ACTL 410, 420, 430, 435, 440, 444, 450, 480; and 9-12 credits chosen from AC 202, FIN 300, 335; MKT 303; LAW 250; MGT 301; ECON 450; MC 307; CS 151 (strongly recommended), 152, 253, 450, 473. No concentration is required for students choosing this major.

#### **Major in Mathematics with Specialization in Operations Research, B.A.\***

54 credits in Mathematics and related courses including: MATH 122, 218, 221, 222, 228, 321, 366, 470; STAT 315, 416; ECON 200, 201, 305, 460, 485. The remaining 9 credits may be selected from MATH 300, 477, 478; STAT 451, 455, 456, 467, 475; Economics courses

\*Pending approval

acceptable toward the B.A. Economics major (ECON 470 strongly recommended); CS 151 (strongly recommended), 152, 253, 450, 473. No concentration is required for students choosing this major.

#### **Major in Mathematics with Specialization in Statistics, B.A.\***

57 credits in Mathematics, Statistics and related courses including MATH 122, 218, 221, 222, 228, 321, 366; STAT 215, 315, 416; STAT 216 or 453; two courses chosen from STAT 451, 467 and 475; two courses chosen from STAT 455, 456, 465 and 470. The remaining 12 credits may be selected from the courses listed above or MAT 300, 463, 491, 495; CS 151 (strongly recommended), 152, 253, 450, 473; BIO 250, 405; ECON 460, 485; GEOG 484; PSY 222, 351; SOC. 410. No concentration is required for students choosing this major.

#### **Interdisciplinary Major in Mathematics/Science, B.S.\***

(Acceptable major for certification in elementary education.)

39 credits in Mathematics/Science including: MATH 103, 203, STAT 104 and 9-12 credits selected from MATH 115, 121, 125, 305, 306, 309, 446; and BIO 111, 132, 211, ESCI 111, 117, and one of SCI 115, PHYS 111, CHEM 111. (Major consists of 18-21 credits in Mathematics and 18-21 credits in Science.)

#### **Interdisciplinary Major in Mathematics with Science and Geography, B.S.**

(Acceptable major for certification in elementary education.)

39 credits in Mathematics/Science/Geography including: MATH 103, 203, STAT 104 and 9-12 credits selected from MATH 115, 121, 125, 305, 306, 309, 446; and either BIO 111 or 132 or 211, and either ESCI 111 or 117, and either SCI 115 or PHYS 111 or CHEM 111, and 0-3 credits from science courses listed in previous science groups; GEOG 110, 120, and 3-6 credits in Geography. (Major consists of 18-21 credits in Mathematics, 9-12 credits in Science, and 9-12 credits in Geography.)

*NOTE:* Please consult with the School of Education and Professional Studies concerning additional education requirements.

#### **Concentration in Mathematics, B.S., Elementary**

In addition to the three Mathematics courses required for Elementary Education majors, STAT104 and three courses from MATH 308, 431, 441, 442, 446 and 449 are required.

*NOTE:* Elementary students seeking certification after December 1, 1992 may have to complete a subject matter major. Students seeking certification may have to pass a subject knowledge competency test.

*NOTE:* Elementary majors have three options for a professional component and/or concentration. See Mathematical Sciences chairperson.

#### **Concentration in Mathematics, B.S., Secondary**

21 credits in Mathematics as follows: MATH 121, 122, 221, 222, either MATH 227 or 228, STAT 315, and 3 credits of Mathematics electives which are acceptable toward the B.S. degree in Mathematics.

*NOTE:* The following courses may not be counted toward the requirements for a Mathematics major, or secondary concentrate: ECM 099, MATH 101, 103, 105, 115, 125, 126, 131, 132, 140, 203, 303, 305, 306, 307, 309, 441, 442, 446, 449 and STAT 104.

#### **Concentration in Mathematics, B.A. and B.S., Non-Teaching\***

18 credits in Mathematics, as follows: MATH 122, 218, 221, 222, 228 or 366, and three credits of Mathematics or Statistics electives which are acceptable toward the B.A. degree in Mathematics.

#### **Concentration in Mathematics, B.A. (for B.A. Physics Majors)**

18 credits in Mathematics, as follows: MATH 121, 122, 221, 222, 463 and one course chosen from MATH 228, 321, 471.

#### **Concentration in Mathematics, B.S. (for B.S. Computer Science Majors)\***

18 credits in Mathematics and Statistics as follows: MATH 122, 218, 221, 222, 477 and STAT 315.

#### **Concentration in Statistics, B.A. and B.S.**

21 credits including: STAT 215, 216, CS 151; three courses chosen from MATH 140, 470, STAT 455, 456, 465, 476; one course chosen from the courses listed above or CS 450, 473; BIO 306, 405; ECON 460, 485; GEOG 484; PSY 300, 351; SOC 400, 410.

*NOTE:* At most one course may be used in both the student's major program and the concentration in Statistics.

\*Pending approval

# Modern Languages

D. Pomerantz, *Chairperson*; N. Arbid M. A. Arenas, L. Auld, E. Force, G. A. Iannace, P. R. Kerson, C. S. Lien, F. M. Lougee, M. Passaro, R. A. Picerno, S. R. Schulman, S. L. Smith, S. Tomoda, L. Uribe, M. M. Wallach, S. Yavener. (Dept. phone 827-7508)

## Major in French, German, Italian, B.S.

(Certifiable for Secondary teaching)

38 credits as follows: FR, GER, ITAL 125, 126, 225, 226, 360, 305, 315, 316, 335, 336, ML 408; and 6 credits of directed electives. For students with advanced preparation appropriate substitutions will be made.

## Major in Spanish, B.S.

(Certifiable for Secondary teaching)

38 credits as follows: SPAN 125, 126, 225, 226, 305, 315, 316, 335, 336, 376, ML 408; and 6 credits of directed electives. For students with advanced preparation appropriate substitutions will be made.

## Minor in French, German, Italian, Spanish, B.S.

(Certifiable for Secondary teaching)

23 credits including language courses numbered 125, 126, 225, 226, 305, 316, 335 or 336, and ML 408.

## Concentration in TESOL (Teaching English to Speakers of Other Languages) in Elementary and Secondary Schools for B.S. Major.

21 credits as follows: ENG 230; ENG 200 or 400; ENG 496, 497, and either 6 credits of foreign language at the intermediate level plus one of the following courses, or three of the following courses for the student who already is competent in a foreign language: ANTH 170, 250, ENG 430, SOC 231, HUM 490.

English majors: See catalog reference under English Department.

## Concentration in Modern Language, B.S., Elementary

12 credits as follows: FR, GER, ITAL, RUS or SPAN language courses numbered 125, 126, and 6 credits of directed electives. CHIN 111, 112, 125 and 126.

## Concentration in Bilingual Education, B.S., Elementary

Prerequisite: Native or near-native command of Spanish. 12 semester hours as follows: SPAN 190 or 335; ML 492 or HUM 490; SPAN 435; ENG 496 or SPAN 451.

## Interdisciplinary Subject Matter Major — Modern Languages, French Core, B.S.

(Acceptable major for certification in elementary education.)

39 credits. French Core (21 credits): FR 114\*, 125, 126, 225, 226, 315, 316. Strands: History (6 credits), HIST 346, 545 (open to undergraduates with special permissions); Geography (6 credits), GEOG 110, 221, 332; Political Science (6 credits), PS 104, 336.

\*If FR 114 is not needed for core, students may begin with FR 125. Advanced course will be taken to complete 21 credits.

## Interdisciplinary Major — Modern Languages, German Core, B.S.

(Acceptable major for certification in elementary education.)

39 credits. German Core (21 credits): GER 125, 126, 225, 226, 315, 316, 335, 336. Strands: History (6 credits), HIST 344, 549 (open to undergraduates with special permission); Geography (6 credits), GEOG 110, 221, 332; Political Science (6 credits), PS 104, 336.

## Interdisciplinary Major — Modern Languages, Italian Core, B.S.

(Acceptable major for certification in elementary education.)

39 credits. Italian Core (21 credits): ITAL 125, 126, 225, 226, 315, 316, 441, 442. History (6 credits): HIST 441, 443. Geography (9 credits): GEOG 110, 221, 332. Humanities (3 credits): HUM 490.

## Interdisciplinary Major — Modern Languages, Spanish Core, B.S.

(Acceptable major for certification in elementary education.)

39 credits. Spanish Core (21 credits): SPAN 114\*, 125, 126, 225, 226, 315, 316. Strands: History (6 credits), HIST 381, 382, 443, 485; Geography (6 credits), GEOG 110, 221, 434, 436; Political Science (6 credits), PS 104, 320.

\*If SPAN 114 is not needed for core, student may begin with SPAN 125. Advanced course will be taken to complete 21 credits.

## Major in French, German, Italian, B.A.

30 credits as follows: FR, GER, ITAL 125, 126, 225, 226, 305, 315, 316, 360 and 6 credits of directed electives.

## Major in Spanish, B.A.

30 credits as follows: SPAN 125, 126, 225, 226, 305, 315, 316, 376 and 6 credits of directed electives. For students with advanced preparation appropriate substitutions will be made.

## Concentration in Modern Language, B.A. or B.S.

18 credits as follows: FR, GER, ITAL or SPAN 125, 126, 225, 226 and 6 credits of directed electives,

In Chinese, the requirement is CHIN 111, 112, 125, 126 and 6 credits of directed electives.

In Russian, the requirement is RUS 125, 126, 225, 305 and 6 credits of directed electives.

### Concentration in Latin American Studies

(Spanish Majors, B.S. and B.A.)

21 credits as follows: ANTH 140, 424; HIST 381, 382; GEOG 334, 336; ECON 200 or PS 438. (SPAN 375 and 376 should be taken as electives in the major requirement.)

History majors, B.S. and B.A.: See catalog under History Department.

Majors in other departments: See catalog under Area and International Studies.

### Concentration in Soviet and East European Studies

(See catalog under Area and International Studies.)

### LANGUAGE PLACEMENT EXAMINATION

As of Fall 1991, every student must demonstrate proficiency in a foreign language equivalent to completion of one year of college-level study.

The Department of Modern Languages tests achievement levels in French, German, Italian and Spanish on specified registration dates. Students with skills in languages other than those listed above should arrange with the Department of Modern Languages for verification of their level of proficiency.

These examinations serve both for exemption and placement.

All students, including native speakers, with two years or less of previous foreign language study must take the exams.

Students with three or more years of successful secondary language study in one language are automatically exempt from further required coursework and need not take the exam unless they expect to continue study in that language.

Only students with no foreign language background should register for an elementary language course, numbered 111.

## Music

B. G. Chandler, *Chairperson*; A. M. Boulden, S. W. Davis, H. H. Denmead, J. Ribchinsky, G. Rosa, J. M. Shugert, A. Welwood. (*Dept. phone 827-7251*)

ASSOCIATE FACULTY: M. Taylor, trombone; S. Perry, tuba; L. Felix, voice; C. Coughlin, percussion; A. Spriestersbach, classic guitar; L. Jones, bassoon, saxophone; R. Hoyle, horn; E. Eklof, B. Gryk, M. Tolo, D. Aquino, J. Barneschi, M. Campbell and L. Eckstein, lecturers.

To enroll as a Music major, the student must consult with the chairperson of the Music Department. Entrance auditions along with theory and secondary piano placement tests will be administered by members of the Music

faculty. Students with deficiencies in theory and/or piano will be required to take remedial courses which will not be credited toward the degree.

### Major in Music Education, B.S.

(Certifiable for K-12 teaching)

60 credits as follows: Basic Musicianship — MUS 115, 116, 121, 122, 215, 221, 222, 231, 232, 321, 331, 332, 390 or 395; Music Performance — 14 credits of MUS 178, 7 credits from MUS 140, 141, 142, 143 (a Music degree student must enroll in 141, 142 or 143 each semester except the semester of practice teaching); Music Methods — MUS 310, 315 or 316, 367, 368; and 5 credits from MUS 259, 261, 262, 263, 267, 268, 361 and 362.

Professional Program, 23 or 24 credits: EDF 401, ED-SC 375, 420, PE 255 or 256 and Sp. ED 470.

6 credits in Music may be used to fulfill Mode 9.

*Students enrolled in MUS 177 or 178 must pay an extra non-refundable fee of \$75 or \$150, respectively, each semester.\**

All Music Education majors must enroll in Piano Class until a piano proficiency exam is passed; this exam must be passed prior to junior year acceptance. The piano proficiency exam consists of the following:

1. Sight-reading (four-part harmony as found in a community song book; a simple vocal accompaniment; a simple piano piece).
2. Transposing up or down a second.
3. Harmonizing of a melody.
4. Playing of major and minor scales, two octaves.
5. Playing three short pieces, one from memory.

*\*Subject to change.*

### Major in Music, B.A.

Core curriculum, 42 credits as follows: Basic Musicianship, MUS 115, 116, 121, 122, 215, 221, 222, 231, 232, 321, 331, 332, 390 or 395. Music Performance: 8 credits of MUS 177 and/or 178; 8 credits from MUS 141, 142 and 143.

Electives: 18 credits as follows, choose A, B or C:

- A. Free electives
- B. Concentration outside major
- C. Specialization within major as follows, choose 1, 2, or 3:
  1. Performance: 8 additional credits of 177 or 178; MUS 421; 2 credits of music electives; Senior Recital; 6 credits of free electives.
  2. Theory and Composition: MUS 390 or 395 (whichever was not completed in core curriculum); MUS 495, 470 and 2 credits of MUS 400; Project in Music, 6 credits of free electives.



3. Music History and Literature: MUS 441, 470 and 2 credits of MUS 400, Project in Music; 6 credits from: MUS 430, 431, 432, 434, 435, 436 and 439; 6 credits of free electives.

### **Interdisciplinary Major — Fine Arts with Core in Music, B.S.**

(Acceptable for certification in elementary education.)

39 credits. For course listing, contact department.

### **Concentration in Music**

Students planning to concentrate in Music must consult the Department chairperson for assignment of an adviser.

18 credits in Music, as follows: MUS 110, 170, 270; 3 credits of Music from the 400 level; 3 credits from MUS 177, 250, 251, 264, 350, 351, 364; 3 credits from MUS 140, 141, 142, 143.

## **Philosophy**

A. P. Iannone, *Chairperson*; D. Blitz, L. M. Creer, C. Evangeliou, E. Godway, J. E. McBride, J. McKeon.  
(Dept. phone 827-7632)

### **Major in Philosophy, B.A.**

33 credits in Philosophy, including the following courses: PHIL 230, 320, 330, 346, 368 and 400. In addition, majors must take at least five electives, no more than one at the 100 level and at least two at the 300 level or higher.

### **Concentration in Philosophy, B.S., Elementary**

9 credits in Philosophy.

### **Concentration in Philosophy, B.A. or B.S., Secondary Education**

18 hours in Philosophy, including the following courses: PHIL 230, 330, 120 or 320, and 346 or 368. In addition, concentrates must take at least two electives, no more than one at the 100 level.

## **Physics — Earth Sciences**

A. A. Antar, *Chairperson*; C. Baskerville, S. F. Burns, C. C. Chow, C. W. Dimmick, G. Geyer, L. K. Joyce, K. Larsent, P. LeMaire, S. B. Newman, T. A. Roman, N. Sadanand, R. J. Salamon, L. Tongson.  
(Dept. phone 827-7228)

Located in Copernicus Hall, the facilities of the Physics/Earth Sciences Department include numerous introductory and intermediate/advanced laboratories as well as two teaching laboratories, an observatory containing a 16-inch telescope, a 100-seat planetarium, a 400-kv Van de Graaff linear accelerator, an ion implanter, and a fully equipped weather center which includes a National Weather Service Digital Computer Facsimile System, a rooftop satellite data retrieval system and a fully operational color weather radar monitoring system.

In addition to teaching, the faculty pursue many areas of interest including atomic collisions, ground water pollution, public planetarium productions, lunar, planetary and deep sky observing, weather forecasting and analysis, prediction of thunderstorm activity in Connecticut, science education, particle physics, solid state physics, applied holography and general relativity.

Wherever possible, students enrolled in the programs listed below are encouraged to join with the faculty in their ongoing studies in these and other areas.

Credit is not given toward a major or minor in this Department for PHYS 111, 113, 115 or ESCI 110, 111, 116, 117 or 118.

### **Major in Earth Science, B.S.**

(Certifiable for Secondary teaching)

30 credits in Earth Science, including ESCI 121, 122, 123, 129, 178 or 179, 279 and other electives as approved by faculty adviser. In addition, the student must take CHEM 121, 122; PHYS 121, 122; BIO 121, 122; SCI 417, 420 and MATH 125, 126. A major in Earth Science is automatically qualified to teach general science.

### **Minor in Earth Science, B.S.**

(Certifiable for Secondary teaching)

20 credits in Earth Science, including ESCI 121, 122, 123, 129, 178 or 179 and other electives as approved by faculty adviser. In addition, a student must take SCI 417, MATH 125, 126 and PHYS 121, 122.

### **Major in Physics, B.S.**

(Certifiable for Secondary teaching)

33 credits in Physics: PHYS 125, 126, 220, 225, 250, 305, 320, 331, 350, 425, 426 and 450. In addition, the student must take BIO 121; CHEM 121 and 122; SCI 417 and 420; MATH 122, 221, 222 and 321.

### **Minor in Physics, B.S.**

(Certifiable for Secondary teaching)

18 credits in Physics, including: PHYS 125, 126 220 and 250, and 6 credits of Physics electives. In addition, a student must take CHEM 121 and 122, MATH 121, 122, 221, 222 and SCI 417.

### **Major in Physics, B.A.**

39 credits in Physics, including: PHYS 125, 126, 220, 225, 250, 305, 320, 331, 350, 425, 426, 450 and 470. In addition, the student must take CHEM 121 and 122 and MATH 122, 221, 222 and 321. Completion of a concentration is required, and for students planning graduate work a year of French, German or Russian should be taken.

### **Major in Earth Science, B.A.**

30 credits in Earth Science, including: ESCI 121, 122, 123, 129, 178 or 179. Other elective courses must be chosen from ESCI 221, 222, 278, 340, 341, 342, 343, 421, 424, 430, 440, 450 or GEOG 274. In addition, the student must take CHEM 121, 122; MATH 125, 126; PHYS 121 and 122. A concentration is not required. For students contemplating graduate work a year of French, German or Russian is recommended.

### **Interdisciplinary Major — Sciences with Core in Physics or Earth Sciences, B.S.**

(Acceptable for certification in elementary education.)

39 credits. For course listing, contact department.

### **Concentration in Physics, B.A.**

18 credits in Physics, including: PHYS 125, 126 and 220. The remaining Physics courses will be selected after consultation with the student's Physics Department adviser. In addition, the student must take MATH 121, 122, 221 and 222.

### **Concentration in Meteorology, B.A. and B.S.**

18 credits in Earth Science and related fields including: ESCI 129, 340 and 341. The remaining 8 credits will be chosen from ESCI 342, 343, 430, GEOG 274 and 474. In addition, the student must take MATH 125, 126.

### **Concentration in Geology, B.A.**

18 credits in Earth Science, including: ESCI 121, 122, 123, 221, 222 and one course from ESCI 421, 424 and 440.

### **Concentration in Astronomy, B.A. and B.S.**

18 credits in Astronomy and related fields, including ESCI 178, 179, 278 and 330. The remaining course will be selected from Physics 220, 225 or 425 after consultation with an Earth Science Department adviser. In addition, the student must take MATH 125, 126 and PHYS 121, 122.

## **Political Science**

C. W. Kerr, *Chairperson*; W. L. Brown, A. C. Moran, G. El-Eid, A. G. Smith, M. A. Triebwasser, H. G. P. Wallach. (Dept. phone 827-7460)

### **Major in Political Science, B.A.**

36 credits in Political Science, as follows: PS 104 or 110 and one course in each of the following areas—Political Theory and Methodology; Comparative Government and Politics; International Relations, Law and Organization; Public Law, Methodology and Organizational Behavior. COMM 360 may be applied to the 36-hour Political Science requirement. So may be, when approved in advance by the Departmental adviser, 6 credits from the fields of history, sociology, psychology, economics, geography, mathematics and statistics.

### **Major in Political Science with Specialization in Public Administration, B.A.**

36 credits in Political Science, as follows: PS 110, 230, 340; 3 credits in Economics (except Economics concentrates); PS 344 or 446 and PS 331 or 332. 6 credits from PS 480-481 or 482-483, 490 or 491, or approved 400-level courses in Political Science and related fields. 12 credits of electives from Political Science, or from fields directly related to Public Administration, with prior approval from the Department adviser. Students must also complete a concentration in an area relevant to Public Administration.

### **Interdisciplinary Major — Social Science with Core in Political Science, B.S.**

(Acceptable for certification in elementary education.)

39 credits. For course listing, contact department.

### **Concentration in Political Science, B.A.**

18 credits, of which at least 15 must be in Political Science; the remaining credits may be earned in a discipline relevant to Political Science.

### **Concentration in Political Science, B.S.**

18 credits, including PS 104 or 110. Credit for not more than 6 credits toward a Political Science concentration may be granted, with approval of the Department chairperson, from those areas listed as options for COMM 360, Parliamentary Law and Politics, as a Political Science elective in any of the above programs.

# Psychology

W. O. Sherman, *Chairperson*; C. S. Austad, L. Bowman, A. Chavarro, P. P. Chu, D. B. Engwall, R. J. Fitzsimmons, C. A. Ford, M. B. Goldstein, G. Hampl, A. C. Huston, N. Steefel, R. S. Stowe, S. K. Vaillant, I. Vlahakos, B. M. Waite, J. Ward. (*Dept. phone 827-7607*)

The Department of Psychology offers courses leading to the bachelor of arts and bachelor of science degrees. The Psychology curriculum provides students with a broad view of the field, its methods of study, and the various specialities of modern psychology.

Individuals major in psychology for varied reasons. Many wish to continue their studies in graduate or professional schools of psychology. Others may enroll in non-psychology professional programs such as law, education, social work, etc. Still others study psychology to gain an understanding of people, for later use in management or other business-related careers. Many students enter directly into psychology-related positions in such areas as rehabilitation or human services. Finally, psychology provides a vehicle for personal development and one avenue for pursuing a liberal arts education. Whatever one's reasons for choosing this major, the study of psychology will broaden one's knowledge of people and their behavior and teach one how to study behavior in a scientific way.

The Department places emphasis on quality teaching and encourages individual research and scholarship. For students interested in experimental psychology, laboratory and computer facilities are available. For those interested in child study, excellent opportunities exist for observing and interacting with children. Faculty resources are always available for student consultation.

Students wishing to major in Psychology, upon completion of a data sheet in the Department office, will be assigned advisers to guide their program choices. Curriculum sheets and advisory materials are also available from the Department office.

## Major in Psychology, B.A.

36 credits in Psychology, including the following required courses: PSY 112, 221, 222 and 490. One course is required from each of the following categories: Developmental, PSY 235 or 236; Social/Personality, PSY 372 or 470; Biological, PSY 342 or 450; Clinical, PSY 330 or 351; Experimental, PSY 200, 281 or 440. Electives: Any three additional courses in Psychology.

## Concentration in Psychology, B.A.

18 credits, including PSY 112 (PSY 100 is not acceptable for this concentration).

## Concentration in Psychology, B.S., Elementary

18 credits, as follows: PSY 112, 235 and PSY or EDEL 255; one course from PSY 351, 362, 365; one course from PSY 330, 372, 462, 470; and one additional Psychology course.

## Concentration in Psychology, B.S., Secondary

20 credits, as follows: PSY 112, 235 and PSY or ED-SC 256; three courses from PSY 330, 351, 363, 365, 372, 462, 470; and one additional Psychology course.

## Concentration in Psychology, B.S., Special Education

18 credits, as follows: PSY 112, 200 and 235 or 236; any three courses from PSY 281, 330, 362, 363, 365, 372, 446, 454, 470, 480.

## Interdisciplinary Major — Behavioral Science with Psychology Core, B.S.

(Acceptable major for certification in elementary education.)

39 credits. Psychology core (18-21 credits): Required, PSY 112, 200, 235 or 236, 351; Electives, PSY 281, 362, 365, 372, 390, 428, 448, 454, 460, 462, 470. Sociology (9-12 credits): SOC 110, 233, 234, 339. Anthropology (9-12 credits): ANTH 140, 160 or 225, 270, 265 or 365 or 465, 320 or 339.

## Interdisciplinary Major — Child Study, B.S.

(Acceptable major for certification in early childhood education.)

39 credits. Psychology core (18 credits): Required (12 credits), PSY 112, 200, 235 or 236, 462; Electives (6 credits), PSY 281, 362, 372, 390, 460, 470. English (6-9 credits): Required, ENG 300; Electives (3-6 credits), ENG 200, 431, 491. Sociology (6-9 credits): Required, SOC 233; Electives (3-6 credits), SOC 111, 231, 232, 234, 235. Fine Arts (6-9 credits): Required, ART 414; Electives (3-6 credits), ART 122, 130, 264, 405, 416.

# Religious Studies

J. McKeon (Philosophy), *Adviser*; L. M. Creer (Philosophy); D. Gerstein (English); J. A. Lucas (Anthropology); D. G. Sanford (History). (*Dept. phone 827-7632*)

## Concentration in Religious Studies, B.A. or B.S., Elementary or Secondary

18 credits of approved courses, including one 3-credit course from each of the four specified course areas:

- 1) Comparative Religion (REL 110, World Religions).
- 2) Religious Texts (ENG 360, Old Testament as Literature; ENG 361, New Testament as Literature).

- 3) Historical/Social Science (HIST 377, 378, 435, 436, 441, 473; SOC 330; ANTH 440).
- 4) Philosophical/Religious Thought (PHIL 232, 355, 376, 492; REL 105, 220, 357).

## Science and Science Education

### *Interdepartmental Staff*

R. J. Salamon, *Science and Science Education Coordinator*; *Advisers* — S. F. Burns, L. K. Joyce, L. M. Carluccio, R. L. Davis, R. P. Wurst.

### **Major in General Science, B.S.**

(Certifiable for Secondary teaching)

57 credits of Natural Sciences including BIO 121, 122, 221, 318; CHEM 121, 122, 450-451; ESCI 121, 122, 123, 129, 178 or 179; PHYS 121, 122; SCI 417 and 420. MATH 121 and 122 are required. The completion of a minor in either Biology or Earth Science is also required. If the minor is in Earth Science, BIO 122 is replaced by BIO 227.

### **Minor in General Science, B.S.**

(Certifiable for Secondary teaching)

Restricted to students with a major in Biology, Chemistry, Earth Science or Physics, 31 credits in science, as follows: BIO 121 and 122; CHEM 121 and 122; PHYS 121 and 122; ESCI 121, 123; and one of the following courses—BIO 318, CHEM 311 or PHYS 225. SCI 417 is required.

### **Major in Natural Sciences, B.A.**

a) Specialization in Physical Sciences:

54 credits in science, including CHEM 121, 122; PHYS 125, 126; ESCI 121, 123, 129, 178 or 179; BIO 121, 122. The remaining 18 credits are selected from courses in Physics, Chemistry and the Earth Sciences approved for majors and minors in those fields. MATH 121, 122, 221 are also required. A concentration is not required.

b) Specialization in Medical Technology:

50 credits in science, including BIO 121, 122, 316, 318 and 416; CHEM 121, 122, 301, 311, 312 and 454; PHYS 121 and 122. In addition, the student must take MATH 125 and complete as a senior a year of clinical training and courses in Medical Technology in an approved hospital, for which 30 hours of credit will be awarded. A concentration is not required. R. Wurst is coordinator for this program.

c) Specialization in Environmental Interpretation: 50 credits in the Natural Sciences or in approved areas, including the following:

- 1) BIO 121, 122; STAT 104 or CS 113; ESCI 121, 123.
- 2) Structured elective component. Earth and Planetary Sciences, four courses from the following or from other courses in Earth Science approved by the chairperson of the Physics/Earth Sciences Department— ESCI 129, 178, 179, 201, 301, 424, 440, 450.
- 3) Structured elective component. Life Sciences, three courses from the following or from other courses in Biology approved by the chairperson of the Biological Sciences Department— BIO 121, 150, 221, 222, 226, 227, 405, 436, 444.
- 4) Electives. In lieu of a concentration at least 15 credits with the adviser's approval from the following courses or from any of the Natural Sciences: ART 490; GEOG 256, 272, 276, 433, 442; ANTH 150, 151, 325, 417, 422; SCI 418; PE 303; REC 180.

At least 9 credits of the elective component must be from courses in Biology, Chemistry, Physics and the Earth Sciences, and must be completed at the 300 level or above. 3 credits of Internship (SCI 453) are also required.

S. Burns, L. Carluccio, R. Davis and R. Salamon are members of the advisory committee for this program.

### **Interdisciplinary Sciences Major, B.S.**

(Acceptable major for certification programs in elementary education.)

39 credits. Core: 24-32 credits. Required: Physics (6-8 credits), PHYS 111, 113, or 121, 122, or 125, 126; Chemistry (6-8 credits), CHEM 111, 102, 104 or 121, 122; Biology (6-8 credits), BIO 211, 111, 132 or 121, 122; Earth Science (6-8 credits), ESCI 111, 117 or 121, 122, 123.

**Specialization** — A minimum of 18 credits in a specialization including 6-8 credits in the core of the specialization:

**Physics** — Requires PHYS 121 and 122 as core courses. Choose a minimum of 10 credits from the following electives: PHYS 220, 225, 305, 320, 331. Other electives as approved by adviser.

**Chemistry** — Requires CHEM 121 and 122 as core courses. Choose a minimum of 10 credits from the following electives: CHEM 102, 301, 311, 312, 406, 450, 451, 454. Other electives as approved by adviser.

**Biology** — Requires BIO 121 and 122 as core courses. Choose a minimum of 10 credits from the following electives: BIO 221, 222, 226, 227, 306, 405. Other electives as approved by adviser.

**Earth Science** — Requires ESCI 121, 122, 123 as core courses. Choose a minimum of 10 credits from the following electives: ESCI 129, 221, 222, 440, 450. Other electives as approved by adviser.

**Interdisciplinary Mathematics/Science Major, B.S.**  
(Acceptable major for certification programs in elementary education.)

39 credits. Mathematics (18-21 credits): Required (9 credits), MATH 103, 104, 203; Electives (9-12 credits), MATH 115, 121, 125, 305, 306, 309, 446. Science (18-21 credits): Required, BIO 111, 132, 211, ESCI 111, 117. Choose one of the following: SCI 115, PHYS 111, CHEM 111.

**Interdisciplinary Major — Mathematics/Science/Geography, B.S.**

(Acceptable major for certification programs in elementary education.)

39 credits. Mathematics (18-21 credits): Required (9 credits), MATH 103, 104, 203; Electives (9-12 credits), MATH 115, 121, 125, 305, 306, 309, 446. Science (9-12 credit minimum): Biological Science (3 credit minimum), BIO 111, 132, 211; Earth Science (3 credit minimum), ESCI 111, 117; Phys., Chemistry or Physical Science (3 credit minimum), SCI 115, PHYS 111, CHEM 111. Geography (9-12 credits): GEOG 110, 221; Elective, at least one additional course in Geography.

**Specialization in Science, B.S. or B.A.**

24 credits as follows: 12 to 16 credits from BIO 121, CHEM 121, ESCI 121, 123 or PHYS 121 (or 125), the remaining from BIO 122, CHEM 122, or ESCI 178 or 179, and PHYS 122 (or 126). The student should take at least one course in each discipline, and the 8-credit sequence in any one discipline may be credited toward a major as well.

**Elective Concentration in Science for Elementary Education Majors**

18 credits in science, as follows: 6 credits in the Biological Sciences; 6 credits in the Earth Sciences; 3 credits in Physics, Chemistry or Physical Science; and SCI 414.

## Social Sciences

Staff of the Departments of Social Sciences

*Methods and Supervision:* W. F. Donovan

**Major in Social Sciences, B.S.**

56 credits as follows: 18 credits in History — HIST 121 or 142 and 122 or 143 and 261, 262 and 6 elective credits, three of which must be in non-western history.

18 credits in one Social Science discipline (Anthropology, Economics, Geography, Political Science, Psychology or Sociology) as required by that Department for a concentration, B.S. program.

18 credits from six of the following courses (not to be duplicative of the second category above and must be in a minimum of three additional Social Science disciplines): ANTH 140, ECON 200, 201; GEOG 110, 120; PS 104, 110; PSY 112; SOC 110. 2 credits in Social Science methods, SSCI 420. In addition, students must take ED-SC 256, 373, 413; EDF 400 or 401; SPED 470 and PSY 235. No minor or concentration is required.

## Social Work

B. Sosnowitz, *Director*; B. L. Schreier, *Field Coordinator*. (Dept. phone: 827-7484)

**Major in Social Work, B.A.**

General Program:

Students majoring in Social Work are required to take 27 credits of Social Work, including SW 226, 227, 360, 361 and two semesters of SW 435 as well as one Social Work elective. Each Social Work course requires some field experience. Courses should be taken in sequence whenever possible. Students are also required to take courses in several other disciplines including: SOC 110, 111, 217 or 401 or 402, 231 or 332 or 335, 233, 400 and 452; BIO 111; PS 448, and PSY 235.

The purpose of the Social Work major is to prepare students for beginning social work practice. Since career objectives differ according to the particular interests of each individual, it is advisable for each student to consult with the Social Work faculty about their professional development as soon as possible.

Social work is a field that deals extensively with sensitive social issues and people's personal well-being; therefore, students will be carefully evaluated not only academically but for professional skill. Students must apply and be accepted into the Social Work major by the end of the sophomore year. Applications from transfer students will be taken each semester.

Students admitted to the Social Work major must maintain an average of 2.5 or better in all Social Work courses. Potential for professional skill must be demonstrated in field experiences which are required in all Social Work courses. The faculty will evaluate the field experience along with the academic achievement of the student each semester. Ideally, students entering the Social Work major take the beginning courses with the expectation of continuing in the major. However, it is possible that the student and/or instructor conclude that a student is not fully motivated toward an understanding of the professional as well as the academic responsibilities this major requires. If a student does not meet academic or professional standards, he or she will be placed on provisional status. Written notification will be given and conditions

for full completion of the major discussed with the student. Students will be given the opportunity to correct the problem(s), however, if the student does not demonstrate improvement, he or she will not be allowed to complete the major.

## Sociology

B. R. Baldwin, *Chairperson*; M. L. Ertel, L. J. Evans, R. J. Fernandez, P. A. Hochstim, S. Pease.  
(Dept. phone: 827-7484)

### Major in Sociology, B.A.

#### General Program:

A major in Sociology, whether in the General or Honors Program, has the option of organizing courses around orientations in Social Research (Sociology and Scientific Method, Research Methodology, Analysis and Interpretation of Social Data, Independent Studies); or Gerontology (Minorities and Social Inequality, Sociology of Aging, Population and Society, Death and Dying). A major may take a concentration in Criminal Justice, or select any of the concentrations the University offers for B.A. students. A specialization in Public and Corporate Administration is also available. Details are available through a Department academic adviser.

33 credits, including SOC 110, 221, 217 or 401 or 402. Of the remaining 24 credits, 12 hours should be at the 300 or 400 level. In addition, the student is required to take STAT 215. Individual programs will differ according to the particular needs of the student and must be developed jointly with the student's adviser.

### Honors Program

33 credits, including SOC 110, 221, 400, 401 or 402 and 6 credits of SOC 433. Of the remaining 15 credits, 9 credits should be at the 300 or 400 level. In addition, the student is required to take STAT 215 and 216. Individual programs will differ according to the particular needs of the student and must be developed jointly with the student's adviser.

### Concentration in Criminal Justice, B.A. and B.S.

18 semester hours, SOC 235, 337, 338, 339, 435, and PS 332. Students concentrating in Criminal Justice are urged to consult the director of the criminal justice program. Students are encouraged to take the applied courses in Criminal Justice offered by the Counseling and Human Services Department. Completion of this concentrate prepares students for entry-level positions in the Criminal Justice system.

### Concentration in Sociology, B.A. and B.S.

18 credits, including SOC 110 and 15 hours of electives in Sociology and certain disciplines, subject to approval of the student's adviser. Normally not open to Anthropology majors.

### Interdisciplinary Major — Behavioral Science with Sociology Core, B.S.

39 credits. Sociology Core (18-21 credits): Required, SOC 110, 233, 234, 339; Choose two from SOC 231, 232, 332, 334, 335, 336, 338; Choose one from SOC 401, 402, 411, 452. Psychology (9-12 credits): PSY 112, 200, 235 or 236, 351. Anthropology (9-12 credits): ANTH 140, 160 or 225, 270, 265 or 365 or 465, 320 or 339.

## Theatre

L. B. Johnson, *Chairperson*; T. J. Callery Jr., C. Fellows, V. L. Finizio, V. C. Gagliardi, J. Stremien, T. L. Torp.  
(Dept. phone 827-7398)

### Major in Theatre, B.F.A.

60 credits completed in one of the following programs:

- a) Acting. 60 credits in Theatre, including 50 credits required as follows: TH 099 (repeated eight times), 111 or 121, 126, 135, 145, 235, 236, 238, 239 (repeated for 3 credits), 246, 327, 336, 347, 373, 447, 449, 456, 483, 484; 10 credits of Theatre electives, excluding TH 100.
- b) Directing. 60 credits in Theatre, including 43 credits required as follows: TH 099 (repeated eight times), 111, 117, 121, 135, 145, 151, 246, 251, 336, 352, 373, 374, 454 or 456, 485 and 488. In addition, 17 credits of Theatre electives, excluding TH 100.
- c) Design and Technical Theatre. 60 credits in Theatre, including 39 credits required, as follows: TH 099 (repeated eight times), 111, 115 (3 credit min.) or 115 (1 credit min.) and 327, 117, 121, 145, 151, 212 or 322, 213-214 or 126, 217, or 481 through 487 (3 credits min.), 316, 318, 373, 374. 21 credits of Theatre electives, excluding TH 100.
- d) General Theatre. 60 credits in Theatre, including 32 credits required as follows: TH 099 (repeated eight times), 110, 111, 117, 121, 126, 145, 151, 373, 374, 470, 489; 14 credits of Theatre electives, excluding TH 100, and 14 credits of Theatre or related fields courses approved by the student's adviser.

- e) **General Theatre/Dance Emphasis.** 60 credits in Theatre including 32 credits required as follows: TH 099 (repeated eight times), 110, 111, 117, 121, 126, 145, 151, 373, 374, 470, 489; 14 credits of Theatre electives, excluding TH 100, and 14 credits of related fields courses as follows: DAN 150, 151, 152, 153, 157, 158, 275, 352, TH 487 (may be repeated once), MUS 109.

In addition to course requirements, B.F.A. Theatre majors must register for Theatre Practicum each semester of their four years. Majors should consult advisers for specific production requirements for each program, as well as on selection of General Education courses appropriate to program.

**NOTE:** TH 100 may not be taken for credit toward the Theatre major. Majors are urged to complete at least 6 credits in the Summer Theatre Program, TH 490. A concentration is not required with this major. See the introductory pages of the catalog for general information on theatre facilities.

#### **Major in Theatre, B.A.**

34 credits as follows:

A. **Core:** 22 credits including—

1. TH 099 (minimum of four times), 111, 115, 117, 121, 135, 143, 151.
2. 3 credits from TH 373, 374, 470, 489.

B. **Emphasis:** 6 credits from one of the following categories—

1. Acting/Theatre Voice: TH 145, 238, 239, 246, 347.
2. Directing: TH 352, 485, 488.
3. Design/Tech: TH 115 (3 credits max.), 212, 213, 214, 217, 316, 318.
4. Costuming/Makeup: TH 115, 126, 222, 322, 327, 482.
5. Dance/Movement: At least 2 credits from TH 235, 236; at least 2 credits from among DAN 151, 152, 153, 157, 158, 164; and 2 credits from among the above Dance/Movement courses or DAN 150, 275, 352, 490.

C. **Electives:** 6 credits of Theatre electives (excluding TH 100 and 110).

#### **Interdisciplinary Major — Fine Arts with Core in Theatre, B.S.**

(Acceptable for certification in elementary education.)

39 credits. For course listing, contact the department.

#### **Concentration or Minor in Theatre, B.A. or B.S.**

21 credits in Theatre including TH 111, 117, 121, 135, 143, 151 and 3 credits from among TH 373, 374, 470, 489.

#### **Minor in Theatre, B.S., Elementary**

12 credits in Theatre from among TH 111, 117, 121, 135, 143, 151.

# SCHOOL OF BUSINESS

Larry E. Short, *Dean*

Patricia Sanders, *Associate Dean*

Richard Cardinali, *Assistant to the Dean*

The School of Business offers programs leading to the Bachelor of Science degree in Business Administration and Business Education. The aim of these programs is to provide students a broad educational foundation to prepare them for responsible citizenship and leadership roles in business and society—domestic and worldwide.

The curriculum of the School of Business is designed to be responsive to social, economic and technological developments and reflects the application of evolving knowledge in economics, and the behavioral and quantitative sciences.

The School of Business is organized into six departments:

Accounting

Business Education

Finance

Management and Organization

Management Information Systems

Marketing

## Standards

Undergraduate professional work in the School of Business is concentrated in the last two years of the student's four-year program. With the exception of AC 311 and AC 312, students registering in business courses at the 300 and 400 level must be juniors or seniors and must have a cumulative grade-point average of at least 2.00.

Transfer students are required to complete a minimum of 45 credits "in residence." At least 24 of these credits must be taken in the Business common core and major requirements. At least 9 of these 24 credits must be taken in the student's major.

## Admission to the School of Business

Effective with the freshman class enrolling in the 1991/92 academic year, admission to the School of Business shall be separate from admission to the University. Application for admission to the School of Business shall be made by students during the semester in which they complete 57 semester hours. Students must have completed or be currently enrolled in the following pre-business courses at the time of application:

## General Education Requirements

Area A	ENG 110, Freshman Composition MC 207, Managerial Communications OR COMM 280, Business and Professional Speaking
Mode 2	MATH 125, Applied Calculus I STAT 104, Elementary Statistics
Mode 7	ECON 200, Principles of Economics I ECON 201, Principles of Economics II

## Business Requirements

AC 201, Principles of Accounting I
AC 202, Principles of Accounting II
QA 201, Business Statistics
MIS 201, Introduction to MIS
LAW 250, Principles of Law

First priority for admission will be given to students who have met all pre-business course requirements and have earned a 2.70 cumulative grade point average. Other students who have less than a 2.70 but at least a 2.00 grade point average and who have met all the pre-business course requirements will be admitted on a space-available basis. Further information and applications for admission to the School of Business can be obtained in the Dean's Office.

## Student Advising

The School of Business provides advising assistance to all business students. Pre-business students (i.e., freshmen and sophomores) are advised through the Office of the Assistant Dean while business majors are advised through the department of their major. Names and locations of business majors' academic advisers are posted in department offices and in the Office of the Assistant Dean (827-7683).

## Curriculum

All students majoring in programs in the School of Business must complete requirements in General Education, courses in the common Business core, and courses in a chosen major.

## General Education Requirements

Mode 1	Philosophical	3
Mode 2:	Mathematics-Logical* (MATH 125, STAT 104)	6
Mode 3:	Literary	6
Mode 4:	Artistic	6
Mode 5:	Historical	6
Mode 6:	Behavioral	6
Mode 7:	Social Scientific* (ECON 200, ECON 201)	6

\*Pre-Business requirements.



Mode 8:	Natural Scientific	6
Area A:	Communications Skills* ENG 110, and MC 207 <sub>1</sub> or COMM 280)	6
Area B:	Foreign Language/International	3
Area C:	Supplemental* (AC 201, AC 202)	6
Area D:	Physical Activities	2
	<b><sup>2</sup>Total</b>	<b>62</b>

### Common Business Core Requirements

AC 201/202	Principles of Accounting I, II*	6
AC 303	Managerial Accounting <sup>3</sup>	3
QA 201	Business Statistics*	3
MIS 201	Introduction to MIS*	3
LAW 250	Principles of Law*	3
LAW 401	Legal Environment of Business	3
QA 305	Production/Operations Management	3
FIN 300	Managerial Finance	3
MGT 301	Principles of Management	3
MKT 303	Marketing Principles	3
MGT 430	Strategic Management and Policy	3
	<b><sup>2</sup>Total</b>	<b>36</b>

### Major Course Requirements

Major requirements are listed under the appropriate departments.

Required Courses in Major	21-24
Free Electives	6-9
Total Degree Requirements <sup>4</sup>	122

\*Pre-Business requirements.

<sup>1</sup>MC 207 is required of all majors in the Business Education Department.

<sup>2</sup>General Education requirements include 6 credits for AC 201 and AC 202 which are also counted in Common Business Core requirements.

<sup>3</sup>Accounting, Accounting Education and Finance majors must take 3 credits of Intermediate Accounting in lieu of Managerial Accounting.

<sup>4</sup>Business Education has slightly different degree requirements. See particulars under Business Education.

## Accounting

R. T. Avritch, A. J. Bafundo, J. K. Bannon, P. A. Budwitz, B. Cooperstein, W. Ellis, W. Faraci, D.T. Leonhardt, R. Maher, T. P. McNulty, W. A. Parker, B. K. Reilly, H. Shakun. (Dept. phone 827-7504)

The Accounting program prepares its graduates for professional careers in public, industrial, or governmental and other non-profit accounting. The program provides the background necessary in such diversified areas as cost accounting, auditing, taxes, budgeting, systems analysis and management advisory services for success in accounting.

The Accounting program at Central Connecticut satisfies the educational requirements of the Connecticut State

Board of Accountancy for eligibility to take the Connecticut CPA examination. Information regarding Connecticut CPA requirements, as well as those of other states, may be obtained from the chairperson of the Accounting Department.

The Accounting major consists of a common core of 36 credits plus an additional 24 credits of specific course work as follows:

Accounting	Credits	
AC 312	Intermediate Accounting II	3
AC 407	Advanced Accounting	3
AC 410	Auditing	3
AC 301	Cost Accounting I	3
AC 401	Federal Income Tax I	3

Choose one of the following courses<sup>5</sup>:

AC 302	Cost Accounting II	3
AC 402	Federal Income Tax II	3

<sup>5</sup>The course not chosen here may be used in the selection immediately following:

Choose two of the following courses:

AC 403	Estate Taxation	3
AC 408	Contemporary Accounting Problems	3
AC 330	Accounting for Non-Profit Institutions	3
AC 440	Accounting Information Systems	3
LAW 430	Advanced Business Law	3
	or <u>one</u> from above and	
	<u>one</u> advanced finance course, or	3
	advanced MIS course	

**Total 24**

## Business Education

A. W. Boulden, *Chairperson*; G. F. Claffey, F. Cohen, A.T. Sagraves. (Dept. phone 827-7239)

The programs offered by the Department of Business Education prepare students to teach business subjects at the secondary school level. Programs to meet teacher certification requirements are offered at both the undergraduate and graduate levels. In addition, the Department offers an Office Systems Management major (non-teacher certification) designed to provide the student with a variety of career paths.

Students in the Business Education Department must take School of Business common core courses. Certain students in the Office Education major may be exempt from some of these core courses. Consultation with faculty advisers is imperative to plan program schedules.

	<b>Credits</b>
General Education	62
School of Business Common Core	36
Major Requirements	12
Professional Education	22
Elective	4
	<b>Total 130*</b>

Students must specialize in one of the following majors: Accounting Education, Marketing Education, Office Education or Office Systems Management (non-teaching).

Each student preparing to teach must take:

<b>Professional Education</b>		<b>Credits</b>
EDSC 372	Principles of Secondary Education	2
EDSC 373	Evaluation in the Secondary School	2
EDF 400/401	Philosophy of Education/ Foundations in Education	3
EDSC 256	Learning: Its Significance in Secondary Education OR	
PSY 256	Education/Psychology of Learning (Secondary)	2
SPED 470	Educating the Handicapped Student	3
EDSC 413	Responsible Student Teaching (Secondary)	10
	<b>Total 22</b>	

### Major Requirements

<b>Accounting Education</b>		<b>Credits</b>
AC 301 or	Cost Accounting I or	
AC 401	Federal Income Tax I	3
BE 315	Methods of Teaching Accounting and Basic Business Subjects	3
BE 319	Office Education Methods	3
BE 324	Organization and Administration of Vocational Business and Marketing Education	3
Pass Keyboarding Proficiency Examination		0

All Accounting Education majors must complete 500 hours of office work experience within five years immediately preceding graduation. See Business Education Department chairperson for required forms.

**Total 12**

<b>Marketing Education</b>		<b>Credits</b>
BE 324	Organization and Administration of Vocational Business and Marketing Education	3
ETM 370	Audio-Visual Education	3
VTE 415	Principles of Vocational Education	3

BE 414	Methods of Teaching Marketing Education	3
Pass Keyboarding Proficiency Examination		0
All Marketing Education majors must complete 3000 hours of work experience in marketing, merchandising or management positions before graduation. See Marketing Education faculty adviser for required forms.		
	<b>Total 12</b>	

<b>**Office Education</b>		<b>Credits</b>
BE 210	Office Technologies	3
BE 315	Methods of Teaching Accounting and Basic Business Subjects	3
BE 319	Office Education Methods	3
BE 324	Organization and Administration of Vocational Business and Marketing Education	3
OS 230	Editing Skills	1
OS 310	Office Systems Application Software	3
OS 320	Office Systems and Technologies	3
OS 350	Introduction to Records Management	3
WP 204	Word Perfect—Basic	1
OS	Elective	3

Pass Keyboarding Proficiency Exam 0  
All Office Education majors must complete 500 hours of office work experience within five years immediately preceding graduation. See Business Education Department chairperson for required forms.

**Total 26**

\*Equals 136, but AC 201 and AC 202 in the Business common core will be allocated to Area C to bring the total to 130.

\*\*Office Education majors are required to take only AC 201, AC 202, LAW 250, MGT 301, FIN 300 and MIS 201 from the School of Business common core.

## Finance

S. Rosenberg, *Chairperson*; M. M. Cutler, J. Fung, R. G. Fracasso, L. L. Lawson, E. T. Lynch, L. K. Wang. (Dept. phone 827-7317)

The Finance program prepares graduates for managerial careers in corporate and governmental organizations. Underlying the program are related disciplines of accounting and economics. Diverse business opportunities are open to finance professionals. Finance graduates can expect to pursue careers in corporate financial management, banking, insurance, investments and financial services.

Students in Finance must complete the School of Business 36-credit common core requirements plus the following 21 credits:

<b>Financial Core</b>			<b>Credits</b>
FIN	301	Intermediate Managerial Finance	3
FIN	310	Principles of Investments	3
FIN	320	Financial Markets and Institutions	3
Plus	Directed Electives		12
			<b>Total 21</b>

### Directed Electives

The Finance program requires completion of 12 credits selected from the following list of courses. Consultation with an adviser is recommended if the student wishes to pursue a specific concentration and career goal.

FIN	400	Advanced Managerial Finance	3
FIN	410	Securities Analysis	3
FIN	430	International Financial Management	3
FIN	498	Finance Seminar	3
FIN	330	Financial Planning and Investments	3
FIN	340	Insurance	3
ECON	450	Money, Credit and Banking	3
			<b>Total 12</b>

## Management and Organization

I. Blanco, *Chairperson*; E. Baten, R. Baughman, S. Cavaleri, R. C. Dethy, D. Fearon, W. J. Ferguson, H. Johnson, L. Logozzo, P. Sanders, L. E. Short.  
(Dept. phone 827-7685)

The Management and Organization Department prepares students for entry-level positions and for advanced graduate studies in business leading to management careers in business, government and not-for-profit organizations. The program provides a basic foundation in management theory and practices. Program graduates can expect to pursue careers in such diverse areas as human resources management, small business management, international management or not-for-profit management.

Students in the Management major must complete 36 credits of common core requirements and the following 21 credits:

<b>Management Core</b>			<b>Credits</b>
MGT	345	Organization Theory	3
MGT	348	Management Systems	3
MGT	426	Business Organizational Behavior	3
MGT	490	Management Topics or	
MGT	498	Management Seminar	3
		Management Specializations	9
			<b>Total 21</b>

### Management Specializations

**General Management:** For persons interested in gaining a broad knowledge base and understanding of the multiple dimensions of management theory and practice. Three courses from the following:

MGT 305	Human Resources Management	3
MGT 321	International Management	3
MGT 403	Social Issues for Managers	3
MGT 415	Development of Management Thought	3
MGT 425	Management and Collective Bargaining	3
MGT 431	Compensation and Benefits	3
MGT481	Management of Non-Business Organizations	3
MGT 490	Management Topics	3
MGT 494	Entrepreneurship	3
MGT 498	Management Seminar	3
		<b>Total 9</b>

**Human Resources Management:** For persons interested in preparing for careers in human resources management or personnel administration in a variety of business and non-business settings.

			<b>Credits</b>
MGT 305	Human Resources Management	3	
MGT 431	Compensation and Benefits	3	
Plus at least one course from the following:			
COMM 353	Interviewing Theory and Practice	3	
MGT 403	Social Issues for Managers	3	
MGT 425	Management and Collective Bargaining	3	
		<b>Total 9</b>	

**International Management:** \*For persons interested in preparing for careers in international divisions of multinational corporations, foreign exchange divisions of banking institutions, and overseas positions in government organizations.

			<b>Credits</b>
MGT 321	International Management	3	
Plus at least two courses from the following:			
ANTH 339	Work and Culture	3	
FIN 430	International Financial Management	3	
MGT 403	Social Issues for Managers	3	
MKT 321	International Marketing	3	
PS 339	International Law	3	
		<b>Total 9</b>	

**Management of Productivity:** For persons preparing for careers in manufacturing and high technology settings.

			<b>Credits</b>
IT	364	Statistical Quality Control	3
IT	458	Motion and Time Study	3
IT	480	Robotics	3
			<b>Total 9</b>

### **Decision Management and Management**

**Science:** for persons preparing for careers in the management of information systems and interested in acquiring knowledge of the scientific bases for decision-making (See Department chairperson for details).

**Management for Not-For-Profit Institutions:** For persons interested in preparing for administrative careers with institutions performing public services, such as governmental units, labor associations, foundations and charitable organizations.

			<b>Credits</b>
MGT	481	Management of Non-Business Organizations	3
Plus at least two from the following:			
AC	330	Accounting for Non-Profit Institutions	3
MKT	480	Marketing for Non-Profit Organizations	3
PS	340	Public Administration	3
MGT	403	Social Issues for Managers	3
			<b>Total 9</b>

\*Students who select the International Management specialization are encouraged to take foreign language courses, which may be used as free elective credit.

## **Management Information Systems**

M. D'Onofrio, *Chairperson*; R. Cardinali, R. Crouse, W. P. Hinds. (Dept. phone 827-7985)

The Management Information Systems (MIS) program prepares graduates for careers in enterprises as information systems specialists. Students pursue careers as in the areas of application programming, data base administration, information systems management, and systems analysis and design.

The program emphasizes the importance of information as an organizational resource to be managed for the generation of timely, quality information for business decision making. The use of information in business decision making throughout the functional areas (including accounting, finance, management and marketing) of an enterprise is stressed.

Students must complete the School of Business 36-credit common core requirements plus the following 24 credits:

			<b>Credits</b>
MIS	210	Application Program Development I	3
MIS	211	Application Program Development II	3
MIS	330	Information Systems-Analysis and Design	3
MIS	331	Structured Systems and Design	3
MIS	340	Database Program Development	3
			9
			<b>Total 24</b>

### **Directed Electives**

The Management Information Systems (MIS) program requires completion of 9 credits selected from the following list of courses. Consultation with an adviser is recommended if the student wishes to pursue a specific concentration and career goal.

MIS	400	Decision Support Systems	3
MIS	410	Distributed Data Processing	3
MIS	420	EDP Audit Controls	3
MIS	430	Information Systems Planning	3
MIS	440	Information Resource Management	3
			<b>Total 9</b>

### **MIS Specialization**

#### **Quantitative Aspects of Decision-Making**

Students may pursue a specialization in the quantitative aspects of decision making.

			<b>Credits</b>
QA	420	Quantitative Analysis for Business Decision-Making	3
QA	425	Business Simulation Analysis	3
			3
			<b>Total 9</b>

## **Marketing**

C. Prohaska, *Chairperson*; E. R. Astarita, E. Bernstein, A. C. Cortes, R. A. DeCormier, B. Lofman, D. Scherban. (Dept. phone 827-7625)

The Marketing program prepares graduates for careers in advertising and promotion, distribution, marketing management, marketing research, retailing and sales.

Students must complete the School of Business 36-credit common core requirements plus the following 21 credits:

		Credits
MKT 304	Marketing Management	3
MKT 305	Consumer Behavior	3
MKT 306	Advertising & Promotion	3
MKT 423	Marketing Research	3
	A marketing specialization or directed electives	9
	<b>Total</b>	<b>21</b>

### General Education

Modes 2 and 7, and Areas A and C will be filled per School of Business specifications. It is suggested that Modes 3, 4, 5 and 6 be filled using a minimum of one international-designated course for each of these modes.

### International Marketing Specialization

MKT 321	International Marketing	3
MKT 460	Export Marketing	3
ONE of the following:		
MGT 321	International Management	3
FIN 421	International Financial Management	3
ECON 430	International Economics	3
	<b>Total</b>	<b>9</b>

As additional business courses with an international orientation are developed, these will be added to the selection of courses which can be used to complete the specialization.

### Retailing Specialization

MKT 311	Retailing	3
MKT 313	Merchandising	3
MKT 443	Advanced Concepts in Retailing	3
	<b>Total</b>	<b>9</b>

### Sales Specialization

MKT 330	Sales Techniques	3
MKT 307	Sales Administration	3
MKT 413	Industrial Marketing	3
	<b>Total</b>	<b>9</b>

### Directed Electives

MKT 307	Sales Administration	3
MKT 311	Retailing	3
MKT 321	International Marketing	3
MKT 330	Sales Techniques	3
MKT 340	Product Development and Management	3
MKT 350	Distribution Management	3
MKT 400	Computer Applications in Marketing	3
MKT 413	Industrial Marketing	3
MKT 433	Marketing Research II	3
MKT 443	Advanced Concepts in Retailing	3
MKT 460	Export Marketing	3

MKT 480	Marketing for Non-Profit Organizations	3
MKT 494	Independent Study in Marketing	3
MKT 495	Field Studies in International Marketing	3
MKT 498	Marketing Seminar	3
	<b>Total</b>	<b>9</b>

## Office Systems Management

A. W. Boulden, *Chairperson*; G. F. Claffey, F. Cohen,  
A. T. Sagraves. (Dept. phone 827-7239)

The Office Systems Management major must complete the 36-credit common core requirement for students in the School of Business plus the following courses:

		Credits
OS 210	Introduction to Elements of COBOL Programming	1
OS 220	Keyboarding	1
OS 230	Editing Skills	1
OS 310	Office Systems Application Software	3
OS 320	Office Systems and Technologies	3
OS 330	Office Systems Planning and Implementation	3
OS 350	Introduction to Records Management	3
OS 410	Integrated Office Systems	3
OS 420	Topics in Office Systems Management	3

All Office Systems Management majors must complete 360 hours of professional practice within five years immediately preceding graduation. See Business Education Department chairperson for required forms.

**Total 21**

## Concentrations for Non-Business Majors

Concentrations in Business require 18 credits of Business courses, and are not available to students in the School of Business.

Non-business students may specialize in one of the following Business areas. Though not certifiable for teaching, each area meets the requirements for a University concentration. Please contact the appropriate chairperson for approval of concentration.

Areas of Concentration Business	Required Courses	
	AC 201, AC 202, AC 303 or FIN 300, MIS 201* or MKT 303, LAW 250 or LAW 401, any one additional course offered by the School of Business.	<b>Total 18</b>
<b>Marketing</b>	A special concentration in Marketing is available for Communication majors. The concentration requires 12 semester hours of Marketing courses and 6 semester hours from other Business areas. Contact the chairperson of the Marketing Department for full particulars.	<b>Total 18</b>
<b>Office Systems Management</b>	OS 210, OS 220, OS 230 (1 credit each); OS 310, OS 320, OS 330, OS 350, and OS elective (3 credits each).	<b>Total 18</b>

\*Students majoring in Computer Science and concentrating in Business may not use MIS 201 as part of the concentration.

## Student Organizations

A variety of student honorary and professional organizations have been organized in the School of Business to reflect the interest of students in a professional school. Experience and leadership gained from participation in these organizations provide students with important life-time skills. They are:

Accounting Society, Distributive Education Clubs of America (DECA), Finance Management Association, American Marketing Association, Association of Systems Management, Delta Mu Delta and Delta Pi Epsilon.

## Graduate Programs in Business

Graduate programs are available in Organization and Management with a General Business Management option and Business Education. See the Graduate Catalog for details of these programs, or the Director of the MSOM Program.

## Management and Professional Development Center

The School of Business has a Center for Management and Professional Development which sponsors not-for-credit offerings in business and industry. Detailed information may be obtained by contacting the Entrepreneurial Support Center (229-8580).

## Entrepreneurial Support Center

The School of Business Entrepreneurial Support Center, located with the Office of the New Britain Chamber of Commerce, serves and enhances the enterprising qualities of New Britain- and central Connecticut-based business organizations. The Center offers counseling support and business expertise to start-up and existing small businesses, and provides a full spectrum of education and training activities for enterprise development. The Center also utilizes Business student interns and graduate assistants in a learning laboratory environment to assist in the delivery of the Center's services. Detailed information may be obtained by contacting the Entrepreneurial Support Center (229-8580).

# SCHOOL OF EDUCATION AND PROFESSIONAL STUDIES

Nancy E. Seminoff, *Dean*  
Elene S. Demos, *Associate Dean*  
Ronald J. Moss, *Assistant Dean*

## *Departments:*

Athletics, Counselor Education and Human Services, Educational Leadership, Educational Technology and Media, Nursing, Physical Education and Health Fitness Studies, Reading and Language Arts, Teacher Education and Special Education.

## *Certifiable Programs:*

### **Teacher Education Majors (B.S.):**

Accounting, Art, Biology, Chemistry, Earth Science, English, French, General Science, German, Health Occupations Education, History, Italian, Marketing Education, Mathematics, Music, Office Education, Physical Education, Physics, Social Science, Spanish, Special Education, Technology Education and Vocational-Technical Education.

For certification in Elementary Education, a student is required to have a subject matter major. For specific information, see the catalog description under the Department of Teacher Education.

## *Non-Certifiable Programs*

### **Non-Teaching Majors:**

Athletic Training  
Health Fitness  
Nursing (B.S.N.)  
Special Studies

## **Admission to Professional Program**

(Does not apply to non-certifiable programs)

Students in programs leading to certification who have completed 45 credits (15 of which have been earned at Central Connecticut State University) must make formal application to the Professional Program. Acceptance into the Professional Program is a necessary precondition for applying to student teach, State certification and degree candidacy. Applications should be filed by October 1 or March 1 in the semester of eligibility. Forms are available and should be filed with the Assistant Dean in the office of the Dean of the School of Education and Professional Studies (Barnard 248).

Appropriate academic and non-academic standards for admission to the teacher preparation programs are stated and enforced. These standards shall include, but not be limited to:

- Passing the CONNCEPT, the State-mandated skills examination in mathematics, reading and writing. A waiver is possible if you can provide the following:
  - Official proof that your Scholastic Aptitude Test (SAT) scores total 1000, with no less than 400 on either math or verbal subtest. Example: Math = 400, Verbal = 600.
  - Official proof that your American College Test (ACT) composite score is 25, with no less than 22 on the English subtest and 19 on the Math subtest.
  - Official proof of passing a similar test of a state with which Connecticut has certification reciprocity agreements.
  - Official proof of a total score on the Prueba de Aptitud Académica (PAA) equivalent to a score of 1,000 on the SAT, with neither the mathematics nor the verbal subtest score below the equivalent of 400 points.
- A minimum 2.7 cumulative grade point average for all undergraduate courses.
- General Education background including the arts and humanities, mathematics-science-technology, the social and behavioral sciences, health and physical education.
- The presentation of an essay which demonstrates a command of the English language, sets out the reasons for wanting to enroll in the program and emphasizes experiences which are relevant to teaching.
- Two letters of recommendation from persons able to testify to the candidate's suitability as a prospective teacher.
- An interview by a departmental team to assess the candidate's personal attributes likely to affect teaching performance.

A student who does not meet an eligibility requirement for admission to the Professional Program may appeal through procedures established by the School and the Office of the Dean, School of Education and Professional Studies.

In addition to the requirements listed above, students in the Elementary Education undergraduate program and the Special Education certification program are expected to furnish proof of their experience in working with children. See specific requirements in the appropriate Professional Program application packet.

Students seeking certification after December 1, 1988 must pass a subject-knowledge competence test. These tests are being phased in over a five-year period.

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## General Course Requirements

Except for those majoring in Business Education (Accounting, Marketing, Office Education), Art, Music, Physical Education, Technology Education and Vocational-Technical Education, students in Secondary Education programs must complete a major in one field and a minor (certifiable) or a concentration (non-certifiable) in another. Athletic Training, Health Fitness and Nursing (non-teaching majors) do not require a minor.

All undergraduate students entering the elementary certification program are required to have a subject matter major. The Department of Teacher Education will provide information about the subject matter majors which will be applicable to the elementary certification program. Specific courses in the professional education program and the sequence of these courses will also be provided by the Department of Teacher Education.

Enrollment in certain courses offered by the School of Education and Professional Studies requires that a student be matriculated, be admitted to the Professional Program and maintain a specified GPA. Contact academic departments in the School for more information. Students are encouraged to elect substantial course work in Modern Languages or international studies to broaden their multicultural awareness.

Students must have been admitted to the Professional Program one semester prior to applying to student teach. One must remain in good standing to be allowed to student teach. Consult the Department of Teacher Education or your education department for details.

## Special Departmental Criteria

### Business

**Accounting Education:** AC 201 and AC 202 with acceptance deferred until one AC 311 is passed (grade of C or better) at Central Connecticut. The student must receive a grade of C or better in BE 315, 319, 324, and WP 204 and must satisfactorily complete the Keyboarding Proficiency test before student teaching.

**Business Education:** An overall grade-point average of 2.70 must be maintained in all Business courses (major, core and/or electives) taken at Central Connecticut.

**Marketing Education:** The student must complete 2000 hours' work experience in a sales or management position in a marketing type of business. The student must complete BE 324 and satisfactorily complete the Keyboarding Proficiency test before student teaching.

**Office Education:** Students must receive credit at Central Connecticut for BE 210, 319 and 324 before they may do student teaching. The student must receive a grade of C or better in BE 210, 319 and 324, and must satisfactorily complete the keyboarding and word processing requirements.

### English

For preliminary acceptance, the student must complete ENG 110, 200 and any two courses from the sequence 205-206, 210-211 and maintain a 2.70 grade-point average in English. Transfer students should have, in addition, at least 6 credits in English at Central Connecticut.

To qualify for student teaching, the student must complete 24 credits in English courses.

### History

The student must complete 9 credits of History at Central Connecticut. To qualify for student teaching, a student must complete 27 credits in History.

### Technology Education

Before the student can be accepted into the Technology Education program, 15 college credits in Technology Education courses must be completed. Transfer students from a two-year program in a State technical college are required to complete 9 credits at Central Connecticut.

### Mathematics

The student must complete a total of three required mathematics courses at Central Connecticut, and must have completed MATH 221.

### Modern Languages

To be accepted into the teaching program, the student must have a grade-point average of 3.00 or higher in the target language. The student is required to complete successfully language courses numbered 125, 126 and 225 or 226. Transfer students should have at least 6 credits at Central Connecticut.

To qualify for student teaching, the student must continue high quality work and attain satisfactory scores on the MLA Language Proficiency Tests.

### Music

For acceptance into the Music Education degree program, the student must audition and be tested in areas of theory and piano proficiency. Deficiencies in theory and piano must be eliminated with remedial coursework. By the junior year students must apply to the Professional Program. Before student teaching, students must pass a Piano Proficiency Exam.



## **Nursing**

30 credits in nursing and 12 credits in supporting courses compose the upper division Nursing major. Students are required to pass successfully the validation examination before taking NRSE 302, the first clinical course.

## **Physical Education**

For Physical Education and Health Fitness majors in the teacher preparation program (B.S.Ed.) with options in Physical Education for the Schools, Athletic Coaching, Athletic Training and Exercise Specialist: complete 9 credits successfully in required courses (including PE 213, Anatomy), 4 credits of which are required skill courses, and achieve a 2.5 average in major subjects.

For Physical Education and Health Fitness majors in the non-teacher certifiable program (B.S.) with specializations in Health Fitness and Athletic Training: complete 8 credits successfully in required major courses (including PE 213), 3 credits which are required skill courses, and achieve a 2.50 average in major subjects.

## **Sciences**

**Biology:** The student must successfully complete 12 credits of coursework in Biology, 6 of which must be at Central Connecticut.

**Chemistry:** The student must complete satisfactorily three courses in Chemistry (at least two of which must be at Central Connecticut), 4 credits of Physics and MATH 121 or the equivalent.

**Earth Science:** The student must complete BIO 121, CHEM 121, PHYS. 121 and ESCI 121, MATH 125 and ESCI 122. Transfer students with credit for these courses must complete one Earth Science or Geology course at Central Connecticut.

**General Science:** Provisional admission requires BIO 121, CHEM 121, ESCI 121, or equivalent course, satisfactorily completed. Transfer students must complete at least two of these or two additional courses in Science at Central Connecticut.

**Physics:** The student must complete PHYS 125, 126 and 225, and MATH 121, 122 and 221. Transfer students with credits for these courses must complete one Physics course at Central Connecticut.

## **Social Science**

Provisional admission requires 9 semester hours of Social Science (including HIST101) at Central Connecticut. To qualify for student teaching, applicants must complete 42 credits of Social Science.

## **Student Teaching**

Student teaching is an integral part of the Professional Program of all Teacher Education/Special Education students. The nature of the student teaching experience varies with the field of preparation, and the particulars are detailed under the respective departments.

## **Connecticut Certification**

Eligibility for teaching in the public schools of Connecticut requires that the student meet the certification requirements of the State Board of Education and the University. The specific requirements are listed under respective Education departments.

All recommendations for teacher certification from Central Connecticut are made by the School of Education and Professional Studies.

## **Application for Certification**

A graduating student must file an Application for Certification in the Office of the Registrar. Those expecting to complete degree requirements in May or August must file by March 1, and those completing in December by October 1.

## **Out-of-State Certification**

Students who plan to teach outside Connecticut may obtain the certification requirements of the state in which they intend to teach from the University Placement Office.

## Educational Leadership

R. Zieger, *Chairperson*; T. Johnson, B. Morrison,  
A. Rigazio-Digilio, A. Vaillant. (Dept. phone 827-7606)

The Department of Educational Leadership offers a master's degree and a sixth-year certificate leading to certification as an Intermediate Administrator-Supervisor. In addition, the Department offers service courses in Curriculum Development and Research in Education.

## Counselor Education and Human Services

P. E. Tarasuk, *Chairperson*; B.W. Carroll, C. Cyrus,  
I. Hott, S. Rosenberg. (Dept. phone 827-7226)

The Department of Counselor Education and Human Services offers concentrates to students seeking a Master of Science degree in Education leading to provisional certification as a school counselor, and study in the areas of Higher Education, Rehabilitation and Marriage and Family.

## Educational Technology and Media

M. A. Pellerin, *Chairperson*; W. Osterndorf.  
(Dept. phone 827-7671).

The Department of Educational Technology and Media offers undergraduate courses in the use of learning resources and technology.

The Department offers Master of Science in Educational Media degree programs which are designed for students seeking School Library Media Specialist certification, and for other students desiring to major in instructional media with an emphasis in educational computing and multimedia. The Department also has an extended program for those who seek an initial educator certificate as a school library media specialist.

## Reading and Language Arts

B. A. Davies, *Chairperson*; D. D. Hall, M. J. Laurent,  
D. A. Monti, P. L. O'Brien, R. F. O'Neil.  
(Dept. phone 827-7584)

The Department of Reading and Language Arts offers at both the undergraduate and graduate levels courses in teaching reading and language arts.

At the undergraduate level required courses and elective courses are provided for students preparing to become teachers.

At the graduate level the Department offers a master's degree and a sixth-year certificate program leading toward certification as a remedial reading and remedial language arts teacher, and a reading and language arts consultant.

## Special Education

L. Snyder, *Chairperson*; B. T. Bard, V. W. Dethy,  
F. W. Fischer, A. J. Wolcott, M. J. Williams (joint appointment). (Dept. phone 827-7558)

The Department of Special Education is responsible for undergraduate courses and certification programs in Special Education. Students may select Special Education as a major and will be required to receive certification in Special Education as part of the major.

### Criteria for Acceptance

Requirements for students who wish to be certified in Special Education:

1. Formal acceptance into the Professional Program.
2. Assignment of an adviser in Special Education by the chairperson of the Department of Special Education to create a planned program of study.
3. Documentation of 30 hours experience with regular education students and 10 hours with special education students.

### Program Requirements

#### Requirements for Special Education Majors

##### A. Professional Requirements (9 credits)

SPED	470	Educating the Handicapped Student	3
RDG	200	Developmental Reading in Elementary School	3

and one of the following:

MATH	103	Number Systems	3
MATH	203	Logic and Geometry	3

MATH 303	Learning and Curriculum Studies in Mathematics	2
RDG 344	Teaching Intermediate Reading	3
RDG 440	Teaching Reading in Secondary School	3
<b>B. Specialization Requirements (36 credits):</b>		
SPED 480	Characteristics and Education of the Emotionally Disturbed	3
SPED 481	Characteristics and Education of the Learning Disabled	3
SPED 482	Characteristics and Education of the Mentally Retarded	3
SPED 483	Applied Behavioral Analysis in Educational Settings	3
SPED 484	Educational Assessment of the Exceptional Learner I	3
SPED 485	Educational Assessment of the Exceptional Learner II	3
SPED 486	Methods & Materials for the Exceptional Learner	3
SPED 487	Program Planning and Curriculum for the Exceptional Learner	3
SPED 488	Practicum with Exceptional Learners I	6
SPED 489	Practicum with Exceptional Learners II	6

Students majoring in Special Education may select a concentration from a variety of academic disciplines outside of the School of Education and Professional Studies. They should consult the catalog and their Special Education adviser.

**NOTES:** 1. It is the student's responsibility to see his/her adviser on a regular basis as program policies and procedures are subject to change.

2. Students should consider prerequisite requirements before registering for courses. Numerical listing does not necessarily indicate correct sequence.

3. Students must maintain a 2.7 average in Special Education courses to be recommended for certification.

### Requirements for Special Education Minors

Students wishing to minor in Special Education should meet with the chairperson of the Department of Special Education before registering for any courses. The courses taken as part of a minor can, with additional coursework, be applied to State of Connecticut Certification in Special Education.

## Teacher Education

E. Joyce, *Chairperson*; T. Andrews, R. DiMartino, B. S. Handler, M. Hott, M. Howell, L. D. Klein, C. Koskoff, P. Lemma, T. Mason, K. Olson, S. Seider, C. Shmurak. (Dept. phone 827-7600)

The Department of Teacher Education is committed to the preparation and continuing professional education of those involved in early childhood, elementary and secondary teaching. The Department consists of the following four divisions:

- Division of Elementary and Early Childhood Education
- Division of Secondary Education
- Division of Educational Foundations
- Division of Clinical Practices

### Division of Elementary and Early Childhood Education

P. Lemma, *Coordinator of Elementary and Early Childhood Education* (827-7582); M. Hott, M. Howell, E. Joyce, C. Koskoff, P. Lemma, T. Mason, S. Seider.

The Division of Elementary and Early Childhood Education believes that teacher preparation is a developmental process. Our program requires students to attain knowledge in a wide variety of subject areas as well as pedagogical knowledge. Preservice teachers are expected to integrate knowledge obtained from course work with experiences that provide opportunities for exploration, reflection, and decision-making.

All students entering the certification program in elementary education and all continuing students who complete requirements for certification in elementary education **AFTER DECEMBER, 1992** must choose a subject matter major. Information about subject matter majors which are applicable to the elementary education certification program is available in the Department of Teacher Education — Barnard 277. Specific courses in the professional education program and the sequence of these courses will also be provided by the Department of Teacher Education.

### ACADEMIC REQUIREMENTS

#### 1. General Education

*General Education includes the modal and area requirements for baccalaureate degree candidates. Specific courses are required to meet the General Education Requirement and to meet prerequisites in certain professional courses.* These include ENG 110, MATH 103 and 203, a 200-level or above literature course, HIST 261 or 262<sup>1</sup>, PSY 235 or 236, GEOG 110 or 120 or 330, BIO 211, ESCI 111 or other Earth Science course. All courses

listed above must be completed prior to the submission of an application to the Professional Program. (In addition to these courses, there will be specific courses in the subject matter major and in education which must be completed prior to applying to the Professional Program.)

<sup>1</sup>HIST 261 or 262 should not be taken in the freshman year.

## 2. Subject Matter Major

All students planning to teach in the elementary school must have a subject matter major or an interdisciplinary subject matter major. The subject matter majors, from which students may choose, are listed below:

### Interdisciplinary Subject Matter Majors

- Behavioral Sciences
- Child Study
- Fine Arts
- Mathematics and Science
- Mathematics with Science and Geography
- Modern Languages
- Sciences
- Social Science
- Science with Computer Science Core

### Subject Matter Majors

- Biology
- Chemistry
- Earth Science
- Economics
- English
- French
- Geography
- German
- History
- Italian
- Mathematics
- Natural Science: Environmental Interpretation
- Physics
- Political Science
- Spanish

A more complete description of each major is available from the department offering the major and from the Department of Teacher Education. Specific requirements may pertain to the subject matter majors. Contact the appropriate departments.

## 3. Professional Education

Professional Program: specific requirements for acceptance to the Professional Program are listed in the beginning of this section. The Department of Teacher Education requires students to be accepted to the Professional Program before taking 300- and 400-level education courses (exception: SPED 470). Continuing status in the Professional Program requires a grade of C- or better in all 300- or 400-level professional program courses.

One certification area is available to students at this time. Other areas may be available at a later date. Please see the Department of Teacher Education for this information. Course requirements are as follows:

### Pre-Kindergarten Through Grade Six

*EDEL	101,	Elementary Teaching as a	3
	*102	Profession: Analysis and	
	*103	Reflection	
ETM	200	Intro to Microcomputers in	1
		Education	
RDG	200	Developmental Reading in	3
		Elementary School	
SPED	470	Education the Handicapped Student	3

**The following courses require acceptance into the Professional Program:**

RDG	330	Teaching Language Arts	3
EDEL	355	Learning Theories and the	3
		Principles of Elementary Education	
		and Application to the Classroom	
EDEL	356	General Methods in	3
		Elementary Education	
MATH	303	Learning and Curriculum	2
		Studies in Mathematics	
SCI	412	Learning and Curriculum	2
		Studies in Science	
EDF	400	Philosophy of Education OR	3
EDF	401	Foundations of Education	
EDEL	411	Student Teaching: Elementary	8

The Department of Teacher Education has materials which describe the certification program, required courses and their sequence, and the prerequisites for acceptance into the Professional Program. A handbook is available in the Department, Barnard 277. During each semester, advising sessions are provided to assist students as they proceed through their course of study.

*NOTE:* Students anticipating graduation as of December 1992 should review their planned programs with their advisers. Courses will be phased out of the present program during the 1991-1992 academic year. Substitute courses will be provided to ensure graduation and certification to those eligible.

### Student Teaching —

See DIVISION OF CLINICAL PRACTICES

\*Pending approval EDEL 210 will replace EDEL 101, 102, 103

## Division of Secondary Education

R. DiMartino, *Coordinator*; K. Olson, C. Shmurak.  
(Div. phone 827-7414)

The Division of Secondary Education is responsible for coordinating the curricula and providing counseling for majors in Secondary Education programs toward the fulfillment of their requirements in Professional Studies in their Bachelor of Science degree program. General Education advisement is done by an assigned adviser in an academic department. In general, majors in Secondary Education teacher programs who satisfactorily complete their planned program of studies are certified to teach in middle schools, and junior and senior high schools in an area of specialization. Physical Education majors, Technology Education majors, Music and Art majors are certified to teach in grades K-12. Spanish and French majors with a concentration in Elementary Education may be certified to teach in their major field, grade K-12.

### Major in Secondary Education Programs, B.S.

The major in a Secondary Education program must complete 130 credits for the Bachelor of Science degree and certification for teaching an area of specialization in the secondary schools.

This program of studies includes four principal areas — the General Education requirements, the Professional Studies, the completion of a major, and the completion of a certifiable minor or a non-certifiable concentration.

### Majors in the Secondary Education Program

Accounting Education, Art, Biology, Chemistry, Earth Science, English, French, General Science, German, Marketing Education, Mathematics, Music, Office Education, Physical Education, Physics, Social Science/History, Spanish, Technology Education and Vocational-Technical Education

### Certifiable Minors for Secondary Students

Biology, Chemistry, Earth Science, French, General Science, German, Italian, Physics, Spanish (Spanish is open to Business Education majors).

Requirements for these areas of specialization may be found under the discipline.

### Concentrations for Secondary Students

Afro-American Studies, Anthropology, Art, Business, Chinese, Computer Science, Economics, English, French, General Science, Geography, German, History, Italian, Mathematics, Music, Office Systems Management, Philosophy, Physical Education, Political Science, Psychology, Russian, Soviet and East European Studies, Sociology, Speech Communication, Speech Pathology, Spanish, TESOL, Theatre.

## COURSE REQUIREMENTS

### General Education

In partial fulfillment of the General Education requirements, the following studies are required of majors in Secondary Education programs: 6 credits in English and Speech (ENG 110 is required); Hist. 261 and 3 elective credits (HIST 122 or 262 is recommended); PSY 235 ; 6 credits in Science; and 3 credits in Mathematics, either MATH 105, STAT 104 or CS 113.

Students in K-12 programs should consult the chairperson of their departments to determine and recommend General Education courses in their degree program.

### Professional Education

Specific requirements for acceptance to the Professional Program of the School of Education and Professional Studies are listed at the beginning of this section. In addition, enrollment in specific, upper-level courses is limited to students who have been accepted to the Professional Program. These courses include the following: EDSC 372, 373, 375, 413; EDF 400, 401.

The following credits of professional courses are required for certification:

			Credits
SPED	470	Educating the Handicapped Child	3
*EDSC	372	Principles of Secondary Education	2
*EDSC	373	Evaluation in the Secondary School	2
EDF	400	Philosophy of Education OR	
EDF	401	Foundations of Education	3
EDSC	413	Responsible Student Teaching	6-12
EDSC	256	Learning: Its Significance in Secondary Education OR	
PSY	256	Psychology of Learning (Secondary)	2
		Special Methods course in conjunction with the major academic department (3 credits for English).	2

All students must also take professional education coursework in the academic discipline to be taught.

NOTE: EDSC 372, 373 (or 375), EDF 400 or 401, EDSC/PSY 256, SPED 470 and special professional education courses must be completed prior to student teaching.

### Majors, Minors, Concentrations and Professional Education Courses

A grade of C or better is required for credit in the subjects taken in the major, minor and/or concentration fields, and in professional education courses.

\*K-12 program (Art, Music, Physical Education and Technology Education) students take EDSC 375, Principles and Evaluation in Education instead of EDSC 372 and 373. EDSC 375 is only open to students who will student teach within two semesters after completing the course.

**Student Teaching —**  
see **DIVISION OF CLINICAL PRACTICES**

**Division of Educational Foundations**

B. S. Handler, *Coordinator*; L. D. Klein. (*Div. phone 827-7618*)

The Division of Educational Foundations offers undergraduate courses in the areas of social and cultural foundations of education and philosophy of education. It also provides advanced coursework at the graduate level, as well as a Master of Science degree in Educational Foundations.

**Division of Clinical Practices —**  
**Student Teaching**

T. Andrews, *Director*. (*Div. phone 827-7610*)

All majors in Elementary and Secondary Education programs are required to complete student teaching. Prospective student teachers must complete a student teaching application form which is available in the office of the Division of Clinical Practices. To student teach in the Fall semester, applications must be submitted by March 1 in the preceding Spring semester. Applications to student teach in the Spring semester must be submitted by October 1 of the preceding semester.

Students should have received a passing grade on the CONNCEPT examination (or waiver) and been accepted to the Professional Program of the School of Education and Professional Studies prior to applying for student teaching. The letter of acceptance from the Assistant Dean of the School of Education must be included with the application for student teaching.

## Nursing

J. A. Hriceniak, *Chairperson*; L. Barile, L. Daniels, M. J. Williams. (*Dept. phone 827-7267 or 827-7116*)

The Nursing Department offers a baccalaureate program, the Bachelor of Science in Nursing (B.S.N.), designed to prepare a liberally educated person to function as a professional nurse in a variety of roles and health care settings. The program requires 123 credit hours.

Upon completion of this program, graduates are expected to be professionally competent generalists in nursing; recognize the need for continued personal and professional development throughout life and possess the educational background for post-baccalaureate study in nursing.

## Major in Nursing, B.S.N.

### Admission Requirements

In addition to meeting all requirements established for admission to Central Connecticut\*, the applicant must:

- A. Be licensed currently as a registered nurse in Connecticut;\*\*
  - B. Carry and provide documentation of adequate malpractice and health insurance;
  - C. Submit a Nursing application form to the Department of Nursing by Feb. 1 for consideration for fall admission and by Aug. 1 for spring admission;
  - D. Have completed a minimum of 45 undergraduate credits from an accredited college or university;
  - E. Have advisement by Department of Nursing faculty;
  - F. Be CPR certified;
  - G. Successfully complete a nursing validation examination (24 credits of nursing transferred from associate degree or diploma school program if the examination is passed).
1. Start clinical courses within one year of passing the validation examination.
  2. Complete the B.S.N. program within five years of passing the validation exam.

### Requirements

Courses and credits as follows:

30 credits in Nursing—NRSE 300, 301, 302, 303, 304, 306, 401, 402, 404 and 406. In addition, the student must take STAT 104, PSY 112, SOC 110, PSY 236, PSY 428, BIO 412, PS 448, MGT 301 and a Computer Science course is recommended.

\*Admission to the University does not guarantee advancement to upper division nursing courses.

\*\*Applicants in their final year of a diploma or associate degree may be accepted on a provisional basis.

## Athletics

B. A. Reilly, *Chairperson*; M. A. Brown, R. Burns, M. J. Foster, J. C. Garner, S. Green, J. J. Keleher, C. F. Krein, C. Lee, M. McGlinchey, K. Pirog, R. M. Pringle, G. L. Redman, D. T. Rybczyk. (*Dept. phone 827-7365*)

# Physical Education and Health Fitness Studies

R. E. Trichka, *Chairperson*; A. B. Capitaio, C. M. Conatser, A. P. Craven, C. Fellows, F. J. Frangione, P. T. Gosselin, R. Groves, T. Nyein, J. R. Olcott, S. H. Smith, J. R. Webster, J. W. Wojtusik.  
(Dept. phone 827-7209)

The Department of Physical Education and Health Fitness Studies offers a major in Physical Education for teacher certification with the options: PE in the Schools, Athletic Coaching, Athletic Training, and Exercise Specialist and non-certifiable majors in Health Fitness, Athletic Training and Physical Education for Older Adults.

## Major in Physical Education, B.S. Ed.

65 credits (depending upon option elected) in Physical Education, subdivided into the following components:

### Activity Courses

14 credits—7 credits required and 7 credits elective from among the following categories:

*Rhythmics*—Select two from PE 372\*, REC 150, 152, 153, 157, 275.

*Aquatics*—Select one from PE 174, REC 200, 230, 232, 233.

*Body Development*—Select three from PE 155, 156, 170\*, 171, 175\*.

*Racket Sports*—Select two from REC 160, PE 370, 371.

*Outdoor Recreation*—Select one from REC 121, 124.

*Team Sports*—Select two from REC 142, PE 172, 173, 271, 374\*.

*Individual Sports*—Select two from REC 159, 163, 164, 169, PE 273\*, 274\*.

\*Required

### Core of Required Lecture Courses

27 credits required of all majors:  
PE 111, 210, 213, 214, 216, 303, 304, 305, 402, 405, 406.

### Options in Physical Education

Each student will select one of the following options:

*Physical Education for the Schools*—PE 220, 301, 404, 420, EDSC 417, EDSC 419.

*Athletic Coaching*—PE 217, 332, 341, 404, select 4 credits from coaching courses, ED 419.

*Athletic Training*—PE 217, 315, 316, 404, 218, 317, EDSC 419.

*Exercise Specialist*—PE 217, 404, 218 or 317, 422, PE 400 and 433, EDSC 419.

The General Education prerequisites are:

BIO 111, CHEM 111, ENG 110, HIST 261, HIST 262, STAT 104, PHYS 111, PSY 235 and COMM 115.

## \*PROGRAMS NOT CERTIFIABLE FOR TEACHING

\*Programs under revision. Please see Department Chair for details.

### Core of Required Courses (25 credits)

	Credits
PE 110 Concepts in Physical Fitness	2
PE 111 Orientation to Physical Education	1
PE 180 Cardiopulmonary Resuscitation	1
PE 210 Personal and Community Health	2
PE 213 Anatomy in Physical Education	3
PE 214 Physiology	3
PE 216 Kinesiology	3
PE 303 First Aid	1
PE 305 Evaluation in Physical Education	3
PE 402 Organization & Administration of Physical Education	3
PE 422 Motor Learning	3

### Skill/Activity Courses

(7 credits)	Credits
PE 170 Physical Fitness	1
PE 171 Weight Training	1
PE 174 Swimming	1
PE 370 Tennis OR	
PE 371 Badminton	1
DAN 155 Dancercise	1
DAN 156 Slimnatics	1
REC 160 Racquetball	1

Free Electives 6

### Health Fitness Specialization

Required Courses (27 credits)	Credits
PE 217 Care and Treatment of Athletic Injuries	3
PE 218 Scientific Basis for Athletic Training	3
PE 317 Therapeutics for Athletic Training	3
PE 404 Exercise Physiology	3
PE 400 Graded Cardiac Testing	3
PE 401 Implementation & Evaluation of Health Fitness	3
PE 443 Practicum in Exercise Counseling	3
PE 444 Internship in Exercise Science	6

**Athletic Training Specialization**

Required Courses (27 credits)	Credits
PE 217 Care & Treatment of Athletic Injuries	3
PE 218 Scientific Basis for Athletic Training	3
PE 315 Practicum in Athletic Training I	3
PE 316 Practicum in Athletic Training II	3
PE 317 Therapeutics in Athletic Training	3
PE 404 Exercise Physiology	3
PE 440 Therapeutic Modalities in Athletic Training	3
PE 445 Internship in Athletic Training	6
Free Electives	6

**Physical Education for Older Adults  
Specialization**

Required Courses (15 credits)	Credits
PE 215 Psychological Aspects of the Human Performance of the Aging	3
PE 306 Recreation and the Aging Process	3
PE 400 Graded Cardiac Testing	3
PE 403 Methods of Physical Education for the Aging	3
PE 443 Practicum in Health Fitness	3

**Concentration in Physical Education**

Required Courses	Credits
PE 101 Coaching Permit: Legal and Safety Aspects of Coaching	1
PE 102 Coaching Permit: Medical Aspects of Coaching	1
PE 103 Coaching Permit: Principles and Practices of Coaching	1
PE 110 Concepts in Physical Fitness	2
PE 180 Cardiopulmonary Resuscitation	1
PE 303 First Aid	1
PE 332 Psychological Aspects of Coaching	3
PE 407 Human Perspectives in Sport	3

**Electives**

Select 3-6 credit hours from the following: 3-6  
Coaching courses—PE 333, 334, 335, 353, 355, 356,  
357, 358, 359, 360, 361, 362, 363.

Select 2 credit hours from the following: 2  
Officiating courses— PE 312, 314.

**Total 18-21 credits**



# SCHOOL OF TECHNOLOGY

John R. Wright, *Dean*

Andrew W. Baron, *Assistant to the Dean*

The School of Technology prepares people to cope with the technological side of society. It consists of three program departments and four technical areas which serve the departments.

The School offers Industrial Technology and Engineering Technology degrees leading to technical careers in industrial management and engineering technology. In conjunction with the School of Education, the bachelor of science degree (in Education) prepares individuals for teaching careers in Technology Education and Vocational-Technical Education.

The School provides students with an opportunity to develop competencies in tool, material and instrument usage; concepts of how industry changes the forms of material, energy and information to increase their value in society; concepts of how industry develops products, distributes and services products; and concepts of industrial organization and management.

The Program Departments of the School are Industrial Technology, Engineering Technology, and Technology and Vocational-Technical Education.

## Industrial Technology

W.W. Davison, *Chairperson*; A. W. Baron, S. R. Bennett, J. A. DeLaura — C. Mfg. E., M. Haase, J. J. Mack, O. Odesina, R. J. Perreault, P. J. Resetarits, S. E. Rich, R. H. Thompson, P. J. Vernesoni. (*Dept. phone 827-7414; Faculty phone 827-7654*)

The Industrial Technology Department offers the following programs of instruction:

- Bachelor of Science degree in Industrial Technology.
- Master of Science degree in Organization and Management—Industrial Technical Management option.

The Industrial Technology Department has nine technical specializations designed to prepare students for technically oriented supervisory and middle management positions in industrial firms. The program responds to an increasing demand by industry for supervisory and management personnel who have a combination of technical, managerial and general education backgrounds. Therefore, Industrial Technology training includes a basic knowledge of industrial processes, including the operation of machines and equipment, in addition to a background in general studies. The training provides the graduate with experiences which make him or her flexible and adaptable to many kinds of industrial organizations with a reasonable amount of in-service or job-oriented training.

### PLANS OF STUDY

Students interested in the Technology programs may attend Central Connecticut full- or part-time. Part-time study permits a student to keep a full-time day job and enroll in courses in the late afternoon or evening. Full-time students may complete the 122-credit program in four years.

#### Industrial Technology Major, B.S. (64 Credits)

Industrial Technology majors, regardless of the specialization selected, are required to complete a common base of 12 credits in technical courses and choose 12 credits in either Management or Industrial Sales as part of their program. Courses included within these common requirements are as follows:\*

Technology Courses	Credits
IT 362 Leadership Skills for Supervisors	3
IT 410 Industrial Safety	3
IT 401 Industrial Internship	6

NOTE: Cooperative Apprenticeship Program under Special Programs.

<b>Management</b>		<b>Credits</b>
MGT 301	Principles of Management	3
LAW 250	Principles of Law	3
ENG 403	Technical Writing	3
AC 210	Industrial Accounting	3

<b>Industrial Sales</b>		<b>Credits</b>
MKT 303	Marketing Principles	3
ENG 403	Technical Writing	3
AC 210	Industrial Accounting	3
MKT 307	Sales Force Administration	3

TC — Technical Courses — designed to develop technical competencies; for Industrial Technology, Engineering Technology, and Technology Education majors.

\*Different for Construction Management, Manufacturing, Power Transmission, Graphic Design/Management, and Public Safety Specializations.

### General Education Requirements

A total of 62 credits in General Education studies must be completed as part of all baccalaureate degree programs.

Industrial Technology majors are required to complete the following 3-credit courses as part of their General Education: Mode 2 — STAT 104, MATH 115; Mode 6 — PSY 435; Mode 7 — ECON 201; Mode 8 — CHEM 111 with lab, PHYS 111 with lab; Area A — ENG 110, COMM 115 or 140

### Industrial Technology Specializations

Each Industrial Technology student should identify a specialization based on individual interests and goals. Nine specializations are available; each is shown with its course requirements.

#### Automation

*Advisers:* W.W. Davison (827-7414), R.H. Thompson (827-7393)

This specialization is designed to prepare students in the field of automation. Graduates will have a background in electronics, hydraulics and pneumatics, servo and non-servo robotics, automation mechanisms, automated warehousing, data acquisition and feed back mechanisms, and the use of various control devices including personal computers (PC's), programmable logic controllers (PLC's), and sequence controllers. These technical components, in conjunction with middle management skills, will enable the graduate to enter industry in the areas of production automation, technical sales, project management and supervision of automated systems.

<b>Specialization Requirements</b>		<b>Credits</b>
TC 113	Intro to Information Processing	2
TC 114	Intro to Energy Processing	2
TC 118	Intro to Material Processing	2
TC 121	Technical Drafting	3
MATH 121	Pre-Calculus Mathematics	3

CS 213	Applications of Computer Programming	3
TC 324	Fluid Power Systems	3
TC 333	Data Acquisition and Control	3
TC 334	Mechanisms for Automation	3
TC 463	Automation	3
IT 400	Senior Project	3
IT 480	Robotics	
Electives — Technical and Management, select from the following:		Total 7
ET 260	CAD/CAM/CIM	3
IT 481	Robotic Systems	3
TC 321	Computer-Aided Drafting	3
TC 433	Digital Circuits	3
TC 453	Microprocessors	3

Industrial Technology majors with a specialization in Automation are required to complete the following courses as part of their 62-credits General Education program: Area C — TC 213, 216.

#### Construction Management

*Advisers:* S. R. Bennett, R. J. Perreault. (827-7412)

This sequence of courses is designed to supply the student with a background of knowledge and experiences which will enable him/her to operate effectively in a supervisory position in the construction industries. The emphasis is not on specialized skills, but rather on a broad spectrum of subjects pertinent to this particular field.

<b>Specialization Requirements</b>		<b>Credits</b>
In place of IT 410, students will take IT 422.		
TC 113	Intro to Information Processing	2
IT 150	Construction Practices and Principles	3
TC 255	Materials of Construction	3
IT 252	Building Codes and Specifications	3
IT 254	Construction Graphics	3
TC 351	Construction Estimating	3
TC 353	Construction Surveying	3
TC 355	Construction Planning	3
TC 455	Construction Project Management	3
IT 457	Construction Supervision	3
Electives—Technical and Management		11

## Electrical Systems

*Advisers:* R. H. Thompson, D. C. Dowty.  
(827-7393)

This area of specialization is keyed toward preparing students for middle management positions in the electrical and electronic industries. Graduates may work in such fields as utilization and distribution of electrical power, communications, computers and machine control systems.

Specialization Requirements		Credits
TC 113	Intro to Information Processing	2
TC 114	Intro to Energy Processing	2
TC 118	Intro to Material Processing	2
TC 121	Technical Drafting	3
TC 223	Electrical Circuits: DC	3
TC 233	Electrical Circuits: AC	3
TC 303	Electro-Mechanical Converters	3
TC 313	Electrical Power Systems	3
TC 323	Analog Circuits	3
TC 433	Digital Circuits	3
TC 443	Electronic Communications	3
TC 453	Microprocessors	3
Electives—Technical and Management		7

## Graphic Arts

*Advisers:* S. E. Rich (827-7242), M. Haase, O. Odesina  
(827-7654)

This specialization is designed to provide the student with knowledge of the various techniques used in the printing industry: composition, photo mechanicals, press work and bindery. The training will be broad in scope with an emphasis upon wide background rather than mechanical skills, and will equip students to work on the management side of the labor management team as supervisors, estimators, salespersons or production controllers.

Specialization Requirements		Credits
TC 112	Instrument Drawing	3
TC 113	Intro to Information Processing	2
TC 114	Intro to Energy Processing	2
TC 118	Intro to Material Processing	2
TC 261	Intro to Graphic Design and Color	3
TC 212	Graphic Arts Industries	3
TC 342	Porous Printing and Post-Press Operations	3
TC 442	Lithography	3
TC 462	Advanced Graphic Arts Techniques	3
IT 355	Estimating for Printing	3
IT 360	Production Control	3
Electives—Technical and Management		10

## Graphic Design Management

*Advisers:* S. E. Rich (827-7242), M. Haase, O. Odesina.  
(827-7654)

This track of the Graphic Arts specialization allows students to combine courses in Graphic Arts, Art and Management to prepare for design management careers in the graphic arts field. Transfer credits from Graphic Design programs at community colleges are accepted.

Specialization Requirements		Credits
In place of IT 410, students will take MKT 306		
TC 112	Instrument Drawing	3
TC 212	Graphic Arts Industry	3
TC 261	Intro to Graphic Design and Color	3
TC 442	Lithography	3
TC 462	Advanced Graphic Arts Techniques	3
TC 472	Introductory and Publications Photography	3
IT 400	Senior Project	3
ART 222	Graphic Design Skills I	3
ART 421	Design Advertising	3
Electives—Technical, Art or Management		13

## Manufacturing

*Advisers:* J. A. DeLaura—C. Mfg. E. (827-7654),  
J. J. Mack (827-7262).

This specialization is designed to train students primarily for middle management and supervisory positions that are production-oriented. Industrial areas involved include production control, methods and work standards, production supervision, cost estimating and quality control. (Related job titles include industrial engineer, production foreman, quality control supervisor.)

Specialization Requirements		Credits
TC 113	Intro to Information Processing	2
TC 114	Intro to Energy Processing	2
TC 118	Intro to Material Processing	2
TC 121	Technical Drafting	3
TC 216	Materials Processing II (Metallics)	3
TC 316	Metals Machining	3
TC 416	Principles of Numerical Control	3
TC 446	Tool & Die Fundamentals	3
IT 359	Plant Layout	3
IT 360	Production Control	3
IT 458	Productivity Improvement	3
ET 456	Materials Analysis	3
Electives—Technical and Management		7

## Occupational Safety

Adviser: A. W. Baron (827-7997).

The Occupational Safety and Health Act of 1970, by requiring employers to provide safe and healthful working conditions, has increased the need for trained safety personnel. This specialization in Occupational Safety will prepare students for management positions as safety professionals in private industry, federal, state and local government.

Specialization Requirements		Credits	
TC	113	Intro to Information Processing	2
TC	114	Intro to Energy Processing	2
TC	118	Intro to Material Processing	2
TC	121	Technical Drafting	3
ET	300	Human Factors Engineering (Ergonomics)	3
IT	411	Industrial Hygiene	3
IT	412	Principles of Occupational Safety	3
IT	359	Plant Layout	3
IT	360	Production Control	3
IT	414	Industrial Loss Control and Prevention	3
IT	415	Fire Protection and Prevention	3
Electives—Technical and Management		10	

## Power Transmission

Adviser: W. W. Davison (827-7414)

This specialization provides the student with knowledge of the various techniques used in the power transmission industry. Training will be provided in the electro-mechanic areas, and provide students with the background to become supervisors, managers and salespeople in the field of power transmission. This program provides transferability from the community colleges and state technical colleges for students enrolled in automotive-related technology programs.

Students who select the Industrial Sales track should replace MKT 307 with MKT 304. Credits are selected from the following or automotive courses transferred from community and/or technical colleges.

Specialization Requirements		Credits	
TC	113	Intro to Information Processing	2
TC	114	Intro to Energy Processing	2
TC	118	Intro to Material Processing	2
TC	121	Technical Drafting	3
TC	213	Electrical Energy	3
TC	214	Mechanical Energy	3
TC	313	Electrical Power Systems	3
TC	323	Electronic Circuits	3
TC	324	Fluid Power Systems	3
TC	334	Mechanisms for Automation	3
IT	360	Production Control	3
Electives—Technical and Management		10	

## Public Safety

Adviser: A. W. Baron (827-7997).

This specialization, primarily an in-service program, prepares students for supervisory and middle management positions in the public safety field.

The program provides transferability from the community colleges and state technical colleges for students enrolled in Public Safety, Police or Fire Science, EMS, Health or other safety-related technology programs. Students may earn the Bachelor of Science degree. Technical as well as management and supervisory courses are offered. Common base is included in specialization requirements below.

Specialization Requirements		Credits	
IT	362	Leadership Skills for Supervisors	3
IT	401	Industrial Internship	6
IT	403	Techniques and Theories of Technical Training	3
IT	410	Industrial Safety	3
IT	433	Techniques of Conference Leading	3
MGT	301	Principles of Management	3
LAW	301	Principles of Law	3
AC	210	Industrial Accounting OR	
AC	201	Principles of Accounting	3
VTE	440	Human Relations	3
Political Science Elective		3	

## Specialization Courses (18 credits required):

Credits are selected from the following or transferred from community and/or technical colleges.

		Credits	
TC	214	Mechanical Energy	3
TC	441	Architectural Drafting	3
TC	472	Introduction and Publication Photography	3
IT	380	Emergency Medical Technician	3
IT	412	Principles of Occupational Safety	3
IT	414	Industrial Loss Control Management	3
IT	415	Fire Protection and Prevention	3

Directed electives—13 credits based on advisement

13

# Engineering Technology

L. Lema — C. Mfg. E., *Chairperson*; G. Alungbe, J. Bean — P.E., D. C. Dowty, M. Faezi, R. S. Lang, E. J. Maydock, O. A. Powell — P.E., E. Sarisley — P.E.  
(Dept. phone 827-7370; Faculty phone 827-7412, 827-7413)

The Engineering Technology Department offers the Bachelor of Science degree in Engineering Technology.

The Department has three technical specializations designed to prepare students to become active partners with engineers and be team members of the total technological enterprise that extends from planning to production, construction, and/or service.

Students who have chosen a specific track in Engineering Technology will be able to apply scientific, mathematical and basic engineering knowledge and methods, combined with technical skills, in support of engineering activities. The four-year planned course of study includes science, math, computer graphics, communications and mechanics, along with laboratory courses in the technical specialization.

## Plans of Study

Those students enrolled in the Engineering Technology Department may attend the University full- or part-time. Courses offered in the late afternoon or evening allow part-time students to maintain full-time employment. Full-time students may complete their 130-credit program in four years. A Co-op experience is suggested for all students.

## Engineering Technology Major, B.S.

### General Education Requirements

Engineering Technology majors are required to complete the following courses as part of their General Education program: Mode 2 — STAT 104, MATH 115, 125, CS 213; Mode 8 — CHEM 121, PHYS 121, 122; AREA A — ENG 110, 403, COMM 140; and Area C — ET 150, 497. A minimum grade of C- is required in these General Education courses. Refer to program curriculum sheets for specific mode requirements.

### Engineering Technology Specializations

Each Engineering Technology student should identify one of the following specializations based on individual interests and goals. Three specializations are identified; each is shown with its course requirements.

#### Manufacturing Engineering Technology

*Advisers:* L. Lema—C. Mfg. E. (827-7370), M. Faezi (827-7412), R. S. Lang (827-7413).

This specialization develops concepts employed by manufacturing industries to increase productivity, reduce cost and efficiently use tools and machinery. Emphasis is on the area of manufacturing, process planning, CAD/CAM, production techniques, and the application of mathematics and computers.

Specialization Requirements			Credits
*MATH 101		Alegbra	3
TC	113	Intro to Information Processing	2
TC	121	Technical Drawing	3
TC	213	Electrical Energy	3
TC	216	Materials Processing II	3
TC	316	Metals Machining	3
TC	324	Fluid Power Systems	3
TC	416	Principles of Numerical Control	3
TC	446	Tool and Die Fundamentals	3
IT	360	Production Control	3
IT	364	Statistical Process Control	3
IT	480	Robotics	3
ET	260	CAD/CAM/CIM	3
ET	351	Applied Mechanics I (Statics)	3
ET	352	Applied Mechanics II (DYN/HYD)	3
ET	360	Computer-Aided Planning	3
ET	440	Geometrical Dimensioning/ Tolerancing	3
ET	456	Materials Analysis	3
ET	461	Manufacturing Plastics/Composites	3
ET	462	Manufacturing Process Planning and Estimating	3
ET	466	Design for Manufacturing	3
ET	498	E.T. Senior Project (capstone)	3
		Directed Technical Elective	3
			<b>Total 68</b>

### Industrial Systems Engineering Technology

*Advisers:* E. J. Maydock (827-7412).

This specialization combines Industrial Engineering principles with computer applications to increase and improve the quality of a professional's performance. These graduates support both line and staff management personnel. Responsibilities would include scheduling, allocation of human and/or material resources involving sales force, office and plant personnel.

Specialization Requirements			Credits
*MATH 121		Pre-Calculus	3
CHEM 122		Chemistry II	4
TC	113	Intro to Information Processing	2
TC	121	Technical Drawing	3
TC	213	Electrical Energy	3
IT	359	Plant Layout	3
IT	360	Production Control	3

\*Placement exam required

IT	364	Statistical Process Control	3
IT	410	Industrial Safety	3
IT	432	Worker/Supervisor Relations	3
IT	458	Productivity Improvement	3
IT	480	Robotics	3
ET	260	CAD/CAM/CIM	3
ET	300	Human Factors Engineering	3
ET	351	Applied Mechanics I (Statics)	3
ET	352	Applied Mechanics II (DYN/HYD)	3
ET	360	Computer-Aided Planning	3
ET	456	Materials Analysis	3
ET	498	E.T. Senior Project (capstone)	3
CS	450	Operations Research in Computer Science	3
CS	473	Simulations Techniques	3
		Directed Technical Electives	5
		<b>Total</b>	<b>68</b>

### Construction Engineering Technology

*Advisers:* E. Sarisley — P.E. (827-7412), G. Alungbe, J. Bean — P.E., O. A. Powell — P.E. (827-7413)

This specialization provides students with a background of knowledge in design support, construction and maintenance of the infrastructure. Graduates may work in consulting firms, construction organizations, testing laboratories, municipal governments and utility companies. Emphasis is on the areas of surveying, materials, structures and use of the computer in the construction industry.

Specialization Requirements		Credits
*MATH	101 Algebra	3
TC	113 Intro to Information Processing	2
TC	122 CAD for Construction	3
TC	255 Materials of Construction	3
TC	313 Electrical Systems	3
TC	351 Estimating for Construction	3
TC	353 Construction Surveying	3
TC	355 Construction Planning	3
IT	150 Construction Practices and Principles	3
IT	252 Building Codes/Specifications	3
IT	254 Construction Graphics	3
ET	351 Applied Mechanics I (Statics)	3
ET	352 Applied Mechanics II (DYN/HYD)	3
ET	357 Strength of Materials	3
ET	397 Structural Analysis	3
ET	451 Soil Mechanics/Foundations	3
ET	454 Transportation/Land	3
ET	457 Advanced Surveying	3
ET	470 Structural Steel Design	3
ET	471 Reinforced Concrete Structures	3
ET	498 E.T. Senior Project (capstone)	3
	Directed Technical Elective	6
	<b>Total</b>	<b>68</b>

\*Placement exam required

## Technology and Vocational-Technical Education

M. J. Williams, *Chairperson* (827-7379); B. J. Haviland, *Coordinator for Vocational-Technical Education program* (827-7861); G. Ku, J. C. Larkin, A. J. L'Esperance, P. A. Rodrigues, R. Rinas, R. Ross, K. Tracey, W. Tracey. (*Faculty phone* 827-7393, 827-7413)

The Department of Technology and Vocational-Technical Education offers the following programs of instruction:

Bachelor of science degree programs in Technology Education and Vocational-Technical Education;

Master of science degree programs in Technology Education and Vocational-Technical Education;

Planned sixth year—no certificate or degree;

Sixth-year diploma in professional education in cooperation with the University of Connecticut.

Specific requirements for the planned fifth year, master of science degree program and sixth-year programs in Technology Education and Vocational-Technical Education are stated in the graduate catalog.

### TECHNOLOGY EDUCATION

The undergraduate day and evening programs in Technology Education prepare students for teaching Technology Education in the elementary grades, junior and senior high schools, and in adult education. The four-year curriculum provides specific training in Technology Education as well as courses in the humanities, the social and behavioral sciences, mathematics, natural sciences, fine arts and physical education. When registering for courses, students must have the registration material examined and signed by their adviser or the Department chairperson. Otherwise, courses taken may not be counted toward acceptance into the Professional Program, the bachelor's degree, or both.

College/University graduates desiring to meet the certification requirements for teaching Technology Education in Connecticut should meet with Mr. Peter Rodrigues (827-7654).

### Technology Education Major, B.S.

*Advisers:* G. Ku, P. A. Rodrigues, K. Tracey, W. Tracey. (*Faculty phone* 827-7393 or 827-7654)

### General Education Requirements

A total of 62 credits in General Education studies must be completed as part of all baccalaureate degree programs. See General Education section in this catalog.

Technology Education students are required to take

ENG 110, HIST 261, PSY 235 or 236, PHYS 111 and CHEM 111, and MATH 115. These courses count toward the overall General Education requirements.

### Technology Education Professional Requirements

Students are required to take TE 199, 399, 400 and 428. Please pay careful attention to the semester in which these courses will be offered indicated in the Course Description section of this Catalog. All of these courses may not be available each semester and are seldom available during the Summer sessions.

### Technology Education Technical Requirements

Technology Education majors are required to take TC 113, 114, 118, 121, 212, 213, 214, 215 and TE 110, 410, 420, 430, 450 as well as three additional credits of technical courses indicated by the TC prefix and approved by their Technology Education adviser. Each major in Technology Education must complete at least 6 semester hours in each of the following areas: communication, production and transportation.

### Professional Education Requirements

Technology Education majors are required to take SPED 470, EDSC 375, EDF 400 or 401, EDSC 256 or PSY 256, EDSC 414 and 415. NOTE: EDSC 256 or PSY 256 may not be used for Mode requirements.

### Admission to the Professional Program

Students must make formal application for admission to the Professional Program of Technology Education after completion of 45 credits in coursework. At least 15 of these credits must be in TC, TE or IE courses. Applications are available from the Dean of Education and Professional Studies, Barnard Hall, and must be filed prior to October 1 or March 1. Acceptance is prerequisite to taking TE 400, EDSC 414 and 415. Students must maintain a minimum 2.50 grade point average in all technology courses. See School of Education and Professional Studies, Admission to Professional Program and Special Departmental Criteria for Technology Education.

## VOCATIONAL-TECHNICAL EDUCATION

The undergraduate curriculum in Vocational-Technical Education is designed for preparing teachers of occupational subjects (skilled trades) and trade-related subjects for Connecticut's vocational-technical schools, teachers of trade and industrial occupational subjects for local education agencies, and health occupation educators. The

program is also offered for persons who wish to prepare for instructor positions in training programs within business and industry and private vocational schools. Students planning to qualify for vocational teaching positions within Connecticut's public schools are normally required to meet the following work experience requirements for certification:

**Occupational Subjects (CT Vocational-Technical Schools)**—8 years of appropriate work experience.

**Trade-Related Subjects Teachers (CT Vocational-Technical Schools)**—3 years of appropriate work experience.

**Trade and Industrial Occupational Subjects Teachers (Comprehensive High Schools)**—3 years of appropriate work experience.

**Vocational-Technical Education Major, B.S.**  
(Trade and Industrial and Occupational Subjects Teachers)

B. J. Haviland, *Coordinator (827-7861)*; *Advisers:*  
A. J. L'Esperance, R. Rinas, R. J. Ross. (*Faculty phone 827-7413*)

<i>Professional Education</i>	<b>Credits</b>
VTE 113, 116, 325, 328, 400, 415; EDSC 372, EDF 400; ETM 370; EDSC 256 OR PSY 256, RDG 440, SPED 470	34

<i>Supervised Teaching or Student Teaching</i>	
VTE 117 and VTE 118 (In-Service) or EDSC 413 (Pre-Service)	6-10

<i>Occupational Specialization</i>	
VTE 421 Credit-by-examination for occupational work experience. (Contact Dr. Rinas for details, 827-7413)	25

**Total 65-69**

General Electives	0-3
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<i>General Education Program</i>	
Required courses: ENG 110, Mathematics elective, HIST 261, PSY 235	62
<b>Total</b>	<b>130</b>

**Vocational-Technical Education Major, B.S.**  
(Related Subjects Teacher)

B. J. Haviland, *Coordinator (827-7861)*; *Advisers:*  
A. J. L'Esperance, R. Rinas, R. J. Ross. (*Faculty phone 827-7413*)

<i>Professional Education</i>	<b>Credits</b>
VTE 113, 116, 325, 329, 400, 415; EDSC 372, EDF 400; ETM 370; EDSC 356 or PSY 256, RDG 440, SPED 470	34

*Supervised Teaching or Student Teaching*  
 VTE 117 and VTE 118 (In-Service) or  
 EDSC 413 (Pre-Service) 6-10

*Major Area Courses*  
 TC 121, 213, 214, 441; CHEM 121, ESCI 110,  
 directed elective 22  
**Total 62-66**

General electives 5-9

*General Education Program*  
 Required courses: ENG 110, MATH 115 and 121,  
 HIST 261, PHYS 121 and 122, PSY 235 62  
**Total 130**

**Vocational-Technical Education Major, B.S.**  
 (Health Occupations Education)  
 Coordinator/Adviser: B. J. Haviland. (827-7861)

Central Connecticut offers a B.S. degree in Health Occupations Education with teacher certification at the secondary level. The program is designed to prepare instructional personnel for the following areas:

- a. Teachers in nursing-assistant programs
- b. Teachers in health occupations education programs (e.g. dental, mental, medical, medical lab assistant, surgical and radiological technician)
- c. Teachers in licensed practical nurse education programs
- d. School-nurse teachers
- e. Staff development personnel
- f. In-service education personnel in extended care facilities.

Applications for admission are welcomed from men and women who have a sincere interest in preparing for or who are currently involved in health occupations education. Graduates from State-approved diploma programs and associate degree programs in nursing, and other health occupations fields who are currently licensed to practice, may be admitted for full- or part-time study. Current occupational licensure or registration in Connecticut is a prerequisite to enrolling in any course with a clinical component.

Credit may be transferred for courses completed in accredited colleges or universities which are appropriate to the courses in the program. Credits are evaluated by the Office of Admissions on a course-by-course basis. Registered nurses holding a diploma verifying completion of a hospital-based approved school of nursing may be granted up to 48 transfer credits.

The Health Occupations program consists of :

<i>Professional Education</i>	<b>Credits</b>
VTE 113, 116, 325, 400, 415 440; EDF 400; ETM 370; EDSC 256 or PSY 256, SPED 470	29

<i>Supervised Teaching or Student Teaching</i>	
ED 403, 404 (In-Service) or ED 422 (Pre-Service)	6-10

<i>Occupational Specialization</i>	
VTE 421, 445	30

General Electives	0-4
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<i>General Education Program</i>	
Required courses: ENG 110, STAT 104, HIST 261, PSY 235	62
<b>Total</b>	<b>130</b>



# COOPERATIVE EDUCATION PROGRAM

Cooperative Education is an academic program integrating classroom study with career-related work experiences. Co-op work experiences are paid, full-time, six-month positions related to academic and career interests. Co-op is an optional, and in most cases, noncredit program.

Central Connecticut's program, the largest in Connecticut and one of the largest in New England, combines five months of on-campus study with six months of paid Co-op employment. Thus, students apply textbook learning to on-the-job training. The money earned, at similar salaries earned by regular full-time employees, helps students finance their University education.

Co-op students are assigned a Cooperative Education coordinator who will develop Co-op jobs which meet their needs, and guide their career development at Central Connecticut. Students also receive instruction in skills that make the difference in today's job market: résumé writing, interviewing techniques, career planning and job-seeking strategies.

Students may go through the work/study cycle up to four times. As they advance in studies, Co-op jobs are more advanced, more responsible and higher paid.

In the Co-op program, students graduate with up to two years of career-related work experience and, possibly, with a job offer. Approximately half of Central Connecticut's Co-op students are offered permanent positions with their Co-op employers upon graduation. And nationwide, graduates of Co-op programs are hired at higher salaries and promoted faster than other employees. For students unsure of a career, Co-op is a no-risk way to test job options. For those set in their goals, Co-op provides a direct route from campus to career.

## How Co-op Works

- Co-op work blocks run from January through June (Group A) and from July to December (Group B).
- Students may participate in either one, two, three or four Co-op work blocks.
- Students may enroll in the Co-op program as early as the summer following their freshman year.
- Students must enroll in a Co-op Career Development Seminar during the semester prior to the first work experience.

## Enrolling in the Co-op Program

Once enrolled at Central Connecticut, the first step in becoming a Co-op student is to attend a Co-op Information Session. These are offered weekly in the Co-op Office, Room 100, Willard Hall. The session provides details about how the program works, how to enroll, and the benefits the student can expect as a Co-op student at Central Connecticut. It gives students an opportunity to ask questions and receive current literature about the program.

After the Information Session, students meet with a coordinator to formally enroll in the program.

Students should plan to enroll in the program at least one semester prior to the first planned work block. Group A students must apply no later than the third week of the Fall semester; Group B students must apply no later than the third week of the Spring semester. Applying a semester in advance of the work block ensures 1) a place in the program; 2) sufficient time for the Co-op staff to develop appropriate Co-op positions; and 3) sufficient time for students to complete the Career Development Seminar prior to their work experience.

## The Career Development Seminar

The Career Development Seminar is designed to teach students life-long career skills. They learn to write a résumé, interview effectively, make career decisions, explore occupations and discover where the jobs are in their field. This one-credit course is taught by the Co-op staff.

## Cost and Eligibility

The Co-op program is available to all full-time students in good academic standing. Currently, it costs \$400 per year to be enrolled in the Co-op program. Students are billed \$200 per semester.

# INTERNATIONAL AND AREA STUDIES

International and Area Studies programs are offered as interdepartmental and inter-school programs at the undergraduate and graduate levels.

For the undergraduate student, a major is offered leading to the B.A. degree with specialization in East Asian Studies. Concentrations in Latin American Studies and Soviet and East European Studies are also offered.

B.A. and B.S. students also may develop a Special Studies major focusing on a particular area of the world, such as East Asia, Latin America, the Soviet Union and East Europe, or any other area for which suitable courses are offered. The Special Studies major also may be used to develop an International Studies program of a broader nature which does not necessarily focus on a particular geographical area. The requirements for a Special Studies major are explained in the section following.

B.S. students have an additional option which enables them to develop an International Studies focus through selecting the Social Science major (see under that heading in this Catalog).

Each student planning any major or concentration in International or Area Studies must register with the coordinator or adviser for the area in which they have special interest or, for those seeking a broader approach to International Studies, with the chairperson of the International and Area Studies Committee (827-7469).

A multidisciplinary program leading to the Master of Science in International Studies, designed for students who wish to study a specific area of the world and/or to develop a graduate program with a global perspective is offered through the International and Area Studies Committee.

Arrangements have been made with many area colleges which permit Central Connecticut students to use the East Asian library resources of the cooperating institutions.

Chinese and Japanese language courses are also open to recommended high school students.

Pending final approval, three new comprehensive International Studies majors will be available to students. The School of Arts and Sciences will offer the B.A. in International Studies and, in cooperation with the School of Technology, the B.A. in International Studies — Technology Focus. The School of Education will offer a B.S. in International Studies for Secondary Education.

For further information contact: Prof. Richard A. Williams, Chairperson, International and Area Studies Committee, Department of History, 827-7447.

## East Asian Studies

R. A. Williams, *Coordinator* (827-7469);  
W. W. Donovan, K. H. Kim, I. Kopf, C. S. Lien,  
J. McKeon, S. Tomoda.

### East Asian Studies Major, B.A.

39 credits, distributed as follows: HIST 122, AS 497 and 498, two approved disciplinary groupings of 12 and 9 credits, respectively, and 6 credits in approved electives. Three semester hours are included to provide for a prerequisite for any of several elective options.

With this major a concentration is required; a concentration in Chinese or Japanese is strongly recommended.

### Special Studies or Social Science Major with focus on East Asia, B.S.

(See International and Area Studies introduction above.)

### Concentration in East Asian Studies

18 semester hours of electives in East Asian courses, subject to approval of the coordinator. Courses used for a major may not be used to fulfill the requirements of the concentration.

## Latin American Studies

M. A. Arenas, *Program Adviser* (827-7508);  
I. Blanco, D. A. Kideckel, A. C. Richard,  
J. N. Snaden, A. J. Zottola.

A brochure describing the program in depth is available from the adviser. Program revision pending approval. For details see Dr. Arenas.

### Concentration in Latin American Studies, B.A. or B.S.

This concentration is not available to History or Spanish majors; separate concentrations are provided for majors in those disciplines. Required courses include GEOG 434, 436; HIST 381, 382; and 12 credits from the following: ANTH 433\*; ECON 398\*, 435, 499\*; GEOG 459\*, 469\*; HIST 483, 484, 493\*; HUM 490\*; PS 235, 438, 490; SOC 411, 433\*; SPAN 125, 126, 225, 226, 305, 315, 316, 375, 376, 410 totalling 24 credits.

Courses taken as a part of this concentration may not also be used to fulfill requirements of the student's major. Elementary Education students will use a minimum of one required course and two electives (9 credits) from the above list to satisfy their unspecified Modes 4,5 and 7 General Education requirements, as appropriate. Note prerequisites where applicable. Each concentrate is required to register with the program adviser.

### **Concentration in Latin American Studies for History Majors, B.A. or B.S.**

18 credits including GEOG 434, 436 and 12 credits from the following: ANTH 433\*; GEOG 459\*, 469\*; HIST 483, 484, 493\*; HUM 490\*; PS 235, 438, 490\*; SOC 411, 433\*; SPAN 125, 126, 225, 226, 305, 315, 316, 375, 376, 410. HIST 381 and 382 must also be taken as part of the requirements for the student's major. Each concentrate is required to register with the program adviser.

### **Concentration in Latin American Studies for Spanish Majors, B.A. or B.S.**

18 credits including GEOG 434, 436; HIST 381, 382; and 6 credits from the following: ANTH 433\*; ECON 398\*, 435, 499\*; GEOG 459\*, 469\*; HIST 483, 484, 493\*; HUM 490\*; PS 235, 438, 490\*; SOC 411, 433\*. In addition, SPAN 316 and 376 must be taken as part of the requirements for the student's major. Each concentrate is required to register with the program adviser.

### **Special Studies Major with Focus on Latin America, B.A. or B.S.**

See the program adviser for course requirements and additional information.

\*These courses may be taken when it can be demonstrated that such courses are appropriate to a Latin American Studies concentration and when the written approval of the program adviser has been obtained.

## **African-American Studies**

M. L. Ertel, *Program Adviser* (827-7484); African-American Studies Committee: W. L. Brown, D. J. DeNuccio, H. S. Enck, C. J. Jones, E. Joyce, B. M. Morrison, R. S. Stowe.

The African-American Studies concentrates are designed to provide a comprehensive view of the expanding body of knowledge about black people in America and throughout the world, past and present.

### **Concentration in African-American Studies, B.S. Secondary or B.A.**

21 credits, including HIST 369 or 469 and 18 credits of approved electives.

### **Concentration in African-American Studies, B.S. Elementary**

15 credits including HIST 369 or 469 and 12 credits of approved electives.

Many departments offer courses applicable to the African-American Studies concentration. Students should consult with the program adviser when planning a program. Students interested in achieving a background in African-American Studies, and are unable to complete

the concentration, may, with the approval of the program adviser, select courses which include either HIST 369 or 469. A brochure describing the program in depth is available.

## **Soviet and East European Studies**

A. G. Smith, *Program Adviser* (827-7460); S. Blejwas, D. A. Kideckel, I. Kopf, J. A. Lucas, N. G. Papp, S. Yavener.

### **Special Studies or Social Science Major with focus on Soviet and East European Studies, B.S. or B.A.**

(See International and Area Studies introduction above.)

### **Concentration in Soviet and East European Studies**

18 credits, including 9 selected from the following: ANTH 426, GEOG 348, HIST 348, 350, 356, PS 435. RUS 125 and 126 or study of another East European language at an equivalent level are strongly recommended. Courses in Polish Studies may be applied to a Soviet and East European concentration (see Polish Studies Center).

# **SPECIAL PROGRAMS**

## **Cross-Discipline Majors and Concentrations**

### **Special Studies Major**

With the help of an academic adviser, an undergraduate student may design a major to fit his or her own interests and needs. A Special Studies major must consist of 30-40 credits if a conventional concentration is taken, or 48-60 credits if no concentration is taken. At least half of the program must consist of 300- or 400-level courses. A proposal for a Special Studies major will only be considered when it is clearly shown that no present major offered by the University meets the same need. The major will consist of already existing courses, and all academic requirements including prerequisites must be met. All Special Studies programs total 122 credits.

To be eligible for such a Special Studies major leading to a B.S. or B.A. degree, the student should be in good standing. Approval of Special Studies majors is by a majority of a committee composed of the chairperson of the Curriculum Committee, the chairperson of the International and Area Studies Committee, the associate dean of

the School of Arts and Sciences, the student's adviser, and when appropriate, an administrative representative of other schools of the University. Inquiries may be directed to the associate dean of the School of Arts and Sciences or other members of the committee.

The following are examples of some areas in which students have designed Special Studies programs leading to degrees in Special Studies:

**American Studies.** Students interested equally in American history and literature may devise a special program with the help of the program adviser.

**Soviet and East European Studies.** Various specialized majors may be worked into this general area with the assistance of the program adviser.

**Latin American Studies.** Students interested in this area should see the program adviser.

## Library Science

Central Connecticut participates in a joint program with the three other Connecticut State universities to enable students to pursue undergraduate study in Library Science. It is recommended that students wishing to pursue this program also select a second discipline to broaden their knowledge. Students interested in this program must contact the University Registrar's Office.

This course of study, composed of 122 credits, integrates Library Science and prepares graduates to work in supportive programs such as library associate or associate media specialist.

Students register and pay fees at their University and travel to Southern Connecticut State University for specific courses there. They complete two semesters of classwork at Southern.

Full details of the program are available by writing to Director, Division of Library Science—Instructional Technology, Southern Connecticut State University, New Haven, CT 06515.

## Medical Technology

Students may specialize in Medical Technology in the Natural Sciences major in the B.A. program. This specialization within the major requires 50 credits in science, including BIO 121, 122, 316, 318 and 416; CHEM 121, 122, 301, 311, 312 and 454; PHYS 121 and 122. In addition, the student must take MATH 125 and complete, as a senior, a year of clinical training in medical technology at an approved hospital. 30 credits will be awarded for the courses taken at the hospital.

The listing of clinical courses and their descriptions is in the Course Description section of this Catalog under Medical Technology.

Those applicants who qualify for clinical placement should note that eligibility does not imply automatic acceptance.

Students interested in this program must consult Professor Richard P. Wurst, coordinator, Medical Technology Program, Department of Biological Sciences, Copernicus Hall 345.

The University currently has affiliation agreements with the following schools:

Bridgeport Hospital, Bridgeport, CT: Larry Bernstein, M.D., Medical Director, School of Medical Technology, and Patricia A. Clark, MT (ASCP), Program Director;

St. Mary's Hospital, Waterbury, CT: Dante Cannarozzi, M.D., Medical Director, School of Medical Technology, and Colette Shukis, M (ASCP), Program Director.

## B.A. Program for Registered Nurses

Registered nurses holding a diploma verifying completion of a three-year program in an approved school of nursing may be granted up to 48 credits toward a B.A. degree at Central Connecticut. Nurses entering this program may select any standard B.A. major. If the chosen major requires a concentration, it is automatically replaced by 25 credits in clinical experience which is part of the nursing degree. When 48 credits are granted, the remaining 23 credits satisfy requirements in Modes 6, 7, 8 and Area C as shown below.

General Education requirements for registered nurses entering the B.A. program are as follows:

Mode 1	3 credits
Mode 2	6 credits, including one MATH or STAT course.
Mode 3	6 credits
Mode 4	6 credits
Mode 5	6 credits
Mode 6	6 credits of transferred behavioral science credits fulfill this mode.
Mode 7	6 credits of transferred social scientific credits fulfill this mode.
Mode 8	6 credits of transferred chemistry and microbiology credits fulfill this mode.
Area A	6 credits, including required ENG 110.
Area B	3 credits
Area C	5 credits in transferred anatomy and physiology will be credits toward this area.
Area D	2 credits

A concentration is not required.

Applicants who are graduates of a three-year school of nursing may apply. Admission is on the basis of established requirements as set forth in this catalog under the Admission of Transfer Students section.

For information on the B.S.N. degree, see the catalog under School of Education and Professional Studies.

## Public and Corporate Service

A Specialty for Arts and Sciences Majors  
H. G. P. Wallach, *Coordinator*; M. L. Ertel,  
C. W. Kerr, T. J. Rickard, A. J. Zottola.

The Public and Corporate Service specialization is intended to equip students with career-oriented skills and experiences in addition to those provided by a major in Arts and Sciences.

Upon completing the program, graduates will possess:

- An appreciation of the administrative process and how to function effectively within it.
- An understanding of the overall organizational and social context within which an agency or company operates.
- Knowledge of how to apply research methods appropriate to both corporate or governmental work.
- Ability to read and evaluate complex material.
- Ability to write intelligible reports.
- An understanding of how economic conditions influence the operations and plans of public and private organizations.
- Familiarity with computer programming and the ability to instruct programmers.
- Ability to interpret recommendations of auditors and controllers.
- A knowledge of finance and budget preparation.
- Planning skills to develop programs in terms of staffing, budgeting, implementing and policy compliance.
- Critical and evaluatory skills to measure performance against goals.

The specialization may supplement any non-teaching major requiring 39 credits or fewer. This includes all such programs in the Humanities and Social Sciences plus Computer Science. Majors specializing in Urban and Regional Planning can enter this program as a combined specialization. A concentration is not required for participants in this program.

**Courses are selected from the following areas:**

### *Skill Components—15 credits*

One course from each of the following areas: Statistics (STAT 215); Computer Science/Methodology (CS 113 or 271, PS 344, SOC 211 or 400; GEOG 484); Accounting (AC 201, 202 or 330); Writing (ENG 403); Speech (COMM 280) or another course from the above list.

### *Core Courses—33 credits*

One course in each of the following categories: Economics (ECON 200); Public Finance (ECON 355); Budgeting (ECON 457); Federal or State and Local Government (PS 110 or 230); Public Administration (PS 340); Public Policy Analysis (PS 445); American History (HIST 262 or 282); Demography (SOC 411); Complex

Organizations (SOC 452); Economic Geography/Resources and Industry (GEOG 344 or 222); Urban and Regional Planning (GEOG 439 or 441).

### *Specialized Cluster—9 credits*

Three courses from a single cluster must be chosen: For example, Land Use Planning (GEOG 439, 440, 441, 442 and ECON 426); Poverty Policy and Social Planning (SOC 332, 431, PS 342 and GEOG 439); Environmental Policy (BIO 132, ESCI 450, ECON 426, GEOG 433 and 474, and PS 441); Urban Policy (ESCI 450, ECON 420, GEOG 439 and 441, PS 432 and SOC 232); International Policy (ECON 430, 433, 435, HIST 484, 486 and PS 231, 345, 438).

### *Applied Exercises—6 credits*

To be chosen from an Internship, Independent Study project on problem-solving, or a Senior Policy Seminar.

The program will be drawn up by the student and the student's major adviser, in consultation with the Specialty coordinator. Final approval will be made by the Public and Corporate Service Committee.

For further information call the coordinator (827-7328).

## Environmental Sciences

### **Concentration in Environmental Sciences, B.S. Elementary**

15 credits including BIO 132 and 12 credits of electives approved by an adviser in the Department of Biological Sciences. BIO 133 is strongly recommended.

NOTE: For the major in Biology with a specialization in Environmental Sciences, see the listing of the Department of Biological Sciences.

### **Women's Studies**

J. B. Higgins, *Coordinator* (827-7679); *Advisory Committee*: K. C. Beyard, W. L. Brown, M. A. Ertel, C. Ford, E. Godway, E. M. Hoffman, D. A. Kideckel, D. M. Lynch.

### **Concentration in Women's Studies, B.A. or B.S.**

18 credits, distributed as follows: PSY 448; 15 credits of electives selected in consultation with the Women's Studies coordinator. A minimum of 6 credits must be taken in each of the following areas: Humanities (PHIL 100\*, 347†, 382\*†; ART 409\*†; ENG 288\*, 448\*, 488\*). Social and Behavioral Sciences (PS 104\*, 448; ANTH 225, 339, 365; SOC 240; SW 227†; PSY 390, 428†).

9 credits of electives on the 300-400 level are required. Students whose needs are not met by available courses can take up to 3 credits of independent guided reading and/or research, pending approval of the appropriate departmental chair and the Women's Studies coordinator.

†Note prerequisites.

\*Under section or topic approved by the Women's Studies coordinator.

## **UConn/CCSU Joint Program in Public Affairs**

There is a cooperative program between Central Connecticut State University and the University of Connecticut for the Master of Public Administration degree. An undergraduate student may enroll in up to four approved graduate-level courses and later apply these courses toward the MPA. Approved Central Connecticut courses (PS 445, 446, 447, 448, and 561) may be credited toward the MPA. Non-matriculated students who have completed the B.A., may take up to three courses in the MPA program before applying for admission. Courses at both universities are cross-listed for registration purposes and students may register from their home institution. Detailed information may be obtained from the chairperson of the Political Science Department, or from the director of the UConn Master of Public Affairs program.

## **Pre-Professional Programs**

### **Pre-Law**

Students preparing for a career in law are invited to consult members of the Pre-Law Advisory Committee.

Information concerning law school admission and the Law School Aptitude Test is available from the following committee members: Robert G. Fracasso; Charles W. Kerr and Antonia Moran, Department of Political Science; and Karen Hansen, Office of University Career Development.

### **Pre-Medical**

A Pre-Health Professional Advisory Committee is available to students interested in preparing for careers in medicine, dentistry, veterinary medicine, optometry and related fields in the health sciences for which pre-professional training is required prior to admission to other institutions. The Pre-Health Professional Advisory Committee includes faculty members from each department of the Division of Natural Sciences.

Students interested in pre-health professional programs should consult Professor Richard P. Wurst, program coordinator for the health professionals, Department of Biological Sciences, Copernicus Hall 345.

## **COOPERATIVE PROGRAMS**

### **Central-UConn Exchange Program**

Under certain conditions, Central Connecticut students may take courses at the University of Connecticut or its branches without paying additional fees. Only courses not offered at Central Connecticut may be taken on this basis.

Admission to the courses will be on a space-available basis within pre-established class limits. To be eligible,

Central Connecticut students must have paid maximum tuition and fees for full-time study. University officials must approve the student's qualifications for taking the course in question.

Interested students may contact the Dean of Arts and Sciences in DiLoreto Hall 112, for further information.

### **Cooperative Apprenticeship Program**

By agreement between Central Connecticut and Pratt & Whitney Aircraft, college credit may be granted for successful completion of approved courses taken in-plant by Pratt & Whitney Aircraft apprentices when transferred to the Industrial Technology program. These credits will be applied toward the B.S. degree in Industrial Technology after the student has matriculated at Central Connecticut.

Inquiries regarding this program may be directed to the Educational Assistance Office at Pratt & Whitney Aircraft or to the chairperson of the Industrial Technology Department at Central Connecticut.

### **Corrections Concentration**

Students who complete a planned program of 18 credits in police science, law enforcement or corrections at an accredited college may receive transfer credit at Central Connecticut. This work will be regarded as fulfilling the requirement for concentration. Students receiving credit for such a concentration may undertake a B.A. major in Sociology, Political Science or Psychology or in other fields with the approval of the appropriate department chairpersons and the Dean of Arts and Sciences.

Regardless of major chosen, all students receiving credit for a Corrections concentration should notify the office of the Dean of Arts and Sciences immediately upon transfer to Central Connecticut.

### **Engineering Transfer Program**

This program provides the freshman and sophomore core of courses needed for a wide variety of engineering fields. Constructed in consultation with the School of Engineering at the University of Connecticut, it is designed to enable a limited number of students to transfer to that school after the sophomore year to complete the Bachelor of Science degree in either Chemical, Civil, Electrical or Mechanical Engineering in approximately two additional years.

The program at Central Connecticut includes laboratory courses in Chemistry and Physics, Mathematics, Computer Science, Drafting, freshman English, and various electives in Social Sciences and Humanities.

The Engineering Advisory Committee will assist students with transfer procedures to the School of Engineering at the University of Connecticut and to other schools of engineering.

Students planning to enroll must consult with the Committee Chairperson at the earliest opportunity. Inquiries

should be addressed to Engineering Transfer Program, Department of Physics-Earth Sciences, Central Connecticut State University, New Britain, CT 06050 (827-7228).

## **Reserve Officers Training Corps (ROTC)**

Army and Air Force ROTC program offered to Central Connecticut students at the University of Connecticut Storrs campus.

Without paying extra tuition, Central Connecticut students may pursue Army- or Air Force-Commissioning studies for four years (four-year program) or only during their junior and senior years (two-year program).

Students wishing to enroll in the two-year program must arrange with ROTC authorities during the second semester of their sophomore year.

Scholarships paying a tax-free monthly stipend of \$100, tuition, fees and book costs up to \$7000 per school year are available to students on a competitive basis.

Interested students are directed to the Army ROTC office at UConn, 486-4539.

## **AIR FORCE AEROSPACE STUDIES**

**Aerospace Studies I.** Both semesters. One credit each semester. One class period and one one-hour leadership laboratory period.

Role of U.S. military forces as the military instrument of national power. The doctrine, organization, missions and functions of strategic offensive and defensive forces, general purpose forces and support forces. Emphasis is on the U.S. Air Force.

**Aerospace Studies II.** Both semesters. One credits each semester. One class period and one one-hour leadership laboratory period.

Development of air power from a historical perspective. Air power's impact on military strategy. Changing mission of the defense establishment.

**Aerospace Studies III.** Both semesters. Three credits each semester. Three class periods and one one-hour leadership laboratory period. Prerequisite: Air Force Aerospace Studies 114 and 124, or six weeks field training and consent of Professor of Aerospace Studies.

Modern management fundamentals, including individual motivational and behavioral processes, group dynamics, organizational power and managerial strategy. Development of communicative skills.

**Aerospace Studies IV.** Both semesters. Three credits each semester. Three class periods and one one-hour leadership laboratory period. Prerequisite: Air Force Aerospace Studies 196.

Broad range of American civil-military relationships and the environment in which defense policy is formulated with an emphasis on the role of the professional officer, the formulation and the implementation of national security policy and the impact of technology on defense planning. The system of military justice.

## **MILITARY SCIENCE**

**MISI 131. General Military Science I-A.** One credit. One class period and lab.

Orientation course on the Reserve Officers' Training Corps and the United States Army. Emphasis on national security structure, organization of the Army and the Army in today's society.

**MISI 132. General Military Science I-B.** One credit. One class period and lab.

Orientation course on the United States Army. Emphasis on individual soldier skills, military instruction techniques and an introduction to military leadership skills.

**MISI 145. General Military Science II-A.** One credit. One class period and lab.

Study of military physical readiness programs, land navigation and mountaineering.

**MISI 146. General Military Science II-B.** One credit. One class period and lab.

Study of the conduct of unit formations, small unit tactical operations and military organizational leadership.

**MISI 252. General Military Science III-A.** Three credits. Two class periods, physical fitness training and lab. Prerequisite: Permission of Professor of Military Science.

Study of military leadership principles, techniques and responsibilities of command.

**MISI 253. General Military Science III-B.** Three credits. Two class periods, physical fitness training and lab. Prerequisite: MISI 252.

Study of the dynamics of military unit tactics. A three-day pre-summer camp orientation at a military installation is required.

**MISI 297. General Military Science IV-A.** Three credits. Three class periods, physical fitness training and lab. Prerequisite: MISI 253.

Study of military staff organization and military unit administration.

**MISI 298. General Military Science IV-B.** Three credits. Three class periods, physical fitness training and lab. Prerequisite: MISI 297.

Study of military law, obligations and responsibilities and contemporary human problems.

## **Special Student Services**

Students with disabilities are provided an equal opportunity for access to higher education. Services to Special Needs Students are planned for and provided on an individual basis as mutually determined by the program director and student. All students seeking assistance via the Special Student Services Office must interview with the program director (Dr. George Tenney, Willard 100, 827-7651). Early application is encouraged. (See Admissions Section —Special Student Services.)

## International Students Program

Central Connecticut attracts students from many countries. The International Student Office in the International Affairs Center is the primary source for assistance for all international students.

Services include orientation to campus and community, academic advising, personal and cross-cultural counseling, and handling of all immigration matters including extension of stay and work permission. The International Student Office coordinates its services with other offices on campus (i.e. Housing, Financial Aid, Health Office, Registrar, Bursar, Admissions).

The office seeks to assist international students to learn about, adjust to and enjoy a new culture. Activities are planned to facilitate cultural awareness and sharing among international students and U.S. students and the community. Inquiries should be addressed to the International Student Adviser, International Affairs Center, Elihu Burritt Library 103 (827-7652).

## Study Abroad Programs

Central Connecticut State University can place students almost anywhere in the world through a variety of arrangements with overseas universities. The cost is most often little more than studying at Central Connecticut. With proper planning, all course work completed abroad will transfer to Central Connecticut and be applied toward graduation requirements.

International experiences may range from two weeks to one year in duration. The study abroad program's structure may be a one-for-one exchange during which time students pre-pay tuition, room and board at Central Connecticut, enroll overseas and study via an immersion program; or, students may travel with a group overseas to a university/study site and take classes with a group while living in a host family; or, students may go overseas with a group including a professor, take classes with that group, and live with the group. Depending upon the individual's specific criteria, foreign language proficiency may or may not be required.

To plan a study abroad program, contact the Study Abroad Coordinator in the International Affairs Center, Burritt Library 101 (827-7652). Generally, the application process requires eight months; therefore, it is advisable that students begin investigating their choices well in advance of their desired departure date.

## Honors Program

The Honors Program is a program for academically superior students regardless of major. Entering freshmen or transfer students with high scores on standardized tests, exceptional high school rank, or other evidence of outstanding academic ability as determined by the honors faculty are offered participation in the program. A limited number of merit scholarships covering in-state tuition and fees (currently \$2,414 per year) are awarded to Honors Program students on a competitive basis.

Honors Program students are required to complete 30 credits in the following courses: ANTH 225 — The Study of Culture (3 credits); ID 200 — Western Culture I, a survey of western culture from its beginnings in the Classical and Semetic world to the end of the Roman period (6 credits); ID 201 — Western Culture II, a survey of western culture from the Middle Ages through the Enlightenment (6 credits); ID 310 — Western Culture III, a survey of western culture in the 19th century; (6 credits); ID 311 — Western Culture IV, a survey of western culture in the 20th century (6 credits); and ID 420 — Honors Research, independent research in western culture (3 credits). These courses are taken over a four-year period and are available only to Honors Program students. In addition, students are required to demonstrate proficiency in foreign language at the 126 level. Students who enter the program in the fall of their freshman year are required to take an honors section of ENG 110.

All Honors Program courses satisfy general education requirements, and the 24 credits in Western Culture I-IV may be used for any mode/area except Mode 2 and Areas B and D. ID 420 — Honors Research can be used for modal credit appropriate to subject matter. The ID courses cannot be used to satisfy the laboratory course requirement of Mode 8. Honors Program students may choose to graduate without a minor or concentration. Students who complete the program with an average grade of B in Honors Program courses will receive the designation "Honors Program Scholar" on their transcripts and diploma.

Inquiries should be addressed to the Director of Honors Program, Department of Philosophy, or to the Dean, School of Arts and Sciences.



# COLLEGE OF CONTINUING EDUCATION AND SUMMER SESSION

John M. Zulick, *Dean*

Peggy Schuberth, *Associate Dean*

Arthur H. Anderson, *Assistant Dean*

Francis Keefe, *Assistant Dean*

Carolyn Thornberry Sullivan, *Assistant Dean*

(Phone 827-7423)

The College of Continuing Education serves individuals who wish to start or continue degree studies or pursue an avocation on a part-time basis.

Approximately 600 course sections are offered each semester, encompassing all academic areas.

Part-time students may enroll in day or evening classes. Saturday morning classes are also available. A Continuing Education bulletin provides all the details and fees.

Persons having a high school diploma or an equivalency diploma may earn college credit through enrollment in Continuing Education courses. Others may enroll, for no credit, as auditors.

## Part-time Matriculant Program

Application for part-time degree study is made in the Office of Undergraduate Admissions, which is located in the Administration Building (827-7543). Candidates for part-time admission are expected to meet the minimum qualification of 12 credit-hours of college work, completed at a "C" or 2.0 cumulative grade-point average. Candidates for the Part-time Matriculant Program should go to the College of Continuing Education (Willard Hall, 827-7423) to make an academic advising appointment as soon as they have decided to apply for admission to the program.

Part-time matriculants (PTMs) taking at least 6 credits a semester may be eligible for aid or loans under federally funded or assisted programs. Details are available in the Financial Aid Office.

Upon acceptance, the PTM's college transfer credits, if any, are evaluated by the Admissions Office and applied to the academic record at Central Connecticut. The Transfer Evaluation is mailed to the student, who takes it to the relevant department chairperson, who in turn will assign the student an adviser.

PTMs register through the Continuing Education Office. Students who wish to take courses at other

accredited institutions will not receive transfer credits unless prior approval is obtained in writing from the Registrar's Office.

To maintain their status, PTMs must register for classes in at least one of the regular academic semesters each year.

PTMs are eligible for graduation and Dean's List honors. For details, consult "Academic Standards and Regulations" in this catalog.

## Office Hours

The Continuing Education Office is open Monday through Thursday, 8:30 a.m. to 8:30 p.m.; Friday, 8:30 a.m. to 3:45 p.m.; and during the academic year on Saturday, 8 a.m. to noon. Special hours for registration are advertised in the Registration Bulletin each semester.

## Standards, Course Load, and Credits

Standards of quality for work done in the College of Continuing Education are the same as those regularly required by the University. All courses offer college credit unless otherwise specified.

Normally, part-time undergraduate Continuing Education students may register for up to a maximum of 11 credits.

Non-matriculated undergraduate students must apply for matriculation (acceptance into a planned program of study) before 30 credits are completed. Students will not be allowed to matriculate after completion of 30 credits without specific recommendation of an academic dean of the University and the Dean of Continuing Education.

## Advisement

Undergraduates who plan to work toward a degree and need advice on course selection should consult a Continuing Education adviser before registration. Undergraduate part-time matriculants are assigned an adviser in their major department.

## The Graduate Program

Information about graduate courses or Master's programs may be obtained from the Graduate Bulletin or from the Dean of Graduate Studies. Part-time matriculated graduate students are assigned an adviser in their major department upon their admission.

## Community and Extension Services

The College of Continuing Education has expanded its programs and services to meet the unique and changing needs of students. Individual credit and non-credit courses, workshops and seminars are available to students, community groups, civic organizations, businesses and industries.

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Non-credit courses and certificate programs in the areas of personal improvement, leisure activities, and professional growth and development are offered through the College of Continuing Education.

## **Summer Session**

During the summer Central Connecticut operates two five-week sessions and one eight-week session. The first five-week session and the eight-week session begin in late May; the second five-week session begins in early July. Courses, both undergraduate and graduate, are offered in the day and evening.

Summer sessions are designed to provide opportunities for 1) incoming freshmen who wish to accelerate their college work by entering the University before the normal beginning of the academic year; 2) students from other colleges; 3) Central Connecticut's students who wish to accelerate their studies toward a degree; 4) teachers and other graduate students who wish to pursue a master's or other advanced degrees; 5) graduates of other colleges interested in meeting certification requirements for teaching; and 6) qualified high school students seeking college-level courses.

During the 1990 Summer Session approximately 5,000 students were enrolled.

### *Residence Facilities and Meals*

Residence accommodations and meals are available for men and women. Commuting students may arrange for lunch and/or dinner at the University. The University Library, the Student Center and other facilities are available.

### *Course Load*

The maximum load is 7 credits during each five-week summer session. The eight-week session is counted as part of the first five-week session.

# SCHOOL OF GRADUATE STUDIES

Karen C. Beyard,  
*Dean of Graduate Studies and Research*  
Drina M. Lynch, *Assistant Dean*

The School of Graduate Studies offers the degrees of Master of Science, Master of Arts, and the Master of Science in Organization and Management. For holders of a master's degree, the School of Graduate Studies offers the Sixth-Year Certificate in Educational Administration and Reading. Planned programs of post-master's study are available in selected fields of study. A post-baccalaureate program leading to teacher certification in Connecticut and other states is also available.

## Admissions Criteria

Admission to the School of Graduate Studies is based on the applicant's academic record. Prospective students must hold a bachelor's degree from a regionally accredited institution of higher education. The undergraduate record must demonstrate clear evidence of ability to undertake and pursue successfully advanced study in the graduate field.

A minimum undergraduate G.P.A. of 2.70 on a 4.00 scale (where A is 4.00), or its equivalent, and good standing (3.00 G.P.A.) in all post-baccalaureate coursework is required. Some graduate programs have established additional admissions requirements beyond the minimum requirements of the Graduate School. Prospective applicants should consult the Graduate Catalog or the academic department about admissions criteria for particular programs.

## Applying for Admission

The Application for Admission form is available in the School of Graduate Studies (Administration Building, Room 125; 827-7265) and in other campus offices, including the College of Continuing Education in Willard Hall. This form contains information about the application and admission process, and must be submitted to the School of Graduate Studies office accompanied by a non-refundable application fee of \$20.

As part of the application and admissions process, the applicant must request that official undergraduate and graduate transcripts be sent to the School of Graduate Studies from every institution attended except Central Connecticut State University. Applicants who have attended Central Connecticut State University must list all dates of attendance so that their official record can be appropriately evaluated.

In addition to submitting the application form, the fee and the official transcripts, applicants must provide any additional evidence of admissibility (such as test scores, essays, letters of recommendation, etc.) which is required by the program to which they are making application.

**Application Deadlines.** The deadline for receipt of the application form and all transcripts and supporting materials is AUGUST 1 for Fall semester, and JANUARY 1 for Spring semester. International applicants should submit all application materials by May 1 for Fall semester, and October 1 for Spring semester to assure adequate time for processing visa applications and other arrangements.

## Graduate Student Status

**Full-time Student Status.** A student who registers for nine (9) semester hours or more is considered a full-time student for tuition purposes. Full-time students pay tuition to the University Bursar, and register in the School of Graduate Studies (new full-time students) or using procedures established by the University Registrar (continuing full-time students).

**Part-time Student Status.** A student who enrolls in eight (8) or fewer semester hours is considered a part-time student for tuition purposes. Part-time students must register and pay fees through the College of Continuing Education.

All graduate students when first accepted for admission or re-admitted to Central Connecticut must pay a non-refundable \$90 Enrollment Binder (applied to Tuition) within the time specified on the bill. The balance of Tuition/Fees is due August 1 for the Fall and January 2 for the Spring.

## Tuition and Fees

At this Catalog printing, the proposed tuition and fees of graduate study for the 1991-92 academic year are as follows:

For **FULL-TIME Study** (course load of nine or more semester hours):

	Connecticut Resident	Out-of State Resident
Tuition	\$ 860.00	\$ 2395.00
State University Fee	\$ 220.00	\$ 541.00
General Fee	\$ 260.00	\$ 260.00
Student Activity Fee	\$ 26.50	\$ 26.50
<b>Total Tuition/Fees</b>	<b>\$ 1366.50</b>	<b>\$ 3222.50</b>

In addition, full-time graduate students are billed an annual Sickness Insurance Fee of \$159.00 in the fall semester. Those who already have adequate insurance may complete a waiver form and return it to the University Health Services.

For **PART-TIME Study** (course load of eight or less semester hours):

Registration Fee	\$ 33.00
Courses numbered 100-499	\$ 105.00 per credit hour
Courses numbered 500-699	\$ 115.00 per credit hour

**All fees are subject to change without notice.**

## Program Information

Central Connecticut State University offers graduate degree programs in 35 fields of study.

The **Master of Arts (M.A.)** degree signifies completion of at least 30 credit hours of advanced study, including research and/or thesis. Students in the M.A. program seek to expand their knowledge of the subject, and may specialize in an aspect of the subject relevant to their career goals. Students also choose an M.A. degree program when planning to continue their studies at the doctoral level.

The **Master of Science (M.S.)** degree is primarily a professional degree for educators and others seeking to enter or advance in public service professions. Degree programs include at least 30 hours of coursework; a thesis is optional. Most M.S. programs at Central Connecticut are designed for certified teachers, although some departments admit students who have not completed certification, or who intend to pursue other professions.

The **Master of Science in Organization and Management (M.S.O.M.)** degree is an interdisciplinary program of 36 credit hours. Students prepare for leadership positions in public service, business and industry while completing coursework in one of three program options: General Business Management, Industrial/Technical Management, and Organizational and Managerial Communication.

The **Sixth-Year Certificate** provides graduate study beyond the master's degree for teachers and other educators. Presently offered only in two fields (Educational Administration, Reading), the sixth-year certificate signifies completion of a program of study designed to prepare the recipient for a high level of professional practice, leadership and responsibility in public education.

Initial certification programs are available for elementary, secondary, special and vocational education, as well as for specializations such as school counselor, media specialist, and reading consultant. Programs for the preparation of K-12 teachers in art, music and physical education are also available.

## Requirements for the Master's Degree

The Master's degree is conferred on the student who has completed, to the satisfaction of the faculty, at least 30 hours of approved graduate work. A student may elect, with the consent of the adviser, Plan A which requires 30 credits of graduate work including a thesis or Plan B which requires 30 credits of graduate work including a research course and a comprehensive exam.

Some departments offering the Master of Science degree have adopted a third option (Plan C) which requires a minimum of 30 credits in an approved planned program of graduate study and a thesis substitute, art exhibit or other special project.

Students should consult their adviser and the Graduate Catalog for further information.

### **Transfer of Graduate Credit**

Students may request the transfer of credit for courses completed at another accredited institution of higher education. All credit presented for transfer must show an earned grade of B (3.0) or higher, must be included on the student's planned program of study at Central Connecticut State University, and must be completed within the six-year period preceding graduation and conferral of the graduate degree. Courses which were applied to a previously completed degree may not be transferred to a new degree program.

#### **Transfer of credit is limited to the following:**

- Up to 21 credits may be transferred from another Connecticut State University institution (that is, from Eastern, Southern or Western). Regardless of the number

of credits transferred from another University in the CSU system, no fewer than 15 credit hours in the student's degree program must be completed at Central Connecticut, with at least 6 credits of the 15 in the student's area of specialization.

- Transfer of credits from accredited institutions other than universities in the CSU system is limited to 9 credits. In addition, any combination of coursework from CSU institutions and other accredited institutions is limited to a total of 9 credits.

Students who have been admitted to a graduate program should obtain prior written approval from the adviser and the graduate dean if they wish to take a course at another institution for transfer to their degree program at Central Connecticut. Forms for requesting transfer of credit are available in the office of the Graduate School. Students without prior approval may not be able to use courses from other institutions as part of their planned programs. Students are responsible for requesting that an official transcript of any proposed transfer courses be sent to the Graduate School.

# COURSES

## Course Numbering

A summary of eligibility of students at the several levels:

- 001-099 Non-credit courses.  
100 Search course.  
101-199 Courses normally open to freshmen, and in general to all undergraduate students.  
200-299 Courses normally open to sophomores, and in general to all undergraduate students.  
300-399 Courses normally open to juniors, and in general to sophomores, juniors and seniors.  
400-499 Courses normally open to seniors, and in general to juniors, seniors and graduate students.  
500-599 Graduate courses; undergraduate students must have a 2.70 GPA and senior standing; also requires permission of adviser, chairperson of department offering the course, and submission to the graduate dean prior to registration. The necessary form is available in the Registrar's Office and in the School of Continuing Education.  
600-699 Open to master's and sixth-year candidates.

## When Courses are Available

*If unspecified, the course is offered both semesters.*

The marking of courses as available in an odd year (O) or an even year (E) refers to the whole academic year. Thus, a course scheduled for (O), odd year, would be given in an odd-starting academic year, such as 1991-92, that fall or the next spring. One marked (E), even year, would be available in an even-starting academic year, such as 1992-93, that fall or the next spring.

## Computer Usage

Courses with the letter [c] may have computer use activity in some or all sections and may require Central Connecticut computer use certification.

## International Courses

Courses with the letter [I] have been designated as fulfilling the international component of the General Education Requirements.

## General Education: Courses under the Modes

The General Education program embraces eight Modes of Thought and four Areas. Freshmen entering Central Connecticut in the Fall of 1991 will be required to complete a new General Education program. All students entering in the Fall of 1992 will be subject to the new program. Under the current program, the modes are:

1. Philosophical/Religious
2. Mathematical-Logical
3. Literary
4. Artistic
5. Historical
6. Behavioral
7. Social Scientific
8. Natural Scientific

The Areas are:

- A. Communication Skills
- B. Foreign Language/International
- C. Supplemental
- D. Physical

Modal designations of General Education courses are as follows:

### MODE 1: PHILOSOPHICAL/RELIGIOUS

- PHIL 100: Search in Philosophy  
PHIL 112: Introduction to Philosophy  
PHIL 120: Logic and Language  
PHIL 150: Socrates  
PHIL 225: Nature, Mind and Science  
PHIL 230: Greek and Roman Philosophy  
PHIL 232: Medieval and Renaissance Philosophy  
PHIL 240: Ethical Problems in Business  
PHIL 242: Ethical Problems in Technology  
PHIL 244: Moral Issues  
PHIL 248: Philosophy of the Arts  
PHIL 250: Philosophy of Sport  
PHIL 320: Modern Logic  
PHIL 275: Chinese Philosophy  
PHIL 330: 17th and 18th Century Philosophy  
PHIL 332: 19th Century Philosophy [I]  
PHIL 344: Health Care Ethics  
PHIL 345: Philosophy of Life, Death and Dying  
PHIL 346: Ethical Theory  
PHIL 347: Philosophy of Human Sexuality  
PHIL 349: Philosophy of Law  
PHIL 355: Philosophy of Religion  
PHIL 363: Marx and His Interpreters  
PHIL 376: Buddhist Philosophy [I]  
PHIL 382: Special Topics in Philosophy  
REL 105: Development of Christian Thought [I]  
REL 110: World Religions [I]  
REL 357: Special Topics in Religion [I]

### MODE 2: MATHEMATICAL-LOGICAL

A minimum of one course designated as Mathematics or Statistics is required in Mode 2.

- CS 113: Introduction to Computers  
CS 115: Workshop in Computer Science  
CS 207: Introduction to Computer Graphics  
CS 213: Applications of Computer Programming

†MATH 103:	Number Systems
†MATH 105:	Fundamentals of Mathematics
MATH 115:	Trigonometry
MATH 121:	Pre-Calculus Mathematics
MATH 122:	Calculus I
MATH 125:	Applied Calculus I
MATH 126:	Applied Calculus II
MATH 131:	General Calculus I
MATH 132:	General Calculus II
MATH 140:	Finite Mathematics
MATH 203:	Logic and Geometry
MATH 221:	Calculus II
STAT 104:	Elementary Statistics
STAT 215:	Statistics for Behavioral Sciences I
STAT 216:	Statistics for Behavioral Sciences II

†No student is permitted to use both MATH 103 and MATH 105 to satisfy the General Education requirements.

### MODE 3: LITERARY

ENG 111:	Introduction to Literature
ENG 205:	British Literature I
ENG 206:	British Literature II [I]
ENG 210:	American Literature I
ENG 211:	American Literature II
ENG 220:	Shakespeare
ENG 240:	Heritage of Western Literature I
ENG 241:	Heritage of Western Literature II [I]
ENG 250:	Contemporary Literature
†ENG 260:	Introduction to Poetry
†ENG 261:	Introduction to Fiction
†ENG 262:	Introduction to Drama [I]
ENG 288:	Studies in Literature
ENG 332:	Medieval English Literature
ENG 333:	The English Renaissance
ENG 334:	Seventeenth Century Poetry and Prose
ENG 335:	Restoration and Eighteenth Century Literature
ENG 336:	The Romantic Age [I]
ENG 337:	The Victorian Age [I]
ENG 339:	Modern British Literature [I]
ENG 340:	Early American Literature
ENG 341:	The American Renaissance
ENG 342:	American Realism and Naturalism
ENG 343:	Modern American Literature
ENG 360:	The Bible as Literature: Old Testament
ENG 361:	The Bible as Literature: New Testament
ENG 362:	Greek and Roman Literature
ENG 365:	Modern European Novel [I]
ENG 441:	Hawthorne, Melville and James
ENG 445:	American Drama
ENG 448:	Studies in American Literature
ENG 450:	Chaucer
ENG 451:	Milton
ENG 458:	Studies in British Literature
ENG 461:	Shakespeare: Major Comedies
ENG 462:	Shakespeare: Major Tragedies
ENG 463:	Elizabethan and Jacobean Drama
ENG 464:	Restoration and 18th Century Drama
ENG 470:	The Victorian Novel [I]
ENG 472:	The Rise of Modernism: Vitalist, Aesthetic and Pessimistic British Literature [I]
ENG 474:	The Contemporary American Novel
ENG 475:	The British Novel to 1832
ENG 476:	The Modern British Novel [I]
ENG 477:	Modern British Poetry [I]
ENG 478:	Modern American Poetry
ENG 480:	Modern Irish Literature [I]
ENG 486:	Literature and Film
ENG 488:	Studies in World Literature

FR 305:	Literary Masterpieces Since 1800 [I]
FR 360:	Literary Masterpieces to 1800 [I]
GER 305:	Literary Masterpieces Since 1800 [I]
GER 360:	Literary Masterpieces to 1800 [I]
HUM 100:	Search in Humanities
HUM 150:	Topics in European Literature
ITAL 305:	Literary Masterpieces Since 1800
ITAL 360:	Literary Masterpieces to 1800
PHIL 275:	Chinese Philosophy [I]
PHIL 366:	Existentialism [I]
RUS 305:	Literary Masterpieces Since 1800
SPAN 305:	Literary Masterpieces Since 1700
SPAN 360:	Literary Masterpieces to 1700

†No credit given to students who have taken ENG 111.

### MODE 4: ARTISTIC

ART 100:	Search in Art
ART 110:	Introduction to Art
ART 122:	Design I
ART 123:	Design II
ART 124:	Three-Dimensional Design
ART 126:	Graphic Design Theory and Practice
ART 130:	Drawing I
ART 222:	Graphic Design Skills I
ART 230:	Drawing II
ART 233:	Design Layout for Photography
ART 250:	Watercolor Painting
ART 252:	Painting I
ART 260:	Ceramics I
ART 261:	Sculpture I
ART 264:	Design—Handcraft Materials and Techniques I
ART 340:	Printmaking I
ART 360:	Ceramics II
ART 361:	Sculpture II
ART 408:	The Art of Greece in the Bronze Age
ART 409:	Studies in Art History
ART 410:	Greek and Roman Art
ART 412:	Oriental Art
ART 414:	American Art
ART 415:	The African Diaspora/Art & Culture
ART 416:	Modern Art
ART 418:	Renaissance Art
ART 422:	Design—Lettering and Poster
ART 452:	Advanced Painting I
ART 460:	Ceramics III
ART 466:	Design—Jewelry
ENG 386:	The Language of Film
MUS 100:	Search in Music
MUS 109:	Fundamentals of Music
MUS 110:	Introduction to Music
MUS 112:	Computer Applications to Music
MUS 140:	Ensemble
MUS 141:	Chorus
MUS 142:	Band-Wind Ensemble
MUS 143:	Orchestra
MUS 170:	Theory of Music I
MUS 177:	Applied Music
MUS 250:	Introductory Piano Class I
MUS 251:	Introductory Piano Class II
MUS 264:	Voice Class I
MUS 270:	Theory of Music II
MUS 350:	Intermediate Piano Class I
MUS 351:	Intermediate Piano Class II
MUS 401:	Topics in Music
MUS 410:	Contemporary Techniques
MUS 430:	Mozart and Haydn
MUS 431:	Beethoven
MUS 432:	Bach and Handel

MUS 434: Chamber Music  
 MUS 435: Music for the Twentieth Century  
 MUS 436: Choral Music  
 MUS 439: Symphonic Music  
 MUS 470: Musical Structure and Style  
 PHIL 248: Philosophy of the Arts  
 TH 100: Search in Theatre  
 TH 110: Introduction to Theatre  
 TH 111: Stagecraft  
 TH 115: Play Production  
 TH 117: Lighting  
 TH 121: Costuming  
 TH 135: Speaking Voice Development  
 TH 143: Theatre Games and Improvisation  
 TH 145: Acting I  
 TH 151: Directing I  
 TH 212: Stage Mechanics  
 TH 213: Scene Painting I  
 TH 214: Scene Painting II  
 TH 217: Sceno-Graphic Techniques  
 TH 222: History of Costume  
 TH 238: Advanced Voice Development  
 TH 489: Studies in Theatre/Drama  
 TH 490: Summer Theatre Workshop

## MODE 5: HISTORICAL

The following courses are particularly recommended for Mode 5:

HIST 121: World Civilization I  
 HIST 122: World Civilization II [I]  
 HIST 142: Western Civilization I  
 HIST 143: Western Civilization II [I]  
 HIST 231: Ancient Civilization  
 HIST 232: Medieval Civilization  
 HIST 261: History of American Life I  
 HIST 262: History of American Life II

The following courses are also acceptable in Mode 5:

HIST 341: English History to 1715  
 HIST 342: English History Since 1715 [I]  
 HIST 344: History of Modern Germany [I]  
 HIST 346: History of France: 1789 to Present [I]  
 HIST 347: Russian History to 1905 [I]  
 HIST 348: Russian History Since 1905 [I]  
 HIST 350: History of Poland [I]  
 HIST 351: East Asia to 1800  
 HIST 352: East Asia Since 1800 [I]  
 HIST 355: History of the Hapsburg Empire, 1815-1918 [I]  
 HIST 356: History of Eastern Europe Since 1919 [I]  
 HIST 360: History of Connecticut  
 HIST 361: The West in United States History  
 HIST 369: African American History  
 HIST 377: History of Christianity I  
 HIST 378: History of Christianity II  
 HIST 381: Latin American History to 1823  
 HIST 382: Latin American History Since 1823 [I]  
 HIST 423: Colonial Period in American History  
 HIST 424: Establishment of a New Nation  
 HIST 425: Era of National Development  
 HIST 426: The United States 1850-1890  
 HIST 427: The United States 1890-1933  
 HIST 428: The United States Since 1933  
 HIST 430: Economic History of Europe [I]  
 HIST 433: History of Ancient Greece  
 HIST 434: History of Ancient Rome  
 HIST 435: History of Early Medieval Europe  
 HIST 436: History of Later Medieval Europe  
 HIST 439: European Diplomatic History Since 1870 [I]  
 HIST 440: Russian Foreign Policy [I]  
 HIST 441: Renaissance and Reformation

HIST 442: European History, 1650 to 1815  
 HIST 443: European History, 1815-1918 [I]  
 HIST 444: European History, 1918 to Present [I]  
 HIST 445: European Intellectual History, 1750-1870 [I]  
 HIST 446: European Intellectual History, 1870-Present [I]  
 HIST 453: History of Modern China [I]  
 HIST 454: History of Modern Japan [I]  
 HIST 463: Constitutional History of the United States to 1900  
 HIST 464: Constitutional History of the United States Since 1900  
 HIST 465: Economic History of the United States  
 HIST 466: History of American Technology  
 HIST 467: Social and Cultural History of the United States I  
 HIST 468: Social and Cultural History of the United States II  
 HIST 469: African Americans in the Twentieth Century  
 HIST 471: Early Middle East  
 HIST 472: Modern Middle East [I]  
 HIST 473: History of Judaism  
 HIST 477: Invasion and Empires: Central Asia From Genghis Kahn to the Russian Conquest  
 HIST 478: Central Asia in World Affairs—1830 to Present [I]  
 HIST 483: History of Inter-American Relations [I]  
 HIST 484: History of Mexico [I]  
 HIST 485: History of American Foreign Policy to 1920  
 HIST 486: History of American Foreign Policy Since 1920  
 HIST 487: America and the Sea: The Role of the Sea in U.S. History  
 HIST 488: American Business History  
 HIST 489: American Labor History  
 HIST 497: Topics in History  
 PHIL 230: Greek and Roman Philosophy  
 PHIL 232: Medieval and Renaissance Philosophy  
 TE 110: Technological Systems

## MODE 6: BEHAVIORAL

ANTH 100: Search in Anthropology  
 ANTH 140: Introduction to Anthropology  
 ANTH 150: Introduction Archaeology  
 ANTH 151: Laboratory in Introductory Archaeology  
 ANTH 160: Introduction to Physical Anthropology  
 ANTH 210: The Ancient World  
 ANTH 225: The Study of Culture [I]  
 ANTH 250: Intercultural Communication [I]  
 ANTH 265: Human Evolution  
 ANTH 270: Psychological Anthropology [I]  
 ANTH 318: New England Prehistory  
 ANTH 320: Before History  
 ANTH 322: Historical Archaeology  
 ANTH 325: Human Ecology  
 ANTH 329: Experimental Anthropology  
 ANTH 339: Work and Culture  
 ANTH 345: Forensic Anthropology  
 ANTH 365: The Anthropology of Human Differences  
 ANTH 370: Anthropology and Modern Life  
 ANTH 417: Connecticut Indians  
 ANTH 422: North American Indians  
 ANTH 426: People and Cultures of Eastern Europe and the Soviet Union [I]  
 ANTH 430: Theories of Culture  
 ANTH 440: The Supernatural  
 ANTH 445: Folklore and Myth  
 ANTH 450: Archaeological Field School  
 ANTH 460: Industrial Archaeology  
 ANTH 465: The Origins of Human Behavior  
 COMM 266: Phonetics  
 COMM 310: Communication Theory and Practice  
 COMM 381: Introduction to Speech and Hearing Problems  
 COMM 385: Speech and Language Development



COMM 325: Speech Science  
 COMM 443: Persuasion  
 ENG 200: Descriptive Linguistics I  
 ENG 230: The Study of Language  
 ENG 300: Language Acquisition  
 ENG 400: Descriptive Linguistics II  
 ENG 430: Studies in Linguistics and the English Language  
 ENG 431: The History of the English Language  
 IS 225: The World as a Total System  
 IS 226: Intercultural Sensitivity [I]  
 PSY 100: Search in Psychology  
 PSY 112: General Psychology I  
 PSY 164: General Psychology II  
 PSY 200: Learning and Memory  
 PSY 235: Child and Adolescent Development  
 PSY 236: Life-Span Development  
 PSY 237: Applied Psychology  
 PSY 240: The Psychology of Politics  
 PSY 281: Cognitive Psychology  
 PSY 363: Adolescent Psychology  
 PSY 365: Psychology of the Exceptional Child  
 PSY 390: Human Behavior and Sexuality  
 PSY 428: Psychology of Adulthood  
 PSY 435: Organizational and Personnel Psychology  
 PSY 448: Psychology of Women  
 PSY 454: Drugs and Behavior  
 PSY 480: Psychology of Dying and Death  
 SW 100: Search in Social Work  
 SW 436: The World of the Physically Disabled  
 SW 437: Social Work with Children  
 SOC 100: Search in Sociology  
 SOC 110: Introductory Sociology  
 SOC 111: Social Problems  
 SOC 217: Theories of Social Organization  
 SOC 221: The Sociological Imagination  
 SOC 231: Minorities and Social Inequality  
 SOC 233: The Family  
 SOC 234: Social Interaction  
 SOC 235: Introduction to the Criminal Justice System  
 SOC 240: Sex Roles and Sexism  
 SOC 332: The Sociology of Poverty  
 SOC 334: American Society  
 SOC 336: Sociology of Deviance  
 SOC 337: Sociology of Crime  
 SOC 338: Sociology of Punishment  
 SOC 339: Juvenile Delinquency  
 SOC 340: Sociology of Aging  
 SOC 440: Death and Dying: Sociological Implications

#### MODE 7: SOCIAL SCIENTIFIC

ECON 200: Principles of Economics I  
 (Introductory Macroeconomics)  
 ECON 201: Principles of Economics II  
 (Introductory Microeconomics)  
 ECON 435: Economic Development [I]  
 ECON 450: Money, Credit and Banking  
 ECON 462: Industrial Organization  
 ECON 470: Managerial Economics  
 ET 497: Engineering Cost Analysis  
 GEOG 100: Search in Geography  
 GEOG 110: Introduction to Geography  
 GEOG 120: World Regional Geography [I]  
 GEOG 220: Human Geography [I]  
 GEOG 222: Resources and Industry  
 GEOG 241: Introduction to Planning  
 GEOG 256: Maps and Map Reading  
 GEOG 266: Aerial Photo Interpretation  
 GEOG 272: Physical Geography  
 GEOG 274: Elementary Climatology

GEOG 275: Soils and Vegetation  
 GEOG 276: Elementary Cartography  
 GEOG 290: Geography of Tourism [I]  
 GEOG 330: United States and Canada  
 GEOG 332: Europe [I]  
 GEOG 337: China [I]  
 GEOG 339: Japan and Korea [I]  
 GEOG 344: Economic Geography  
 GEOG 348: Soviet Union [I]  
 GEOG 433: Issues in Environment Protection  
 GEOG 434: Mexico, Central America and the Caribbean [I]  
 GEOG 436: South America [I]  
 GEOG 438: Southeast Asia [I]  
 GEOG 439: Urban Geography  
 GEOG 440: Rural Land Use Planning  
 GEOG 441: Community and Regional Planning  
 GEOG 442: Field Methods in Geography  
 GEOG 443: Transportation Planning  
 GEOG 459: Field Studies in Regional Geography (only 3 cred  
 its may be applied to General Education)  
 GEOG 480: Topics in the Geography of China [I]  
 GEOG 490: Connecticut  
 IS 225: The World as a Total System  
 IS 226: Intercultural Sensitivity [I]  
 PHIL 349: Philosophy of Law  
 PHIL 365: Marx and His Interpreters [I]  
 PS 104: The World's Political Systems [I]  
 PS 110: American National Government  
 PS 230: American State and Local Government  
 PS 231: Conduct of American Foreign Policy [I]  
 PS 232: Ancient and Medieval Political Philosophies  
 PS 235: International Relations [I]  
 PS 240: Political Organizing  
 PS 320: Political Development in Africa and Latin America [I]  
 PS 330: American Parties and Politics  
 PS 331: American Constitutional Law  
 PS 332: Civil Liberties  
 PS 334: Modern Political Philosophies  
 PS 336: West European Governments [I]  
 PS 338: International Organization [I]  
 PS 339: International Law [I]  
 PS 340: Public Administration  
 PS 341: Labor and Politics  
 PS 343: Political Leadership  
 PS 344: Interpretation of Political Data  
 PS 345: International Terrorism [I]  
 PS 380: Conflict and Negotiation [I]  
 PS 415: Government, Business and Public Policy  
 PS 430: The American Presidency  
 PS 431: The Legislative Process  
 PS 432: The Urban Politics and Government  
 PS 433: Twentieth Century Political Thought  
 PS 434: Government and Politics of the Middle East and  
 North Africa [I]  
 PS 435: The Soviet Union and Eastern Europe [I]  
 PS 438: Politics and Administration of Developing Nations [I]  
 PS 444: Polish Politics and Society [I]  
 PS 448: The Politics of Human Services  
 SOC 232: Cities and Urban Life Styles  
 SOC 335: Power, Conflict and Social Class  
 SOC 411: Population and Society

#### MODE 8: NATURAL SCIENTIFIC

BIO 100: Search in Biology  
 BIO 111: Introductory Biology  
 BIO 112: Introductory Biology Laboratory  
 BIO 116: Introduction to Microbiology

BIO 117:	Human Biology I
BIO 118:	Human Biology II
BIO 120:	Plants of Connecticut
BIO 121:	General Biology I
BIO 122:	General Biology II
BIO 132:	Introductory Ecology
BIO 133:	Laboratory in Introductory Ecology
BIO 150:	Marine Studies Institute
BIO 204:	Small Greenhouse Management
BIO 211:	Concepts in Biology
BIO 221:	Invertebrate Zoology
BIO 222:	Vertebrate Zoology
BIO 226:	Non-Vascular Plants
BIO 227:	Vascular Plants
BIO 250:	Introduction to Human Genetics
BIO 318:	Anatomy and Physiology I
BIO 319:	Anatomy and Physiology II
BIO 442:	Plant Anatomy
BIO 444:	Local Flora Taxonomy
BIO 445:	Morphology of Vascular Plants
BIO 455:	Introduction to Horticulture
BIO 468:	Anthropod Biology
BIO 481:	Comparative Anatomy
CHEM 100:	Search in Chemistry
CHEM 102:	Chemistry of Nutrition
CHEM 104:	Chemistry in Everyday Life
CHEM 111:	Introductory Chemistry I
CHEM 118:	Fundamental Chemical Principles
CHEM 121:	General Chemistry I
CHEM 122:	General Chemistry II
ESCI 110:	Introduction to the Earth
ESCI 111:	Elementary Earth Science
ESCI 116:	Life of the Past: Fossils
ESCI 117:	Introduction to Astronomy I: The Solar System
ESCI 118:	Introduction to Astronomy II: Stars and Galaxies
ESCI 121:	Physical Geology
ESCI 122:	Historical Geology
ESCI 123:	Geology Laboratory
ESCI 129:	Introduction to Meteorology
ESCI 178:	Planetary Astronomy
ESCI 179:	Stellar Astronomy
ESCI 201:	Introduction to the Planetarium
ESCI 278:	Observational Astronomy
ESCI 424:	Geomorphology
ESCI 450:	Environmental Geology
PHYS 111:	Introductory Physics
PHYS 113:	Sound of Music
PHYS 115:	Physics of Sailing
PHYS 121:	General Physics I
PHYS 122:	General Physics II
PHYS 125:	College Physics I
PHYS 126:	College Physics II
PHYS 339:	Computer Electronics I
PHYS 340:	Computer Electronics II
SCI 100:	Search in Science
SCI 110:	Introductory Physical Science
SCI 113:	Earth, Energy and the Environment
SCI 115:	General Physical Science
SCI 120:	Topics in Natural Sciences

#### AREA A: COMMUNICATION SKILLS

COMM 115:	Fundamentals of Communication
COMM 140:	Public Speaking
COMM 200:	Reading Aloud
COMM 250:	Voice and Articulation Improvement
COMM 260:	Problem-Solving and Decision-Making
COMM 280:	Business and Professional Speaking
COMM 285:	Communication Skills for Training and Development

COMM 360:	Parliamentary Law and Politics
COMM 361:	Controversy and Negotiation
ENG 110:	Freshman Composition (required)*
ENG 180:	Listening to English I
ENG 181:	Listening to English II
ENG 182:	Reading English I
ENG 183:	Reading English II
ENG 184:	Writing English I
ENG 185:	Writing English II
ENG 202:	Intermediate Composition
ENG 235:	Journalism I
ENG 236:	Journalism II
ENG 371:	Creative Writing (Short Fiction)
ENG 372:	Creative Writing (Short Fiction)
ENG 373:	Creative Writing (Poetry)
ENG 374:	Creative Writing (Poetry)
ENG 376:	Creative Writing (Essay)
ENG 377:	Creative Writing (Playwriting)
ENG 380:	Feature Writing
ENG 381:	Editorial Writing
ENG 401:	Advanced Composition
ENG 403:	Technical Writing
ENG 416:	Magazine Writing
ENG 418:	Studies in Journalism
MC 207:	Managerial Communications

\*An acceptable CCSU English Placement Test score or an appropriate equivalent is required for ENG 110. See under Skills Testing and Remediation Policy. The requirement of ENG 110 may be waived for a student by the English Department, but the 6-credit requirement in Mode 1 will not be reduced.

Students who have not completed their ENG 110 requirement prior to achieving Junior standing (61 credits) will be required to take ENG 202 instead.

#### AREA B: FOREIGN LANGUAGE

*AS 490:	Overseas Study (East Asia and Other)
AS 497:	Seminar on East Asia (China)
AS 498:	Seminar on East Asia (Japan and Korea)
CHIN 111:	Elementary Chinese I [I]
CHIN 112:	Elementary Chinese II [I]
CHIN 125:	Intermediate Chinese I [I]
CHIN 126:	Intermediate Chinese II [I]
FR111:	Elementary French I [I]
FR112:	Elementary French II [I]
FR114:	Basic French Review [I]
FR115:	Conversational French I [I]
FR125:	Intermediate French I [I]
FR126:	Intermediate French II [I]
FR225:	French Composition and Diction [I]
FR226:	French Structure and Idiom [I]
GER 111:	Elementary German I [I]
GER 112:	Elementary German II [I]
GER 125:	Intermediate German I [I]
GER 126:	Intermediate German II [I]
GER 225:	German Composition and Diction [I]
GER 226:	German Structure and Idiom [I]
ITAL 111:	Elementary Italian I
ITAL 112:	Elementary Italian II
ITAL 125:	Intermediate Italian I
ITAL 126:	Intermediate Italian II
ITAL 225:	Italian Composition and Diction
ITAL 226:	Italian Structure and Idiom
ITAL 488:	Italian Life and Culture
ITAL 491:	Conversational Italian I
JAPN 111:	Elementary Japanese I [I]
JAPN 112:	Elementary Japanese II [I]
JAPN 125:	Intermediate Japanese I [I]
JAPN 126:	Intermediate Japanese II [I]
JAPN 225:	Japanese Composition and Diction [I]
JAPN 226:	Japanese Structure and Idiom [I]
LAT 111:	Elementary Latin I

\*No more than 3 credits can be applied to General Education.

LAT 112: Elementary Latin II  
 LAT 125: Intermediate Latin I  
 LAT 126: Intermediate Latin II  
 POL 111: Elementary Polish I [I]  
 POL 112: Elementary Polish II [I]  
 POL 125: Intermediate Polish I [I]  
 POL 126: Intermediate Polish II [I]  
 RUS 111: Elementary Russian I [I]  
 RUS 112: Elementary Russian II [I]  
 RUS 125: Intermediate Russian I [I]  
 RUS 126: Intermediate Russian II [I]  
 RUS 225: Russian Composition and Diction [I]  
 SPAN 111: Elementary Spanish I [I]  
 SPAN 112: Elementary Spanish II [I]  
 SPAN 114: Basic Spanish Review [I]  
 SPAN 115: Conversational Spanish I [I]  
 SPAN 125: Intermediate Spanish I [I]  
 SPAN 126: Intermediate Spanish II [I]  
 SPAN 190: Spanish for Spanish Speakers I [I]  
 SPAN 191: Spanish for Spanish Speakers II [I]  
 SPAN 225: Spanish Composition and Structure [I]  
 SPAN 226: Spanish Structure and Idiom [I]

### AREA C: SUPPLEMENTAL

Courses below and/or courses in any of the Modes preceding may be substituted.

AC 201: Principles of Accounting I  
 AC 202: Principles of Accounting II  
 AC 401: Federal Income Tax I  
 COMM 230: Introduction to Mass Media  
 ET 150: Intro to Engineering Technology  
 ET 454: Transportation/Land  
 ET 456: Material Analysis  
 ET 497: Engineering Cost Analysis  
 FIN. 330: Financial Planning and Investment  
 IE 363: Industrial Computer Applications  
 IE 460: Constructive Activities for Non-Technical Teachers  
 IT 150: Construction Practices and Principles  
 IT 360: Production Systems  
 IT 410: Industrial Safety  
 IT 411: Industrial Hygiene  
 IT 414: Industrial Loss Control Management  
 IT 433: Techniques of Conference Leading  
 LAW 250: Principles of Law  
 MKT 303: Marketing Principles  
 PE 110: Concepts in Physical Education  
 PE 210: Personal and Community Health  
 PE 213: Anatomy in Physical Fitness  
 PE 303: First Aid  
 RDG 140: Reading Efficiency  
 SA 190: Personal Typewriting  
 SPED 470: Educating the Handicapped Student  
 TC 112: Instrument Drawing  
 TC 113: Introduction to Information Processing  
 TC 114: Introduction to Energy Processing  
 TC 118: Introduction to Material Processing  
 TC 121: Technical Drafting  
 TC 212: Graphic Arts Industries  
 TC 213: Electrical Energy  
 TC 214: Mechanical Energy  
 TC 215: Material and Processes  
 TC 216: Material Processing II (Metallurgy)  
 TC 217: Material Processing III (Plastics & Ceramics)  
 TC 223: Electrical Circuits: DC  
 TC 233: Electrical Circuits: AC  
 TC 255: Materials of Construction  
 TC 303: Electro-Mechanical Converters

TC 313: Electrical Power Systems  
 TC 323: Electronics Circuits  
 TC 342: Porous Printing and Post-Press Operations  
 TC 352: Graphic Design and Typography  
 TC 371: Plastics Processing Technique  
 TC 414: Sizing and Installation of Active Solar Heating Systems  
 TC 441: Architectural Drafting  
 TC 442: Lithography  
 TC 452: Graphic Design and Production  
 TC 461: Advanced Technical Drafting  
 TC 462: Advanced Graphic Arts Technique  
 TC 463: Automation  
 TC 464: Transportation/Aerospace  
 TC 471: Technical Illustration and Rendering  
 TC 472: Introductory and Publications Photography  
 TC 474: Transportation/Marine  
 TE 110: Technological Systems  
 TH 465: Theatre in the Elementary School  
 TH 466: Theatre in the Secondary School  
 VTE 415: Principles of Vocational Education  
 VTE 440: Human Relations in the Workplace  
 WP 204: Word Perfect — Basic

### AREA D: PHYSICAL

DAN 150: Folk and Square Dance  
 DAN 151: Modern Dance  
 DAN 152: Beginning Ballet  
 DAN 153: Intermediate Ballet  
 DAN 155: Dancercise  
 DAN 156: Slimnastics  
 DAN 157: Beginning Jazz Dance  
 DAN 158: Intermediate Jazz Dance  
 REC 120: Physical Fitness Activities  
 REC 121: Cycling  
 REC 124: Downhill Skiing  
 REC 141: Volleyball  
 REC 142: Softball  
 REC 159: Trampolining  
 REC 160: Racquetball  
 REC 162: Badminton  
 REC 163: Bowling  
 REC 164: Fencing  
 REC 166: Tennis  
 REC 168: Weight Training  
 REC 169: Golf  
 REC 200: Beginning Swimming  
 REC 230: Intermediate Swimming  
 REC 232: Advanced Lifesaving  
 REC 233: Water Safety Instructor's Course

## ACCOUNTING

- AC 201 PRINCIPLES OF ACCOUNTING I 3  
Basic theory and practice for service and mercantile businesses, including record techniques, statement preparation and simple financial analysis. Emphasis is on the understanding of accounting concepts. *Area C*
- AC 202 PRINCIPLES OF ACCOUNTING II 3  
Prereq.: AC 201. Continuation of Principles of Accounting I. Basic theory and practice are related to the organization and operation of partnerships and corporations. Managerial control is emphasized with such topics as financial statement analysis, cash flow, budgeting and the roles of taxes in influencing business decisions. *Area C*
- AC 210 PRINCIPLES OF INDUSTRIAL ACCOUNTING 3  
An introductory study of the measurement of financial position, net income, manufacturing costs, cost behavior, direct costing, standard costs and budgeting. Emphasis on the managerial uses of accounting data in industry. *IT majors only.*
- AC 301 COST ACCOUNTING I 3  
Prereq.: AC 202. Basic principles of cost accounting are developed together with application in formulation of cost accounting procedures. Elements of production, distribution and financial costs are treated with special emphasis on implications of resulting cost information for management. Consideration of job order, process and standard cost procedures.
- AC 302 COST ACCOUNTING II 3  
Prereq.: AC 301. Advanced topics in cost accounting are developed together with application in formulation of cost accounting procedures. Elements of production, distribution and financial costs are treated with special emphasis on implications of resulting cost information for management. Consideration of job order, process and standard cost procedures.
- AC 303 MANAGERIAL ACCOUNTING 3  
Prereq.: AC 202. This course in accounting for non-accounting majors, minors and concentrates covering the use of accounting data to plan and control business activities; includes analysis of financial statements, cost concepts and applications. Emphasis is on analyzing accounting data for effective management.
- AC 311 INTERMEDIATE ACCOUNTING I 3  
Prereq.: AC 202. Analysis of asset and liability accounts, including methods of evaluation and presentation. Current trends in accounting are studied with special references to recent pronouncements of the American Institute of Certified Public Accountants and other authoritative agencies.
- AC 312 INTERMEDIATE ACCOUNTING II 3  
Prereq.: AC 311. Continuation of Intermediate Accounting I, with special emphasis on accounting problems peculiar to corporate organizations. Other topics include the analysis of financial data and the statement of changes in financial position.
- AC 330 ACCOUNTING FOR NON-PROFIT INSTITUTIONS 3  
Prereq.: One year of elementary accounting. Comprehensive survey of governmental and other non-profit institution accounting as it relates to budgeting, cost accounting and financial reporting. Statutory influences which direct and control operation funds, bonded debt, fixed assets, investments, revenue and expenditure classification, general property taxes and inter-fund relationships are subjected to detailed study.

- AC 401 FEDERAL INCOME TAX I 3  
Centers upon and gives practice in preparation of federal income tax returns for individual taxpayers. *Open to all students. Area C*
- AC 402 FEDERAL INCOME TAX II 3  
Prereq.: AC 401 or permission of instructor. Detailed course on taxability of corporation income, allowable and unallowable deductions, net operating losses and capital transactions. Also contains material on corporate reorganizations, personal holding companies and potentialities of taxes on undistributed surplus. Includes background of partnership, estate and trust tax law and history of tax legislation.
- AC 403 ESTATE TAXATION AND PROBATE ACCOUNTING 3  
\*Prereq.: AC 401. A basic course in estate taxation and probate accounting. Area coverage includes: Post-mortem tax planning, examination of the U.S. Estate & Fiduciary tax returns, and probate accounting rules.
- AC 407 ADVANCED ACCOUNTING 3  
Prereq.: AC 312. Partnership accounting, consignments and installation sales, parent and subsidiary accounting, consolidations and mergers, agencies and branches.
- AC 408 CONTEMPORARY ACCOUNTING PROBLEMS 3  
Prereq.: AC 407 and senior standing. Advanced topics in contemporary accounting theory. Integrated review for students majoring in accounting.
- AC 410 AUDITING 3  
Prereq.: Accounting major with senior standing. Duties and responsibilities of auditor, kinds of audits, review of accounting theory in its application to work of auditor, internal control and relationship to auditing procedures, auditing working papers, financial statements and reports.
- AC 440 ACCOUNTING INFORMATION SYSTEMS 3  
Prereq.: AC 407. Principles and practices applied to design installation and maintenance of accounting and other information systems. Includes study of information system design and analysis with examples for handling cash, inventories, receivables, purchases, sales and payrolls. [c]
- ## ACTUARIAL SCIENCE
- ACTL 400 REVIEW—SOA COURSE 100 2  
Prereq.: MATH 222 and 228 (may be taken concurrently). Review and extension of the principles of calculus as related to the material on the Society of Actuaries (SOA) Course 100 Exam. *Spring.*
- ACTL 410 REVIEW—SOA COURSE 110 2  
Prereq.: STAT 416. Review and extension of the principles of probability and statistics as related to the material covered on the SOA Course 110 Exam. *Spring.*
- ACTL 420 REVIEW—SOA COURSE 120 1  
Prereq.: STAT 216 or STAT 416. Review and extension of the principles of applied statistics as related to the material covered on the SOA Course 120 Exam. *Spring.*
- ACTL 430 REVIEW—SOA COURSE 130 1  
Prereq.: MATH 470. Review and extension of the principles of operations research as related to the material covered on the SOA Course 130 Exam. *Spring.*
- ACTL 435 REVIEW—SOA COURSE 135 1  
Prereq.: MATH 477. Review and extension of the principles of numerical analysis as related to the material covered on the SOA Course 135 Exam. *Spring.*

ACTL 440 REVIEW—SOA COURSE 140 1  
Prereq.: MATH 335. Review and extension of the principles of the theory of interest as related to the material covered on the SOA Course 140 Exam. *Spring*.

ACTL 444 ACTUARIAL MATHEMATICS 3  
Prereq.: STAT 315. Topics are chosen from: survival distributions and life tables, life insurance, life annuities, net premiums, premium reserves, multiple life functions, multiple decrement models, valuation theory for pension plans, insurance models including expenses, and non-forfeiture benefits and dividends.  
*Fall. (O)*

ACTL 450 REVIEW—SOA COURSE 150 2  
Prereq.: ACTL 444. Review and extension of the principles of Actuarial Mathematics as related to the material covered on the SOA Course 150 Exam. *Spring*.

ACTL 480 TOPICS IN ACTUARIAL SCIENCE 1-3  
Prereq.: Permission of the instructor. Topics chosen from theory of interest, life contingencies, risk theory, elements of graduation and mortality table construction. May be repeated with different topics for a maximum of 6 credits. *Irregular*.

## ANTHROPOLOGY

ANTH 100 SEARCH IN ANTHROPOLOGY 3  
Introduction to processes and value systems of anthropology. Theme and title may vary from section to section. *Mode 6*

ANTH 140 INTRODUCTION TO ANTHROPOLOGY 3  
Major fields of anthropology; physical anthropology, prehistory and ethnology, with emphasis on the distinctive perspectives of anthropology as a cultural and human science. *Mode 6*

ANTH 150 INTRODUCTION TO ARCHAEOLOGY 3  
Survey of methods used in the acquisition, analysis and interpretation of archaeological data and how those data are used in culture reconstruction. *Mode 6*

ANTH 151 LABORATORY IN INTRODUCTORY ARCHAEOLOGY 1  
An introductory archaeology laboratory course to accompany, or follow, ANTH 150. During the semester four full days of field and/or lab work are required, ordinarily on weekends. Not open to students who have taken ANTH 450. *Mode 6*

ANTH 160 INTRODUCTION TO PHYSICAL ANTHROPOLOGY 3  
Introduction to the anthropological study of the human species. Course will cover humans as members of the primate order, human genetics, evolution and variation, stressing anthropological perspective of interaction of physical, environmental and cultural factors. *Mode 6*

ANTH 210 THE ANCIENT WORLD 3  
A scientific examination of the mysteries of the ancient world. Astronomical, mathematical, architectural and medical achievements of prehistoric peoples are considered, as well as possible explanations for these, ranging from ancient astronauts to human ingenuity. *Mode 6*

ANTH 225 THE STUDY OF CULTURE 3  
Human ways of life and how to investigate them. Introduces basic skills and knowledge necessary for the description, analysis and understanding of cultures. *Mode 6 [I]*

ANTH 250 INTERCULTURAL COMMUNICATION 3  
A study of communication variables which affect intercultural encounters. Communication problems which arise from cultural differences explored together with types of culture diffusion. *Mode 6 [I]*

ANTH 265 HUMAN EVOLUTION 3  
Prereq.: ANTH 140 or 160 or permission of instructor. The story of the human species from the earliest primate to modern *Homo sapiens*. Includes basic genetics, evolutionary theory and skills for studying the fossil record. *Mode 6*

ANTH 270 PSYCHOLOGICAL ANTHROPOLOGY 3  
Cross-cultural studies of the human life-cycles: maturation, socialization, enculturation in different cultural and natural environments. The human individual in a world-wide, species-wide comparative perspective. *Mode 6 [I]*

ANTH 318 NEW ENGLAND PREHISTORY 3  
Prereq.: ANTH 140 or 150 or permission of instructor. An examination of the prehistoric people of New England through analysis of fragmentary remains of their villages, burial grounds and trash deposits. Focus will be on sites excavated by the Anthropology Department at Central Connecticut. *Mode 6*

ANTH 320 BEFORE HISTORY 3  
Prereq.: ANTH 140 or 150 or permission of instructor. Considers the vast period of time before the development of writing. Investigates the first four million years of human existence. Human physical and cultural evolution from the first upright hominids to the builders of Stonehenge; the cave painters of Europe to the ancient pyramid builders of the Americas. *Mode 6*

ANTH 322 HISTORICAL ARCHAEOLOGY 3  
An anthropological study of Euro-American cultural history, using documentary and artifactual data to interpret changing cultural patterns in post-contact New England. Specialized techniques of document research, field excavation and artifact analysis in historical archaeology are studied. *Mode 6*

ANTH 325 HUMAN ECOLOGY 3  
Prereq.: ANTH 140 or permission of instructor. Explores the relationship between humans and their environments. How humans have changed the face of the earth and to what extent different environments have influenced human biological and cultural evolution. *Mode 6*

ANTH 329 EXPERIMENTAL ARCHAEOLOGY 3  
Prereq.: ANTH 150 or permission of instructor. An investigation of the techniques used by archaeologists in the reconstruction of prehistoric technology. This course will include actual experiments in tool manufacture and use. *Mode 6*

ANTH 339 WORK AND CULTURE 3  
A cross-cultural exploration of humanity as creator and tool user. The nature of work, innovation, invention and the beliefs and values surrounding them in various cultures. *Mode 6*

ANTH 345 FORENSIC ANTHROPOLOGY 3  
Prereq.: ANTH 160 or permission of instructor. The anatomy of the human skeleton and the determination of gender, age, race and other factors such as disease and cause of death from skeletal remains. The application of such studies to traditional anthropological topics and to the provision of evidence in criminal cases. *Mode 6*

ANTH 365 THE ANTHROPOLOGY OF HUMAN DIFFERENCE 3  
Prereq.: ANTH 140 or 160 or permission of instructor. The biological and cultural processes which have brought about the individual, sexual and "racial" variation of the human species. *Mode 6*

- ANTH 370 ANTHROPOLOGY AND MODERN LIFE 3  
Views the methods and techniques applying anthropological concepts to social change. Examines the uses of anthropology in medicine, education, social service, population control, economic development. *Mode 6*
- ANTH 375 ANTHROPOLOGICAL DATA ANALYSIS 3  
Prereq.: MATH 104 or equivalent. Investigation of techniques in numerical analysis of anthropological data. Covers statistical methods of correlation, spatial analysis and factor analysis. Focuses on the application of various statistical methods to actual anthropological data. *Anthropology majors only.*
- ANTH 405 CONNECTICUT ETHNICITY 3  
After a general discussion of ethnicity from the anthropological perspective, the course will focus on the demography, culture, history and interrelationships of diverse Connecticut ethnic groups. As one requirement, students will research and write on their own families and communities, and share this knowledge with the class and the University at-large. *One-time offering, Fall 1991. Future offerings are subject to Curriculum committee and University Senate approval. Mode 6*
- ANTH 417 CONNECTICUT INDIANS 3  
A study of the Native American cultures of Connecticut, using archaeological and ethnohistorical source materials. *Mode 6*
- ANTH 422 NORTH AMERICAN INDIANS 3  
Traditional American Indian cultures and contemporary problems facing them. Stresses the evolution of distinct ways of life in North America and the position of Native Americans in the United States and Canada today. *Mode 6*
- ANTH 426 PEOPLE AND CULTURES OF EASTERN EUROPE AND THE SOVIET UNION 3  
A survey of culture in the nations of Eastern Europe and the Soviet Union. Course will concentrate on contemporary aspects of above. *Mode 6 [1]*
- ANTH 430 THEORIES OF CULTURE 3  
Prereq.: ANTH 140 or 225 or permission of instructor. A historical survey of major schools of thought in socio-cultural anthropology. Include critical analysis of Evolutionist, Historicist, Functionalist, Structuralist, Interpretive and Marxist explanations with focus on post-1960s period. *Mode 6*
- ANTH 433 INDEPENDENT STUDIES IN ANTHROPOLOGY 3  
Prereq.: Senior standing and permission of Department chairperson. Directed study in anthropology. *On request.*
- ANTH 440 THE SUPERNATURAL 3  
A study of the beliefs in gods and spirits, visions, rites relating to beings and powers of other realms, and the effects of religion, magic and witchcraft on human lives. Contrasts diverse forms of spirituality with varieties of naturalistic, materialistic and atheistic perspectives. *Mode 6*
- ANTH 445 FOLKLORE AND MYTH 3  
The characteristics, meanings and functions of myths, legends, heroic epics, fairy tales, animal fables, proverbs, riddles, toasts, jokes and graffiti. From the folklorist and anthropological perspectives. *Mode 6*
- ANTH 450 ARCHAEOLOGICAL FIELD SCHOOL 3-6  
Provides instruction in survey techniques, mapping, scientific excavation, photographic and laboratory skills and analysis. Field schools are operated in both Historical and Prehistorical Archaeology. Enrollment is limited. Send letter of application to Department. May be repeated. *Summer. Mode 6*

- ANTH 460 INDUSTRIAL ARCHAEOLOGY 3  
A survey of the industrial heritage of Connecticut and New England, from the early processing of agricultural products in gristmills, sawmills and fulling mills to the full industrialization of the region in the 19th century. Attention is given to the power systems, transportation networks, mining and manufacturing industries of this area. *Mode 6*
- ANTH 465 THE EVOLUTION OF HUMAN BEHAVIOR 3  
Prereq.: ANTH 265 or permission of instructor. Examination of human behavior from the perspective of ethology including behavioral responses to our unique cultural environment. *Mode 6*
- ANTH 475 SEMINARS IN ANTHROPOLOGY 3  
Examination of selected topics in anthropology.

## AREA STUDIES

See also International Studies

- AS 490 OVERSEAS STUDY: EAST ASIA 6  
Summer overseas in East Asia. *Area B*
- AS 497 SEMINAR ON EAST ASIA (CHINA) 3  
Interdisciplinary seminar on East Asia (China). Anthropology-sociology, economics, geography, history, government and politics of China. Students from mentioned disciplines may take the seminar for credit in this discipline. *Fall. Area B*
- AS 498 SEMINAR ON EAST ASIA (JAPAN AND KOREA) 3  
Interdisciplinary seminar on East Asia (Japan and Korea). Anthropology-sociology, economics, geography, history, government and politics of Japan and Korea since World War II. Students from mentioned disciplines may take the seminar for credit in this discipline. *Spring. Area B*

## ART

- ART 100 SEARCH IN ART 3  
Introduction to nature and structure, processes and implications of selected topics in fine and applied arts. Titles and contents may vary from section to section. *Mode 4*
- ART 110 INTRODUCTION TO ART HISTORY 3  
General survey of historical development of visual arts in Western architecture, painting and sculpture. Credit not given to students who have taken Art 112 or Art 113. *Mode 4*
- ART 112 HISTORY OF WESTERN ART I 3  
A survey of paintings, sculpture and architecture from prehistoric times to the Renaissance. Credit not given to students who have taken Art 110.
- ART 113 HISTORY OF WESTERN ART II 3  
Prereq.: ART 112. Continuation of Art 112. A survey of paintings, sculpture and architecture from the Renaissance to the present. Credit not given to students who have taken Art 110.
- ART 120 DESIGN THEORY AND PRACTICE 3  
Introduction to concepts of design theory with application in both two- and three-dimensional media. Open to majors only. Credit not given to students who have taken Art 122.
- ART 122 DESIGN I (ELEMENTS OF DESIGN) 3  
Exploration of spatial division, color, aesthetic theories and relationship to typical design problems in two dimensions. Credit not given to students who have taken Art 120. *Mode 4*

ART 123	DESIGN II (ELEMENTS OF DESIGN)	3	ART 263	CRAFTS THEORY AND PRACTICE	3
	Prereq.: ART 122. Continuation and extension of ART 122. <i>Mode 4</i>			Prereq.: ART 130 and 120. Course focuses on the creative structuring of materials and ideas into art forms through the use of tools and processes. <i>Open to majors only.</i>	
ART 124	THREE-DIMENSIONAL DESIGN	3	ART 264	DESIGN—HANDCRAFT MATERIALS AND TECHNIQUES I	3
	Introduction to design elements of architecture, environment design, sculpture, etc. Construction of three-dimensional assemblages required. <i>Mode 4</i>			Prereq.: ART 122 or 130. Varied handicrafts and materials are included. May not be substituted for ART 263. <i>Mode 4</i>	
ART 126	GRAPHIC DESIGN	3	ART 300	ART EDUCATION THEORY & PRACTICE II	3
	Overview of the field of graphic design and commercial art. Studio and seminar. <i>Mode 4</i>			Prereq.: ART 111 and 200. Contemporary methods for art teachers of children in grades 7-12. Comprehensive curriculum planning, materials and processes, and evaluation of teaching methods. <i>Required for Art Education majors.</i>	
ART 130	DRAWING I	3	ART 321	ART THEORY AND PRACTICE FOR THE ELEMENTARY TEACHER	3
	Fundamentals of drawing, composition, perspective and figure drawing. Varied techniques are employed. <i>Mode 4</i>			Fundamental theories and practices for creative art activities in elementary school. <i>Open to Elementary Education majors only or permission of the Department chairperson.</i>	
ART 200	ART EDUCATION THEORY & PRACTICE I	3	ART 322	GRAPHIC DESIGN SKILLS II	3
	Contemporary principles and practices in education through art in the elementary schools. Materials and processes recommended for these levels will be explored and evaluated. <i>Open to Art Education majors only.</i>			Prereq.: ART 222 and 230. Extensive development of skills in the area of design. The student is exposed to concept theory, typographic considerations, professional critique and presentation technique as well as design practice.	
ART 201	PRACTICUM IN ART EDUCATION I	3	ART 323	GRAPHIC DESIGN ILLUSTRATION I	3
	Prereq.: ART 200. Actual teaching experience in Central Connecticut's Saturday Art Workshop as a pre-student teaching requirement, accompanied by weekly seminars. <i>Open to Art Education majors only. Fall.</i>			Prereq.: ART 230 or 322. Introduction of a variety of illustration techniques and procedures. Emphasis upon the selection and application of illustration techniques suitable for translating written or suggested material into visual form. <b>ART 224</b>	
ART 222	GRAPHIC DESIGN SKILLS I	3	ART 324	GRAPHIC DESIGN ILLUSTRATION II	3
	Prereq.: ART 130. Course acquaints the student with the skills, vocabulary, theory and pre-production technique of the graphic designer. <i>Mode 4</i>			Prereq.: ART 323. Continuation of Graphic Design Illustration I.	
ART 230	DRAWING II	3	ART 340	PRINTMAKING I	3
	Prereq.: ART 130. Continuation of Drawing I. An in-depth study in drawing techniques as applied to individual expression. <i>Mode 4</i>			Prereq.: ART 130. An introduction to planographic, relief and intaglio techniques as modes of artistic expression. <i>Mode 4</i>	
ART 233	DESIGN LAYOUT FOR PHOTOGRAPHY	3	ART 343	SERIGRAPHY I	3
	Prereq.: ART 222 and 230. Introduction to techniques and procedures necessary to solve aesthetic problems. Emphasis upon selection of subject matter, three-dimensional design and lighting. <i>Fall. Mode 4</i>			Prereq.: ART 120 or 122 or 222 or permission of Department chairperson. An introduction to basic stencil techniques and screen processes and their application to creative and artistic expression.	
ART 250	WATERCOLOR PAINTING	3	ART 344	LITHOGRAPHY I	3
	Prereq.: ART 120 or 122 and 130. Styles and techniques of painting in transparent and opaque watercolors, with emphasis on individual creative expression. <i>Mode 4</i>			Prereq.: ART 230 or permission of Department chairperson. An introduction to planographic printing techniques on litho plates as modes of artistic expression.	
ART 251	PAINTING THEORY AND PRACTICE	3	ART 352	PAINTING II	3
	Prereq.: ART 120 or 130. Traditional concepts of painting are explored. Painting approached without limitations of commonly accepted media and surfaces. <i>Open to majors only.</i>			Continuation of Painting I.	
ART 252	PAINTING I	3	ART 360	CERAMICS II	3
	Prereq.: ART 120 or 130 or 251. Exploration of techniques of painting in still life, landscape and creative composition. <i>Mode 4</i>			Prereq.: ART 260. Continuation of ART 260 with emphasis on wheel skills and glaze calculation. <i>Mode 4</i>	
*ART 259	SCULPTURE THEORY AND PRACTICE	3	*ART 361	SCULPTURE II	3
	Prereq.: ART 120 or 122 or 130. Carving, modeling, constructing and assembling techniques are employed as methods of developing realistic, abstract and non-objective sculpture. <i>Open to majors only or by permission of Department chairperson.</i>			Prereq.: ART 261 or 259. Continuation of Sculpture I. <i>Mode 4</i>	
ART 260	CERAMICS I	3	ART 366	HANDWROUGHT JEWELRY	3
	Functional and non-functional design in clay and glaze using various techniques. <i>Mode 4</i>			Prereq.: ART 120 or 122 or 130. The basic principles of hand-wrought jewelry construction will be explored with emphasis on use of materials, tools and processes as they may be utilized in a simple studio setup.	
ART 261	SCULPTURE I	3			
	Introduction to creative sculpture: modeling, carving, constructing and assembling. Clay, firebrick, mass-produced objects and plaster will be used to develop figurative, abstract and non-objective sculpture. <i>Mode 4</i>				

- ART 401 PARTICIPATION IN ART EDUCATION II 1  
Prereq.: ART 201. Must be taken concurrently with EDSEC 429 or after completion of EDSC 429. Supervisory experience in the Central Connecticut Saturday Art Workshop. *Open to Art Education majors only.*
- ART 405 COLOR THEORY AND PRACTICE 3  
Prereq.: ART 120 or 122. This course seeks to develop a concept of color through experiments in perception and production that will equip the student to make independent selections and control color usage.
- ART 408 THE ART OF GREECE IN THE BRONZE AGE 3  
Prereq.: ART 110. An introduction to the art of Greece in the Bronze Age. The artistic and cultural development of mainland Greece, Crete, the Aegean Islands and Western Asia Minor from the Paleolithic to the end of the Bronze Age. Emphasis on the art of flourishing Minoan and Mycenaean civilizations. *Mode 4*
- ART 409 STUDIES IN ART HISTORY 3  
Prereq.: ART 110 or 112 or 113. Selected topics in the history of art, announced each semester. Students may not take this course under the same topic more than once. *Mode 4*
- ART 410 GREEK AND ROMAN ART 3  
Prereq.: ART 110 or 112 or 113. Historical development of painting, sculpture and architecture from the Bronze Age through the Golden Age of Greece to the fall of the Roman Empire. *Irregular. Mode 4*
- ART 412 ORIENTAL ART 3  
Historical development of visual arts of Far Eastern societies: architecture, painting, sculpture and minor arts of China, India, Japan and Korea. *Spring. Mode 4*
- ART 414 AMERICAN ART 3  
Prereq.: ART 110 or 112 or 113. Historical development of painting, sculpture and architecture in America from the 17th century to the present. *Mode 4*
- ART 415 THE AFRICAN DIASPORA 3  
Prereq.: ART 110 or MUS 110 or TH 110. An introduction to the fine arts contributions of African-American artists as expressed through their culture. The focus is on individual research and presentations on historical and contemporary topics. *Mode 4*
- ART 416 MODERN ART 3  
Prereq.: ART 110 or 112 or 113. Historical development of painting, sculpture and architecture from the late 19th century to the present. *Mode 4*
- ART 418 RENAISSANCE ART 3  
Prereq.: ART 110 or 112 or 113. Historical development of European painting, sculpture and architecture from 1400 to 1600. *Irregular. Mode 4*
- ART 421 DESIGN—ADVERTISING 3  
Prereq.: ART 122 or 130 or 422. Selected topics in design theory and application in merchandising. *Spring.*
- ART 422 DESIGN—TWO & THREE-DIMENSIONAL 3  
Explores design concepts through the use of paper, wood, metal, plaster, plastic. Relationship to other art forms, i.e.: painting, sculpture, fashion, advertising will be part of course. Studio and seminar. *Mode 4*
- ART 431 LIFE DRAWING I 3  
Prereq.: ART 130 or 435. Drawing from the nude and clothed model, various media. *Open to majors only.*
- ART 432 LIFE DRAWING II 3  
Prereq.: ART 431 or permission of Department chairperson. Continuation of Art 431. *Open to majors only.*
- ART 435 ADVANCED DRAWING 3  
Prereq.: Permission of Department chairperson. Emphasis on development of expressive use of line and value. Various materials used including ink, pencil, conti crayon, chalk, wire, charcoal and others.
- ART 436 GRAPHIC DESIGN SKILLS III 3  
Prereq.: ART 322 and 323. Course acquaints the student with the skills of the graphic designer. Special attention is given to a variety of techniques and application of skills in practical commercial design projects.
- ART 437 GRAPHIC DESIGN STUDIO INTERNSHIP 3  
Prereq.: ART 436 and permission of instructor. On-the-job experience through internship with professional commercial art or advertising concern. Classroom studio experience preceding and classroom discussion and portfolio preparation following the internship.
- ART 438 GRAPHIC DESIGN SKILLS IV 3  
Topics in advanced typographic, symbolic, collateral, campaign and package design theory and application. Emphasis on development of individual skills and techniques. Professional layout and comprehensive presentation technique stressed.
- ART 439 CENTRAL DESIGN 3  
Prereq.: ART 322 and permission of instructor. Studio practice, design and production of printed materials.
- ART 440 PRINTMAKING II 3  
Prereq.: ART 340. Continuation of Printmaking I.
- ART 442 DESIGN—LETTERING AND POSTER 3  
Prereq.: ART 122 or 130 or 422 or 435. Alphabets, drawing and cutting letters, techniques of producing effective charts and posters. *Fall.*
- ART 443 SERIGRAPHY II 3  
Prereq.: ART 343, graduate standing or permission of Department chairperson. An extension of Serigraphy I.
- ART 444 LITHOGRAPHY II 3  
Prereq.: ART 344 or graduate standing or permission of the Department chairperson. An extension of Lithography I.
- ART 447 PHOTOGRAPHY 3  
Prereq.: ART 120 or 122 or 130. Exploration of photography techniques as they may be used for individual creative expression. A camera is required.
- ART 450 WATERCOLOR PAINTING AND RELATED MEDIA 3  
Prereq.: ART 250 or 435 or 422. This course will explore the various watercolor processes and the effects unique to each, i.e., tempera, aquarelle, water acrylics and colored inks. Historical and contemporary examples of watercolor techniques will be discussed.
- ART 452 ADVANCED PAINTING I 3  
Prereq.: ART 130 or 435 or 251. Exploration of varied qualities of painting media, historical and contemporary techniques and styles. *Mode 4*
- ART 460 CERAMICS III 3  
Prereq.: ART 360. Advanced clay and glaze techniques. *Mode 4*
- ART 462 SCULPTURE 3  
Prereq.: ART 120 or 123 or 422. Students pursue directed assignments in several sculptural areas. Past and present styles discussed. Studio and seminar.



- ART 464 DESIGN—HANDCRAFT MATERIALS AND TECHNIQUES 3  
Prereq.: ART 422 or 435 or 264. Continuation and extension of ART 264.
- ART 465 STUDIO TOPICS 1-3  
Prereq.: To be stipulated at time of course offering. Selected topics in studio art, announced each semester. Students may not take this course for credit under the same topic more than once.
- ART 466 DESIGN—JEWELRY 3  
Prereq.: ART 120 or 122 or 366 or 435 or 422. Course exploring possibilities of materials and equipment in jewelry and metal work, with emphasis on design. *Mode 4*
- ART 468 CERAMICS IV 3  
Prereq.: ART 460. Thesis—clay and glaze design used to express a statement in form.
- ART 469 ADVANCED CERAMICS I 3  
Prereq.: ART 460. Emphasis on skills in wheel use, glazing and firing techniques.
- ART 490 CURATORSHIP 3  
Theory and practice in collection management, gallery and museum programming, and exhibition design. *On demand.*
- ART 494-495 LOCATION STUDIES — EUROPEAN ART 3  
Course is designed to enrich student's background in fine arts through direct contact with cultural resources in Europe. Consideration will be given to general principles common to all arts and specific principles unique to art and architecture. Field trips will be taken to exhibits, private collections, artist's ateliers, operas and museums. Preparatory reading, discussion, critical analysis and concluding projects will be part of the course. *Special fees. Six-week session. Irregular.*
- ART 498 INDEPENDENT STUDY 1-6  
Prereq.: Seniors and advanced juniors in Art. Formal application to Art Department chairperson following procedure approved by the Art Department faculty. Individually planned program of independent study in Art or Art Education for students who wish to pursue specialized areas not covered in regular course offerings or go beyond that provided for in the program. Must be requested three weeks before new semester.

## BIOLOGY

- BIO 100 SEARCH IN BIOLOGY 3  
Examination of historical perspectives and exploration of contemporary issues and problems in biological sciences. *Mode 8*
- BIO 111 INTRODUCTORY BIOLOGY 3  
Man and biological world, with emphasis on structure and function of the human organism, including topics on disease, heredity and evolution. BIO 121 or 122 may be substituted for this course. Three lectures per week.
- BIO 112 INTRODUCTORY BIOLOGY LABORATORY 1  
Prereq.: BIO 111 which may be taken concurrently. Laboratory course to accompany BIO 111. One three-hour laboratory per week. *Mode 8*
- BIO 120 PLANTS OF CONNECTICUT 3  
From Sea Lettuce to Mountain Laurel—an introduction to the form and function of plants, with emphasis on those which occur in Connecticut. Field work will include identification of algae, fungi, bryophytes and vascular plants collected from various habitats. Some laboratory methods for the study of these plants will be introduced. The equivalent

of two lectures and one three-hour laboratory per week. Not open to Biology majors. *Summer. Mode 8*

- BIO 121 GENERAL BIOLOGY I 4  
Structural and physiological organization of cells involved in growth of living organisms is discussed. Consideration of growth of flowering plants and comparisons of levels of specialization reached among major groups within the plant kingdom. Lecture topics are paralleled in laboratory, where living, prepared and preserved materials are used for study and dissection. Three lecture and one three-hour laboratory per week. *[c] Mode 8*
- BIO 122 GENERAL BIOLOGY II 4  
Prereq.: BIO 121. Consideration of major animal groups, emphasizing diversity of animal life and its wide distribution. Vertebrate type is used to illustrate differentiation, division of labor, and development of organ systems, stressing integration to make unified whole. Embryology, genetics, evolution and ecology. In laboratory, living, prepared and preserved materials are used for study and dissection. Three lectures and one three-hour laboratory per week. *[c] Mode 8*
- BIO 132 INTRODUCTORY ECOLOGY 3  
An introductory biology lecture course which examines the inter-relationships of plants, animals and their environment. The biological aspects of man's place in the environment will be stressed. Three lectures per week. Cannot be used to meet requirements for major, minor or concentrate in Biology. *Mode 8*
- BIO 133 LABORATORY IN INTRODUCTORY ECOLOGY 1  
An introductory biology laboratory course in field ecology to accompany, or follow, BIO 132, Introductory Ecology. One three-hour laboratory or field trip per week. Cannot be used to meet requirements for major, minor or concentrate in Biology. *Mode 8*
- BIO 150 MARINE STUDIES INSTITUTE 4  
Environmental simulation exercise on a site along Long Island Sound. On-shore and on-water activities in marine biology, geology and meteorology, in seamanship and piloting and in coastal zone management. *Summer. Mode 8*
- BIO 204 SMALL GREENHOUSE MANAGEMENT 1  
Help for the beginning student in anticipating and handling the inevitable problems in the management of home and school greenhouses. Topics include greenhouse structure and design; control of temperature, humidity and light and sensible use of space; propagation; and use of fertilizers and pesticides. 21 hours of lectures, demonstrations and practical experience in the greenhouse. Credit may not be applied to Biology major, minor or concentration requirements. *Summer. Mode 8*
- BIO 211 CONCEPTS IN BIOLOGY 3  
Introduction to cellular, genetic, evolutionary and ecological principles with laboratory emphasis on application of basic concepts. Two lectures and one laboratory or field period per week. *[c] Mode 8*
- BIO 221 INVERTEBRATE ZOOLOGY 4  
Prereq.: BIO 122. Structure, activities, life histories and evolutionary relationships of invertebrate phyla. Three lectures and one three-hour laboratory per week. *Mode 8*
- BIO 222 VERTEBRATE ZOOLOGY 4  
Prereq.: BIO 122. Vertebrate classification and life histories of representative forms. Laboratory work will emphasize identification of North American species. Three lectures and one three-hour laboratory per week. *Mode 8*
- BIO 226 NON-VASCULAR PLANTS 3  
Prereq.: BIO 121. Slime molds, bacteria, algae, fungi, lichens, liverworts and mosses. Life histories, relationships, distribution and significance to man are considered. Two lectures and one laboratory per week. *[c] Mode 8*

- BIO 227 VASCULAR PLANTS 3  
Prereq.: BIO 121. Phylogenetic relationships, taxonomy, distribution and economic significance of vascular plants. Emphasis is placed on the seed plants. Two lectures and one three-hour laboratory per week. *Mode 8*
- BIO 250 INTRODUCTION TO HUMAN GENETICS 3  
Prereq.: BIO 111 or equivalent. An introduction to basic principles of genetics and their application to human heredity, presented at a level not requiring an extensive background in biology. Topics include inheritance of human traits, genetic bases of human disorders, genetic counseling, pedigree analysis, eugenics and human future. Three lectures per week. *Not open to Biology majors. Mode 8*
- BIO 306 PRINCIPLES OF GENETICS 4  
Prereq.: BIO 122, CHEM 121. Historical development of basic principles and modern concepts of genetics. Integrated survey of each of the major fields of genetics is presented. Three lectures and one laboratory per week. *[c]*
- BIO 316 MICROBIOLOGY 4  
Prereq.: BIO 122, CHEM 121. Bacteria and other microorganisms with reference to welfare of man. Life cycles, infection, laboratory and culture techniques, and biology of immunity. Three lectures and two laboratory periods per week.
- BIO 318 ANATOMY AND PHYSIOLOGY I 5  
Prereq.: BIO 122 or equivalent. Gross morphology of human body and brief consideration of histology, together with detailed study of various organ systems. Three lectures and two laboratory periods per week. *[c] Spring. Mode 8*
- BIO 319 ANATOMY AND PHYSIOLOGY II 1  
Prereq.: BIO 318 (may be taken in the same or previous term). Continuation of BIO 318, Anatomy and Physiology I. Special emphasis placed on metabolism, nutrition and the effects of aging on organ structure and function. *Spring. [c] Mode 8*
- BIO 390 SPECIAL PROBLEMS IN BIOLOGY 1-6  
Prereq.: Written permission of instructor(s) and Department chairperson to register. Specific research projects in various aspects of biology under the supervision of one or more Department members selected by the student. Written report required.
- BIO 400 SEMINAR IN BIOLOGY 1  
Seminar course open to senior biology majors in both the B.A. and B.S. programs and to graduate students only with permission of the Department chairperson. Through individual readings, discussions and presentations, students will study contemporary topics in biology.
- BIO 405 ECOLOGY 4  
Prereq.: Two organismic courses. Relation of plants and animals to environment in both terrestrial and aquatic communities. Physical and biotic factors as they affect population dynamics are considered. Three lectures and one three-hour laboratory a week. *Fall.*
- BIO 410 ECOLOGICAL PHYSIOLOGY 4  
Prereq.: BIO 122 and 221 or 222 and CHEM 450, 451 or 312. A phylogenetic study of animal physiology in which the diversity of physiological adaptations for various habitats is stressed. Three lectures and one three-hour laboratory per week. *Spring.*
- BIO 411 CELLULAR PHYSIOLOGY AND METABOLISM 4  
Prereq.: BIO 122, CHEM 450, 451 or 312. Cellular environment, some of the homeostatic mechanisms whereby the cell maintains a steady state. Structure of a cell in terms of its chemical composition and physicochemical and functional organization and certain aspects of cellular metabolism: permeability, respiration and energy metabolism, synthesis, and growth and differentiation. Specialized cellular functions such as excitation and contraction. Three lectures and one three-hour laboratory per week.
- BIO 412 HUMAN PHYSIOLOGY 3  
Prereq.: BIO 122 or equivalent, CHEM 450 and 451 or 311 or permission of instructor. Study of the human body and its reactions to internal and external environmental changes. Physiology of the musculoskeletal, nervous, circulatory, respiratory, excretory and endocrine systems is considered. Integrative mechanisms of the system are emphasized. *Fall.*
- BIO 413 HUMAN PHYSIOLOGY LABORATORY 1  
Prereq. or Coreq.: BIO 412. Laboratory course to accompany BIO 412. One three-hour laboratory per week. *Fall.*
- BIO 416 IMMUNOLOGY 3  
Prereq.: Junior standing and permission of instructor. Introduction to the structure of the immune system, the immunoglobulins, antigen-antibody interactions, infection immunity, lymphocytes, histocompatibility and genetic regulations. *Spring.*
- BIO 417 IMMUNOLOGY LABORATORY 1  
Prereq. or Coreq.: BIO 416. Introduction to the anatomy and histology of the immune system and an introduction to some immunological and immunodiagnostic laboratory techniques involving the principles of precipitation, agglutination and immunoelectrophoresis. One three-hour laboratory per week. *Spring.*
- BIO 418 HUMAN ANATOMY, PHYSIOLOGY, PATHOPHYSIOLOGY 6  
Prereq.: BIO 122 or equivalent, CHEM 450/451 or 311 or permission of instructor. Functional anatomy, physiology and pathophysiology of man. A review of cell physiology is followed by an in-depth analysis of muscular, circulatory, nervous, respiratory, excretory and endocrine systems with special applications to the health sciences. No credit to Biology majors who have received credit for BIO 412 or 318. *Summer.*
- BIO 434 LIMNOLOGY 4  
Prereq.: BIO 122 or equivalent and CHEM 122. Investigations of the physical and biological nature of standing and flowing fresh water environments. Lecture, field work and data analysis will be included. Students should be prepared to take Saturday field trips. One two-hour lecture and one four-hour lab per week. *Fall. (O)*
- BIO 436 ENVIRONMENTAL MANAGEMENT 3  
Prereq.: Upper division students in science. An examination of the quality of the natural environment as a product of human activity. The study of the utilization of environmental resources using information systems, research, planning, development, regulation and financing functions to establish environmental priorities. Lecture and laboratory. *Irregular.*
- BIO 440 ORGANIC EVOLUTION 3  
Prereq.: CHEM 450, 451 or BIO 306. A study of the historical development of evolutionary concepts, the evidence of evolution, and the mechanisms involved in race formation and speciation. The roles of gene mutation, chromosomal aberrations, selection and other evolutionary factors are discussed. Three lectures per week. *Irregular.*
- BIO 442 PLANT ANATOMY 3  
Prereq.: BIO 121. Development of internal structure in roots, stems, leaves and flowers of the seed plants from the origin of these organs to maturity. Two lectures and one three-hour laboratory per week. *Irregular. Mode 8*
- BIO 444 LOCAL FLORA TAXONOMY 3  
Prereq.: BIO 121. Identification, classification and evolution of local plants with special emphasis on dicotyledons but including some other groups. Family relationship and distribution are stressed. Two lectures and one three-hour laboratory per week. *Irregular. Mode 8*

**BIO 445 MORPHOLOGY OF VASCULAR PLANTS 3**

Prereq.: BIO 121 or permission of instructor. Relationship between structure and form of vascular plants is studied and compared, from most primitive to most advanced of these plants. Two lectures and one three-hour laboratory per week. *Irregular. Mode 8*

**BIO 449 PLANT PHYSIOLOGY 3**

Prereq.: BIO 411 or equivalent. Introductory course dealing with physiological processes in growth, development, nutrition and metabolism of plants. Two lectures and one three-hour laboratory per week. *Irregular.*

**BIO 455 INTRODUCTION TO HORTICULTURE 3**

A study of useful procedures and techniques in plant propagation, gardening and landscaping. Topics include selection and propagation of horticultural plants; seeding and transplanting of vegetables and flowers; selection and application of fertilizers; control of insects, diseases and weeds; planning of home ground; transplanting and pruning of ornamental and fruit trees; and establishment and maintenance of lawns. Two lectures and one three-hour laboratory per week. *Summer. Mode 8*

**BIO 462 DEVELOPMENTAL BIOLOGY 4**

Prereq.: BIO 411. Fundamental structural and functional aspects of development of organisms are studied. Cellular differentiation and primary morphogenesis are emphasized. Prepared materials and classical experimental exercises using living materials are used to illustrate patterns of development. *Irregular.*

**BIO 468 ARTHROPOD BIOLOGY 3**

Prereq.: BIO 122. Systematic approach to arthropods with emphasis on insects. Topics on morphology, physiology, evolution, land economics, importance of various groups are considered. Two lectures and one laboratory per week. *Spring. Mode 8*

**BIO 470 ADVANCED GENETICS 3**

Prereq.: BIO 306 and 411 or CHEM 450, 451. MATH 104 is recommended. A study of current genetic research including postulated mechanisms involved in genetic phenomena. Readings are assigned from various texts and journals. Three lectures per week. *Spring.*

**BIO 472 PRINCIPLES AND TECHNIQUES OF ELECTRON MICROSCOPY 3**

Prereq.: Permission of instructor, advanced undergraduate or graduate status, one year of college physics. Introduction to physical principles and biological applications of transmission electron microscopy. Preparation of specimens, operation of the electron microscope and photographic techniques taught. One lecture and two laboratory sessions per week. *Spring.*

**BIO 481 COMPARATIVE ANATOMY 4**

Prereq.: BIO 122. Representative types emphasizing comparative morphology of various organ systems. Laboratory work chiefly on dogfish, salamander and rabbit. Two lectures and two three-hour laboratories per week. *Irregular. Mode 8*

**BIO 490 STUDIES IN BIOLOGY 1-4**

Prereq.: Permission of the Department and/or instructor. Selected studies in the biological sciences which are not offered presently in the curriculum of the Department. Course may be repeated for different topics, but students may not take this course for credit under the same topic more than once. *Irregular.*

**BIO 495 MOLECULAR BIOLOGY 4**

Prereq.: BIO 360 or equivalent, permission of instructor. Introduction to the structure and function of DNA. Emphasis on approaches currently being used to analyze the expression of approaches currently being used to analyze the expression of genes. Examination of regulated gene expression to cellular growth and differentiation.

**BUSINESS EDUCATION****BE 210 OFFICE TECHNOLOGIES 3**

Prereq.: 45 net words per minute or permission of instructor. Introduction to office systems technologies generally taught at the secondary-school level by business educators, such as keyboarding proficiency, telephone/mail operations, etc. *Fall. [c]*

**BE 315 METHODS OF TEACHING ACCOUNTING AND BASIC BUSINESS SUBJECTS 3**

Methods of teaching accounting and basic business subjects. Includes techniques, materials and evaluation. *Fall.*

**BE 319 OFFICE EDUCATION METHODS 3**

Prereq.: Keyboarding Proficiency Exam and WP 204. Goals and objectives of office education, curriculum considerations, instructional methods and techniques, teaching materials and references, utilization of community resources for office education. *Spring.*

**BE 324 ORGANIZATION AND ADMINISTRATION OF VOCATIONAL BUSINESS AND MARKETING EDUCATION 3**

Prereq.: Junior or senior standing. To be taken in the spring semester immediately preceding student teaching. Designed to orient students to organization and administration of the following types of vocational programs: high school, post-secondary and adult education. Programs are explained in relation to current federal vocational education acts. *Spring.*

**BE 414 METHODS OF TEACHING MARKETING EDUCATION 3**

Prereq.: BE 324. Preparation of lesson plans, teaching methods, materials and evaluation techniques for Marketing/Distributive Education high school students. *Fall.*

(See Managerial Communication, Office Systems Management and Word Processing listings.)

**CHEMISTRY****CHEM 100 SEARCH IN CHEMISTRY 3**

Introduction to methods, procedures and intellectual processes in chemistry. Theme may vary from section to section. *Mode 8*

**CHEM 102 CHEMISTRY OF NUTRITION 3**

An introduction to nutrition, the basic nutrients, their chemistry, and their role in health. Two lectures and one two-hour laboratory period per week. *Fall. Mode 8*

**CHEM 104 CHEMISTRY IN EVERYDAY LIFE 3**

Basic descriptive chemistry and its practical application in household and consumer situations. Two lectures and one two-hour laboratory period per week. *Spring. Mode 8*

**CHEM 111 INTRODUCTORY CHEMISTRY I 3**

Introduction to fundamental concepts of chemistry; descriptive aspects of inorganic and organic chemistry. For Art, Technology, Elementary and other non-science majors. Two lectures and one two-hour laboratory period per week. *Mode 8*

**CHEM 121 GENERAL CHEMISTRY I 4**

Introduction to fundamental principles of chemistry including basic quantitative laws of chemical reaction and some descriptive inorganic and organic chemistry. Three lectures, and one three-hour laboratory period per week. *Mode 8*

**CHEM 122 GENERAL CHEMISTRY II 4**

A continuation of CHEM 121. *Mode 8*

- CHEM 301 ANALYTICAL CHEMISTRY 4  
Prereq.: CHEM 122, MATH 121. Theory and practice of gravimetric and volumetric quantitative analysis; introduction to colorimetric analysis and methods of separation. Two lectures and two three-hour laboratory periods per week. *Fall*.
- CHEM 311 ORGANIC CHEMISTRY I 4  
Prereq.: CHEM 122. Principal classes of aliphatic and aromatic carbon compounds; compounds of industrial significance. Three lectures and one three-hour laboratory period per week. *Fall, Summer*.
- CHEM 312 ORGANIC CHEMISTRY II 4  
Continuation of CHEM 311 with emphasis on special classes of carbon compounds. Three lectures and one three-hour laboratory period per week. *Spring, Summer*.
- CHEM 313 ORGANIC PREPARATIONS 1  
Coreq.: CHEM 312. Emphasis on modern procedures for preparation and isolation of organic compounds. Students are introduced to the use of chemical literature. Not open to Chemistry minors or concentrates for fulfillment of program requirements except with permission of Department. One three-hour laboratory period per week. *Spring*.
- CHEM 321 PHYSICAL CHEMISTRY I 4  
Prereq.: CHEM 311, PHYS 126, MATH 221. Coreq.: CHEM 301. Thermodynamic approach to theory of gases, liquids, solids; study of laws of thermodynamics; theory of solutions and equilibria. Four lectures per week. *Fall*.
- CHEM 322 PHYSICAL CHEMISTRY II 4  
Prereq.: CHEM 321. Theory of electrochemical cells and ionic solutions, chemical kinetics, and quantum chemistry. Three lectures per week. *Spring*.
- CHEM 323 PHYSICAL CHEMISTRY LABORATORY 2  
Coreq.: CHEM 322. Experimental work to accompany CHEM 322. Two three-hour laboratory periods per week. *Spring*.
- CHEM 402 INSTRUMENTAL METHODS IN ANALYTICAL CHEMISTRY 4  
Prereq.: CHEM 301, 312, 322. An advanced treatment of complex equilibria of analytical interest and instrumental methods in analytical chemistry. The laboratory emphasizes practical analytical problems and physio-chemical methods, including atomic absorption, spectrophotometric, coulometric, polarographic, potentiometric, electroanalytical and chromatographic methods. Two lectures and two three-hour laboratory periods per week. *Fall*.
- CHEM 406 ENVIRONMENTAL CHEMISTRY 3  
Prereq.: CHEM 301, 311. Nature and properties of pollutants, their interaction with each other and the environment, preventative and remedial methods of control. Laboratory concerned with sampling and analysis of pollutants. Two lectures and one two-hour laboratory period per week. *Spring*.
- CHEM 432 CHEMISTRY SEMINAR 1  
Prereq.: CHEM 312, 321. Participants will prepare written and oral presentations on topics of current interest in various fields of chemistry. One conference per week. May be taken a maximum of three times for credit. *Spring*.
- CHEM 435 LITERATURE OF CHEMISTRY 2  
Prereq.: CHEM 301, 311. Survey of English and foreign-language literature of chemistry; preparation of bibliographies and research papers. Journals are available in University Library for reference. Two conference hours per week. *Spring*.
- CHEM 438 INTRODUCTION TO RESEARCH 1-3  
Prereq.: Permission of Department. Research participation for senior students under faculty adviser. May be repeated for total of 3 credits.
- CHEM 450 BASIC ORGANIC AND BIOLOGICAL CHEMISTRY 3  
Prereq.: CHEM 122. Selected topics in chemistry of biological processes: classes of organic compounds found in biological systems, their significance in nutrition and metabolism, energy production, and acid-base and related concepts as applied to body fluids as aqueous media. *Spring, Summer*.
- CHEM 451 BASIC ORGANIC AND BIOCHEMISTRY LABORATORY 1  
Coreq.: CHEM 450. Experimental work to accompany CHEM 450. One laboratory period per week. *Spring*.
- CHEM 454 BIOCHEMISTRY 3  
Prereqs.: CHEM 312, BIO 122 or equivalent. General principles of biochemistry, chemical constituents of cells, metabolic pathways, energies and biochemical regulators. Three lectures per week. *Spring*.
- CHEM 455 BIOCHEMISTRY LABORATORY 1  
Coreq.: CHEM 454. Experimental work to accompany CHEM 454. One laboratory period per week. *Spring*.
- CHEM 458 INTERNSHIP IN CLINICAL CHEMISTRY 8  
Prereq.: Approval of director of Clinical Chemistry program. Six-month internship in an approved hospital clinical chemistry laboratory. Required of all majors in Clinical Chemistry.
- CHEM 460 PRINCIPLES OF INORGANIC CHEMISTRY 3  
Coreq.: CHEM 322. Electronic structure and theories of bonding as they relate to the structures of inorganic compounds. Three lectures per week. *Spring*.
- CHEM 461 DESCRIPTIVE INORGANIC CHEMISTRY 3  
Prereq.: CHEM 460. A study of inorganic reactions with emphasis on acid-base, substitution and oxidation-reduction reactions including those of polymeric, bioinorganic, coordination and organometallic compounds. Three lectures per week. *Fall*.
- CHEM 462 INORGANIC CHEMISTRY LABORATORY 1  
Coreq.: CHEM 460. A laboratory course to accompany or follow CHEM 460, concerned with the synthesis and characterization of inorganic compounds. One laboratory period per week. *Fall*.
- CHEM 472 SPECTROMETRIC IDENTIFICATION OF ORGANIC COMPOUNDS 1 or 2  
Prereq.: CHEM 313, or permission of Department. A study of physical methods of structure determination with emphasis on infrared, ultraviolet, nuclear magnetic resonance and mass spectrometry. One or two three-hour laboratory periods per week. *Fall*.
- CHEM 485 TOPICS IN CHEMISTRY 3  
Prereq.: Permission of instructor. Advanced treatment of chemistry topics in analytical chemistry, inorganic chemistry, organic chemistry and physical chemistry. May be repeated up to three times as topics are changed. Three lectures or two lectures and one laboratory period per week depending on topic.
- CHEM 490 SHORT COURSE IN CHEMISTRY 1  
Prereq.: 16 credits in chemistry. A short course of in-depth coverage of a single topic. Topic varies as announced. May be repeated for a total of 6 credits. Not open to Chemistry minors or concentrates for fulfillment of program requirements except with permission of Department.

## CHINESE

- CHIN 111 ELEMENTARY CHINESE I 3  
Basic sounds and structure patterns of Mandarin-Chinese are established through a direct audio-lingual approach. Not open to students with one year of high school study. *Fall. Area B [I]*
- CHIN 112 ELEMENTARY CHINESE II 3  
Prereq.: CHIN 111. Continuation of Chinese 111. No credit given to students with previous credit for more advanced course work in Chinese except by permission of the Department chairperson. *Spring. Area B*
- CHIN 125 INTERMEDIATE CHINESE I 3  
Prereq.: One year of college Chinese or equivalent. Further work on the patterns of Chinese structure with readings and conversation in the language. No credit will be given to students with previous credit for more advanced course work in Chinese except by permission of the Department chairperson. *Fall. Area B [I]*
- CHIN 126 INTERMEDIATE CHINESE II 3  
Prereq.: CHIN 125. A continuation of Chinese 125. No credit will be given to students with previous credit for more advanced course work in Chinese except by permission of the Department chairperson. *Spring. Area B [I]*
- CHIN 341 THE CHINESE HERITAGE I 3  
Prereq.: CHIN 125 or equivalent. Mainstreams of Chinese cultural development. Use of Chinese texts. *Fall. [I]*
- CHIN 342 THE CHINESE HERITAGE II 3  
Prereq.: Chinese 126 or 341 or equivalent. Continuation of CHIN 341. *Spring. [I]*
- CHIN 351 MODERN CHINESE LITERATURE I 3  
Prereq.: Chinese 342 or equivalent. Representative selections from modern Chinese authors are studied in the original texts. *Fall. [I]*
- CHIN 352 MODERN CHINESE LITERATURE II 3  
Prereq.: CHIN 351 Or equivalent. Continuation of Chinese 351. *Spring. [I]*
- CHIN 410 BUSINESS CHINESE I 3  
Prereq.: CHIN 342 or CHIN 352 or permission of instructor. Development of oral and written skills needed for conducting business in China with business firms. Study of the cultural attitudes of Chinese business people. *(E) [I]*
- CHIN 411 BUSINESS CHINESE II 3  
Prereq.: CHIN 410 or permission of instructor. Additional practice in the oral and written skill needed for conducting business in China; emphasis on commercial translation. *(E) [I]*
- CHIN 475 CLASSICAL CHINESE I 3  
Prereq.: CHIN 342 or 352, or permission of instructor. Introduction to classical Chinese literature with an emphasis on etymology, semantics and grammar of classical Chinese. *(O)*
- CHIN 476 CLASSICAL CHINESE II 3  
Prereq.: CHIN 475 or equivalent. Masterpieces of classical Chinese literature with an emphasis on the moral teachings of Confucius. *(O)*

## COMMUNICATION

- COMM 115 FUNDAMENTALS OF COMMUNICATION 3  
Basic course offering the student an opportunity to understand and improve communication skills. Performance, observation and evaluation. *Area A*

- COMM 140 PUBLIC SPEAKING 3  
Study of and practice in the principal forms of public address. Additional emphasis on the needs and expectations of persons preparing for business and professional careers. Recommended for all concentrates in Communication. *Area A*
- COMM 200 READING ALOUD 3  
Basic principles and techniques of the spoken communication of ideas from the printed page to the listening audience. May be taken instead of COMM 115. *Area A*
- COMM 215 INTRODUCTION TO INTERPERSONAL COMMUNICATION 3  
Introductory survey of interpersonal communication theories and the application of these theories in dyadic, group and organizational contexts.
- COMM 230 INTRODUCTION TO MASS MEDIA 3  
A study of the structure, roles and processes of the mass media. Primary emphasis is on radio, television and film. Examination of effects on society. *Area C*
- COMM 231 COMMUNICATION TECHNOLOGIES 3  
Prereq.: COMM 230. An examination of how selected telecommunication systems such as satellite, computer networks, and teleconferencing influence the way we receive and process information; determine national, corporate and personal priorities and policies; allocate time, learn and are entertained.
- COMM 250 VOICE AND ARTICULATION IMPROVEMENT 3  
Study of vocal mechanism, voice production, articulation and pronunciation, with intensive drill and exercises for improvement. *Area A*
- COMM 260 PROBLEM-SOLVING AND DECISION-MAKING 3  
Introduction to small group interaction processes with emphasis on fundamental forms of communication in all discussion settings. (May require group meetings outside of class.) *Area A*
- COMM 266 PHONETICS 3  
Study of motor, acoustic, visual and kinesthetic aspects of speech sound production and acquisition of tools for describing phenomena. *Mode 6*
- COMM 280 BUSINESS AND PROFESSIONAL SPEAKING 3  
Principles of communication in report making, parliamentary processes, interpersonal conferences and related managerial functions. Emphasis on understanding and practicing patterns of communication in various organized settings. *Area A*
- COMM 285 COMMUNICATION SKILLS FOR TRAINING AND DEVELOPMENT 3  
Survey and application of communication strategies for training and development in public and private corporate and institutional settings. *Area A*
- COMM 310 BASIC COMMUNICATION THEORY AND PROCESS 3  
An introduction to prevalent theories of communication. Emphasis will be on human communication processes. *Mode 6*
- COMM 325 SPEECH SCIENCE 3  
Study of the integration of various bodily systems for speech production; the physiological, anatomical, acoustical and perceptual processes involved in speech communication. *Mode 6*
- COMM 330 BASIC TELEVISION BROADCASTING 3  
Prereq.: COMM 230, 231. An introduction to television production as it relates to verbal and visual communication. An overview of how a commercial television broadcast station operates. Work on individual and crew projects is a requirement.

- COMM331 TELEVISION PERFORMANCE 3  
Prereq.: COMM 330. Techniques used in communicating ideas on television. Students will have an opportunity to present news, weather, and sports material, and do commercials and public service announcements on camera. *Fall.*
- COMM 335 COMMUNICATIONS MANAGEMENT 3  
Prereq.: COMM 230, 231, 330. Communications management in broadcast, cable, closed-circuit or related environments. Facility planning, scheduling, personnel supervision, programming, sales, marketing strategies and government regulations are explored.
- COMM 336 MEDIA LITERACY 3  
Prereq.: COMM 230. A review of current changes in philosophy, content and processes in media use and application as this use affects society and its value system.
- COMM 337 MEDIA CAMPAIGNS 3  
Prereq.: COMM 230. Analysis of the media strategies utilized by ad agencies, political agencies and corporations to promote a product, idea or service by influencing attitudes or changing behavior.
- COMM 340 RADIO AND TELEVISION ANNOUNCING 3  
Prereq.: COMM 140. Announcing formats, approaches, techniques and styles used in radio and television industries. Emphasis is placed on performance.
- COMM 345 RADIO AND TELEVISION SCRIPTING 3  
Prereq.: COMM 330 or permission of instructor. Audio and television script writing for commercial and educational uses. Terminology, formats, appeals, timing and pacing stressed. Students will create, organize and develop sample scripts. Studio applications included.
- COMM 353 INTERVIEWING THEORY AND PRACTICE 3  
A study and practice of different interview formats (excluding counseling) as a unique context of communication. Special attention given to interviews for employment, appraisal and information gathering.
- COMM 360 PARLIAMENTARY LAW AND POLITICS 3  
An introduction to the rules and operation of committees, assemblies and other formal gatherings, with special attention to communication in legislative settings. *Area A*
- COMM 361 CONTROVERSY AND NEGOTIATION 3  
A systematic exploration of the nature of oral controversy and its impact on behavior. *Fall. Area A*
- COMM 381 INTRODUCTION TO SPEECH AND HEARING PROBLEMS 3  
An overview of major points of view about communication disorders including causes, methods of assessment, diagnostic approaches and psychological effects. *Mode 6*
- COMM 385 SPEECH AND LANGUAGE DEVELOPMENT 3  
Factors relating to speech and language acquisition and growth from birth to the preschool-age child; factors relating to disruption of speech and language learning processes; remedial treatment procedures for speech and language disorders in the young child. *Mode 6*
- COMM 427 TELEVISION PROGRAMMING AND PRODUCTION 3  
Prereq.: COMM 330 or permission of instructor. A study of broadcasting systems. Use of studio television facilities includes investigation of sound, lighting, graphics, production and on-camera presentation. *Spring.*
- COMM 428 ADVANCED TV PRODUCTION 3  
Prereq.: COMM 427. A technique-centered course which focuses on combining TV studio production with field and remote components for broadcast, cable or corporate applications. *Spring.*
- COMM 443 COMMUNICATION AND SOCIAL INFLUENCE 3  
Prereq.: COMM 115 or 140. Principles and processes of influencing attitudes, beliefs and behavior. Practical illustrations drawn from advertising, speeches, and other communicative settings. *Spring. Mode 6*
- COMM 453 ORGANIZATIONAL COMMUNICATION 3  
Prereq.: COMM 310 or permission of instructor. A study of communication theory and processes within organizational concepts. Specific attention given to communication processes within organizational contexts.
- COMM 454 COMMUNICATION STRATEGIES FOR SOCIAL ACTION AND COMMUNITY DEVELOPMENT 3  
Study of the roles of interpersonal communication, telecommunication, traditional media and specialized media. Emphasis on research study, field project, production, campaign, or simulation designed to facilitate change. *[I]*
- COMM 463 ADVANCED INTERPERSONAL COMMUNICATION 3  
Prereq.: COMM 215, 260 or permission of instructor. Variables in interpersonal communicative behavior. Experience in practical small group settings with the application of theory and observation.
- COMM 480 TELEVISION DOCUMENTARY PRODUCTION 3  
Prereq.: COMM 428 or permission of instructor. An analysis of TV documentary style, techniques and processes with opportunity to build upon TV skills learned in previous TV production courses by producing a TV documentary.
- COMM 490 INTERNSHIP/INDEPENDENT STUDY 1-6  
Prereq.: Permission of a faculty adviser and the Department chairperson. Reading and research in approved topics or an intern project under guidance of a member of the Communication Department. *For majors only.*
- COMM 492 LEGISLATIVE INTERN EXPERIENCE 3-6  
Prereq.: Junior or senior status, permission of faculty and Department chairperson. Students who apply and are admitted to this program are assigned to work in the State Legislature. In addition, a series of seminars, assigned readings and completion of a substantial research project related to work in State Legislature are required. To be taken concurrently with COMM 490.
- COMM 495 SPECIAL TOPICS IN COMMUNICATION AND SPEECH PATHOLOGY 3  
Prereq.: Junior or senior standing or permission of instructor. Study of selected topics in Communication. May be repeated once with a different topic.
- ## COMPUTER SCIENCE
- \*Pending Approval
- CS 113 INTRODUCTION TO COMPUTERS 3  
For the non-Computer Science student who wishes to become acquainted with computers. An investigation of computer impact on many facets of our society, discussion of types of problems solved by computer and an introduction to an appropriate programming language. No credit given to students with credit for CS 151, 213 or MATH 446, 471. *[c] Mode 2*
- CS 115 WORKSHOP IN COMPUTER SCIENCE 1-3  
Prereq.: ECM 099 or placement test. Topics vary and include application-oriented languages, computer literacy-oriented software packages, and human-computer interface procedures. *[c] Mode 2*

- CS 151 INTRODUCTION TO COMPUTER SCIENCE 4  
Prereq.: MATH 115 or placement test. This is a first course in Computer Science. The emphasis is on the analysis of classes of problems, the design of algorithms for solving them, and the use of a computer language for implementing them. No credit given to students with credit for MATH 471. [c] Mode 2
- CS 152 ADVANCED PROGRAMMING CONCEPTS 4  
Prereq.: CS 151 or MATH 471, and MATH 122 or 125 or 131. Advanced programming and data structures for Computer Science majors and concentrates. Emphasis on techniques and procedures appropriate to production of reliable and easily modifiable programs. Stacks, queues, lists and tree structures. [c]
- CS 207 INTRODUCTION TO COMPUTER GRAPHICS 3  
Prereq.: Art 110, and either ECM 099 or placement test. This course will use the computer facilities to produce abstract designs and images, with special emphasis on color forms, shapes, texture and basic design. Spring. [c] Mode 2
- CS 213 APPLICATIONS OF COMPUTER PROGRAMMING 3  
Prereq.: MATH 121 or 125 or 131 or placement test. This course focuses on the use of programming techniques to solve problems encountered in the areas of mathematics, life science, physical science, engineering, education and social science. Topics include programming, languages with emphasis on FORTRAN and either BASIC or PASCAL, the use of time-shared and batch-oriented computers, and applications of the computer. No credit given to students with credit for CS 151. [c] Mode 2
- CS 216 C PROGRAMMING IN THE UNIX ENVIRONMENT 3  
Prereq.: CS 151 or 213. An introduction to the C language and the Unix Operating System for experienced programmers. No credit given to CS majors. Spring. [c]
- CS 253 DATA AND FILE STRUCTURES 3  
Prereq.: CS 152, MATH 281 and MATH 132 or MATH 221. A software design course which develops concepts and techniques for structuring and manipulating data both in the computer and on external storage devices. Topics include a review of basic data structures, balanced tree structure, graphs, sequential and direct access files, external sorting. An introduction to data base systems is also provided. [c]
- CS 254 COMPUTER ORGANIZATION AND ASSEMBLY LANGUAGE PROGRAMMING 3  
Prereq.: CS 151 or MATH 471. Concepts of assembler language, machine language, macro-instructions, subroutines, program checkout, interrupt structure of assemblers, and use of operating system. No credit given to students with credit for MATH 472. [c]
- CS 290 TOPICS IN COMPUTER SCIENCE 1-3  
Prereq.: CS 151 or equivalent, and permission of instructor. This course will provide an opportunity to introduce into the curriculum elementary topics of current interest. May be repeated with different topics for up to 6 credits. [c] Irregular.
- CS 300 COMPUTER SCIENCE WORK EXPERIENCE I 3  
Prereq.: Permission of Department. Students must go through Co-op office prior to receiving credit. A six-month employment experience relevant to the Computer Science program. No more than 6 credits of other course work may be taken concurrently.
- CS 301 COMPUTER SCIENCE WORK EXPERIENCE II 3  
Prereq.: CS 300 and permission of Department. Students must have a job which is different from their CS 300 job. Students must go through the Co-op office prior to receiving credit. A six-month employment experience relevant to the Computer Science program. No more than 6 credits of other course work may be taken concurrently.
- CS 354 DIGITAL SYSTEMS DESIGN 3  
Prereq.: CS 254 and MATH 281. Physics 338 must be taken concurrently by those students whose program requires Physics 338. An introduction to the analysis and design of digital systems in terms of logical and sequential networks. Various minimization techniques are studied. Fall. [c]
- CS 355 INTRODUCTION TO SYSTEMS PROGRAMMING 3  
Prereq.: CS 253, and 254 or MATH 472. Introduction to the design of systems software. Topics include comparative machine organizations, the design of assemblers and loaders, an introduction to operating systems, and an introduction to compiler design. [c]
- CS 385 STRUCTURED COMPUTER ORGANIZATION 3  
Prereq.: CS 354. The architecture of the computer is explored by studying its various levels: physical level, operating-system level, conventional machine level, and higher levels. An introduction to microprogramming and computer networking is provided. Spring. [c]
- CS 398 INDEPENDENT STUDY IN COMPUTER SCIENCE 1-3  
Prereq.: CS 152 and 254. Special independent work to meet individual interest in areas not covered by regular curriculum. Work will be under the supervision of a faculty member in an area and for an amount of credit agreed upon prior to registration for the course. On request. [c]
- CS 407 ADVANCED TOPICS IN COMPUTER SCIENCE 1-3  
Prereq.: CS 152 and 254 and permission of instructor. This course provides an opportunity to introduce into the curriculum topics of interest and new courses on an experimental basis. Topics include advanced systems programming, computer performance evaluation, pattern recognition, computer information storage and retrieval, microprogramming, advanced software engineering and compiler optimization. May be repeated with different topics for up to 6 credits. [c]
- CS 410 INTRODUCTION TO SOFTWARE ENGINEERING 3  
Prereq.: CS 355. An examination of the software development process from the initial requirement analysis to the operation and maintenance of the final system. The scope of the course includes the organization of software development projects, the verification and validation of systems, the problems of security and privacy, and the legal aspects of software development, including software protection and software liability. Fall. (E) [c]
- CS 420 OBJECT-ORIENTED PROGRAMMING SYSTEMS 3  
Prereq.: CS 355. Introduction to the theory, concepts and application of object-oriented programming as implemented in today's computing world. This course will include such topics as objects and messages, classes and inheritances, encapsulation and specification, and will present an overview of the currently popular object-oriented systems. Irregular. [c]
- CS 423 COMPUTER GRAPHICS 3  
Prereq.: CS 253 or MIS 310. Wire frame and solid graphics in two and three dimensions, data structure for computer graphics, geometrical transformations in computer graphics, raster and vector display device technologies. Fall. [c]
- CS 450 OPERATIONS RESEARCH IN COMPUTER SCIENCE 3  
Prereq.: CS 152 or 213, and STAT 315 or MATH 104. This course introduces the student to the methods of OR with emphasis on the use of digital computers. Topics covered include scheduling situations, allocation problems, queuing models, inventory models and probability models. Fall. (O) [c]

CS 460 DATA BASE MANAGEMENT SYSTEMS 3

Prereq.: CS 253. Data base systems are considered from both the designer's and the user's point of view. Physical implementation and data access techniques are studied. *Fall. (E) [c]*

CS 462 ARTIFICIAL INTELLIGENCE: THEORY AND PRACTICE 3

Prereq.: CS 355 and PHIL 120 or permission of instructor. Presentation of artificial intelligence as a coherent body of ideas and methods to acquaint the student with the classic programs in the field and their underlying theory. Students will explore this through problem-solving paradigms, logic and theorem proving, language and image understanding, search and control methods and learning. *[c]*

CS 463 ALGORITHMS 3

Prereq.: CS 253. Topics include algorithms in combinatorics, integer and real arithmetic, pattern matching, list processing and artificial intelligence. Algorithmic analysis and domain-independent techniques are also considered. *Spring. (O) [c]*

CS 464 PROGRAMMING LANGUAGES 3

Prereq.: CS 253. Emphasis on programming languages as one of many tools in the software development effort. Comparison of different language usages of data types, information hiding, control structures, block structure, sub-programs, re-entrancy and recursion. *Fall. (E) [c]*

CS 465 COMPILER DESIGN 3

Prereq.: CS 355. Current techniques of compiler writing. Introduction to formal grammar and parsing techniques is given. Problems of semantic phase are discussed and some solutions are given. Optimization techniques are discussed. *Fall. [c]*

CS 473 SIMULATION TECHNIQUES 3

Prereq.: CS 152 or 213, and STAT 315 or MATH 104. This course introduces the student to the basic principles of simulation methods using digital computers. Topics covered include random number generators, stochastic variate generators, computer models and simulation languages. *Spring. (O) [c]*

CS 481 OPERATING SYSTEMS DESIGN 3

Prereq.: CS 355. Theory and design of computer operating systems. Topics include machine and interrupt structure, memory, processor, device and information management. *Spring. [c]*

CS 483 THEORY OF COMPUTATION 3

Prereq.: MATH 281 and CS 463. The concept of algorithm, correctness and efficiency of algorithm, decidable vs. undecidable problems, recursion, halting problem, formal languages, context free and context-sensitive grammars, and introduction to automata and parallel algorithms. *Fall.*

CS 485 MICROPROCESSORS 3

Prereq.: CS 354. Acquaints students with the basic techniques in the design and use of microprocessor software and hardware. Topics include microprocessors, differences and similarities, instructions, software and hardware components, applications and future uses. *Spring. (E) [c]*

CS 486 INTRODUCTION TO VLSI 3

Prereq.: CS 385. Introduction to the physics, features and fabrication of Very Large Scale Integrated circuits. Emphasis on VLSI design and applications. Topics include design algorithms, contra-flow and fabrication techniques. *Spring. [c]*

CS 490 COMPUTER COMMUNICATIONS NETWORKS AND DISTRIBUTED PROCESSING 3

Prereq.: CS 253 and 254. A study of networks of interacting computers. The problems, rationale and possible solution for both distributed processing and distributed data bases will be examined. *Fall. (E)*

CS 495 LEGAL, SOCIAL, ETHICAL AND ECONOMIC ISSUES IN COMPUTING 3

Prereq.: 12 credits in Computer Science and senior standing. Topics include privacy, security, law of torts in computing and legal protection of software. *Spring. (O)*

CS 498 SENIOR PROJECT 1-3

Prereq.: CS major, senior standing, 21 credits toward major including one track course. Opportunity for student to participate in design and implementation of large problem with small group of people. Problem will be chosen in consultation with instructor. *Spring.*

CS 499 SEMINAR IN COMPUTER SCIENCE 3

Prereq.: CS major. Opportunity for student to explore topics of current interest not covered in normal curriculum. *Fall.*

## DANCE

*DAN. 150-158 are Area D courses. They are general activity courses, open to all students.*

DAN 150 FOLK AND SQUARE DANCING 1

DAN 151 MODERN DANCE 1

DAN 152 BEGINNING BALLET 1

DAN 153 INTERMEDIATE BALLET 1

DAN 155 DANCERCIZE 1

DAN 156 SLIMNASTICS 1

DAN 157 BEGINNING JAZZ DANCE 1

DAN 158 INTERMEDIATE JAZZ DANCE 1

*DAN 275 and 352 are Activity courses, open to majors only*

DAN 275 MODERN DANCE & THEORY 1

DAN 352 INTERMEDIATE MODERN DANCE 1

Prereq.: DAN 151 or 275. Exploration of various intermediate-level movements, techniques, creative problems and individual and group choreography. *Spring.*

## EARTH SCIENCE

ESCI 110 INTRODUCTION TO THE EARTH 3

A descriptive introduction to the astronomical, geological and meteorological studies of the earth that allow an understanding of the earth as a physical environment. No credit given students with credit in ESCI 111, or to students with 6 credits in Earth Science. *Mode 8*

ESCI 111 ELEMENTARY EARTH SCIENCE 3

An introduction to the study of earth science. Selected topics in geology, meteorology and astronomy. Two lecture hours per week and one two-hour laboratory. No credit given to students with credit for ESCI 110. *Mode 8*

ESCI 116 LIFE OF THE PAST: FOSSILS 3

Introduction to ancient life. The pageant of life as revealed by fossils over approximately three billion years. For non-science majors. Two lecture hours and one two-hour laboratory per week. *Fall. Mode 8*

ESCI 117 INTRODUCTION TO ASTRONOMY: THE SOLAR SYSTEM 3

Prereq.: ECM 099 or equivalent. An introductory course in descriptive astronomy focusing on the solar system, including coordinate systems, the Earth-Moon system, light and telescopes, and the structure of the solar system. No credit will be given to Physics or Earth Science majors or to students with credit for ESCI 178. *Mode 8*



- ESCI 118 INTRODUCTION TO ASTRONOMY II: STARS AND GALAXIES 3  
Prereq.: ECM 099 or equivalent. An introductory course in descriptive astronomy focusing on stars and galaxies, including stellar evolution, galaxies, and the origin and fate of the universe. No credit given to Physics or Earth Science majors or to students with credit for ESCI 179. *Mode 8*
- ESCI 121 PHYSICAL GEOLOGY 3  
Basic principles of development of the earth, earth materials and agents responsible for existing surface features. *Mode 8*
- ESCI 122 HISTORICAL GEOLOGY 4  
Prereq.: ESCI 121. Earth history, emphasizing earth's changing geographic pattern through time, history and development of life, climates of past as revealed by study of stratified rocks of earth's crust. Three lectures and one three-hour laboratory period per week. *Spring. Mode 8*
- ESCI 123 GEOLOGY LABORATORY 1  
Prereq.: ESCI 121 (may be taken concurrently). Laboratory experiences that broaden the understanding of concepts and relationships presented in ESCI 121. One two-hour lab per week. There may be one or more field trips. *Fall. Mode 8*
- ESCI 129 INTRODUCTION TO METEOROLOGY 4  
Prereq.: MATH 101 or placement exam. An introductory course dealing with atmospheric composition, structure and basic motions. The nature of high and low pressure systems, severe weather, how the National Weather Service works. Three lectures and one two-hour laboratory per week. *Mode 8*
- ESCI 178 PLANETARY ASTRONOMY 4  
Prereq.: MATH 115 or equivalent. A study of the members of the solar system, their motions and compositions. Topics will include physical laws of motion and radiation, comparative planetology, the origin and structure of the solar system. Three lectures and one two-hour laboratory per week. No credit given to students with credit for ESCI 117. *Fall. Mode 8*
- ESCI 179 STELLAR ASTRONOMY 4  
Prereq.: MATH 115 or equivalent. A study of stars as separate bodies and members of clusters and galaxies. Topics will include properties of stars, stellar evolution, galaxies and cosmology. Emphasis will be placed on methods astronomers use to study stars. Three lectures and one two-hour laboratory per week. No credit given to students with credit for ESCI 118. *Spring. Mode 8*
- ESCI 201 INTRODUCTION TO THE PLANETARIUM 3  
Prereq.: ESCI 117 or permission of Department. The planetarium as a multimedia teaching and enrichment center drawing from diverse areas such as the sciences, the creative arts and the humanities. Designed for students interested in multimedia work, public education and astronomy education. *Spring. Mode 8*
- ESCI 221 EARTH MATERIALS 4  
Prereq.: CHEM 121. The study of the origin, composition and physical properties of the solid constituents of the crust and interior of the earth. Three lectures and one three-hour laboratory per week. *Fall. (E)*
- ESCI 222 STRUCTURAL GEOLOGY 3  
Prereq.: ESCI 121. Crustal structures such as folds, faults and plutons. Two lectures and one three-hour laboratory or field trip per week. *Spring. (E)*
- ESCI 278 OBSERVATIONAL ASTRONOMY 4  
Prereq.: ESCI 178 or 179 and permission of instructor. Theory and practice of observational astronomy. Topics include solar and lunar observation, naked eye observation, and coordinate systems, telescope usage and design, basic astrophotography. Two lectures and two two-hour labs per week. *Fall. Mode 8*
- ESCI 301 PLANETARIUM INTERNSHIP 2  
Prereq.: ESCI 201. Directed study in the use of the planetarium for school and public programming. The student will prepare and conduct one or more planetarium presentations. May be repeated for a maximum of 4 credits.
- ESCI 330 TOPICS IN ASTROPHYSICS 3  
Prereq.: MATH 126, PHYS 122 and ESCI 118 or 179 or permission of instructor. Selected topics in astrophysics on the frontier of current research. Course may be repeated once with different content. *Spring. (E)*
- ESCI 340 PHYSICAL METEOROLOGY 3  
Prereq.: ESCI 129, Phys. 121 (may be taken concurrently), or permission of instructor. An examination of the physical basis of the earth's atmosphere. Structure, composition, gas laws, atmospheric thermodynamics and hydrostatics, atmospheric stability, solar radiation and the energy budget of the earth. Three lecture hours per week. *Fall. (E)*
- ESCI 341 DYNAMIC METEOROLOGY 3  
Prereq.: ESCI 340. Continuation of ESCI 340 with emphasis on dynamic processes of the earth's atmosphere. Equations of motion, geostrophic and gradient winds, thickness and thermal wind, circulation and vorticity, mechanism and influences of pressure changes. Three lecture hours per week. *Spring. (O)*
- ESCI 342 WEATHER ANALYSIS AND FORECASTING I 4  
Prereq.: ESCI 129, and MATH 121 or permission of instructor. Basics of analysis and forecasting. National Weather Service codes and interpretation, understanding the weather map, graphical addition and subtraction, analysis of scalar and vector fields, streamlines and isogons, kinematic analysis. Three lecture hours and a two-hour laboratory per week. *Fall. (O)*
- ESCI 343 WEATHER ANALYSIS AND FORECASTING II 4  
Prereq.: ESCI 341 and 342. National Weather Service Facsimile Products, applications of thickness and thermal wind equations, thermodynamic diagrams and their usefulness, cross-sectional analysis, tilt of pressure systems, quasi-geostrophic theory, performance characteristics of NWS prediction models. Three lecture hours and a two-hour laboratory per week. *Spring. (E)*
- ESCI 421 THE STRATIGRAPHIC RECORD 4  
Prereq.: ESCI 122. Methods of identifying spatial and temporal relationships between fossil assemblages and sedimentary rock types. Three one-hour lectures and one three-hour laboratory period per week. *Fall. (O)*
- ESCI 424 GEOMORPHOLOGY 3  
Prereq.: ESCI 121. Origin and development of land forms in terms of processes of erosion and relation to geologic structure. Three lectures per week. *Fall. (O) Mode 8*
- ESCI 430 OCEANOGRAPHY 3  
Prereq.: BIO 121, CHEM 121, PHYS 121. Introduction to physical properties and chemical composition of sea water, its topography and circulation, and relationships to activities of plants and animals. Three lectures per week. Field work by arrangement. *Spring. (O)*
- ESCI 440 GEOLOGY OF NORTH AMERICA 3  
Prereq.: ESCI 121 or permission of Department. Course treats geological evolution of North American continent from regional point of view. Morphology and structure of areas of special interest are described and explained in terms of the overall geological history of continent. Three lecture-recitation periods per week. *Fall. (E)*

ESCI 450 ENVIRONMENTAL GEOLOGY 3  
 Prereq.: Permission of instructor. Geological factors that control or affect human habitat and land use potential. Earthquakes, landslides, floods, groundwater seepage, cave collapse and similar processes are briefly discussed. Attention is focused on major landscape changes in urban areas during the last 25 years and on methods of preventing, avoiding or compensating for geological hazards. *Spring. (E) Mode 8*

ESCI 452 INDEPENDENT STUDY IN EARTH SCIENCE 1-4  
 Prereq.: Approved plan of study of arrangement with supervising instructor and approval of Department chairperson. Special work in laboratory, theory or research to meet individual requirements in areas not covered by regular curriculum. May be taken more than one semester up to a limit of 4 credits.

ESCI 490 TOPICS IN EARTH SCIENCE 3  
 Selected studies in earth science which are not offered presently in the curriculum of the department. Course may be repeated for different topics. No topic may be taken for credit more than once.

## ECONOMICS

ECON 200 PRINCIPLES OF ECONOMICS I 3  
 Macroeconomics. Introduction to the prevailing pattern of American economic institutions, the theory of income, employment and investment in the national economy and public policies that affect them. *Mode 7*

ECON 201 PRINCIPLES OF ECONOMICS II 3  
 Microeconomics. Presents economic principles related to consumer demand, and determination of prices of goods and factors of production under differing market structures. Applications to real world situations will be discussed. It is recommended that ECON 200 be taken before ECON 201. *Mode 7*

ECON 300 MACROECONOMICS 3  
 Prereq.: ECON 200, 201. Theoretical analysis of determination of national income and economic growth. *Fall.*

ECON 305 MICROECONOMICS 3  
 Prereq.: ECON 200, 201. Determination of prices of goods and productive factors in free market economy and role of prices in allocation of resources. *Spring.*

ECON 310 MATHEMATICAL ECONOMICS I 3  
 Prereq.: ECON 200, 201, MATH 125 or MATH 122, or permission of instructor. Applications in economics of functions, differential calculus, maxima and minima, Lagrange multipliers, matrices and determinants. *Fall.*

ECON 311 MATHEMATICAL ECONOMICS II 3  
 Prereq.: ECON 310. A continuation of ECON 310. An examination of economic problems in a dynamic framework. The use of integrals, differential equations and difference equations will be discussed as applied to economics. A brief introduction to linear programming and game theory is included.

ECON 398 TOPICS IN ECONOMICS 1  
 Prereq.: Permission of instructor. An examination of selected topics in economics which are not otherwise offered as part of the Department's regular courses. Course may be repeated for different topics for a total of 3 credits.

ECON 420 URBAN ECONOMICS 3  
 Prereq.: ECON 200, 201. An economic analysis of metropolitan and regional entities with special focus on land use, location decision-making, role of public services, transportation, public finance, human resources and social welfare.

ECON 430 INTERNATIONAL ECONOMICS 3  
 Prereq.: ECON 200, 201. Principles of international trade and finance and application to modern world, theory of comparative advantage, exchange rates, monetary standards, international financial institutions, tariffs, commercial policy and aid to underdeveloped countries.

ECON 433 ECONOMIC DEVELOPMENT OF MODERN CHINA, JAPAN AND KOREA 3  
 Prereq.: ECON 200. An interdisciplinary analysis of special problems in economic development of China, Japan and Korea, with major attention to history, theory and policies. Actual growth experiences and potentials are compared between the three nations, as well as between East Asia and other parts of the world.

ECON 435 ECONOMIC DEVELOPMENT 3  
 Prereq.: ECON 200. Problems of accelerating development in underdeveloped countries and maintaining development in prosperous countries. From viewpoints of theory, history and policy, this course attempts to explain forces that lead to economic development. *Mode 7 [I]*

ECON 440 COMPARATIVE ECONOMIC SYSTEMS 3  
 Prereq.: ECON 200, 201. Analysis of economic systems, both theoretical and actual. Topics include: the economy as a system, classification of economic systems, bases or criteria for comparison of systems, market economics, market socialism and command economies.

ECON 445 LABOR ECONOMICS 3  
 Prereq.: ECON 200, 201. A thorough economic analysis of human resources as a factor of production. Special attention is devoted to demographics, labor market structures, wage determination, career decision-making, training and the roles of employee organizations.

ECON 450 MONEY, CREDIT AND BANKING 3  
 Prereq.: ECON 200. Money and its functions, including structure of the American banking system with emphasis on monetary theory and policy. *Mode 7*

ECON 451 MONETARY THEORY 3  
 Prereq.: ECON 450. Role of money in economic activity, including examination of Classical, Keynesian and neo-Keynesian theories. Special emphasis will be given to Monetarism and practical problems in controlling the money supply.

ECON 455 PUBLIC FINANCE 3  
 Prereq.: ECON 200, 201. Analysis of federal revenues and expenditures, including an examination of federal budget concepts, fiscal policy, cost-effectiveness analysis, tax efficiency and equity, and debt management problems.

ECON 457 BENEFIT-COST ANALYSIS 3  
 Prereq.: ECON 200, 201. Analysis of ways of increasing efficiency in government spending through quantification of alternative courses of action. Topics include financial statements, measures of output and effectiveness, and benefit-cost analysis of selected programs.

ECON 460 ECONOMIC FORECASTING 3  
 Prereq.: ECON 200, 201 and MATH 104 or equivalent. The theory and use of such forecasting techniques as simple and multiple regression, seasonal adjustment, economic indicators, input-output and macroeconomic models. Emphasis will be given to economic applications and the use of the computer.

ECON 462 INDUSTRIAL ORGANIZATION 3  
 Prereq.: ECON 201. The study of the structure, conduct and performance of selected U.S. industries. The effects of concentration on prices, outputs, profits and technological change will be analyzed. *Mode 7*

ECON 465 GOVERNMENT AND BUSINESS 3  
Prereq.: ECON 200, 201. Role of government in free enterprise system followed by evaluation of government policy with respect to specific industries.

ECON 470 MANAGERIAL ECONOMICS 3  
Prereq.: ECON 201. Application of economic theory and quantitative methods to managerial decision-making problems. Topics include: decision analysis, forecasting, demand analysis, production and cost analysis, linear programming, break-even analysis, and capital theory and budgeting. *Mode 7*

ECON 475 HISTORY OF ECONOMIC THOUGHT 3  
Prereq.: ECON 200, 201. Evolution of economic thought from Ancient Greece to current doctrines.

ECON 485 ECONOMETRICS 3  
Prereq.: ECON 200, 201 and MATH 104 or equivalent. Application of statistical methods to economics. Emphasis is placed on statistical inference, regression analysis and real-world applications using the computer. *Spring. (O)*

ECON 492 ECONOMICS FOR TEACHERS 1-3  
Prereq.: For teachers in-service or Education majors. Designed to familiarize school teachers with basic economic concepts and the methods by which they may be integrated into the school curriculum. *Summer.*

ECON 493 TOPICS IN ECONOMIC EDUCATION 1  
Prereq.: For teachers in-service or Education majors. An examination of elected topics in economic education which are not otherwise offered as part of the Department's regular courses. May be repeated for different topics for a total of 6 credits. *Summer.*

ECON 498 ADVANCED TOPICS IN ECONOMICS 1  
Prereq.: ECON 200, 201 or permission of instructor. An examination of advanced selected topics in economics which are not otherwise offered as part of the Department's regular courses. Course may be repeated for different topics for a total of 6 cr.

ECON 499 INDEPENDENT STUDY IN ECONOMICS 3 or 6  
Prereq.: Permission of instructor. Students may specialize in projects of an advanced nature not covered by regular course offerings. Supervision is given through periodic conferences with each student and through several group meetings to discuss findings and common problems.

## EDUCATION

ED 403 SUPERVISED TEACHING IN THE HEALTH OCCUPATIONS I 3  
Prereq.: VTE 113 or concurrent enrollment; employment (minimum half-time) by a private or public school system or appropriate clinical facility if a component of an approved program. Prescriptive observation of the teaching-learning process, systematic planning and execution of lessons in an educational setting under the supervision of University Health Occupation Education faculty. Emphasis on Connecticut teaching competencies in both classroom and clinical areas.

ED 404 SUPERVISED TEACHING IN THE HEALTH OCCUPATIONS II 3  
Prereq.: ED 403 or 422; employment (minimum half-time) by a private or public school system or appropriate clinical facility if a component of an approved program. An in-depth continuation of ED 403 with emphasis on integrating theory and practice in the classroom and clinical areas. Contact learning will be employed.

ED 412 PRACTICUM IN TEACHING ENGLISH AS A SECOND LANGUAGE 3  
Supervised observation and practice teaching of English to speakers of other languages in elementary or secondary schools.

ED 422 STUDENT TEACHING FOR HEALTH OCCUPATIONS EDUCATION 10  
Prereq.: VTE 400, permission of the coordinator of the Health Occupations Education program. Student teachers teach for 10 weeks under continuous supervision of an experienced instructor in their field of specialization. For those who choose to teach in other professional programs, supervision will be provided by University Health Occupation Education faculty as well as by faculty of cooperating institutions. Applications must be filed by March 15 for Fall semester and October 15 for the Spring semester. Application forms may be obtained from the coordinator of the Health Occupation Education program. Emphasis on Connecticut teaching competencies in both classroom and clinical areas.

## EDUCATION — EARLY CHILDHOOD

NOTE: Admission to the professional program is required prior to applying for student teaching.

EDEC 104 OVERVIEW OF EARLY CHILDHOOD EDUCATION 1  
Prereq.: EDEL 101 and 102. Historical and philosophical approaches to early childhood education including Head Start, Montessori, day care, kindergarten and the primary levels of elementary education.

EDEC 201 ENHANCING RECEPTIVE AND EXPRESSIVE SKILL DEVELOPMENT IN YOUNG CHILDREN 3  
Prereq.: EDEC 104. Study of the processes involved in developing avid communicators in early childhood. Relationship of receptive and expressive language arts (listening, speaking, reading, writing) to children's social understanding and competence.

EDEC 360 EARLY CHILDHOOD EDUCATION: CURRICULUM AND METHODS 4  
Prereq.: EDEL 355, admission to the professional program, and declared certification Pre K-Grade 3. Methods for early childhood education. Emphasis on the relationship of the young child's growth and development to appropriate curriculum planning. Includes language arts, mathematics, science, and social studies. Related field experience at the preschool level.

EDEC 361 EARLY CHILDHOOD EDUCATION: EXPRESSIVE MODES 3  
Prereq.: EDEC 360. The integration of play, visual arts, music, movement, and language arts into early childhood curriculum. Planning and providing for the appropriate teaching strategies and environment. Includes approaches to develop parent understanding.

EDEC 432 EXPRESSIVE ACTIVITIES FOR YOUNG CHILDREN 3  
Prereq.: Undergraduates—EDEL 100/El. EDEL 255 and junior or senior standing; or graduate-level standing. Focuses on expressive modes of young children and their integration into early childhood programs; active participation in related activities, ability to plan and provide for appropriate environment, teaching strategies and approaches to develop parent understanding.

EDEC 433 EARLY CHILDHOOD EDUCATION: THE CHILD AND THE CURRICULUM 3  
Prereq.: Undergraduates eligible for the professional program and junior or senior standing; or graduate-level standing. Introduction to the growth and development of young children (ages three through eight). Planning, creation and use of learning activities and materials to facilitate the total development of these children. Planned observation/participation with young children.

**EDEC 434 PROGRAM AND SETTINGS FOR EARLY CHILDHOOD EDUCATION 3**  
 Prereq.: Undergraduates eligible for the professional program and junior or senior standing; or graduate-level standing. Overview of history, philosophy and organization of home and center, public and private settings for early childhood education. In-depth analysis of present prototypes. Criteria for establishing and evaluating early childhood learning settings. Visits to local settings with emphasis on pre-primary—day care, parent and child centers, nursery schools and kindergarten.

**EDEC 436 IMPACT OF TEACHER BEHAVIOR 3**  
 Prereq.: Admission to the professional program. An examination of teacher behaviors, characteristics and interactive styles that develop competence and self-control in children. The effect of teacher behavior on children coping with stressful life situations will be studied.

**EDEC 437 THE HOME AND THE COMMUNITY IN THE EDUCATION OF THE YOUNG CHILD 3**  
 Prereq.: Admission to the professional program. Students will improve understanding of the impact of home and community on growth and learning of young children. Means of developing effective communication links will be explored. Community resources will be surveyed for their utilization for the benefit of young children.

**EDEC 438 THE EDUCATION OF INFANTS AND TODDLERS 3**  
 Prereq.: Undergraduates — admission to the professional program. Growth and development of infants and toddlers. Training in the use of screening devices and familiarity with basic observation techniques and infant assessment procedures. Overview of existing programs. Creating and using materials and activities, planning environments for infants and toddlers.

**EDEC 439 ADMINISTRATION OF EARLY CHILDHOOD PROGRAMS 3**  
 Prereq.: 9 semester hours in Early Childhood. and admission to the professional program. Organization and administration of early childhood education programs. Course topics include: assessing community need, determining goals, exploring licensing and funding of programs, equipping and staffing a center, planning and management principles, evaluation, professional staff development and working with parents, volunteers and the community. Designs for child care programs will be developed and evaluated.

## EDUCATION — ELEMENTARY

**NOTE:** Admission to the professional program is required prior to applying for student teaching.

**EDEL 101, 102, 103 ELEMENTARY TEACHING AS A PROFESSION: ANALYSIS AND REFLECTION 1 each**

Prereq.: Certification program in Elementary Education declared. Three interrelated courses taken in consecutive semesters. Examines teaching and learning in the classroom. Includes analysis of case studies, discussion of issues in teacher education, observations and reflections on classrooms and specific teaching models.

**EDEL 105 OVERVIEW OF MIDDLE SCHOOL EDUCATION 1**

Prereq.: EDEL 101 and 102. Introduction to the education in the Middle School. Examines pre-adolescent youth, their characteristics and educational needs. Designed for students seeking grades 4-8 certification.

**EDEL 355 LEARNING THEORIES AND PRINCIPLES OF ELEMENTARY EDUCATION AND THEIR APPLICATION TO THE CLASSROOM 3**  
 Prereq.: Psy. 235 and admission to the professional program. Understanding of principles pertinent to the process of teaching and learning in the elementary classroom. Emphasizes the use of educational theory and research findings as they apply to classroom practices.

**EDEL 356 GENERAL METHODS IN ELEMENTARY EDUCATION 3**  
 Prereq.: EDEL 355 and admission to the professional program. Methods of direct instruction and classroom management techniques. Also examines cooperative learning, inquiry-based instruction, unit planning, and individualized instruction. Instructional goals and methods for the social studies curriculum. Field experience required.

**EDEL 357 TEACHING METHODS: GRADES FOUR THROUGH EIGHT 3**  
 Prereq.: EDEL 355 and admission to the professional program. Methods of teaching including instructional planning, lesson presentation skills, questioning skills, interpersonal communication skills, classroom management and evaluation. Social studies curriculum presented. Field experience required.

**EDEL 402 SCHOOL HEALTH 2**  
 Various aspects of the health program in the elementary school are considered. A study is made of the selection and presentation of curriculum materials in health education. Special attention is given to the teaching of the effects of alcohol, tobacco and controlled drugs.

**EDEL 411 STUDENT TEACHING: ELEMENTARY 8**  
 Prereq.: Permission of the Department of Teacher Education. During the senior year a period of time is spent working with children in professional activities culminating in the student assuming complete responsibility for planning and executing units of instruction.

**EDEL 412 STUDENT TEACHING: ELEMENTARY EDUCATION GRADUATE CERTIFICATION PROGRAM 8**  
 Prereq.: Matriculation in Graduate Certification Program, admission to Professional Program, and permission of the Department of Teacher Education. Experiences with children in professional activities culminating in the student assuming complete responsibility for planning and executing units of instruction.

**EDEL 498 INDIVIDUAL STUDY PROJECT 2-6**  
 Prereq.: Permission of Department chairperson. Individual research open only to advanced students and experienced teachers. Systematic study of problems of special interest. Students in either elementary or secondary fields are guided in selection analysis, gathering of data and drawing conclusions.

## EDUCATION — SECONDARY

**NOTE:** Admission to the professional program is required prior to applying for student teaching.

**EDSC 256 LEARNING: ITS SIGNIFICANCE IN SECONDARY EDUCATION 2**

Prereq.: Psy. 235. Processes of learning as applied particularly to children in the secondary school. (Not open to students who have had or are taking Psy. 255.)

**EDSC 372 PRINCIPLES OF SECONDARY EDUCATION 2**  
 Prereq.: EDSEC 256 or Psy. 256 and admission to the professional program. Historical development of secondary education in this country, present functions and objectives, problems of curriculum construc-

tion and revision, general methods of directing learning, techniques of classroom management and professional responsibilities of teacher. Normally fused with EDSEC 373. (For Sec. Ed. 7-12 certification only.)

**EDSC 373 EVALUATION IN THE SECONDARY SCHOOL 2**  
 Prereq.: EDSC 256 or Psy. 256 and admission to the professional program. Appraisal of learning and diagnosis of learning difficulties by teacher-constructed means as well as by standardized evaluation instruments. Normally fused with EDSC 372. (For Sec. Ed. 7-12 certification only.)

**EDSC 375 PRINCIPLES AND EVALUATION IN EDUCATION (K-12) 3**  
 Prereq.: Psy. 235 and admission to the professional program. Orientation to the role of the teacher in elementary and secondary schools. Emphasis upon development and understanding of objectives, curriculum, individual needs and differences, teaching skills, functions of school administration and services, issues of education and professionalism. Field experiences will be offered. (For Art, Music, Teacher Ed., and Phys. ED K-12; junior or senior years.)

**EDSC 413 RESPONSIBLE STUDENT TEACHING (SECONDARY) 10**  
 Prereq.: Admission to the Professional Program. During the senior year, a period of time is spent in classrooms of public secondary schools where the student demonstrates ability to conduct secondary school learning activities and to work effectively with adolescent youth.

**EDSC 414 PRELIMINARY STUDENT TEACHING (TECHNOLOGY EDUCATION) 6**  
 See EDSC 415.

**EDSC 415 STUDENT TEACHING (TECHNOLOGY EDUCATION) 6**  
 Prereq.: Admission to the Professional Program. In accordance with the public school schedule, Technology Education students spend approximately a 16-week period in the first semester of the senior year in a public secondary school; one period of eight weeks in junior high school and a second period of nine weeks in senior high school, usually in different communities. The Technology Education major demonstrates his or her ability to organize and conduct school learning activities and to work effectively with adolescent youth in a program of technology education. Emphasis on Connecticut teaching competencies in both classroom and laboratory situations.

**EDSC 417 STUDENT TEACHING (ELEMENTARY P.E.) 6 or 8**  
 Prereq.: Admission to the Professional Program. An eight-week period of the senior year is spent in a physical education department of a public elementary school where the student demonstrates the ability to conduct activity classes and to work effectively with children.

**EDSC 419 STUDENT TEACHING (SECONDARY SCHOOL P.E.) 6 or 8**  
 Prereq.: Admission to the Professional Program. An eight-week period of the senior year is spent in a physical education department of a public secondary school where the student demonstrates his or her ability to conduct activity classes and to work effectively with youth.

**EDSC 420 STUDENT TEACHING — MUSIC EDUCATION K-12 12**  
 Prereq.: Admission to the Professional Program. One-half a semester is spent in the music department of an elementary school, the other half in a secondary school music department. Student demonstrates his ability to conduct learning activities in music and to work effectively with children and youth.

**EDSC 429 RESPONSIBLE STUDENT TEACHING — ART (K -12) 12**  
 Prereq.: Admission to the Professional Program. Student demonstrates his ability to organize and conduct school learning activities and to work effectively with pupils and teachers in a program of art education. *Open only to Art majors.*

**EDSC 435 STUDENT TEACHING: SECONDARY EDUCATION GRADUATE CERTIFICATION PROGRAM 8**  
 Prereq.: Matriculation in Graduate Certification Program, admission to Professional Program, and permission of the Department of Teacher Education. Experiences in classrooms of public secondary schools where the student demonstrates ability to conduct secondary school learning activities and to work effectively with adolescent youth.

## EDUCATIONAL FOUNDATIONS

**EDF 400 PHILOSOPHIES OF EDUCATION 3**  
 Prereq.: Satisfactory completion of 65 semester hours and admission to the Professional Program. Some major philosophies and their implications for education in the United States.

**EDF 401 FOUNDATIONS OF EDUCATION 3**  
 Prereq.: Satisfactory completion of 65 semester hours and admission to the Professional Program. Aims of modern education are studied with respect to the historical, philosophical, psychological and sociological forces which have shaped the modern school.

## EDUCATIONAL TECHNOLOGY AND MEDIA

**ETM 200 INTRODUCTION TO MICROCOMPUTERS IN EDUCATION 1**  
 Introduction to computer usage in schools through operating a micro-computer, using word processing, reviewing exemplary types of educational software, examining and writing lesson plans integrating computer usage. [c]

**ETM 370 AUDIOVISUAL EDUCATION 3**  
 Development of basic skills in use of audiovisual equipment for the modern classroom. Development of a rationale for effective and efficient use of instructional material.

## ENGINEERING TECHNOLOGY

**ET 150 INTRODUCTION TO ENGINEERING TECHNOLOGY 3**  
 Prereq.: MATH 115 (may be taken concurrently), or permission of instructor. Introduction to engineering through the study of calculation techniques. Emphasis on calculator operations, computer coding, design graphics, graphical analysis and design projects. [c] *Area C*

**ET 260 COMPUTER AIDED DESIGN AND INTEGRATED MANUFACTURING CAD/CAM/CIM 3**  
 Prereq.: TC 121, TC 216, MATH 115. An introduction to the utilization of computer technology for the planning, implementation and control of a manufacturing facility, to create or modify engineering designs or processes in the manufacture of a product. This is a laboratory course utilizing analytical and simulation models on CAD/CAM/CIM systems. Lecture/Lab. [c]

- ET 300 HUMAN FACTORS ENGINEERING (ERGONOMICS) 3  
Prereq.: TC 121, PSY 112. A study of the man/machine relationship necessary to achieve maximum productivity and job satisfaction. Emphasis will be placed on the physical work environment with considerations given to health and safety criteria.
- ET 351 APPLIED MECHANICS I — STATICS 3  
Prereq.: MATH 125, ET 150, PHYS 121. The fundamentals of statics, including the resolution and composition of forces, the equilibrium of force systems. The analysis of forces acting on structures and machines, centroids, moments of inertia. Vector methods are used.
- ET 352 APPLIED MECHANICS II — DYNAMICS AND HYDRAULICS 3  
Prereq.: ET 351. The basic theory and application of engineering technology calculations in the field of dynamics, stress analysis, machine design and hydraulics.
- ET 357 STRENGTH OF MATERIALS 3  
Prereq.: ET 351, PHYS 121. The study of simple and combines stress, torsion, flexure and deflection of beams, continuous and restrained beams, combines axial and bending loads, and columns. Computer applications. [c]
- ET 360 COMPUTER AIDED PLANNING (CAP) 3  
Prereq.: TC 113, IT 360. Application of the computer to production problems and decision-making process in inventory control scheduling, aggregate parts processing, production control, work force utilization, plant layout, forecasting, line balancing and process planning. [c]
- ET 397 STRUCTURAL ANALYSIS 3  
Prereq.: ET 357. Analysis of statically determined structures; influence lines, deflection analysis of trusses, beams and frames; introduction to indeterminate structural analysis using consistent deformation principles and moment distribution; computer applications. [c]
- ET 440 GEOMETRIC DIMENSIONING AND TOLERANCING 3  
Intended for all technical personnel involved in originating or interpreting state-of-the-art industrial engineering drawings. Emphasis will be on the interpretation, application and verification of all aspects of Geometric Dimensioning and Tolerancing per the latest ANSI Y14.5 specification including the concept of true positioning, runout, datums, maximum material condition and functional gaging.
- ET 451 SOIL MECHANICS AND FOUNDATIONS 3  
Prereq.: ET 357. Fundamentals of soil behavior and its use as a construction material. Principles of effective strength, permeability, shear strength and consolidation. Application to construction problems in shallow and deep foundations, slope stability, retaining structures and excavation drainage. Lecture/lab.
- ET 454 TRANSPORTATION/LAND 3  
Prereq.: TC 353. Study of the planning, design, environmental concerns addressing, construction and maintenance of transportation projects using new and rehabilitated highway and bridge projects as focus points for lecture and laboratory work. Lecture/lab. Area C
- ET 456 MATERIALS ANALYSIS 3  
Prereq.: TC 118 or permission of the instructor. The study of the composition, properties and characteristics of metallic and non-metallic manufacturing materials, including: the nature and structure of materials, phase diagrams, mechanical properties and the effects of environment on materials. Emphasis will be placed on the principles behind the selection of materials to meet design requirements. Laboratory includes the use of standard materials and testing apparatus. Lecture/lab. Area C
- ET 457 ADVANCED SURVEYING 3  
Prereq.: TC 353, MATH 125. Advanced topics in surveying including horizontal and vertical curve layout, traversing earthwork and laser leveling. Computer applications in electronic distance measurement and total station development. Lecture/Lab. [c]
- ET 460 COMPUTER AIDED DESIGN AND MANUFACTURING (CAD/CAM) 3  
Prereq.: TC 113, 121, 216, IT 360. An introduction to the utilization of computer technology for the planning, implementation and the control of a manufacturing facility; to create or modify engineering designs or process in the production of the product. The course is laboratory-oriented with analytical and simulation models on the computer. Lecture/Lab. [c]
- ET 461 MANUFACTURING WITH PLASTICS AND COMPOSITES 3  
Prereq.: CHEM 121, PHYS 121, MATH 115. An analytical study of the nature of materials and the correlated manufacturing techniques used in the plastics and composite industry. Emphasis will be placed on the processes involving thermoplastic, thermoset and composite materials. Lecture/lab.
- ET 462 MANUFACTURING PROCESS PLANNING AND ESTIMATING 3  
Prereq.: TC 121, 316, ET 440. The fundamentals of design and planning of the production, operational sequence and cost estimates for discrete part manufacturing. The analysis of part design for the development of process plans, routings and operations sheets for process engineering, estimating and costing procedures of manufacturing operations. [c]
- ET 466 DESIGN FOR MANUFACTURE 3  
Prereq.: ET 260, 440, 462, TC 446 (taken concurrently). This applications and problem solving course covers contemporary industrial practices for integrating product design with manufacturing process design to produce products which will function in accordance with design intent, have interchangeable parts and allow economical automated manufacture.
- ET 470 STRUCTURAL STEEL DESIGN 3  
Prereq.: TC 255, ET 397 —An introduction to the analysis of steel structures using classical and computer methods. Application of design, fabrication and construction in structural steel using standard specifications. Topics on beams, columns, trusses and frames.
- ET 471 REINFORCED CONCRETE STRUCTURES 3  
Prereq.: ET 357, 397. Applications of design and construction in reinforced concrete and timber structures. Topics on beams, columns, slabs, footings, retaining walls, form work and prestressed concrete fundamentals.
- ET 472 TIMBER STRUCTURES 3  
Prereq.: ET 397. A study of the physical properties of wood used in structures and architecture. Influence on strength from moisture content, species and preservation treatments are emphasized. Design and construction applications in bridges and buildings.
- ET 476 ENVIRONMENTAL TECHNOLOGY 3  
Prereq.: CHEM 111 or CHEM 121, MATH 115. Environmental effects on air, water and land from construction activities. Case studies with discussion of corrective action.
- ET 497 ENGINEERING COST ANALYSIS 3  
Prereq.: MATH 125, senior standing. Technical and engineering aspects of financing the construction of infrastructure facilities, determination of costs and justification of improvements. [c] Mode 7 and Area C.

ET 498 ENGINEERING TECHNOLOGY  
SENIOR PROJECT (CAPSTONE) 3

Prereq.: Senior ET majors only. An analysis of the professional activities and responsibilities of engineering technologists. Student involvement through visits to organizations and discussion with engineers/technologists, field trips and technical/engineering projects. Sections are held for specializations with faculty and/or professionals to discuss, analyze and report on aspects of engineering activities.

## ENGLISH

\*Sophomore standing recommended

ENG 110 FRESHMAN COMPOSITION 3

An introductory course in expository writing designed to develop the student's ability to write clearly, logically and effectively. Emphasis on the composing process, organization, coherence, sentence and paragraph structure and usage. An acceptable Central Connecticut English Placement Test score or an appropriate equivalent is required for ENG 110. See skills testing and remediation policy, page 22. Open only to freshmen and sophomores. Students who have not completed their ENG 110 requirement prior to achieving 61 credits are required to take ENG 202 instead. *Area A*

ENG 111 INTRODUCTION TO LITERATURE 3

Study of fiction, drama and poetry. Not recommended for English majors. Credit not given to students who have taken either ENG 260 or 261 or 262. *Irregular. Mode 3*

**PRIOR TO REGISTRATION FOR ENG 180-185, STUDENTS MUST TAKE ESL PLACEMENT TESTS. CONTACT THE ENGLISH DEPARTMENT FOR DETAILS.**

ENG 180 LISTENING TO ENGLISH I 1

Practice in listening to spoken English on an intermediate level for students whose native language is not English. Understanding informal pronunciation. *Area A*

ENG 181 LISTENING TO ENGLISH II 1

Practice in listening to spoken English on an intermediate level for students whose native language is not English. Understanding informal pronunciation. *Area A*

ENG 182 READING ENGLISH I 1

Intermediate to advanced reading in English for students whose native language is not English. Not open to students with TOEFL scores of over 450. *Area A*

ENG 183 READING ENGLISH II 1

Advanced reading in English for students whose native language is not English. Not open to students with TOEFL scores of over 550. *Area A*

ENG 184 WRITING ENGLISH I 1

Intermediate to advanced writing in English for students whose native language is not English. Not open to students with TOEFL scores of over 450. *Area A*

ENG 185 WRITING ENGLISH II 1

Advanced writing in English for students whose native language is not English. Not open to students with TOEFL scores of over 550. *Area A*

**NOTE: ENG 110 OR AN EQUIVALENT IS A PREREQUISITE FOR ALL OTHER ENGLISH COURSES.**

\*ENG 200 INTRODUCTION TO LINGUISTICS 3

The structure and system of language with English as the subject of analysis: history, phonology, morphology, syntax, semantics, usage. *Mode 6*

\*ENG 202 INTERMEDIATE COMPOSITION 3

Prereq.: ENG 110 or junior standing. An intermediate course in expository writing designed to expand the student's writing skills. Emphasis on academic and career-oriented writing in the student's major field or area of interest, including research skills and papers, professional reports and résumés. *Area A*

\*ENG 205 BRITISH LITERATURE I 3

Major British writers from the beginnings through the 18th century. *Not a prerequisite for ENG 206. Mode 3*

\*ENG 206 BRITISH LITERATURE II 3

Major British writers from the late 18th century to the present. *ENG 205 is not a prerequisite. Mode 3 [I]*

\*ENG 210 AMERICAN LITERATURE I 3

American literature from the Colonial Period to the Civil War. *Not a prerequisite for ENG 211. Mode 3*

\*ENG 211 AMERICAN LITERATURE II 3

American literature from the Civil War to the present. *ENG 210 is not a prerequisite. Mode 3*

\*ENG 220 SHAKESPEARE 3

Selected tragedies, comedies and history plays. *Mode 3*

ENG 230 THE STUDY OF LANGUAGE 3

General concepts of language as it evolved in thought, society, literature and scientific analysis with emphasis on universal characteristics and relevance to contemporary English. *Mode 6*

\*ENG 235 JOURNALISM I 3

A survey of the fundamentals of news and feature reporting. Covers basic newsroom practices, ethics and responsibilities of the journalist, news-gathering techniques, the different kinds of stories, and editing and make-up. *Area A*

\*ENG 236 JOURNALISM II 3

Prereq.: ENG 235 or permission of instructor. This course builds on ENG 235, but places more emphasis on actual news-gathering and the challenges of writing the story. *Spring. Area A*

\*ENG 240 HERITAGE OF WESTERN LITERATURE I 3

Significant works in the Western literary tradition, from Homer to Dante. *Mode 3*

\*ENG 241 HERITAGE OF WESTERN LITERATURE II 3

Continuation of ENG 240 from Renaissance through 19th century, including such writers as Montaigne, Cervantes, Molière, Swift, Goethe and Dostoyevsky. *Mode 3 [I]*

\*ENG 250 CONTEMPORARY LITERATURE 3

Modern fiction, plays and poetry in relation to modern life. *Mode 3*

ENG 260 INTRODUCTION TO POETRY 3

A close analysis of poetry: prosody, diction, figurative language, structure, tone and theme. Selection read from entire range of English and American poetry. Credit not given to students who have taken ENG 111. *Mode 3*

ENG 261 INTRODUCTION TO FICTION 3

A close analysis of the elements, structure and technique of short stories and novels. Credit not given to students who have taken ENG 111. *Mode 3*

ENG 262 INTRODUCTION TO DRAMA 3

A close analysis of plays, representing major and minor genres of drama (tragedy, comedy, tragi-comedy, melodrama, farce, etc.), relationship of genre, structure and statement. Credit not given to students who have taken ENG 111. *Mode 3 [I]*

ENG 270	DRAMATIC ENACTMENT	3	ENG 342	AMERICAN REALISM AND NATURALISM	3
	Introduction to the theory and applications of creative drama as an interpretive tool and a response to literature. <i>Spring. (E)</i>			Study of the period after the Civil War to about 1915, including such writers as Dickinson, Twain, James, Wharton, Crane and Dreiser. <i>Spring. Mode 3</i>	
ENG 274	STORYTELLING	3	ENG 343	MODERN AMERICAN LITERATURE	3
	Study of the history, art and technique of storytelling. Discussion of the skills involved in order to develop the student's competency in this oral tradition. Designed to enable the student to build a personal repertoire of stories for performance. <i>Spring. (O)</i>			Major American writers in the period between World War I and World War II; the ideological and social influences which shaped their art. <i>Mode 3</i>	
ENG 288	STUDIES IN LITERATURE	3	ENG 360	THE BIBLE AS LITERATURE: OLD TESTAMENT	3
	Selected topics to be announced each semester. Students may not take this course under the same topic more than once. <i>Irregular. Mode 3</i>			Major books of O.T. important to literature, their literary qualities and their historical and cultural backgrounds. <i>Fall. (E) Mode 3</i>	
<b>NOTE: FOR 300- AND 400-LEVEL COURSES LISTED BELOW: JUNIOR STANDING IS RECOMMENDED FOR 300-LEVEL COURSES; JUNIOR OR SENIOR STANDING IS REQUIRED FOR 400-LEVEL COURSES. IN ADDITION, PERMISSION OF THE INSTRUCTOR IS RECOMMENDED FOR NON-ENGLISH MAJORS.</b>					
ENG 300	LANGUAGE ACQUISITION	3	ENG 361	THE BIBLE AS LITERATURE: NEW TESTAMENT	3
	A study of how we acquire our first language; child language, regional and social dialect, register, style, and idiolect. <i>Fall. Mode 6</i>			Major books of N.T. important to literature, their literary qualities and their historical and cultural backgrounds. Part of Apocrypha. <i>Spring. (E) Mode 3</i>	
ENG 332	MEDIEVAL ENGLISH LITERATURE	3	ENG 362	GREEK AND ROMAN LITERATURE	3
	Old English and Middle English literature, exclusive of Chaucer, from the eighth through the 14th centuries. Most materials read in translation. <i>Fall. Mode 3</i>			Such major Greek and Roman writers as Homer, the Greek dramatists, Plato, Thucydides, Lucretius and Virgil. <i>Irregular. Mode 3</i>	
ENG 333	THE ENGLISH RENAISSANCE	3	ENG 365	THE MODERN EUROPEAN NOVEL	3
	Emphasis on British poetry and prose of the 16th and early 17th centuries, including such writers as More, Erasmus, Sidney, Spenser, Marlowe, Shakespeare and Jonson. <i>Spring. Mode 3</i>			Representative works by such writers as Flaubert, Tolstoy, Dostoyevsky, Proust, Kafka and Camus. <i>Irregular. Mode 3 [I]</i>	
ENG 334	SEVENTEENTH-CENTURY POETRY AND PROSE	3	ENG 371	CREATIVE WRITING	3
	British poetry and prose of the earlier 17th century, including Donne, Herbert, Marvell, Bacon, Burton and Browne. <i>Fall. Mode 3</i>			Writing of short fiction. <i>Fall. Area A</i>	
ENG 335	RESTORATION AND EIGHTEENTH-CENTURY LITERATURE	3	ENG 372	CREATIVE WRITING	3
	British poetry, prose and drama from 1660 to 1798, including such writers as Dryden, Congreve, Addison, Swift, Pope, Fielding, Gay, Johnson, Goldsmith and Sheridan. <i>Spring. Mode 3</i>			Writing of short fiction. <i>Spring. Area A</i>	
ENG 336	THE ROMANTIC AGE	3	ENG 373	CREATIVE WRITING	3
	British Literature from Blake to 1832, including Wordsworth, Coleridge, Byron, Shelley and Keats. <i>Fall. Mode 3 [I]</i>			Writing of poetry. <i>Fall. Area A</i>	
ENG 337	THE VICTORIAN AGE	3	ENG 374	CREATIVE WRITING	3
	Poetry and non-fiction prose from 1832 to 1880, including poetry of Tennyson, Browning and Arnold and prose of Carlyle, Mill, Newman and Ruskin. <i>Spring. Mode 3 [I]</i>			Writing of poetry. <i>Spring. Area A</i>	
ENG 339	MODERN BRITISH LITERATURE	3	ENG 376	CREATIVE WRITING	3
	Prose and poetry from about 1920 to the fifties, including such writers as Hopkins, Sitwell, Eliot, Yeats, Joyce, Woolf, Forster, Auden, MacNiece, Spender, Graves, Thomas, Orwell. <i>Fall. Mode 3 [I]</i>			Writing the familiar essay. Primarily a writing course, but also an introduction to the familiar essay as a form in the tradition of Montaigne—Hazlitt, Lamb, E.V. Lucas, E.B. White and Thoreau. <i>Area A</i>	
ENG 340	EARLY AMERICAN LITERATURE	3	ENG 377	CREATIVE WRITING	3
	Early writers of the country through approximately the first third of the 19th century, with emphasis on the ideological and social influences which shaped their art. <i>Fall. Mode 3</i>			Study and practice of playwriting. With permission of instructor, may be repeated for a maximum of 6 credits. <i>Irregular. Area A</i>	
ENG 341	THE AMERICAN RENAISSANCE	3	ENG 380	FEATURE WRITING	3
	Prose and poetry of American romantic authors in the 19th century. Special emphasis on Poe, Hawthorne, Melville, Thoreau, Emerson, Whitman; contemporary ideologies. <i>Mode 3</i>			Prereq.: ENG 235 or 236 or permission of instructor. Writing and analysis of human interest articles; exploration of the newspaper and magazine markets. <i>Fall. (E) Area A</i>	
			ENG 381	EDITORIAL WRITING	3
				Prereq.: ENG 235 or 236 or permission of instructor. The study, evaluation and writing of newspaper opinion pieces. <i>Fall. (O) Area A</i>	
			ENG 386	THE LANGUAGE OF FILM	3
				A development of visual terminology analogous to literary terminology in order better to understand the intentions of the author of the film. The qualities of picture, movement and editing are discussed in an effort to develop critical interpretation and judgment. Attendance at film screenings required. Of ENG 386 and 486, only one may be used to satisfy major or concentration requirements. <i>Fall. Mode 4</i>	
			ENG 400	ANALYTICAL SKILLS IN LANGUAGE	3
				Intensive analyses (syntactic, morphological, phonological) of selected data from English and other languages. Particular emphasis on developing analytical skills. <i>Spring. Mode 6</i>	



ENG 401	ADVANCED COMPOSITION	3	ENG 461	SHAKESPEARE: MAJOR COMEDIES	3
An advanced course in expository writing designed for competent writers who wish to refine their skills. Emphasis on vividness, precision and impact, with attention to audience and style. <i>Area A</i>			Close analysis of major comedies and pertinent critical problems. <i>Spring. Mode 3</i>		
ENG 403	TECHNICAL WRITING	3	ENG 462	SHAKESPEARE: MAJOR TRAGEDIES	3
A course designed to assist students in planning, researching, structuring, writing, revising and editing technical materials. Emphasis on various types of writing drawn from an industrial/professional context: reports, correspondence, directories, manuals, technical articles. <i>Area A</i>			Close analysis of major tragedies and pertinent critical problems. <i>Fall. Mode 3</i>		
ENG 412	EDITING	3	ENG 463	ELIZABETHAN AND JACOBEAN DRAMA	3
Prereq.: ENG 235 or 236 or permission of instructor. Emphasis on copy editing, headline writing, news judgment, photo handling, newspaper makeup. <i>Fall.</i>			Major dramatists from Kyd to Ford, excluding Shakespeare. <i>Spring. Mode 3</i>		
ENG 416	MAGAZINE WRITING	3	ENG 464	RESTORATION AND 18TH CENTURY DRAMA	3
Prereq.: ENG 235 or 236 or permission of instructor. The process of researching, interviewing for, and writing magazine articles; preparation for selling freelance articles. <i>Spring. Area A</i>			English drama from 1660 to 1800, primarily comedy. Readings from the works of such dramatists as Wycherly, Etherege, Dryden, Congreve, Vanbrugh, Farquhar, Gay and Sheridan. <i>Fall. Mode 3</i>		
ENG 418	STUDIES IN JOURNALISM	3	ENG 470	THE VICTORIAN NOVEL	4
Prereq.: ENG 235 or 236 or permission of instructor. Selected topics in journalism. Students may take this course under different topics for a maximum of 6 credits. <i>Irregular. Area A</i>			Representative Victorian novelists with special emphasis on Trollope, Eliot, Dickens, Thackeray and Hardy. <i>Spring. Mode 3 [I]</i>		
ENG 420	TEACHING ENGLISH IN SECONDARY SCHOOLS	3	ENG 472	THE RISE OF MODERNISM: VITALIST, AESTHETIC AND PESSIMISTIC BRITISH LITERATURE	3
Prereq.: Acceptance into the Professional Program in English. Methods and materials for teaching English language and literature. <i>Fall.</i>			A survey of the work of Rossetti, Wilde, Strachey, Forster and Woolf, as well as a consideration of representative writing by Meredith, Shaw, Housman, Hardy and Conrad. <i>Spring. Mode 3 [I]</i>		
ENG 430	STUDIES IN LINGUISTICS AND THE ENGLISH LANGUAGE	3	ENG 474	THE CONTEMPORARY AMERICAN NOVEL	3
Selected topics in linguistics. Students may take this course under different topics for a maximum of 6 credits. <i>Mode 6</i>			American novels which have come to prominence since World War II and the changing cultural environment which they reflect. <i>Mode 3</i>		
ENG 431	THE HISTORY OF THE ENGLISH LANGUAGE	3	ENG 475	THE BRITISH NOVEL TO 1832	3
History, growth and structure of the English language. <i>Spring. Mode 6</i>			Form and content of the novel with readings selected from DeFoe, Richardson, Fielding, Sterne, Smollett, Austen, Scott and Gothic novels. <i>Spring. Mode 3</i>		
ENG 441	HAWTHORNE, MELVILLE AND JAMES	3	ENG 476	THE MODERN BRITISH NOVEL	3
Study of the problem of evil in 19th-century American literature. The course seeks to define the problem, to trace its courses in the Puritan tradition and to consider solutions proposed in the fiction of Hawthorne, Melville and Henry James. <i>Fall. Mode 3</i>			Form and content of the novel with readings selected from Joyce, Woolf, Ford, Conrad, Lawrence, Huxley, Forster, Greene, Waugh and others. <i>Fall. Mode 3 [I]</i>		
ENG 445	AMERICAN DRAMA	3	ENG 477	MODERN BRITISH POETRY	3
Development of American drama and its contribution to literature. <i>Spring. Mode 3</i>			Major works of Hardy, Hopkins, Yeats, D.H. Lawrence, Owens, Sassoon, Auden, Dylan Thomas, Larkin, Hughes, others. <i>Spring. Mode 3 [I]</i>		
ENG 448	STUDIES IN AMERICAN LITERATURE	3	ENG 478	MODERN AMERICAN POETRY	3
Selected topics in American literature. Students may take this course under different topics for a maximum of 6 credits. <i>Mode 3</i>			The study of important American poets from Dickinson to the present. <i>Fall. Mode 3</i>		
ENG 450	CHAUCER	3	ENG 480	MODERN IRISH LITERATURE	3
Readings in Chaucer, with special emphasis on <i>The Canterbury Tales</i> and <i>Troilus and Criseyde</i> . <i>Mode 3</i>			Study of the major themes and traditions in Irish writers of the 20th century. Included will be works by Yeats, Joyce, Synge, O'Casey, O'Connor and others. <i>Fall. Mode 3 [I]</i>		
ENG 451	MILTON	3	ENG 486	LITERATURE AND FILM	3
Readings in Milton's prose and poetry with emphasis upon <i>Paradise Lost</i> and <i>Samson Agonistes</i> . <i>Mode 3</i>			A study of films adapted from novels and plays, the course investigates the nature of the relationship of these forms. Attention will be paid to the theory of film with comparison to the aesthetics of the printed word and the live performance. Attendance at screenings required. Of ENG 386 and 486, only one may be used to satisfy major or concentration requirements. <i>Spring. Mode 3</i>		
ENG 458	STUDIES IN BRITISH LITERATURE	3	ENG 488	STUDIES IN WORLD LITERATURE	3
Selected topics in British literature. Students may take this course under different topics for a maximum of 6 credits. <i>Mode 3</i>			Selected topics in world literature. Students may take this course under different topics for a maximum of 6 credits. <i>Mode 3</i>		

ENG 490 INDIVIDUAL GUIDED READING 1-3

Prereq.: Permission of chairperson. A conference course for English majors in their senior year who have a GPA of at least 3.00 or better and who wish to follow a planned program of guided reading.

ENG 491 CHILDREN'S LITERATURE 3

Balanced selection of the best literature available to children. Traditional forms of fables, legends, myths, epics, fairy tales, and folk tales of the world; examination of how these represent the universal needs and aspirations of all cultures. Major authors and illustrators included. Not available for graduate credit. *Spring*.

ENG 492 LITERATURE FOR YOUNG ADULTS 3

Through extensive reading this course examines trends and issues, forms and content, and authors and topics of contemporary books read by and written expressly for adolescents. Recommended for secondary teachers and reading specialists.

ENG 495 INTERNSHIP 1-6

Intern projects under the guidance of an English faculty adviser or the Department chairperson. This course can help fulfill requirements for concentrations in writing, journalism, TESOL and descriptive linguistics. It cannot be used to help fulfill requirements for an English major or concentration.

ENG 496 TESOL METHODS 3

Principles, methods and materials for teaching English to non-English speaking students at all levels. Acquisition and practice of basic language teaching skills. Intercultural communication. Preparation of classroom tests. *Fall*.

ENG 497 SECOND LANGUAGE ACQUISITION 3

Major theories of language acquisition and their potential application to language learning. The theoretical bases of second language instruction. *Spring*.

ENG. 498 TESOL PRACTICUM 3

Prereq.: ENG 496. Students will teach ESOL under appropriate supervision in the Intensive English Language Institute. *Fall*.

## FINANCE

FIN 300 MANAGERIAL FINANCE 3

Prereq.: AC 202. A basic course in business finance. Topics include the environment of financial management, the analysis of financial statements for planning and control, corporate securities and financing the short- and long-term requirements of the firm.

FIN 301 INTERMEDIATE MANAGERIAL FINANCE 3

Designed to develop a fundamental understanding of the following major topics in Finance: The Capital Investment Decision, Capital Structure and Dividend Policy, Managing Fund Sources, Working Capital Management, International Financial Management and Corporate Restructuring.

FIN 310 PRINCIPLES OF INVESTMENTS 3

Prereq.: FIN 300. A study of investment, securities, sources of investment information, the securities markets, and elements of analysis. Attention is directed to the investment of funds by individual and institutional investors.

FIN 320 FINANCIAL MARKETS AND INSTITUTIONS 3

Prereq.: Fin 300. A study of the operation of financing intermediaries. Topics include deposits, loans, internal operations, domestic and international banking.

FIN 330 FINANCIAL PLANNING AND INVESTMENT 3

Basic study of the entire financial planning process. It is designed to give a broad conceptual foundation in personal asset management and investments. *Area C*

FIN 340 INSURANCE 3

General information: organization of insurance, operation of life insurance, reading insurance contracts, social security insurance, accident and health insurance, automobile insurance, resident insurance, personal liability insurances and fire insurance.

FIN 400 ADVANCED MANAGERIAL FINANCE 3

Prereq.: Fin 301, 310 and 320. Not for graduate credit. An advanced course in financial management of the business firm. Utilizes a case study approach to stress the application of financial management theories. Topics include asset management, investment decisions and financial structure of the firm.

FIN 410 SECURITIES ANALYSIS 3

Prereq.: FIN 301, 310 and 320. Not for graduate credit. An advanced course in investments with emphasis on security analysis and portfolio management practices. Topics include financial statement analysis, interpretation of ratios used in evaluation of various classifications of securities and special techniques employed in forecasting, timing and the development of investment strategies.

FIN 430 INTERNATIONAL FINANCIAL MANAGEMENT 3

Prereq.: FIN 301, 310 and 320. Not for graduate credit. A study of the principles and practices of corporate finance in an international setting. Explores the primary elements of international monetary economics with emphasis on balance of payments and exchange rate analysis. Major topics of study include exchange and credit risks in international trade, capital budgeting process of the multi-national corporation and the international financial markets with emphasis on Eurocurrency markets. *[I]*

FIN 498 FINANCE SEMINAR 3

Prereq.: FIN 301, 320 and 320. Not for graduate credit. The course will expose students to the latest developments in the field of finance. Heavy emphasis will be placed on current advanced books and literature in relevant journals. The course content will vary from semester to semester.

## FINE ARTS

FA 496 SEMINAR IN FINE ARTS 3

Prereq.: Permission of Department chairperson. Individual research directed toward a specific area of interest. *Summer*.

## FRENCH

FR 111 ELEMENTARY FRENCH I 3

The foundations of the French sound system and structure are established through an aural-oral approach. Not open to students with one year of high school study. *Area B [I]*

FR 112 ELEMENTARY FRENCH II 3

Prereq.: FR 111 or equivalent. Continuing the presentation of the elements of French language structure. Dictation and aural comprehension are stressed as well as conversation. No credit will be given to students with previous credit for more advanced course work in French except by permission of the Department chairperson. *Area B [I]*

FR 114 BASIC FRENCH REVIEW 3

Prereq.: Two years of French in high school or equivalent preparation. Refresher course in the structure patterns and the sound system of the French language. The course does not apply toward the major or minor requirement in French. *Area B [I]*

FR 115 CONVERSATIONAL FRENCH 3

Prereq.: Two years of high school French or equivalent. Designed to develop language fluency in everyday-life situations. Individualized instructional techniques will be used to meet student needs. May not be counted toward major or minor. *Irregular. Area B [I]*

FR 125 INTERMEDIATE FRENCH I 3  
Prereq.: One year of college French or equivalent. French language structure is reviewed. Short stories and plays. Conversation and composition based on topics of general interest. No credit will be given to students with previous credit for more advanced course work in French except by permission of the Department chairperson. *Area B [I]*

FR 126 INTERMEDIATE FRENCH II 3  
Prereq.: FR 125 or equivalent. Continuation of French 125. No credit will be given to students with previous credit for more advanced coursework in French except by permission of the Department chairperson. *Area B [I]*

FR 225 FRENCH COMPOSITION AND DICTION I 3  
Prereq.: FR 126 or instructor's permission. A course to train students in self expression by means of frequent compositions in French, in addition to systematic drills in pronunciation and intonation. *Area B [I]*

FR 226 FRENCH STRUCTURE AND IDIOM 3  
Prereq.: FR 126 or equivalent preparation. A course designed to develop correct idiomatic usage and fluency of expression. *Spring. Area B [I]*

FR 305 LITERARY MASTERPIECES SINCE 1800 3  
Prereq.: FR 225 or 226 (may be taken concurrently). Introduction to major works in French literature since 1800. *Spring. Mode 3 [I]*

FR 315 FRENCH CIVILIZATION TO 1789 3  
Prereq.: FR 225 or 226 (may be taken concurrently). The cultural development of France to 1789.

FR 316 FRENCH CIVILIZATION FROM 1789 TO THE PRESENT 3  
Prereq.: FR 225 or 226 (may be taken concurrently). Cultural development of France from 1789 to the present. *[I]*

FR 335 FRENCH COMPOSITION AND DICTION II 3  
Prereq.: FR 225. Additional practice in written and oral expression. *Fall. [I]*

FR 336 ADVANCED STRUCTURE AND IDIOM 3  
Prereq.: FR 226. Additional practice in idiomatic usage and verbal fluency. *Spring. [I]*

FR 360 LITERARY MASTERPIECES TO 1800 3  
Prereq.: FR 305 or instructor's permission. Introduction to great works of French literature from the Middle Ages to 1800. *Fall. Mode 3 [I]*

FR 389 19TH CENTURY FRENCH LITERATURE 3  
Prereq.: FR 305 or instructor's permission. Development of various literary genres from Romanticism to Symbolism. *Fall. (E) [I]*

FR 410 BUSINESS FRENCH I 3  
Prereq.: FR 126 or equivalent. Development of the oral and written skills needed for bilingual work situations encountered in business firms, travel bureaus and government agencies; study of the cultural attitudes of French business people. *Fall. [I]*

FR 411 BUSINESS FRENCH II 3  
Prereq.: FR 410 or permission of instructor. Additional practice in the oral and written skills needed for bilingual work situations; emphasis on commercial translation and interpretation of France as a Common Market country. *Spring. [I]*

FR 435 FRENCH PHONETICS AND DICTION 3  
Prereq.: Permission of instructor. Phonetic theory and practice designed to help students improve all aspects of oral expression. *Spring. [I]*

FR 441 ADVANCED ORAL PRACTICE I 3  
Prereq.: Permission of instructor. Development of fluency in oral self-expression. Speech analysis to improve pronunciation and intonation. *Fall. [I]*

FR 442 ADVANCED ORAL PRACTICE II 3  
Prereq.: FR 441 or permission of instructor. Continuation of French 441. *On request. [I]*

FR 451 THE STRUCTURE OF MODERN FRENCH 3  
Prereq.: Permission of instructor. Scientific analysis of the French language, phonetic theory, description of morphological systems and syntactic analysis. Application of these principles to the writing of structural drills and practice therein. *Fall. (E) [I]*

FR 460 ADVANCED GRAMMAR AND COMPOSITION 3  
Prereq.: FR 335 or equivalent. Written expression of French, particularly in idiomatic free composition, designed to establish an appreciation for French style and to develop the ability to express shades of meaning. *Fall. [I]*

FR 465 LITERARY ANALYSIS 3  
Prereq.: FR 305, 335 and 360, or equivalent preparation. Instruction in the techniques of "explication de texte" and of various approaches to literary analysis as an instrument for the development of critical reading ability, and as a necessary step in literary research. *Fall. [I]*

FR 471 20TH CENTURY FRENCH LITERATURE I 3  
Prereq.: Permission of instructor. Literature and the arts in a world of complex and ever-changing values, from the century's surrealist beginnings to Existentialism. *Fall. (O) [I]*

FR 472 20TH CENTURY FRENCH LITERATURE II 3  
Prereq.: Permission of instructor. Literature and the arts from Existentialism to the present focus on the mass media and other innovations. *Spring. (E) [I]*

## GEOGRAPHY

GEOG 100 SEARCH IN GEOGRAPHY 3  
Introduction to processes and value systems in geography. Theme and title may vary from section to section. *Spring. Mode 7*

GEOG 110 INTRODUCTION TO GEOGRAPHY 3  
Basic patterns of physical environment and relationship of human patterns to them are explained. *Mode 7*

GEOG 120 WORLD REGIONAL GEOGRAPHY 3  
Survey of the lands, people and places in the world's major culture regions. Reliance on case studies, investigations of development problems, or other approaches to develop concepts. *Mode 7 [I]*

GEOG 220 HUMAN GEOGRAPHY 3  
A survey of the world's people and their culture. Topics studied may include population, religion, language, settlement, architecture, land tenure, ideologies, social problems, behavior, resource utilization and environmental change. *Spring. Mode 7 [I]*

GEOG 222 RESOURCES AND INDUSTRY 3  
Study and analysis of world, U.S. and Connecticut industries and resources. Distribution of industrialization and related energy, mineral and agricultural supplies, transportation, manpower and other determinants of the character and location of industry. A detailed study of selected heavy industries and light industries. *Fall. (O) Mode 7*

GEOG 241 INTRODUCTION TO PLANNING 3  
Introduction to the principles and practice of planning at various spatial scales — regional, metropolitan, urban and neighborhood. *Fall. Mode 7*

- GEOG 256 MAPS AND MAP READING 3  
Conferences and practical exercises in the use and interpretation of a variety of map types. Emphasis on the topographic map. Map sources will be discussed. *Fall. Mode 7*
- GEOG 266 AIR PHOTO INTERPRETATION 3  
Conferences and practical experience in uses and interpretation of aerial photographs. *Spring. Mode 7*
- GEOG 272 PHYSICAL GEOGRAPHY 3  
Prereq.: GEOG 110 or permission of instructor. Analysis of the landforms at the earth's surface, their distribution, genesis and relationships to the other natural phenomena. *Spring. Mode 7*
- GEOG 274 ELEMENTARY CLIMATOLOGY 3  
Prereq.: GEOG 110 or permission of instructor. Analysis of the climates of the continents with emphasis on the dynamic elements of wind systems, air mass interactions and resulting synoptic patterns associated with seasonal progression. *Fall. Mode 7*
- GEOG 275 SOILS AND VEGETATION 3  
An analysis of major soil groups and vegetation zones and their relationship to other geographic factors, including land use and rural or urban planning. Field experiences are part of this course. *Fall. Mode 7*
- GEOG 276 ELEMENTARY CARTOGRAPHY 3  
Instruction and practice in the fundamentals of map construction, design, symbolization and reproduction; emphasis on the use of cartographic scribing instruments, mediums and materials. *Spring. Mode 7*
- GEOG 290 GEOGRAPHY OF TOURISM 3  
Physical and cultural factors affecting the locations and relative importance of recreational areas and tourist attractions, both foreign and domestic. Spatial analysis of tourist flows, modes of transportation, effects on regional economies and impacts on environments. *Spring. Mode 7 [I]*
- GEOG 330 UNITED STATES AND CANADA 3  
The environmental, cultural and economic patterns that give character to the different parts of the United States and Canada. Analysis of the internal structure and functions of cities such as New York and Los Angeles and regional planning in problem areas such as Appalachia, Alaska and Southern California. *Spring. Mode 7*
- GEOG 332 EUROPE 3  
The environmental, cultural and economic patterns that give character to the different parts of Europe. Analysis of the internal structure and functions of cities such as London, Paris and Berlin, and regional planning in problem areas such as Northern Ireland, the Paris basin, Southern Italy and Western Poland. *Fall. Mode 7 [I]*
- GEOG 337 CHINA 3  
Physical, economic, political and historical geography of China. Special consideration of her population, resources, agricultural growth and industrial expansion. Discussion of the geographic bases and the expansion of the Chinese State and the contemporary foundation of Chinese national power. *Fall. (E) Mode 7 [I]*
- GEOG 339 JAPAN AND KOREA 3  
A study of the physical framework, resources, economic activities and characteristic landscapes of Japan and Korea. Activities of the people of Japan and Korea in relation to their environment and resources, and the differing problems of development facing both nations. *Fall. (O) Mode 7 [I]*
- GEOG 344 ECONOMIC GEOGRAPHY 3  
Nature and distribution of the world's economic activities and their relationship to the physical and human environment. Includes discussion of population patterns, systems of land use, agriculture and fishing, resources (mineral, energy and forests), industry and technology, transportation and trade. *Spring. Mode 7*
- GEOG 348 SOVIET UNION 3  
A spatial analysis of the physical geography of the Soviet Union and its impact on human activities; the resource capability of the U.S.S.R. in relationship to her strength, economic development and the role of the Soviet Union in world affairs. *Fall. (E) Mode 7 [I]*
- GEOG 420 INTERNSHIP IN PLANNING 3  
Prereq.: Permission of the Department chairperson. Restricted to students who are pursuing a specialization in planning. Participants will serve as interns in a municipal, regional, state or private planning agency under the supervision of a geography faculty member. Additional work required for graduate credit. *On demand.*
- GEOG 430 INTERNSHIP IN GEOGRAPHY 3  
Prereq.: Permission of the Department chairperson. No credit given to students with credit for GEOG 420. Students will work in an environment directly related to the track or planned program they are following, under the supervision of a geography faculty member. Written reports are required. Additional work required for graduate credit. *On demand.*
- GEOG 433 ISSUES IN ENVIRONMENTAL PROTECTION 3  
Issues in the environmental protection planning process. Topics may include air quality, noise, solid waste, hazardous materials, wilderness areas, endangered species, wetlands and land use issues. A single field trip may be required. *Fall. Mode 7*
- GEOG 434 MEXICO, CENTRAL AMERICA AND THE CARIBBEAN 3  
A study of our nearest neighbors south of the border, concentrating on people, the land on which they live and related problems, primarily from a regional point of view. *Spring. (E) Mode 7 [I]*
- GEOG 436 SOUTH AMERICA 3  
A survey of the countries of South America with emphasis on people, places and problems. *Spring. (O) Mode 7 [I]*
- GEOG 438 SOUTHEAST ASIA 3  
Introductory systematic study of the region as a whole, followed by a detailed study of the physical and cultural landscape forms, patterns and associations of each nation in turn. Consideration of the problems of development in current world economic and political geography. *Spring. (E) Mode 7 [I]*
- GEOG 439 URBAN GEOGRAPHY 3  
Form, function and evolution of urban settlements with reference to attributes of place. Emphasis is also placed on internal structure and regional relationships of cities. Provides a methodological basis for thought involving the planning process, including preservation planning and systems analysis. Personal on-site study of a current urban problem within the State is expected. *Fall. (E) Mode 7*
- GEOG 440 RURAL LAND USE PLANNING 3  
Land use patterns and the planning process in agriculture, transportation, recreation, industry, population and settlement in rural areas. Case studies and field work emphasizing the impact of urbanization on rural Connecticut. *Fall. Mode 7*
- GEOG 441 COMMUNITY AND REGIONAL PLANNING 3  
Philosophies, theories and principles involved in planning of regions and urban areas. *Spring. Mode 7*
- GEOG 442 FIELD METHODS IN GEOGRAPHY 3  
Prereq.: 3 credits in Geography or permission of instructor. Design and execution of field research in physical and human geography. Techniques include field notes, sketching, area sampling, planetable mapping, questionnaire design and administration, design of coding forms, soil and vegetation surveying. Both team and individual field research projects. *Fall. (O) Mode 7*

GEOG 443 TRANSPORTATION PLANNING 3  
Investigation of the spatial problems of transportation in metropolitan areas and the various planning solutions available. Consideration of both the role of public policy in transportation planning and techniques of transportation planning. Examples chosen from a number of metropolitan areas with special attention to the Hartford region. *Spring. (E) Mode 7*

GEOG 459 FIELD STUDIES IN REGIONAL GEOGRAPHY 2-6  
Prereq.: Permission of instructor. On-site group studies in regional geography. This course normally involves travel within the United States or travel outside the country. Only 3 credits may be applied to General Education requirements. *Summer. Mode 7*

GEOG 469 READINGS IN GEOGRAPHY 3  
Prereq.: Permission of instructor. Directed independent studies in geography. May be taken more than once for credit. *On demand.*

GEOG 474 APPLIED CLIMATOLOGY 3  
Prereq.: GEOG 110 or permission of instructor. Studies in applied climatology, urban climates, microclimates, evapotranspiration and weather anomalies. Directed field research in these areas. *Spring. (O)*

GEOG 476 COMPUTER CARTOGRAPHY 3  
Prereq.: VAX and microcomputer orientations or one course in Computer Science, plus one course in Geography. Use of statistical packages to process data for cartographic purposes. Familiarization with major computer mapping programs. "Hands on" experiences emphasized. No knowledge of computer programming required. *Fall. [c]*

GEOG 477 GEOGRAPHIC INFORMATION SYSTEMS 3  
Prereq.: VAX and microcomputer orientations or one course in Computer Science, plus one course in Geography. Introduction to the creation, use and modification of geographic computer data bases for mapping and planning. Work with geocoding systems and sources of geographic information. Use of spreadsheet and GIS software for analysis and synthesis. *Spring. [c]*

GEOG 480 TOPICS IN GEOGRAPHY OF CHINA 3  
Prereq.: GEOG 337 or permission of instructor. Analysis of selected topics in the geography of China, both historical and contemporary. *Spring. (O) Mode 7 [I]*

GEOG 490 CONNECTICUT 3  
Explanation and analysis of man's occupance of Connecticut, employing the concept of areal differentiation, the methodology of historical geography, field investigation and directed individual research. *Fall. (O) Mode 7*

## GERMAN

GER 111 ELEMENTARY GERMAN I 3  
Functional approach to grammar. Facility in understanding spoken German and in reading is developed. *Not open to students with one year of high school study. Area B [I]*

GER 112 ELEMENTARY GERMAN II 3  
Prereq.: GER 111 or equivalent. Presentation of elements of German grammar is completed. Further practice in conversation; writing and speaking based on collateral reading. No credit will be given to students with previous credit for more advanced coursework in German except by permission of the Department chairperson. *Area B [I]*

GER 125 INTERMEDIATE GERMAN I 3  
Prereq.: One year of college German or equivalent. Grammar review, conversation and composition based on popular German readings

including some one-act plays. No credit will be given to students with previous credit for more advanced coursework in German except by permission of the Department chairperson. *Fall. Area B [I]*

GER 126 INTERMEDIATE GERMAN II 3  
Prereq.: GER 125 or equivalent. Continuation of German 125. No credit will be given to students with previous credit for more advanced coursework in German except by permission of the Department chairperson. *Spring. Area B [I]*

GER 225 GERMAN COMPOSITION AND DICTION 3  
Prereq.: GER 126 or instructor's permission. Course to train students in self-expression by means of frequent composition in German, in addition to systematic drills in pronunciation and intonation. *Fall. Area B [I]*

GER 226 GERMAN STRUCTURE AND IDIOM 3  
Prereq.: GER 126 or instructor's permission. Course designed to develop idiomatic usage and fluency of expression. *Spring. Area B [I]*

GER 305 LITERARY MASTERPIECES SINCE 1800 3  
Prereq.: GER 225 or 226 (may be taken concurrently). Introduction to major works of German literature since 1800. *Spring. Mode 3 [I]*

GER 315 GERMAN CIVILIZATION TO 1800 3  
Prereq.: GER 225 or 226 (may be taken concurrently). Cultural development of Germany from its beginnings to 1800. *Fall.*

GER 316 GERMAN CIVILIZATION FROM 1800 TO THE PRESENT 3  
Prereq.: GER 225 or 226 (may be taken concurrently). Cultural development of Germany from 1800 to the present. *Spring. [I]*

GER 335 ADVANCED COMPOSITION AND DICTION 3  
Prereq.: GER 225. Additional practice in written and oral expression. *Fall. [I]*

GER 336 ADVANCED STRUCTURE AND IDIOM 3  
Prereq.: GER 226. Additional practice in idiomatic usage and verbal fluency. *Spring. [I]*

GER 360 LITERARY MASTERPIECES TO 1800 3  
Prereq.: GER 225 or 226 (may be taken concurrently). Introduction to major works in German literature from its beginning to 1800. *Fall. Mode 3 [I]*

GER 379 19TH CENTURY GERMAN LITERATURE 3  
Prereq.: GER 305 or equivalent. Literature of Romanticism, Realism and Naturalism. *Spring. (O) [I]*

GER 380 20TH CENTURY GERMAN LITERATURE 3  
Prereq.: GER 305 or equivalent. Literature of Impressionism, Expressionism, *Neue Sachlichkeit* and other modern movements. *Fall. (E) [I]*

GER 385 THE SOUND AND STRUCTURE OF GERMAN 3  
Prereq.: Permission of instructor. An intensive and systematic study of the grammatical and phonetic structures of the German language for the advanced student. *On request. [I]*

GER 410 BUSINESS GERMAN I 3  
Prereq.: Permission of instructor. Development of the oral and written skills needed for bilingual work in the fields of business, tourism, science, technology, law enforcement, social service and international relations. *Fall. [I]*

GER 411 BUSINESS GERMAN II 3  
Prereq.: GER 410 or equivalent. Additional practice in the oral and written skills needed for bilingual work situations; emphasis on commercial translation. *Spring. [I]*

# HISTORY

- HIST 100 SEARCH IN HISTORY 3  
Introduction to intellectual processes and value systems in history. Titles and themes may vary from section to section. No credit for students who have received credit for HIST 101. *Mode 5*
- HIST 121 WORLD CIVILIZATION I 3  
World civilization to the 17th century. No credit for students who have received credit for HIST 131 or 142. *Mode 5*
- HIST 122 WORLD CIVILIZATION II 3  
World civilization from the 17th century. No credit for students who have received credit for HIST 142 or 143. *Mode 5 [I]*
- HIST 142 WESTERN CIVILIZATION I 3  
Ancient, medieval and early modern contributions to the development of contemporary thought and institutions through the 17th century. No credit for students who have received credit for HIST 121 or 131. *Mode 5*
- HIST 143 WESTERN CIVILIZATION II 3  
Western civilization from the 17th century to the present. No credit for students who have received credit for HIST 122. *Mode 5 [I]*
- HIST 231 ANCIENT CIVILIZATION 3  
Cultures of ancient Middle East and Mediterranean. *Fall. Mode 5*
- HIST 232 MEDIEVAL CIVILIZATION 3  
European history and institutions from the fall of Rome to 1300. *Spring. Mode 5*
- HIST 261 HISTORY OF AMERICAN LIFE 3  
Political, economic, social and cultural development to 1865. *Mode 5*
- HIST 262 HISTORY OF AMERICAN LIFE 3  
Political, economic, social and cultural development since 1865. *Mode 5*
- HIST 341 ENGLISH HISTORY TO 1715 3  
Forces contributing to the growth of English civilization and development of Great Britain. *Fall. Mode 5*
- HIST 342 ENGLISH HISTORY SINCE 1715 3  
Continuation of HIST 341. *Spring. Mode 5 [I]*
- HIST 344 HISTORY OF MODERN GERMANY 3  
German history from unification to the present. *Fall. (O) Mode 5 [I]*
- HIST 346 HISTORY OF FRANCE: 1789 TO PRESENT 3  
French history since the Great Revolution. *Spring. (E) Mode 5 [I]*
- HIST 347 THE RUSSIAN EMPIRE TO 1917 3  
Formation of the Russian Empire as a multinational state from the ninth century to 1917. *Fall. Mode 5 [I]*
- HIST 348 HISTORY OF THE SOVIET UNION 3  
The USSR as a multinational state from 1917 to the present. *Spring. Mode 5 [I]*
- HIST 350 HISTORY OF POLAND 3  
The emergence of the Polish Lithuanian Commonwealth, the partitions and the struggle for national survival, and the Polish Question during World War I. *Fall. (O) Mode 5 [I]*
- HIST 351 EAST ASIA TO 1800 3  
Political, cultural, economic and social history of East Asian countries. *Fall. Mode 5*
- HIST 352 EAST ASIA SINCE 1800 3  
Continuation of HIST 351 with additional emphasis on contemporary foreign and colonial politics related to the Far East. *Spring. Mode 5 [I]*
- HIST 355 HISTORY OF THE HAPSBURG EMPIRE 1815-1918 3  
Political analysis of 19th century Austria with special emphasis on multinational character of the Empire. *Fall. (E) Mode 5 [I]*
- HIST 356 HISTORY OF EAST CENTRAL EUROPE SINCE 1919 3  
Social and political institutions of the Successor states in the Danubian area from 1919. *Spring. (O) Mode 5 [I]*
- HIST 360 HISTORY OF CONNECTICUT 3  
History of Connecticut. *Spring. Mode 5*
- HIST 361 THE WEST IN UNITED STATES HISTORY 3  
Westward movement and its significance in American history. *Fall. Mode 5*
- HIST 369 AFRICAN AMERICAN HISTORY 3  
Survey of African American life from the slave trade through the 1970s. *Fall. (E) Mode 5*
- HIST 377 HISTORY OF CHRISTIANITY I 3  
Christianity from its origins to 1450 A.D. Jewish origins, literature, central doctrines and institutional development. Consideration of its influence on secular life and institutions. *Fall. (O) Mode 5*
- HIST 378 HISTORY OF CHRISTIANITY II 3  
Christianity from 1450 A.D. to present. Continuation of Christianity I. *Spring. (O) Mode 5*
- HIST 381 LATIN AMERICAN HISTORY TO 1823 3  
Social, economic, political and cultural development of Latin American countries to 1823. *Fall. (O) Mode 5*
- HIST 382 LATIN AMERICAN HISTORY SINCE 1823 3  
Social, economic, political and cultural development of Latin American countries since 1823. *Spring. (O) Mode 5 [I]*
- HIST 423 COLONIAL PERIOD IN AMERICAN HISTORY 3  
Development of America to 1763. *Fall. Mode 5*
- HIST 424 ESTABLISHMENT OF A NEW NATION 3  
Establishment of the United States of America from 1763 to 1800. *Spring. Mode 5*
- HIST 425 ERA OF NATIONAL DEVELOPMENT 3  
United States from 1800 to 1850. *Fall. Mode 5*
- HIST 426 THE UNITED STATES, 1850-1896 3  
The US from the Compromise of 1850 to *Plessy v. Ferguson* (1896): Civil War, Reconstruction and the shift of public concern to problems of industrialization, urbanization and immigration. *Spring. Mode 5*
- HIST 427 THE UNITED STATES, 1890-1933 3  
Industrial growth, immigration, political reform, the Great Depression and the rise of the United States as a world power. *Fall. Mode 5*
- HIST 428 THE UNITED STATES SINCE 1933 3  
Major political, social, economic, cultural and diplomatic developments since 1933. *Spring. Mode 5*

HIST 430	ECONOMIC HISTORY OF EUROPE	3	HIST 465	ECONOMIC HISTORY OF THE UNITED STATES	3
	Emphasis on economic and industrial development of the period since the Industrial Revolution. <i>Fall. Mode 5 [I]</i>			American economy from its agricultural beginnings through stages of its commercial, industrial and financial growth. <i>Mode 5</i>	
HIST 433	HISTORY OF ANCIENT GREECE	3	HIST 466	HISTORY OF AMERICAN TECHNOLOGY	3
	Greek institutions from the Mycenaean period to the accession of Constantine. <i>Spring. Mode 5</i>			The history and development of technology in America, emphasizing sources of technology, its impact on the workplace, on the reorganization of production and management, and on change on the larger society. <i>Fall. Mode 5</i>	
HIST 434	HISTORY OF ANCIENT ROME	3	HIST 467	SOCIAL AND CULTURAL HISTORY OF THE UNITED STATES I	3
	Roman institutions from the regal period to the reign of Constantine. <i>Spring. Mode 5</i>			Cultural, social, religious and intellectual life of American people from Colonial times to the middle of the 19th century. <i>Fall. (O) Mode 5</i>	
HIST 435	HISTORY OF EARLY MEDIEVAL EUROPE	3	HIST 468	SOCIAL AND CULTURAL HISTORY OF THE UNITED STATES II	3
	The late Roman empire to the 11th century. <i>Spring. (E) Mode 5</i>			Cultural, social, religious and intellectual life of American people from the middle of the 19th century to present. <i>Spring. (O) Mode 5</i>	
HIST 436	HISTORY OF LATER MEDIEVAL EUROPE	3	HIST 469	AFRICAN AMERICANS IN THE TWENTIETH CENTURY	3
	The Crusades to the Great Schism. <i>Spring. (O) Mode 5</i>			Political, economic, social and cultural developments in Black American since 1900. <i>Fall. (O) Mode 5</i>	
HIST 439	EUROPEAN DIPLOMATIC HISTORY SINCE 1870	3	HIST 471	EARLY MIDDLE EAST	3
	Theory and practice in modern European diplomatic history. <i>Spring. (O) Mode 5 [I]</i>			Political, economic, social and cultural developments in Moslem and other countries in Southwestern Asia and Northern Africa, 600-1900 C.E. <i>Spring. (E) Mode 5</i>	
HIST 440	RUSSIAN FOREIGN POLICY	3	HIST 472	MODERN MIDDLE EAST	3
	Foreign policy of Imperial Russia and the Soviet Union and its interaction with domestic foreign policy from the 17th century to present. <i>Spring. (E) Mode 5 [I]</i>			Political, economic, social and cultural developments in Moslem and other countries in Southwestern Asia and Northern Africa since 1800. <i>Fall. Mode 5 [I]</i>	
HIST 441	RENAISSANCE AND REFORMATION	3	HIST 473	HISTORY OF JUDAISM	3
	History of Europe during the Age of Transition and the Era of the Religious Wars, 1300-1648. <i>Fall. (E) Mode 5</i>			Historical development of Judaism from Abraham to the present. <i>Spring. (O) Mode 5</i>	
HIST 442	EUROPEAN HISTORY, 1650 TO 1815	3	HIST 477	INVASIONS AND EMPIRES: CENTRAL ASIA TO THE RUSSIAN CONQUEST	3
	Social, economic, political and cultural forces of the period in relation to formation of modern society and government. <i>Spring. (E) Mode 5</i>			History of Central Asia from the eighth century to 1830 with a focus on patterns of invasions, the rise and fall of empires, cultures of nomadic peoples, belief systems and tensions between nomadic and settled societies. <i>Fall. (O) Mode 5</i>	
HIST 443	EUROPEAN HISTORY, 1815-1918	3	HIST 478	CENTRAL ASIA IN WORLD AFFAIRS: 1830 TO PRESENT	3
	Political, economic and social institutions in relation to rise of liberalism, nationalism, socialism and imperialism. <i>Fall. Mode 5 [I]</i>			A study of the intrusion of world powers in Central Asia since 1830. The creation of independent states, the exigencies of regional politics, the rise of "Islamic Fundamentalism" and other patterns of shifting influences will be explored. <i>Fall. (E) Mode 5 [I]</i>	
HIST 444	EUROPEAN HISTORY, 1918 TO PRESENT	3	HIST 483	HISTORY OF INTER-AMERICAN RELATIONS	3
	National and international problems of European states. <i>Spring. Mode 5 [I]</i>			Inter-American relations from inception to the Monroe Doctrine to the present. <i>Fall. (E) Mode 5 [I]</i>	
HIST 445	EUROPEAN INTELLECTUAL HISTORY, 1750-1870	3	HIST 484	HISTORY OF MEXICO	3
	Main currents of European thought and culture from 1750 to 1870. <i>Fall. (E) Mode 5 [I]</i>			Mexico from high culture of the Mayans through conquest, colonial period, independence and national development. <i>Spring. (E) Mode 5 [I]</i>	
HIST 446	EUROPEAN INTELLECTUAL HISTORY, 1870-PRESENT	3	HIST 485	HISTORY OF AMERICAN FOREIGN POLICY TO 1920	3
	Main currents of European thought and culture from 1870 to the present. <i>Spring. (E) Mode 5 [I]</i>			American foreign affairs as influenced by trade expansion, security and morality. <i>Fall. (O) Mode 5</i>	
HIST 453	HISTORY OF MODERN CHINA	3			
	China during the late Ch'ing, Republican and Communist periods. <i>Fall. Mode 5 [I]</i>				
HIST 454	HISTORY OF MODERN JAPAN	3			
	Japan during the 19th and 20th centuries. <i>Spring. Mode 5 [I]</i>				
HIST 463	CONSTITUTIONAL HISTORY OF THE UNITED STATES TO 1990	3			
	Nation's fundamental law as influenced by political, economic and social forces. <i>Fall. (E) Mode 5</i>				
HIST 464	CONSTITUTIONAL HISTORY OF THE UNITED STATES SINCE 1900	3			
	Continuation of History 463. <i>Spring. (E) Mode 5</i>				

- HIST 486 HISTORY OF AMERICAN FOREIGN POLICY SINCE 1920 3  
American foreign policy as influenced by America's rise to world power and her international commitment. *Spring. (O) Mode 5*
- HIST 487 AMERICA AND THE SEA: THE ROLE OF THE SEA IN U.S. HISTORY 3  
An examination of American history as influenced by the sea which has been a major source of America's commerce, culture and tradition. *Fall. (O) Mode 5*
- HIST 488 AMERICAN BUSINESS HISTORY 3  
A historical examination of the forms and strategies employed by business in modern America. *Spring. (O) Mode 5*
- HIST 489 AMERICAN LABOR HISTORY 3  
A historical examination of the response of American Labor to technological change and the development of a formal, institutionalized labor movement. *Spring. (E) Mode 5*
- HIST 493 DIRECTED READINGS IN HISTORY 3 or 6  
Prereq.: Senior or graduate standing and approval of instructor. Individual program of studies for students with special interests and abilities. Topics to vary from semester to semester. Not more than 3 credits to be taken in one semester. *On demand.*
- HIST 495 HISTORIOGRAPHY 3  
European and American historical writing and philosophies of history. *Spring.*
- HIST 497 TOPICS IN HISTORY 3  
A historical focus on a facet of history in order to help clarify current domestic and/or world developments. May be repeated with different topics for up to 6 credits. *Summer. Mode 5*

## HUMANITIES

- HUM 100 SEARCH IN THE HUMANITIES 3  
An introduction to the intellectual processes and value systems in the humanities. Titles and themes may vary from section to section. *Mode 3*
- HUM 150 TOPICS IN EUROPEAN LITERATURE 3  
A literary figure, movement or theme in European literature studied in translation. Topic may vary from semester to semester. *Mode 3*
- HUM 290 STUDIES IN MODERN CIVILIZATION 3-6  
Insights in the culture of people of other lands as reflected in the arts, national traditions, institutions and values. Area or topic may vary from semester to semester. *On demand. {I}*
- HUM 490 THE CULTURE AND CIVILIZATION OF OTHER LANDS 3  
An approach to better understanding of other peoples' life and culture as reflected in their language, music, literature, art and folklore. The area covered may vary from section to section. Offered in English. May be repeated with different topics. *Irregular. {I}*
- HUM 494 FOREIGN STUDY THROUGH TRAVEL 3 or 6  
Course aims to acquaint students with the civilizations of other countries through supervised travel abroad. Attention to the special needs and interests of participants. *On request. {I}*

## INDUSTRIAL EDUCATION

*Courses suitable as electives for all Education and Counseling majors and, where indicated, to satisfy Area C, General Education requirements.*

- IE 440 INDUSTRIAL EDUCATION IN THE URBAN SCHOOL 3  
An opportunity to offered students to examine Technology Education activities applicable to urban youth. Emphasis is on learning about needs of urban youth and relating Technology Education activities to those needs. Consideration of supervisor — employee relations, training opportunities and skill applications in the home.
- IE 460 CONSTRUCTIVE ACTIVITIES FOR NON-TECHNICAL TEACHERS 3  
To provide in-service or pre-service personnel with the techniques and skills necessary to use basic tools and materials to enhance their teaching. Emphasis will be placed on "hands-on" experiences with tools and materials, and experiences with group activities relating to industry, technology, careers and occupations. Not open for credit to majors in the School of Technology. *Lecture/lab. Area C*
- IE 470 OCCUPATIONAL EDUCATION PROGRAMS AND THE STUDENT WITH SPECIAL NEEDS 3  
Prereq.: Sp. ED 470 or TE 395, or permission of instructor. For Technology Education, business and office, home economics and other occupational education subject instructors. Emphasis on vocational legislation, interagency collaboration, modifications, informal vocational assessment, learning styles, transition and appropriate teaching strategies for special needs students.
- IE 480 HISTORY OF INDUSTRIAL EDUCATION 3  
Early European influences on beginning of industrial education in America. The growth and development of pioneering institutions in the United States and personalities behind them are stresses. A comparison is made between the basic philosophies of "Manual Training" during the early days and those of Technology Education and Vocational Education today. Emphasis is placed upon the history and development of industrial education in Connecticut.
- IE 488 INDEPENDENT STUDIES IN INDUSTRIAL EDUCATION 1-3  
Prereq.: Senior or graduate standing and permission of instructor. Directed independent studies in Industrial Education for students who wish to pursue specialized areas which are not covered in regular course offerings. *On request.*

## INDUSTRIAL TECHNOLOGY

- IT 150 CONSTRUCTION PRACTICES AND PRINCIPLES 3  
Introduces basic body of knowledge of construction, including job identification, terminology and the use of equipment as used in light and heavy construction. *Area C*
- IT 252 BUILDING CODES AND SPECIFICATIONS 3  
Prereq.: IT 150, T.C. 255. Includes study of the use of BOCA (National Building Code), NFPA 101 (National Fire Prevention Association), Life Safety Code as applied to the construction industry. Emphasis will be on the use of these documents as design aids versus criteria in standard specifications writing.
- IT 254 CONSTRUCTION GRAPHICS 3  
Prereq.: IT 150. Examination of the role of the quantity surveyor. Emphasis on interpretation of architectural, structural, mechanical and electrical drawings. Quantity surveys for sitework, concrete, masonry, steel and rough carpentry. Development of freehand detailed sketches.



- IT 355 ESTIMATING FOR PRINTING 3  
This course is designed to give the student a practical exposure to the many factors which must be considered when estimating a printing job. Actual estimates will be prepared, using a variety of fixed and variable costs. *Spring.*
- IT 359 PLANT LAYOUT 3  
Covers the complete layout function as practiced in modern industry. A detailed analysis is made of the procedures used in placing equipment, organizing efficient machine-operator patterns and servicing of machines. Considerable time is devoted to practical work on actual layout problems, including integrated production lines, using such tools as layout templates, three-dimensional models, man-machine charts and process flow charts. The relationship of work standards, methods and layout inspection, production control and maintenance is also discussed. *Fall.*
- IT 360 PRODUCTION CONTROL 3  
Analysis of skills required in supervising manufacturing departments. Emphasis upon production technologies, machine and tool operations and process control. *Area C*
- IT 362 LEADERSHIP SKILLS FOR SUPERVISORS 3  
Designed as a bridge between technical courses and the art of supervising people. Potential line supervisors will develop specific abilities in applying leadership principles to everyday work situations through creative class participation in industrial case studies. Techniques of getting-the-job-done through people include motivation, delegation, discipline, teamwork, decision making, communications and problem identification. Goal-setting and objectives-planning techniques are also covered.
- IT 364 STATISTICAL PROCESS CONTROL 3  
The application of statistical techniques to the quality control of industrial products. Control charts and acceptance procedures are included. *Spring.*
- IT 380 EMERGENCY MEDICAL TECHNICIAN (EMT) 3  
Recognition of illnesses and injuries; training in the administering of appropriate emergency medical care. Classes will include demonstrations, practice sessions and 10 hours of in-hospital practicum.
- NOTE: CREDIT AUTOMATICALLY WILL BE GIVEN UPON PROOF OF CURRENT EMT CERTIFICATION AS ISSUED BY THE OFFICE OF EMERGENCY MEDICAL SERVICE, STATE OF CONNECTICUT.**
- IT 400 SENIOR PROJECT 3  
The selection of a problem in one area or facet of technology and the preparation of a term report. Areas will include planning, supervision, construction techniques, design innovations and labor relations. *On request.*
- IT 401 INDUSTRIAL INTERNSHIP 6  
Prereq.: Permission of Industrial Technology Department chairperson. Designed to provide students an opportunity to observe, participate and work in an industrial environment directly related to their technical specialization. The internship is a program of experiences tailored for each intern with a specific cooperating company. Students must be employed during the semester they enroll. Applications may be obtained from the chairperson of the Industrial Technology Department. Graded on a pass-fail basis only.
- IT 402 TOPICS IN TECHNOLOGY 3  
Prereq.: Permission of the Department chairperson on request. An individualized inquiry of comprehensive study into a selected technical area. The student may elect to examine processes, products or developmental aspects of modern industry. Open only to Industrial Technology majors.
- IT 403 TECHNIQUES OF TECHNICAL TRAINING 1-3  
Emphasis on instructional techniques and their application for the delivery of training programs to trainees in organizational settings. Areas of study include instructional objectives, presentation planning, delivery strategies, integration of audio-visual materials and development of approaches for assessing trainee achievements. *Irregular.*
- IT 404 ESTABLISHING TRAINING NEEDS & DESIGNING PROGRAMS 3  
Techniques for establishing training needs within an organization and use of task analysis to identify job-related attitudes, skills and knowledge as a base for training programs. Principles of training program design, in-house training materials development, criteria for selection of commercially prepared materials/ services and program delivery logistics. *Irregular.*
- IT 405 PRACTICUM IN INDUSTRIAL TECHNOLOGY 3-6  
Prereq.: Permission of Department chairperson. Familiarization with industrial techniques and processes primarily through on-site observations of and participation in appropriate activities. *Irregular.*
- IT 406 EVALUATION OF TRAINING EFFECTIVENESS 3  
Methods and procedures used for assessing the effectiveness of training programs. Topics include purposes of evaluation, the evaluation plan, data collection techniques and instruments, data analysis, training costs and benefits and organizational factors affecting training results. *Irregular.*
- IT 410 INDUSTRIAL SAFETY 3  
Theory of industrial safety with emphasis upon fundamental concepts in the industrial environment. Emphasis will be placed on the psychological, sociological and physiological aspects of industrial safety. *Both semesters. Area C*
- IT 411 INDUSTRIAL HYGIENE 3  
Lectures and laboratory exercises covering evaluation and control of exposure to dust, fumes, mist, vapors, gases, radiation, noise and abnormal temperatures. *Spring. Area C*
- IT 412 PRINCIPLES OF OCCUPATIONAL SAFETY 3  
Development and establishment of the internal policies of a plant or corporation as it relates to an accident prevention program for the safety and health of all its employees. The course will cover such subjects as safety training, job safety analysis, accident investigation, safety promotion, record keeping.
- IT 414 INDUSTRIAL LOSS CONTROL MANAGEMENT 3  
Loss control philosophy and techniques. Background information and specific techniques required to develop and implement an effective company-wide and on-site loss control program, personnel responsibilities and total safety program. *Spring. Area C*
- IT 415 FIRE PROTECTION AND PREVENTION 3  
Measures related to safeguarding human life and preservation of property in prevention, detection, extinguishing fires. *Spring.*
- IT 422 CONSTRUCTION SAFETY 3  
Prereq.: IT 362 or permission of instructor. A study of safety problems in the construction environment with emphasis on the day-to-day activities of the construction safety coordinator. *Spring.*
- IT 432 WORKER/SUPERVISOR RELATIONS 3  
Prereq.: IT 362 or MGT 301 or permission of instructor. To develop the role of worker-supervisor relationships in manufacturing industries by covering such topics as productivity, supervision within contract guides, union/non-union manufacturing conflicts, Method/Time Study implementation. *Spring.*

IT 433            TECHNIQUES OF CONFERENCE LEADING            3

Practical course in the techniques needed by the conference leader. Student puts into practice techniques learned, and is provided opportunities to lead conferences. Analysis of conference procedures, the leader's responsibility in a conference, selection and preparation of conference topics, use of auxiliary materials, techniques of control and summarization. *On request. Area C*

IT 453            STRUCTURAL DESIGN            3

Prereq.: MATH 115, TC 255 and 254. An introduction to structural analysis and design for the construction supervisor or structural technologist. Emphasis on the design properties of wood, steel and concrete. *Spring.*

IT 457            CONSTRUCTION SUPERVISION            3

Prereq.: Senior standing. Examination of the role of the construction supervisor. Emphasis on personnel scheduling, time keeping, trade unions, superintendents and the duties of the project manager.

IT 458            PRODUCTIVITY IMPROVEMENT            3

Course deals scientifically with analytical and creative problems affecting time. It covers the principles of methods, design and work measurement. The student acquires skill in using motion study techniques and learns how to establish standards. Applications to product design, machine and tool design, process planning, production scheduling, plant layout, budgeting, sales prices, manpower requirements, wage incentives and methods of improvements are studied. *Fall.*

IT 480            ROBOTICS            3

Prereq.: Senior standing or permission of instructor. The course provides an overview of the industrial robot to introduce the student to the science of flexible automata. The course emphasizes features, capabilities, programming, selection and implementation of industrial robots. *Fall and Summer. [c]*

IT 481            MOBILE ROBOTICS            3

Prereq.: IT 480. Not for graduate credit. An examination of sense, mobile automata. Includes the elements of communication, computation and control which are essential to the achievement of autonomous machine operation. *Spring. [c]*

## INTERDISCIPLINARY

ID 099            FRESHMAN SEMINAR            No Credit

Introduction to the expectations of the University, including essential study and academic skills. Assists students in using the resources and opportunities for education at Central Connecticut. Freshmen are encouraged to take this course during their first semester.

ID 200            HONORS WESTERN CULTURE I            6

Prereq.: ENG 110, ANTH 225, and designation as Honors Program participant. A survey of western culture from its beginnings in the Classical and Semitic world to the end of the Roman period. *Fall. All modes except 2 and areas except B and D. (Does not satisfy laboratory course requirement of Mode 8).*

ID 201            HONORS WESTERN CULTURE II            6

Prereq.: ID 200 and designation as Honors Program participant. A survey of Western culture from the Middle Ages through the Enlightenment. *Spring. All modes except 2 and areas except B and D. (Does not satisfy laboratory course requirement of Mode 8).*

ID 300            BUSINESS, SCIENCE AND SOCIETY            3

An interdisciplinary examination of selected issues significant for modern society. Explores various approaches and intellectual processes which may be applied to such issues. This is a topics course, and titles and topics may vary from section to section. (Mode to be determined each semester offered according to topic.) *Irregular.*

ID 310            HONORS WESTERN CULTURE III            6

Prereq.: ID 201 and designation as Honors Program participant. A survey of western culture in the 19th century. *Fall. All modes except 2 and areas except B and D. (Does not satisfy laboratory course requirement of Mode 8). [I]*

ID 311            HONORS WESTERN CULTURE IV            6

Prereq.: ID 310 and designation as Honors Program participant. A survey of western culture in the 20th century. *Spring. All modes except 2 and areas except B and D. (Does not satisfy laboratory course requirement of Mode 8). [I]*

ID 420            HONORS RESEARCH            3

Prereq.: ID 311 (may be taken concurrently). Independent research developed from previous Honors Program courses. Modal and area credit appropriate to subject matter.

## INTERNATIONAL STUDIES

See also Area Studies

IS 225            THE WORLD AS A TOTAL SYSTEM            3

Examination of global interdependence in its historic, ecological, economic, cultural and political dimensions. Analysis of selected contemporary global issues. Consideration of impact of global interdependence on our own local communities. *Spring. Mode 6 or 7*

IS 226            INTERCULTURAL SENSITIVITY            3

An exploration of customs of the world's major societies, with an emphasis on those customs pertinent to cross-cultural understanding and the conduct of international relationships. *Fall. Mode 6, 7 [I]*

IS 475            INTERNATIONAL STUDIES SENIOR PROJECT            3

Prereq.: Senior standing and declared IS major. An independent project developed by the student in consultation with International Studies adviser. The semester's work will integrate the geographic area and academic focus of the student's previous course work. Not for graduate credit. *On demand.*

## ITALIAN

ITAL 111            ELEMENTARY ITALIAN I            3

Fundamentals of Italian pronunciation and grammar taught from the beginning by the direct method. Students participate in conversation. Not open to students with one year of high school study. *Area B*

ITAL 112            ELEMENTARY ITALIAN II            3

Prereq.: ITAL 111 or equivalent. Grammar reviewed and completed. Further practice in conversation, pronouncing and diction. No credit will be given to students with previous credit for more advanced coursework in Italian except by permission of the Department chairperson. *Area B*

ITAL 125            INTERMEDIATE ITALIAN I            3

Prereq.: One year of college Italian or equivalent. Principles of Italian language structure are reviewed. Short stories and plays are read and discussed. Conversation and composition on topics of general interest are practiced to improve oral and written expression. No credit will be given to students with previous credit for more advanced coursework in Italian except by permission of the Department chairperson. *Fall. Area B*

ITAL 126            INTERMEDIATE ITALIAN II            3

Prereq.: ITAL 125 or equivalent. Continuation of Italian 125. No credit will be given to students with previous credit for more advanced coursework in Italian except by permission of the Department chairperson. *Spring. Area B*

- ITAL 225 ITALIAN COMPOSITION AND DICTION 3  
Prereq.: ITAL 126 or instructor's permission. A course to train students in self-expression by means of frequent compositions in Italian in addition to systematic drills in pronunciation and intonation. *Fall.*  
*Area B*
- ITAL 226 ITALIAN STRUCTURE AND IDIOM 3  
Prereq.: ITAL 126 or equivalent preparation. A course designed to develop correct idiomatic usage and fluency of expression. *Spring.*  
*Area B*
- ITAL 305 LITERARY MASTERPIECES SINCE 1800 3  
Prereq.: ITAL 225 or 226 (may be taken concurrently). Introduction to major works in Italian literature since 1800. *Spring. Mode 3*
- ITAL 315 ITALIAN CIVILIZATION TO 1861 3  
Prereq.: ITAL 225 or 226 (may be taken concurrently). The cultural development of Italy from its beginnings to unification. *Fall. [I]*
- ITAL 316 ITALIAN CIVILIZATION FROM 1861 TO THE PRESENT 3  
Prereq.: ITAL 225 or 226 (may be taken concurrently). Cultural development of Italy from 1861 to the present. *Spring. [I]*
- ITAL 335 ADVANCED COMPOSITION AND DICTION 3  
Prereq.: ITAL 225. Additional practice in written and oral expression. *On request. [I]*
- ITAL 336 ADVANCED STRUCTURE AND IDIOM 3  
Prereq.: ITAL 226. Additional practice in idiomatic usage and verbal fluency. *On request. [I]*
- ITAL 360 LITERARY MASTERPIECES TO 1800 3  
Prereq.: ITAL 225 or 226 (may be taken concurrently). Introduction to great works of Italian literature from the Middle Ages to 1800. *Fall. Mode 3*
- ITAL 441 ADVANCED ORAL PRACTICE I 3  
Prereq.: Instructor's permission. Development of fluency in oral self-expression. Speech analysis to improve pronunciation and intonation. *On request. [I]*
- ITAL 442 ADVANCED ORAL PRACTICE II 3  
Prereq.: ITAL 441 or instructor's permission. Further practice in oral self-expression. *On request. [I]*
- ITAL 460 ADVANCED WRITTEN ITALIAN 3  
Prereq.: ITAL 335 or equivalent. A course in written expression of Italian, particularly in idiomatic free composition, to establish an appreciation for Italian style and develop the ability to express shades of meaning. *On request. [I]*
- ITAL 470 14TH CENTURY ITALIAN LITERATURE 3  
Prereq.: ITAL 305 or instructor's permission. Study of the period with special emphasis on Dante, Petrarch, Boccaccio. *On request.*
- ITAL 471 20TH CENTURY ITALIAN LITERATURE 3  
Prereq.: Permission of instructor. Representative authors and literary movements of the 20th century. *On request. [I]*
- ITAL 476 16TH CENTURY ITALIAN LITERATURE 3  
Prereq.: ITAL 305 or instructor's permission. Italian Renaissance major works with special emphasis on The Epic. *On request.*
- ITAL 488 ITALIAN LIFE AND CULTURE 3  
Prereq.: Permission of instructor. Discussion of contemporary Italian society, traditions and values. *On request. Area B*

- ITAL 491 CONVERSATIONAL ITALIAN I 3  
An introductory course for the general public, including students, teachers and social workers. Functional approach will serve to establish and facilitate communication with Italian-speaking people. Individualized teaching methods will be employed to meet student's needs. May not be counted toward a major, minor or concentration in Italian.  
*Irregular. Area B*

## JAPANESE

- JAPN 111 ELEMENTARY JAPANESE I 3  
Basic sounds and structure patterns of Japanese are established through a direct audiolingual approach. *Area B [I]*
- JAPN 112 ELEMENTARY JAPANESE II 3  
Prereq.: JAPN 111. Continuation of Japanese 111. No credit will be given to students with previous credit for more advanced coursework in Japanese except by permission of the Department chairperson. *Spring. Area B [I]*
- JAPN 125 INTERMEDIATE JAPANESE I 3  
Prereq.: One year of college Japanese or equivalent. Continuation and review of grammar and structure. Development of reading skills. *Fall. Area B [I]*
- JAPN 126 INTERMEDIATE JAPANESE II 3  
Prereq.: JAPN 125 or equivalent. Further study of grammar and structure. Readings in literary and cultural areas. *Spring. Area B [I]*
- JAPN 225 JAPANESE COMPOSITION & DICTION 3  
Prereq.: JAPN 126 or permission of instructor. To train students in self-expression by means of frequent compositions, systematic drills in pronunciation and intonation, and readings in Japanese literature and culture. *Fall. Area B [I]*
- JAPN 226 JAPANESE STRUCTURE AND IDIOM 3  
Prereq.: JAPN 126 or permission of instructor. To develop correct idiomatic usage and fluency of expression. Readings in Japanese literature. *Spring. Area B [I]*

## LATIN

- LAT 111 ELEMENTARY LATIN I 3  
Study of the elements of Latin grammar. Not open to students with one year of high school study. *Fall. Area B*
- LAT 112 ELEMENTARY LATIN II 3  
Prereq.: LAT 111 or equivalent. Continuation of Latin I; development of reading skills. *Spring. Area B*
- LAT 125 INTERMEDIATE LATIN I 3  
Prereq.: LAT 111 or 112, or equivalent. Continuation and review of grammar and structure. Development of reading skills. *Fall. Area B*
- LAT 126 INTERMEDIATE LATIN II 3  
Prereq.: LAT 125 or equivalent. Continuation of Latin 125. Further study of Latin grammar, structure and reading. *Spring. Area B*

## LAW

- LAW 250 PRINCIPLES OF LAW 3  
A study of the legal system of the United States and its relationship to the business manager, contracts, sales, negotiable instruments and agency. *Area C*

**LAW 401 LEGAL ENVIRONMENTS OF BUSINESS 3**  
A study of the business-law relationship in the areas of regulation and administrative law, securities regulation, antitrust, patents and copy-rights, consumer protection, labor and equal opportunity and interna-tional business activities.

**LAW 425 LABOR RELATIONS 3**  
Introduction to relations among employers, employees and unions in the United States focusing on the private sector. Critical examination is made of labor laws and of the function of labor contract negotiations and administration.

**LAW 430 ADVANCED BUSINESS LAW 3**  
Prereq.: Law 250 or permission of the instructor. Primarily for stu-dents interested in advanced knowledge of business associations. Con-tract is made among sole proprietorship business, partnership, corporation and business trust. Other topics include wills, trusts, se-cured transaction (Article 9 UCC) and bankruptcy.

## MANAGEMENT

**MGT 301 PRINCIPLES OF MANAGEMENT 3**  
An introduction to the principles of management and their applica-tion to business. Emphasis on the development of a philosophy of man-agement.

**MGT 305 HUMAN RESOURCES DEVELOPMENT 3**  
Prereq.: MGT 301. Study of the management of human resources. Philosophies and concepts of human resources management. Employ-ment and development of people: recruitment, selection, appraisal, training and development of employees and managers. Financial com-pensation (job evaluation and service-rating principles and applica-tions), health and safety, employee security programs and grievance handling. Leadership and motivation. Labor relations both with indi-viduals and organized groups, with some attention to the laws govern-ing unions; collective bargaining, contracts in both public and private employment. Analysis of current issues. Some emphasis upon case study analysis.

**MGT 321 INTERNATIONAL MANAGEMENT 3**  
Prereq.: MGT 301. An introductory course in the field of interna-tional management that focuses on the diverse environmental forces and factors that affect the operations and performance of multinational cor-porations. A comparative approach is used to develop some compre-hension of the wide range of business conditions that exist in various regions of the world. [I]

**MGT 345 ORGANIZATIONAL THEORY 3**  
Prereq.: MGT 301. Provides a systematic understanding of complex business organizations in modern society. The unit of analysis will be the organization and its major subunits. Explores how organizations shape and influence behaviors and develops a conceptual framework for analyzing the design and operation of business corporations and other complex organizations.

**MGT 348 MANAGEMENT SYSTEMS 3**  
Prereq.: MGT 301. Provides an understanding of the complex so-ciotechnical systems in organizations. Examines the relationship be-tween technology and social systems by applying general systems theory. Emphasizes the relationship of machines, work processes and methods to organization structure and human relationships. Alternative strategies for managing change and innovation will be explored.

**MGT 403 SOCIAL ISSUES FOR MANAGERS 3**  
Prereq.: MGT 301. Defines contemporary issues of corporate social responsibility and explores the impact of these issues on managerial de-cision-making behaviors. Emphasizes contemporary social issues that emerge in the external environment of business. Defines societal expec-tations of organizations regarding corporate social responsibility.

**MGT 425 MANAGEMENT AND COLLECTIVE BARGAINING 3**  
Prereq.: MGT 301. Introduction to managerial problems in personnel and labor-management relations. Examination of issues encountered in the management of workers under collective bargaining agreements, and in contract administration. Lectures and simulations will be used.

**MGT 426 BUSINESS ORGANIZATIONAL BEHAVIOR 3**  
Prereq.: MGT 301. A study of human behavior in organizations. Covers topics such as communication, decision making, team develop-ment, leadership, motivation and productivity. Attention is given to be-havioral science methods, research and findings as applied to organizational management.

**MGT 430 STRATEGIC MANAGEMENT AND POLICY 3**  
Prereq.: 90 credits, including FIN 300, MGT 301 and MKT 303. A course which deals with the establishment of company-wide objectives and the subordinate plans and controls to accomplish them. This course integrates and builds upon the School of Business common core re-quirements to develop decision-making ability at the policy-making lev-el of administration.

**MGT 431 COMPENSATION AND BENEFITS 3**  
Prereq.: QA 201 and MGT 305. A systematic exploration of com-pensation theory and practice including job analysis, design and evalua-tions; pricing of job structures; wage incentives; profit sharing and fringe benefits and managing compensation systems.

**MGT 481 MANAGEMENT OF NON-BUSINESS ORGANIZATIONS 3**  
Prereq.: MGT 301. This course will apply basic principles of man-agement of profit-making organizations to those in not-for-profit sec-tors. Areas discussed will be the management problems affecting hospitals, charitable organizations, foundations and unions.

**MGT 490 MANAGEMENT TOPICS 3**  
Prereq.: Senior standing. Selected topics in management, organiza-tion theory and human resources management as announced in advance. Subtitle and course content will vary from semester to semester and from section to section.

**MGT 494 ENTREPRENEURSHIP 3**  
Prereq.: FIN 300 or permission of instructor. Entrepreneurship and its role as a fundamental component of our economic system is dis-cussed. The resources needed to start a new business are outlined as a framework for the formulation of a well-conceived business plan.

**MGT 497 INDEPENDENT STUDY IN MANAGEMENT 3**  
Prereq.: Special Project Request Form, senior standing and a grade-point average of at least 3.00. Students, with approved proposals, iden-tify and investigate managerial problem areas as well as organizational growth and development phenomena. Progress and performance are monitored and evaluated by the faculty adviser who has approved the study project.

**MGT 498 MANAGEMENT SEMINAR 3**  
Prereq.: Senior standing. An examination of the latest development in management and organizational theory. Emphasis will be on current trends in the theory and practice of management using up-to-date man-agement literature and research. Course content will vary from semester to semester.

## MANAGERIAL COMMUNICATIONS

**MC 207 MANAGERIAL COMMUNICATIONS 3**  
Prereq.: ENG 110 and sophomore standing. The study and develop-ment of effective business correspondence, reports and communications systems. Selected assignments include written and oral reports used in business. Area A

## MANAGEMENT INFORMATION SYSTEMS

- MIS 201 INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS 3  
The course provides the background necessary for understanding the role of information systems in organizations and for using computer tools and technology in solving business problems. Topics include organizational foundations of information systems, technical foundations of information systems, building information systems, and the management of information. *Not open to CS majors. [c]*
- MIS 210 APPLICATION PROGRAM DEVELOPMENT I 3  
Prereq.: MIS 201. An introduction to computer programming in a business environment. Emphasis on the fundamentals of structured program design, development, testing, implementation and documentation of common business-oriented applications using COBOL. Discussion and application of top-down design strategies and structured programming techniques for designing developing problem solutions. [c]
- MIS 211 APPLICATION PROGRAM DEVELOPMENT II 3  
Prereq.: MIS 210. A continuation of MIS 210. Emphasis on structured methodology of program design, development, testing, implementation and documentation of common business-oriented applications using COBOL. Includes development of programs and systems of programs for batch and interactive environments. [c]
- MIS 330 INFORMATION SYSTEMS-ANALYSIS AND DESIGN 3  
Prereq.: MIS 211. Overview of the system development life cycle. Emphasis on current documentation through the use of both classical and structured tools, techniques for describing process flows, data structures, file designs, input and output designs and program specifications. Discussion of the information gathering and reporting activities, and of the transition from analysis to design.
- MIS 331 STRUCTURED SYSTEMS ANALYSIS AND DESIGN 3  
Prereq.: MIS 330. Advanced study of structured systems development. Emphasis on strategies and techniques of structured analysis and structured design for producing logical methodologies for dealing with complexity in the development of information systems. [c]
- MIS 340 DATABASE PROGRAM DEVELOPMENT 3  
Prereq.: MIS 331. Introduction to application program development in a database environment with an emphasis on loading, modifying and querying the database. Discussion of storage devices, data administration and data analysis, design and implementation. [c]
- MIS 400 DECISION SUPPORT SYSTEMS 3  
Prereq.: MIS 211. The course provides an introduction to management information support systems, designed to aid managers and others in the decision-making process. These systems include Decision Support Systems (DSS), Group Decision Support Systems (GDSS), Executive Information Systems (EIS), and Expert Systems (ES). *Fall. [c]*
- MIS 410 DISTRIBUTED DATA PROCESSING 3  
Prereq.: MIS 340. The features of centralized, decentralized and distributed systems will be examined. The impact of distributed systems on the business enterprise will be exposed via the medium of case studies. Technology implications of computer hardware, software and communications are discussed as they relate to the design, development and implementation of distributed data processing systems. *Spring. [c]*
- MIS 420: EDP AUDIT AND CONTROLS 3  
Prereq.: MIS 340. An introduction to EDP auditing. Emphasis on EDP controls, types of EDP audits, and concepts and techniques used in EDP audits. Exposure to risk assessment and professional standards in the field of EDP auditing. *Fall. [c]*

- MIS 430 INFORMATION SYSTEMS PLANNING 3  
Prereq.: MIS 340. An introduction to the financial, technical and strategic information systems planning processes. Emphasis on the relationship of the information systems planning process to the overall business goals, policies, plans, management style and industry conditions. Emphasis on the means of selecting large systems projects; assessing the installation's current state; determining processing, staffing, software, hardware and financing approaches. Review of hardware, software and services information sources. *Spring. [c]*

- MIS 440 INFORMATION RESOURCES MANAGEMENT 3  
Prereq.: MIS 340. A seminar course providing a broad overview of the information systems management function. the course emphasizes information systems management, with particular attention on planning, organizing and controlling user services and managing the computer information systems development process. *Spring. [c]*

## MARKETING

- MKT 303 MARKETING PRINCIPLES 3  
Overall general view of scope and significance of marketing, with emphasis on marketing consumer and industrial goods, analysis of marketing institutions, analysis of marketing functions and an introduction to marketing policies and practices of business firms. [c] *Area C*
- MKT 304 MARKETING MANAGEMENT 3  
Prereq.: MKT 303. Critical view of marketing problems such as product planning, pricing, policies, governmental regulation of marketing, distribution cost analysis, business ethics and how these are handled by marketing management. [c]
- MKT 305 CONSUMER BEHAVIOR 3  
Prereq.: MKT 303. Examines the influence of psychological, sociological and cultural factors on buying behavior of consumers and industrial buyers. Shows how this knowledge is indispensable to the marketing manager when he or she delineates target markets and makes decisions about product, price, promotion and channels of distribution. Current theories and models are related to present practices and potential applications.
- MKT 306 ADVERTISING AND PROMOTION 3  
Prereq.: MKT 303. The study of advertising and its relationship to marketing. Specific topics include communication theory, advertising management in both agencies and marketing firms, media, measuring advertising effectiveness, promotional strategy, and advertising's social responsibilities.
- MKT 307 SALES ADMINISTRATION 3  
Prereq.: MKT 303. Examines the organization of sales departments and how to select, train, administer and evaluate the sales force. Techniques of sales forecasting, planning and analysis are explored.
- MKT 311 RETAILING 3  
Prereq.: MKT 303. Discussions of retail store problems, opportunities and trends in retailing, store organizations, merchandising and store management.
- MKT 313 MERCHANDISING 3  
Prereq.: MKT 311. Discusses the basic elements of buying, merchandising, stock controls, product information and fashion analysis as they apply to the retailer and consumer.
- MKT 321 INTERNATIONAL MARKETING 3  
Prereq.: MKT 303. An analysis of the techniques, procedures and strategies used by multinational firms. Potential problems are explored. Methods and sources of data for determining products to sell and countries in which to sell them are studied. [I]

**MKT 330 SALES TECHNIQUE AND TRAINING 3**  
 Prereq.: MKT 303. A study of the characteristics of the good salesman, types of salesmen, psychology of selling and sales techniques; an overview of the training of salesmen.

**MKT 340 PRODUCT DEVELOPMENT AND MANAGEMENT 3**  
 Prereq.: MKT 303. A systematic examination of the processes by which new products are developed and incorporated into the marketing mix, existing products are evaluated and managed, and uneconomic products are demarketed.

**MKT 350 DISTRIBUTION MANAGEMENT 3**  
 Prereq.: MKT 303. A critical analysis of the various distributive strategies, the underlying theories of distribution channels, the techniques of costing alternative trade channels, and the structuring of channel intermediaries.

**MKT 400 COMPUTER APPLICATIONS IN MARKETING 3**  
 Prereq.: STAT 104, MIS 201, MKT 303. Computer applications programs to support marketing strategy formulation and managerial decision-making. Investigation of marketing and sales problem-solving techniques, using numerical data and relationships. Emphasis will be on problem formulation and interpretation of results from the perspective of the marketing manager. [c]

**MKT 413 INDUSTRIAL MARKETING 3**  
 Prereq.: MKT 303. Organization, principles, policies, procedures and techniques used in effective and efficient buying and selling of materials, equipment and supplies by business and industry. Emphasis on roles of purchasing agents in wholesale organizations and buyers in retail establishments.

**MKT 423 MARKETING RESEARCH 3**  
 Prereq.: MKT 303 and STAT 104. Overview of research methods and procedures used in marketing to help solve marketing problems. Analysis of basic research designs and methods of collecting and interpreting data. [c]

**MKT 433 MARKETING RESEARCH II 3**  
 Prereq.: MKT 304, QA 201, MKT 423. Advanced marketing research with emphasis on theory, methodology and practical application. Course encompasses journal research and project design, development and implementation. Analysis involves use of SAS computer statistics system. [c]

**MKT 443 ADVANCED CONCEPTS IN RETAILING 3**  
 Prereq.: MKT 313 and senior status or instructor's permission. Analysis of current problems in retailing by applying principles of merchandising, human relations, marketing and management via case and/or site studies. The course will involve fieldwork and classroom seminar sessions.

**MKT 460 EXPORT MARKETING 3**  
 Prereq.: MKT 303, 321 and senior standing or permission of instructor. Opportunities, constraints and complexities in the strategy of marketing products and services in overseas markets. Marketing activities and institutions that are unique to export marketing.

**MKT 480 MARKETING FOR NON-PROFIT ORGANIZATIONS 3**  
 Prereq.: MKT 303. A comprehensive study of the techniques used in marketing as they apply to non-profit organizations such as hospitals, governments, social action groups, educational institutions, religious institutions, etc. Topical areas to be covered will include market analysis, promotion decisions, market information systems and decision making in non-profit structures.

**MKT 494 INDEPENDENT STUDY IN MARKETING 1-6**  
 Prereq.: MKT 303, senior standing and permission of the supervising instructor, the Department chairperson and the Dean of the School of Business. Special study or research projects, as assigned. Students with a deep interest in a narrow subject area explore their topic in detail.

**MKT 495 FIELD STUDIES IN INTERNATIONAL MARKETING 3**  
 Prereq.: Permission of the instructor. Not for graduate credit. Course is designed to enrich the student's understanding of the world as a marketplace by visiting foreign countries. Students will be able to observe and discuss marketing problems with leading businessmen. On-site seminars will be included. *Area B [I]*

**MKT 498 MARKETING SEMINAR 3**  
 Prereq.: MKT 303 and senior standing. Exposes students to the latest developments in the field of marketing. Emphasis is placed on current advanced books and literature in relevant journals. Content will vary from semester to semester.

## MATHEMATICS

<sup>1</sup>These courses cannot be used to meet the requirements for a major or secondary concentration in mathematics and are not recommended by this Department for use in meeting certification requirements in teaching secondary school mathematics.

\*No student is permitted to use both MATH 103 and 105 to satisfy the General Education requirements.

**<sup>1</sup>ECM 099 ELEMENTARY ALGEBRA Non-Credit**  
 Review of the fundamental algorithms of whole numbers, integral numbers, rational numbers and elementary algebra. ECM 099 formerly MATH 099.

**<sup>1</sup>MATH 101 INTERMEDIATE ALGEBRA 3**  
 Prereq.: Placement Exam or ECM 099. Review and extension of elementary algebra. A study of functions including their algebraic properties and graphs. Quadratic equations and inequalities are solved and graphed. No credit given to students with credit for MATH 115, 121, 125 or 131.

**<sup>1</sup>MATH 103 NUMBER SYSTEMS 3**  
 Prereq.: ECM 099 or Placement Exam. Nature of mathematics and theory of sets and relations. The natural number system is extended by analysis of its properties to integers, rational numbers and real numbers. Various numeration systems are investigated. No credit given to students with credit for MATH 227. *Mode 2\**

**<sup>1</sup>MATH 105 FUNDAMENTALS OF MATHEMATICS 3**  
 Prereq.: ECM 099 or Placement Exam. This course is intended for those students who are not majoring in mathematics or the natural sciences. It will provide the student an introduction to a broad range of topics in mathematics. No credit given to students with credit for MATH 227 or 228. *Mode 2\**

**<sup>1</sup>MATH 115 TRIGONOMETRY 3**  
 Prereq.: MATH 101 or Placement Exam. Study of relations, functions (special emphasis on the six trigonometric functions), inverses and graphs. An analytic approach to trigonometry using circular functions, angular measures, identities, graphs and inverses. No credit given to students with credit for MATH 221. *Mode 2*

**MATH 121 PRE-CALCULUS MATHEMATICS 3**  
 Prereq.: MATH 115 (may be taken concurrently) or Placement Exam. First course in a unified freshman-sophomore program in mathematical analysis. Properties of the real numbers, relations and functions, exponential and logarithmic functions, mathematical induction and conics. No credit given to students with credit for MATH 125 or MATH 131. *Mode 2*

- MATH 122 CALCULUS I 3  
Prereq.: MATH 121 (C- or higher) or Placement Exam. Limits and continuity, derivatives, applications of derivatives and antiderivatives. No credit given to students with credit for MATH 131. *Mode 2*
- <sup>1</sup>MATH 125 APPLIED CALCULUS I 3  
Prereq.: MATH 101 or Placement Exam. This course is for students majoring in the social, biological, behavioral and managerial sciences. Topics include review of algebra, differentiation and integration. No credit given to students with credit for MATH 122 or 131. *Mode 2*
- <sup>1</sup>MATH 126 APPLIED CALCULUS II 3  
Prereq.: MATH 125. Continuation of MATH 125. Topics include techniques of integration, application of integrals, differential equations and multivariate calculus. No credit given to students with credit for MATH 132 or 221. *Mode 2*
- MATH 131 GENERAL CALCULUS I 3  
Prereq.: MATH 115 or Placement Exam. Topics include review of algebra, limits, continuity, applications of the derivative, exponential and logarithmic functions, antiderivatives and the integral. No credit given to students with credit for MATH 122. *Mode 2*
- MATH 132 GENERAL CALCULUS II 3  
Prereq.: MATH 131. Continuation of MATH 131. Topics include techniques of integration, applications of the integral, infinite series, indeterminate forms and an introduction to differential equations and multivariate calculus. No credit given to students with credit for MATH 221. *Mode 2*
- <sup>1</sup>MATH 140 FINITE MATHEMATICS 3  
Prereq.: STAT104 or 215, two years of high school algebra and Placement Exam. Topics to include those chosen from logic, theory of sets, counting techniques, probability theory, linear equations, linear programming, matrix algebra, graph theory and Markov chains. Emphasis placed on the construction of mathematical models and their applications. *Fall. Mode 2*
- <sup>1</sup>MATH 203 LOGIC AND GEOMETRY 3  
Prereq.: MATH 103. Elementary geometry using "point-set" approach with introduction to logic. No credit given to students with credit for MATH 323 or 333. *Mode 2*
- MATH 221 CALCULUS II 3  
Prereq.: MATH 122 (C- or higher). Continuation of MATH 122. Definite integrals, applications of definite integrals, differentiation and integration of transcendental functions and techniques of integration. *Mode 2*
- MATH 222 CALCULUS III 3  
Prereq.: MATH 221 (C- or higher). Continuation of MATH 221. Techniques of integration, improper integrals, indeterminate forms, infinite series, polar coordinates and parametric equations.
- MATH 227 INTRODUCTION TO ABSTRACT ALGEBRA 3  
Prereq.: MATH 122. Certain fundamental structures such as groups, rings, integral domains and fields are considered.
- MATH 228 INTRODUCTION TO LINEAR ALGEBRA 3  
Prereq.: MATH 122. Vector spaces, systems of linear equations, determinants, linear transformations and matrices are considered.
- MATH 281 DISCRETE MATHEMATICS 3  
Prereq.: MATH 122 or 125 or 131. Topics include logic, induction, recursion, combinatorics, graphs, sets and number theory.
- MATH 300 MATHEMATICS INTERNSHIP 3  
Prereq.: Permission of the Department and a 3.00 or higher Departmental grade-point average. Designed to provide students an opportunity to work in a business environment directly related to their major or specialization. Each student will apply his/her classroom knowledge in mathematics, actuarial science, operations research and/or statistics in an appropriate business setting. Graded on pass-fail basis only.
- <sup>1</sup>MATH 303 LEARNING AND CURRICULUM STUDIES IN MATHEMATICS 2  
Prereq.: MATH 203. Concepts underlying contemporary mathematics curriculum for elementary school. Nature of fundamental operations on set of whole and rational numbers, with additional emphasis on approaches used in leading pupils to understanding of both concepts and processes.
- <sup>1</sup>MATH 305 THE REAL NUMBER SYSTEM 3  
Prereq.: MATH 103. Continuation of MATH 103. Further work with real numbers. Special characteristics of the whole numbers will be discussed. Topics include Fibonacci numbers, Pythagorean triples, approximate numbers, sequences and series. *Fall.*
- <sup>1</sup>MATH 306 DEVELOPMENT OF MATHEMATICAL IDEAS 3  
Prereq.: MATH 305. Continuation of MATH 305. Study of concepts underlying the development of mathematical ideas with emphasis on structure and proof in selected topics from algebra and geometry. *Spring.*
- <sup>1</sup>MATH 307 TOPICS IN MATHEMATICS EDUCATION 3  
Prereq.: MATH 203. An extension of the study of the real number system and development of the complex number system, number theory and probability. Relationships and applications to the elementary and middle school mathematics programs will be emphasized. *Fall.*
- MATH 308 TEACHING MATHEMATICS IN THE MIDDLE SCHOOL 3  
Prereq.: MATH 303 or 327. Study of the concepts underlying a contemporary mathematics program in the middle school with emphasis on both the structure of the mathematics content and the procedures used in teaching for understanding. *Spring.*
- <sup>1</sup>MATH 309 MATHEMATICS THROUGH COMPUTERS 3  
Prereq.: MATH 121 or 203. Use of a computer to enhance and reinforce student's understanding of mathematical concepts. Topics include the use of Logo to investigate geometric concepts, and the exploration of several software packages dealing with algebraic concepts. *Fall.*
- MATH 321 CALCULUS IV 3  
Prereq.: MATH 222 (C- or higher) and 228. Continuation of MATH 222. Two- and three-dimensional vectors, three-dimensional analytic geometry, functions of several variables, partial differentiation, double and triple integrals. No credit given to students with credit for MATH 491.
- MATH 323 COLLEGE GEOMETRY 3  
Prereq.: MATH 221. Elementary logic and Euclidean geometry from a modern viewpoint, with emphasis on the structure of deductive systems and methods of proof. Real number system as a model for Euclidean geometry, betweenness, separations and convexity, measure, congruence, parallelism, similarity and construction. *Fall.*
- MATH 327 FOUNDATIONS OF SECONDARY SCHOOL MATHEMATICS I 3  
Prereq.: Application filed for acceptance to Department (professional education program). Careful study of topics currently found in secondary school mathematics curricula. Topics covered include mathematical systems, number systems, numeration systems, logic and structure of algebra. Emphasis is on underlying concepts which unify content of secondary school mathematics. *Spring.*

- MATH 328 FOUNDATIONS OF SECONDARY SCHOOL MATHEMATICS II 3  
Prereq.: MATH 327. Continuation of MATH 327. Topics considered will be chosen from Algebra II, Geometry and Trigonometry. *Fall.*
- MATH 333 PROJECTIVE GEOMETRY 3  
Prereq.: MATH 122, and 227 or 228. An introduction to the basic concepts of projective geometry and point transformation. Topics include cross-ratio, homographic ranges and pencils, duality, ideal points, conics, poles and polars. *Spring. (O)*
- MATH 335 MATHEMATICS OF FINANCE 3  
Prereq.: MATH 122. Theory and applications of the theory of interest. Topics include simple and compound interest, installment buying, annuities certain, sinking funds, amortization, depreciation, bonds and related securities. *Spring. (E)*
- MATH 374 NUMERICAL METHODS 3  
Prereq.: CS 151, and MATH 125 or 132 (may be taken concurrently). Selected topics from among error analysis, roots of equations, solutions of systems of linear and nonlinear simultaneous equations, numerical integration and differentiation, and use of series. No credit given to those with credit for MATH 222 or to those whose programs require them to complete MATH 222. May not be used for Mathematics major or concentration. *Spring.*
- MATH 398 INDEPENDENT STUDY IN MATHEMATICS 1-3  
Prereq.: MATH 227 or 228, and a 3.00 G.P.A. in mathematics and permission of instructor. Special independent work to meet individual interest in areas not covered by the regular curriculum. Work will be under the supervision of a faculty member and in an area and for an amount of credit agreed upon prior to registration for the course. *On request.*
- MATH 404 TOPICS IN MATHEMATICS 3  
Prereq.: MATH 221 and junior standing. Selected topics in mathematics covering specialized areas not covered in regular course offerings or that go beyond that provided for in the standard curriculum. May be repeated with different topics for up to 6 credits. *Irregular.*
- MATH 411 CLINICAL EXPERIENCE IN MATHEMATICS EDUCATION 1  
Prereq.: MATH 327 or 328 or 308 (may be taken concurrently) or permission of instructor. This course provides the prospective mathematics teacher with an opportunity to gain practical experience in a tutorial or small-group-instruction setting. The student will spend a minimum of three hours each week in the Math Center at CCSU, working one-on-one with small groups of students seeking help with mathematics. The director of the Math Center will coordinate and oversee the activities of students enrolled in this course (including receiving reports from cooperating teachers). May be repeated for up to 4 credits but cannot be taken more than once in any semester.
- MATH 413 TEACHING OF MATHEMATICS IN THE SECONDARY SCHOOL 3  
Prereq.: MATH 327 and acceptance to Department (taken concurrently with student teaching). Problems of teaching secondary school mathematics. Items such as textbooks, modern curriculum, modern programs and trends in teaching mathematics are considered. Considerable time is devoted to discussion of teaching problems as they arise in student teaching. *Fall.*
- MATH 421 HISTORY OF MATHEMATICS 3  
Prereq.: MATH 221. Development of mathematics is traced from arithmetic of commerce, astronomy, geometry and trigonometry in Babylonia, Egypt, Greece and Rome to the later accomplishments in algebra, geometry and calculus. *Spring. (O)*
- MATH 425 MATHEMATICS LABORATORY 3  
Prereq.: Application filed for acceptance to Department. Construction and use in the laboratory of models, materials and instruments which illustrate principles and applications of mathematics. *Summer.*
- MATH 431 TECHNIQUES IN DIAGNOSIS AND REMEDIATION FOR THE TEACHING OF MATHEMATICS — K-12 3  
Prereq.: MATH 303 or 327, and student teaching. This course will train elementary, intermediate and secondary teachers in remediation. The course will use a clinical case study approach so that each student will get a practical as well as a theoretical experience. Topics include identifying the factors related to learning difficulties in mathematics in the cognitive and affective domains, diagnostic tests, identification of the underachiever and case studies.
- <sup>1</sup>MATH 441 INTRODUCTION TO CONCEPTS OF ANALYSIS I 3  
Prereq.: MATH 103. Extension of MATH 103. Equations, inequalities, functions, relations and graphs. *Fall.*
- <sup>1</sup>MATH 442 INTRODUCTION TO CONCEPTS OF ANALYSIS II 3  
Prereq.: MATH 441. Extension of MATH 441. Basic concepts of trigonometric functions of angle and of real numbers and analytic geometry, including polar coordinates. Introduction to calculus and other selected topics. *Spring. (O)*
- <sup>1</sup>MATH 446 INTRODUCTION TO COMPUTERS AND COMPUTER PROGRAMMING 3  
Prereq.: MATH 121 or 125 or 441 or equivalent. Introductory course for those students with a limited mathematics background who desire a basic understanding of a computer, how it relates to everyday life and how to communicate with it. Topics include computer components, computer usage, programming and the computer impact on the many facets of our society. The time-shared terminal will be used. No credit given to Mathematics majors or concentrates (except Elementary concentrates) or to students with credit for MATH 221, 471 or CS 151. *Spring.*
- <sup>1</sup>MATH 449 MATHEMATICS LABORATORY FOR ELEMENTARY SCHOOL 3  
Prereq.: MATH 303 or equivalent, and student teaching. Provides teachers in elementary school with the opportunity to make mathematical models to assist in presenting mathematical concepts. Each participant constructs mathematical models, transparencies for overhead projectors and manipulative devices appropriate to the student's teaching level and interest. Mathematics projects and educational implications are discussed. *Summer.*
- MATH 463 INTRODUCTION TO DIFFERENTIAL EQUATIONS 3  
Prereq.: MATH 222. Methods of solution of ordinary differential equations, including the Laplace Transform. Some elementary applications in geometry, physics and chemistry. *Spring.*
- MATH 466 INTRODUCTION TO RINGS AND FIELDS 3  
Prereq.: MATH 227. An in-depth study of rings and related topics including basic ring theorems, ideals, quotient rings, divisibility theory in integral domains, polynomial rings, simple field extensions and finite fields. *Spring. (O)*
- MATH 468 SYMBOLIC LOGIC 3  
Prereq.: MATH 227 or equivalent. Introduction to truth, validity and argument. Methods of deduction, propositional functions and quantifiers, logic of relations, deductive system and propositional calculus. *Fall. (O)*



- MATH 469 NUMBER THEORY** 3  
Prereq.: MATH 227 or equivalent. Elementary theory of numbers. Divisibility, prime numbers, Fundamental Theorem of Arithmetic, congruences, Diophantine equations, quadratic residues and continued fractions are among topics considered. *Fall. (O)*
- MATH 470 MATHEMATICAL METHODS IN OPERATIONS RESEARCH** 3  
Prereq.: STAT 416 or 216 (may be taken concurrently), and MATH 140 or 228. Selected topics chosen from the areas of linear programming, queuing theory, decision analysis, network analysis and simulation. *Spring. (O)*
- MATH 471 COMPUTER PROGRAMMING** 3  
Prereq.: MATH 221. Introduction to digital computation and programming processes with emphasis on Modula-2 and VAX 11/8600 computer. Oriented toward mathematics. No credit given to students with credit for CS 151. *Fall.*
- MATH 472 COMPUTER SYSTEMS ORGANIZATION** 3  
Prereq.: MATH 471 or CS 151, and MATH 221. This course introduces concepts of assembler language, machine language, macro-instructions, subroutines, program check out, structure of assemblers, use of an operating system and the design of computer systems. Oriented toward mathematics and VAX 11/8600 computer. No credit given to students with credit for CS 254. *Spring.*
- MATH 477 NUMERICAL ANALYSIS I** 3  
Prereq.: MATH 222, and MATH 471 or CS 151. Selected topics including difference operators, iterative methods of finding zeros of functions, interpolation and polynomial approximation, numerical integration and differentiation, matrices and systems of linear equations. No credit given to students with credit for MATH 374. *Fall.*
- MATH 478 NUMERICAL ANALYSIS II** 3  
Prereq.: MATH 477. Continuation of MATH 477 with emphasis on computer solution of problems. *Spring. (E)*
- MATH 479 ELEMENTS OF APPLIED MATHEMATICS** 3  
Prereq.: MATH 222, and MATH 471 or CS 151. The calculus of finite differences. Selected topics from difference operators, summations, interpolation, numerical approximations, gamma, beta and psi functions and the solution of difference equations. *Spring. (O)*
- MATH 483 GENERAL TOPOLOGY** 3  
Prereq.: MATH 222 and 227. Rigorous study of point-set topology. Topics include set theory, definition and basic properties of topological spaces, continuous functions and homeomorphisms. *Fall. (O)*
- MATH 486 COMPLEX VARIABLES** 3  
Prereq.: MATH 222. An introduction to the theory of functions of a complex variable. Topics include the field of complex numbers, complex analytic functions, elementary functions and their mapping properties, integration theory and power series expansion of analytic functions. *Spring. (E)*
- MATH 491 ADVANCED CALCULUS** 3  
Prereq.: MATH 321. Topics from continuity and differentiability of functions of several variables, exterior differential forms, multiple and iterated integration, line integrals, Gauss', Green's and Stokes' Theorems. *Fall. (E)*
- MATH 495 PRINCIPLES OF ANALYSIS I** 3  
Prereq.: MATH 222 and 227. An introduction to functions of a real variable and their properties. Rigorous study of the real number system, topological properties of the real line, Cauchy sequences, limit and continuity properties of a real variable, metric spaces. *Fall. (O)*

## MEDICAL TECHNOLOGY

- MT 410 CLINICAL MICROBIOLOGY** 8  
Includes all the isolation and identification of clinically significant bacteria from all types of clinical specimens. Also covered: parasitology, virology and mycology. Correlation of laboratory findings to disease states emphasized.
- MT 411 HEMATOLOGY** 5  
Comprehensive study of the principles, procedures, special techniques and disease states of the cellular components of the blood. Includes hemostasis.
- MT 412 CLINICAL MICROSCOPY** 1  
Principles of the diagnostic procedures for urine, spinal fluids, feces, gastric contents and other body fluids.
- MT 413 BLOOD BANKING AND IMMUNOHEMATOLOGY** 3  
Study of human blood groups, compatibility testing, component therapy and their relation to transfusion. Emphasis is on problem solving.
- MT 414 CLINICAL CHEMISTRY** 8  
The biochemical analysis of body fluids in health and disease, and the clinical application of test results.
- MT 415 IMMUNOLOGY AND SEROLOGY** 3  
A study of the immune response in health and disease and the use of current techniques for the determination of antigen-antibody reactions.
- MT 416 SPECIAL TOPICS IN MEDICAL TECHNOLOGY** 2  
Investigation of special medical technology subject and/or related topic.

## MODERN LANGUAGE

- ML 408 TEACHING MODERN LANGUAGES IN THE SECONDARY SCHOOLS** 2  
Prereq.: Permission of the Department. Techniques and instructional material for teaching modern languages in secondary schools.
- ML 429 SEMINAR IN MODERN LANGUAGE TEACHING** 3  
Prereq.: Permission of the Department. Theory and practice in teaching modern languages in elementary and secondary schools.
- ML 492 TOPICS IN LANGUAGE TEACHING** 1-3  
Prereq.: ML 408 or 429. Special aspects of language teaching, such as creative uses of the language laboratory and other special aids, individualizing language instruction, teaching of literature and culture in the schools, will be emphasized. Topics may vary from section to section. Course may be repeated, with different topics, for up to 6 credits. *Irregular.*

## MUSIC

\*Fee are subject to change

- MUS 100 SEARCH IN MUSIC** 3  
Introduction to music materials, concepts and styles. Titles and themes may vary from section to section. *Mode 4*
- MUS 109 FUNDAMENTALS OF MUSIC** 3  
Music reading, ear-training and elementary music theory. *Mode 4*

MUS 110	INTRODUCTION TO MUSIC	3	MUS 215	SIGHT SINGING III	1
	Survey of music of Western civilization from the Middle Ages through the 20th century. <i>Mode 4</i>			Prereq.: MUS 116 or equivalent. Continued development of sight-singing skills; expanded tonality and atonal materials. <i>Open only to Music majors. Fall.</i>	
MUS 112	COMPUTER APPLICATIONS TO MUSIC	3	MUS 221	MUSICIANSHIP III	3
	An exploration of music using computer technology. Includes music fundamentals, elementary principles of musical composition, and computer sound synthesis through the use of computers. <i>Mode 4</i>			Prereq.: MUS 122 or equivalent. Harmonic relations continued: chromatic and higher tertian harmony, form and analysis continued, basic principles of orchestration, harmonic dictation. <i>Open only to Music majors. Fall.</i>	
NUS 113	HISTORY OF JAZZ	3	MUS 222	MUSICIANSHIP IV	2
	A survey of the evolution of jazz from its origins in African American, European and American ethnic styles through present models as illustrated through lectures, recordings and related readings. <i>Mode 4</i>			Prereq.: MUS 221 or equivalent. Study of historical forms and contrapuntal techniques through analysis, composition and performance, continuation of orchestration study and ear-training. <i>Open only to Music majors. Spring.</i>	
MUS 115	SIGHT SINGING I	1	MUS 231	MUSIC HISTORY I	2
	Development of sight-singing skills; diatonic major and minor materials. <i>Open only to Music majors. Fall.</i>			Prereq.: MUS 121 or equivalent. A survey of the development of Western music in its historical context from ancient time through 1600. Music majors only. <i>Spring.</i>	
MUS 116	SIGHT SINGING II	1	MUS 232	MUSIC HISTORY II	2
	Prereq.: Music 115 or equivalent. Continued development of sight-singing skills; chromatic and modulatory materials. <i>Spring.</i>			Prereq.: MUS 231 or equivalent. A survey of the development of Western music in its historical context from 1600 through the Rococo Period. <i>Majors only. Fall.</i>	
MUS 121	MUSICIANSHIP I	3	MUS 250	PIANO CLASS I	2
	Basic properties of music with emphasis on melodic materials; study includes stylistic analysis, composition, two- and three-part counterpoint and melodic dictation. <i>Open only to Music majors. Fall.</i>			Introduction to piano through the study of harmonic, melodic and rhythmic patterns. Elementary keyboard skills in sight-reading, transposition and melody harmonization. For students with no previous piano training. <i>Mode 4</i>	
MUS 122	MUSICIANSHIP II	3	MUS 251	PIANO CLASS II	2
	Prereq.: MUS 121 or equivalent. Homophonic texture and diatonic harmonic relations, form and analysis, harmonic dictation. <i>Open only to Music majors. Spring.</i>			Prereq.: MUS 250 or equivalent skill and permission of instructor. Continuation of keyboard skills introduced in Music 250. Repertoire at level of Easy Classic to Moderns, Volume 17. <i>Mode 4</i>	
MUS 140	ENSEMBLE	1	MUS 259	VOCAL METHODS	1
	Prereq.: Permission of instructor. Study and performance for ensembles for various combinations. May be repeated for credit with different content. This course does not satisfy ensemble degree requirements for Music majors <i>Mode 4</i>			Methods and materials of class instruction in voice. <i>Open only to Music majors. Spring.</i>	
MUS 141	CHORUS	1	MUS 261	WOODWIND CLASS I	1
	Open to all students who enjoy singing. Various types of choral works are performed. Different choral literature is studied each semester. May be repeated for credit with different course content. <i>Mode 4</i>			Beginning class instruction in woodwind instruments. <i>Open only to Music majors. Fall.</i>	
MUS 142	BAND—WIND ENSEMBLE	1	MUS 262	BRASS CLASS I	1
	Open to all students who play band instruments. Various types of literature performed. Students must audition for Wind Ensemble. May be repeated for credit with different content. <i>Mode 4</i>			Beginning class instruction in brass instruments. <i>Open only to Music majors. Spring.</i>	
MUS 143	ORCHESTRA	1	MUS 263	PERCUSSION CLASS	1
	Open to all students who play orchestra instruments. Standard orchestral literature will be played. Course may be repeated. Combined credit in Music 140, 141, 142 and 143 is limited to 7 credits. <i>Mode 4</i>			Class instruction in snare drum, tympani and related orchestral and band percussion instruments. <i>Open only to Music majors. Fall.</i>	
MUS 170	THEORY OF MUSIC I	3	MUS 264	VOICE CLASS	2
	Prereq.: MUS 109 or MUS 250 or equivalent. Basic materials of music: pitch, duration, intensity, timbre, envelope. Major-minor tonal systems: scales, keys, intervals, rhythmic studies, triads, melodic analysis and composition. Musicianship: sight-singing, ear-training, beat patterns, melodic dictation. <i>Fall. Mode 4</i>			Instruction in voice production and vocal techniques. Vocalizations for vowels, range, flexibility. Song repertoire for individual members. <i>Fall. Mode 4</i>	
MUS 177	APPLIED MUSIC	1	MUS 267	STRING CLASS: VIOLIN AND VIOLA	1
	Individual instrumental or vocal instruction in performance. <i>Open to non-majors by permission of the instructor. Fee: \$75 per semester*. Mode 4</i>			Methods and materials of class instruction in violin and viola. <i>Open only to Music majors. Fall.</i>	
MUS 178	APPLIED MUSIC-MAJORS	2	MUS 268	STRING CLASS: CELLO AND DOUBLE BASS	1
	Individual instrumental or vocal instruction in performance. <i>Open only to Music majors. Fee: \$150 per semester*.</i>			Methods and materials class instruction in cello and double bass. <i>Open only to Music majors.</i>	

- MUS 270 THEORY OF MUSIC II 3  
Prereq.: MUS 170 or equivalent. Two- and three-part polyphonic structures. Diatonic harmony: four-part chorale writing and analysis. Modal and pentatonic scale systems. Intermediate studies in pitch, duration, intensity, timbre, envelope. Musicianship: sight-singing, ear-training, melodic and harmonic dictation. *Spring. Mode 4*
- MUS 305 MUSIC FOR THE ELEMENTARY CLASSROOM TEACHER 3  
Prereq.: MUS 109 or equivalent. Students may waive Music 109 by taking a simple Placement Test administered by the Music Department. Reinforcement of musical skills and elements. Study and application of classroom techniques and materials.
- MUS 310 MUSIC EDUCATION IN THE ELEMENTARY AND MIDDLE SCHOOLS 3  
Organization, aims, methods and supervision of elementary and middle school programs. Materials and methods for teaching general music in the middle school. *Open only to Music Education majors. Fall.*
- MUS 315 VOCAL MUSIC IN THE SECONDARY SCHOOLS 3  
Organization and aims of the secondary school vocal programs and choral organizations. Special problems of choral conducting and the selecting of choral materials. *Open only to Music majors. Music Education majors will select either Music 315 or 316. Fall.*
- MUS 316 INSTRUMENTAL MUSIC IN THE SECONDARY SCHOOLS 3  
Organization and aims of the secondary school instrumental programs. Special problems of instrumental conducting and the selecting of instrumental materials. *Open only to Music majors. Music Education majors will select either Music 315 or 316. Fall.*
- MUS 321 MUSICIANSHIP V 2  
Study of 20th-century music through analysis, composition and performance; includes expanded tonal, atonal, serial, electronic, aleatory and expanded-medium music. *Open only to Music majors. Fall.*
- MUS 331 MUSIC HISTORY III 2  
Prereq.: MUS 232 or equivalent. A survey of the development of Western music in historical context from the Classic through the Romantic periods. *Music majors only. Spring.*
- MUS 332 MUSIC HISTORY IV 2  
Prereq.: MUS 331 or equivalent. A survey of the development of Western music in its historical context from the post-Romantic Period to the present. *Music majors only. Fall.*
- MUS 350 PIANO CLASS III 2  
Prereq.: MUS 251 or equivalent skill. Continuation of Music 251 with emphasis on keyboard skill. Harmonization of folk melodies, improvising to given chord pattern, sight-reading of community songs. By permission of instructor. *Fall. Mode 4*
- MUS 351 PIANO CLASS IV 2  
Prereq.: MUS 350 or equivalent skill. Continuation of Music 350. Improvisation on more advanced level. Repertoire from various styles of piano literature. By permission of instructor. *Spring. Mode 4*
- MUS 361 WOODWIND CLASS II 1  
Methods and materials of class instruction in woodwind instruments. *Irregular.*
- MUS 362 BRASS CLASS II 1  
Methods and materials of class instruction in brass instruments. *Irregular.*
- MUS 367 CHORAL CONDUCTING 1  
Prereq.: MUS 222 or equivalent. Development of skills in choral conducting and score reading. *Open only to Music majors. Fall.*
- MUS 368 INSTRUMENTAL CONDUCTING 1  
Prereq.: MUS 222. Development of skills in instrumental conducting, baton technique and score reading. *Open only to Music majors. Spring.*
- MUS 390 ORCHESTRATION 2  
Prereq.: MUS 321 or permission of instructor. Techniques and principles of orchestration; both instrumental and vocal arranging. *Open only to Music majors. Spring.*
- MUS 395 COMPOSITION 2  
Prereq.: MUS 321 or permission of instructor. Principles and techniques of music composition, geared to the mature musician; much independent work. *Open only to music majors. Spring.*
- MUS 400 PROJECT IN MUSIC 1-3  
Individual study in an area of student's choice. May take the form of performance, composition, paper, etc. to be determined in consultation with a Music Department adviser. *Both semesters.*
- MUS 401 TOPICS IN MUSIC 1-3  
Prereq.: Permission of instructor. Selected topics in music to include specialized areas not covered in regular course offerings. May be repeated with different topics for up to 6 credits. *Mode 4*
- MUS 421 PERFORMANCE PRACTICE 2  
Prereq.: MUS 321 or equivalent. Examination of contemporary sources from the Renaissance to the 20th century; student creates an authentic performance edition. *Open to Music majors only. Irregular.*
- MUS 430 MOZART AND HAYDN 3  
Prereq.: MUS 110 or equivalent. Historical and analytical study of the composers and selected works. *Irregular. Mode 4*
- MUS 431 BEETHOVEN 3  
Prereq.: MUS 110 or equivalent. Historical and analytical study of the composer and selected works. *Irregular. Mode 4*
- MUS 432 BACH AND HANDEL 3  
Prereq.: MUS 110 or equivalent. Historical and analytical study of the composers and selected works. *Irregular. Mode 4*
- MUS 434 CHAMBER MUSIC 3  
Prereq.: MUS 110 or equivalent. Study of chamber music from the Baroque to the present; selected works of major composers in the medium. *Irregular. Mode 4*
- MUS 435 MUSIC OF THE TWENTIETH CENTURY 3  
Prereq.: MUS 110 or equivalent. Major works of Debussy, Stravinsky, Schoenberg, Bartok, Ives, Stockhausen, Carter, others. *Irregular. Mode 4*
- MUS 436 CHORAL MUSIC 3  
Prereq.: MUS 110 or equivalent. Choral music from the Renaissance to the present; analysis of selected major works in the medium. *Irregular. Mode 4*
- MUS 439 SYMPHONIC MUSIC 3  
Prereq.: MUS 110 or equivalent. Survey of representative works in the medium from the Baroque to the 20th century. *Irregular. Mode 4*
- MUS 441 RESEARCH/BIBLIOGRAPHY SEMINAR IN MUSICOLOGY 1  
Prereq.: MUS 332 or equivalent. Examination of primary and secondary research sources and their application to modern musical scholarship. Representative research projects pursued. *Open to Music majors only. Irregular.*

MUS 470 MUSICAL STRUCTURE AND STYLE 3  
Prereq.: Two semesters of undergraduate theory. A survey of the principles of music theory through analysis of representative forms from various style periods. Emphasis on aural awareness through melodic and harmonic dictation. *Irregular. Mode 4*

MUS 495 ADVANCED COMPOSITION 2  
Prereq.: MUS 395 or permission of instructor. Continuation of Music 395. Principles and techniques of musical composition, emphasis on larger forms and independent work. *Irregular.*

## NURSING

NRSE 300 HEALTH ASSESSMENT 3  
The health assessment course is designed to prepare the registered nurse with the theoretical knowledge and skills necessary to perform a comprehensive assessment. The emphasis will be on comprehensive history taking, interviewing and assessment techniques.

NRSE 301 THEORETICAL FOUNDATIONS OF NURSING 3  
Introduction to the B.S.N. program philosophy, objectives and conceptual framework. Investigation of related nursing theories and their application to nursing practice. An examination of the concept of wellness, nursing process, leadership, teaching and learning as applied to individuals, families and communities.

NRSE 302 PRE-CRISIS FAMILY AND COMMUNITY HEALTH 3  
Prereq.: NRSE 300, 301 and matriculation into the B.S.N. program. The development of nursing process related to individuals, families and communities in pre-crisis with emphasis on health promotion, health teaching, leadership, nursing theory and the implications of nursing research. Must be taken with Nurs. 304 and 306.

NRSE 303 INTRODUCTION TO NURSING RESEARCH 3  
Prereq.: NRSE 301 and matriculation into the B.S.N. program. Basic nursing research design and methodology. Preparation of the professional nurse to be a critical consumer of nursing research and to begin to apply basic nursing research findings to nursing practice.

NRSE 304 PRACTICUM IN FAMILY AND COMMUNITY HEALTH 3  
Prereq.: NRSE 300, 301 and matriculation into the B.S.N. program. The application of nursing process to individuals, families and communities in pre-crisis settings with the emphasis on anticipatory guidance, health promotion, health teaching, the leadership role of the nurse and implications of nursing research. Must be taken with Nurs. 302 and 306. Applications due by March 15 for fall semester or summer session and by October 15 for spring semester.

NRSE 306 PROFESSIONAL TRANSITION IN FAMILY AND COMMUNITY HEALTH 3  
Prereq.: NRSE 300, 301 and matriculation into the B.S.N. program. Development and integration of the professional nursing role in relation to the concepts of wellness in a variety of health care delivery systems. Must be taken with Nurs. 302 and 304.

NRSE 401 TRENDS AND ISSUES 3  
Prereq.: NRSE 301 and matriculation into the B.S.N. program. An analysis and evaluation of trends and issues in health care delivery and nursing with emphasis on accountable professional behavior.

NRSE 402 CRISES AND THEIR RESOLUTION IN FAMILY AND COMMUNITY HEALTH 3  
Prereq.: NRSE 303, 306 and permission of instructor. Theoretical analysis and synthesis of the concepts of nursing process with individuals, families and communities in crisis and post-crisis situations utilizing current theories and nursing research. Must be taken with Nurs. 404 and 406.

NRSE 404 ADVANCED PRACTICUM IN FAMILY AND COMMUNITY HEALTH 3  
Prereq.: NRSE 306 and permission of instructor. Application of the nursing process to individuals, families and communities in crisis and post-crisis situations with emphasis on analyzing and synthesizing all aspects of nursing practice in a variety of settings functioning in a leadership role, applying research findings and selecting appropriate principles of teaching in planning, implementation and evaluation of client care. Must be taken with NRSE 402 and 404.

NRSE 406 PROFESSIONAL NURSING PRACTICE 3  
Prereq.: NRSE 306 and permission of instructor. An analysis of change theory and role development in relation to professional practice in nursing. Must be taken with Nurs. 402 and 406. Applications due by March 15 for fall semester or summer session and by October 15 for spring semester.

NRSE 498 SPECIAL STUDIES IN NURSING 1-6  
Prereq.: Permission of instructor. Individualized plan to aid the learner in attainment of professional goals. Plan may consist of directed study of reading, clinical experience, individual instruction, research or other appropriate activities.

## OFFICE SYSTEMS MANAGEMENT

OS 210 INTRODUCTION TO THE ELEMENTS OF COBOL PROGRAMMING 3  
Introduction to the elements of COBOL programming including rules, conventions, definitions and techniques. No credit for MIS majors. *Fall. [c]*

OS 220 KEYBOARDING 1  
Intensive computer keyboarding skills needed for basic Office Systems Management courses. *Fall. [c]*

OS 230 EDITING SKILLS 1  
Development of word origination skills needed in producing all kinds of written business communications—letters, memos, reports, manuscripts and tables. *Fall. [c]*

OS 310 OFFICE SYSTEMS APPLICATION SOFTWARE 3  
Introduction to various office applications software including selection, operation and evaluation. End-user applications may include word processing, desktop publishing, spreadsheets, data base, presentation graphics, calendar and project management, electronic mail, communications and others. *Fall. [c]*

OS 320 OFFICE SYSTEMS AND TECHNOLOGIES 3  
Overview of office systems—technology, people and procedures—within organizational and environmental contexts. Improvements of productivity through appropriate applications of office tools and techniques is stressed. *Fall. [c]*

OS 330 OFFICE SYSTEMS PLANNING AND IMPLEMENTATION 3  
Prereq.: OS 310 and 320. Planning, development and implementation processes for office systems. Applications of proven methodologies through case or field-based projects. Attention given to intergroup needs related to end-user, departmental, divisional and organizational goals. *Spring. [c]*

OS 350 INTRODUCTION TO RECORDS MANAGEMENT 3  
Orientation to forms and business records management. Includes treatment of systematic control over the creation, distribution, utilization, retention, storage, protection, preservation and final disposition of all types of records within an organization. *Spring. [c]*

- OS 410 INTEGRATED OFFICE SYSTEMS 3  
Prereq.: OS 330 or permission of instructor. Synthesis and applications of concepts related to current office systems topics. *Fall. [c]*
- OS 420 TOPICS IN OFFICE SYSTEMS MANAGEMENT 3  
Advanced concepts and issues relative to office systems management. Content will vary according to changing technological office systems management developments. May be taken twice under different topics. *Fall. [c]*

## PHILOSOPHY

- PHIL 100 SEARCH IN PHILOSOPHY 3  
An introduction to the techniques and perspectives of philosophical inquiry. Title and content may vary from section to section. *Mode 1*
- PHIL 112 INTRODUCTION TO PHILOSOPHY 3  
Reading, writing and discussion in introductory philosophy. *Mode 1*
- PHIL 120 LOGIC AND LANGUAGE 3  
An elementary course dealing with deductive and inductive reasoning, the nature of critical thinking and the relationship between language and reasoning. *Mode 1*
- PHIL 150 SOCRATES 3  
Introduction to the life and philosophy of Socrates, especially as portrayed in Plato's early dialogues. Some attention to other commentators such as Aristophanes, Xenophon, Nietzsche and Kierkegaard. *Mode 1*
- PHIL 225 NATURE, MIND AND SCIENCE 3  
Philosophical problems concerning matter, mind, cosmology, and evolution from ancient times to present. *Fall. Mode 1*
- PHIL 230 GREEK AND ROMAN PHILOSOPHY 3  
Development of European philosophy from the time of the early Greeks to the end of the Roman Empire. *Fall. Modes 1 and 5*
- PHIL 232 MEDIEVAL AND RENAISSANCE PHILOSOPHY 3  
Prereq.: PHIL 230. Development of European philosophy from the Middle Ages to the end of the 16th century. *Spring. (E) Modes 1 and 5*
- PHIL 240 ETHICAL PROBLEMS IN BUSINESS 3  
A critical examination (both practical and theoretical) of contemporary moral problems in business such as ethical investment, questionable foreign payments, disclosure, dumping, mergers, job discrimination, whistle-blowing and big and small business responsibilities and regulations. *Spring. Mode 1*
- PHIL 242 ETHICAL PROBLEMS IN TECHNOLOGY 3  
A critical examination (both practical and theoretical) of contemporary moral problems in technology ranging from modern farming and manufacturing technologies to recombinant DNA, nuclear, modern surgical and computer technologies. *Fall. Mode 1*
- PHIL 244 MORAL ISSUES 3  
Prereq.: PHIL 112 or permission of instructor. A critical examination (both practical and theoretical) of issues arising in the private and public conduct of one's life. Typical issues for examination are abortion, violence, capital punishment and conflicts between personal values and professional duties. *Spring. Mode 1*
- PHIL 248 PHILOSOPHY OF THE ARTS 3  
Prereq.: One course in philosophy or permission of instructor. Philosophical analysis of some of the concepts used in identifying, describing and evaluating both works of art and aesthetic experience: expression, representation, form, content, interpretation. *Fall. (O) Modes 1 and 4*

- PHIL 275 CHINESE PHILOSOPHY 3  
A survey of Chinese philosophy from ancient times to the modern era, including early Confucianism and Taoism, Chinese Buddhist schools, Neo-Confucianism and China's reaction to Western thought. *Spring. (O) Mode 3 [I]*
- PHIL 320 MODERN LOGIC 3  
A study of the techniques of formal logic, followed by a critical examination of the application of formal logic to philosophy. *Fall. Mode 1*
- PHIL 330 SEVENTEENTH AND EIGHTEENTH CENTURY PHILOSOPHY 3  
Prereq.: PHIL 112 or 230 or permission of instructor. Development of European philosophy from the end of the Renaissance to the end of the 18th century. *Spring. Mode 1*
- PHIL 332 19TH CENTURY PHILOSOPHY 3  
Prereq.: PHIL 112 or 330 or permission of instructor. Study of major philosophical problems and trends during the 19th century. Reading and discussion of such philosophers as Hegel, Marx, Mill, Schopenhauer and Nietzsche. *Spring. (E) Mode 1 [I]*
- PHIL 344 HEALTH CARE ETHICS 3  
Prereq.: PHIL 112 or 120 or permission of instructor. Study of ethical theories and principles as applied to topics such as professional-patient relationships, new reproductive technologies, maternal-fetal conflicts, AIDS, informed consent, and allocation of scarce health care resources. *Spring. Mode 1*
- PHIL 345 PHILOSOPHY OF LIFE, DEATH AND DYING 3  
Prereq.: PHIL 112 or 120 or permission of instructor. Moral, conceptual and metaphysical issues of life, death and dying. Topics include the meaning of life in view of the inevitability of death; the patient's right to know; the morality of suicide and euthanasia. *Fall. (O) Mode 1*
- PHIL 346 ETHICAL THEORY 3  
Prereq.: One previous course in philosophy. An examination of problems in ethical theory. *Spring.*
- PHIL 349 PHILOSOPHY OF LAW 3  
The nature of law and of such correlative concepts as legal rights, obligations, responsibility and punishment. The logic of judicial reasoning. The relationship between law and morality. *Fall. (O) Modes 1 and 7*
- PHIL 355 PHILOSOPHY OF RELIGION 3  
Prereq.: PHIL 112 or 120 or permission of instructor. A philosophical examination of some of the major religious concepts, such as God, soul, immortality, faith, etc. *Spring. (O) Mode 1*
- PHIL 365 MARX AND HIS INTERPRETERS 3  
Prereq.: PHIL 112 or 330 or permission of instructor. An examination of Marxism as a philosophy, including its place in the reactions to Hegelianism and the varying 20th century interpretations and developments of it as a tool for analysis of history, economics and society. Readings from the works of Marx will be included. *Irregular. Modes 1 and 7 [I]*
- PHIL 366 EXISTENTIALISM 3  
Some of the important existentialists in the 19th and 20th centuries, focusing on questions concerning human existence, such as freedom, responsibility, anguish, interpersonal relationship and the meaning (or lack of meaning) of human existence itself. *Spring. Modes 1 and 3 [I]*
- PHIL 368 CONTEMPORARY EPISTEMOLOGY AND METAPHYSICS 3  
Prereq.: PHIL 320 and 330, or permission of instructor. A study of relations between language, thought and reality by reference to the works of leading 20th century thinkers, both analytic and others. *Spring.*

PHIL 376 BUDDHIST PHILOSOPHY 3  
 One previous philosophy course recommended. The principle variations of realized enlightenment (viz the Arhat, the Bodhisattva, and the Roshi) will constitute the focus of this examination of the origins and main lines of Buddhist thought as it arose in India and spread to northern and southern Asia. The ethical starting-point of Buddhist thought and its connections with ontology and epistemology will also be studied through introductory texts and readings in the principle Sutras. *Fall. Mode 1 [I]*

PHIL 382 SPECIAL TOPICS IN PHILOSOPHY 3  
 Prereq.: One course in philosophy or permission of instructor. Study of various topics not dealt with in other philosophy courses. *Irregular. Mode 1*

PHIL 400 SEMINAR IN PHILOSOPHY 3  
 Prereq.: PHIL 320 and 330, or permission of instructor. Study of selected topics as announced. *Spring.*

PHIL 492 INDEPENDENT STUDY 1-3  
 Prereq.: Permission of instructor. Individual research in selected topics. Open to any interested student who wishes to pursue a topics of special interest for which the student is qualified. *On request.*

## PHYSICAL EDUCATION

(See other courses under Recreation for students not majoring in Physical Education.)

PE 101 COACHING PERMIT: Legal Liability and Safety Aspects of Coaching 1  
 This course is designed to acquaint the student with a background in legal liability with specific reference to negligence, due process and product liability. *Summer.*

PE 102 COACHING PERMIT: Medical Aspects of Coaching 1  
 This course is designed to acquaint the student with the medical aspects of coaching adolescents. Instruction will include the care of, prevention of and rehabilitation of athletic-related injuries. *Summer.*

PE 103 COACHING PERMIT: Principles and Practices of Coaching 1  
 This course is designed to acquaint the student with the aspects of coaching which deal with the values of athletics in education, ethics, public relations, motivation, aggression and violence, anxiety and stress, and practice sessions. *Summer.*

PE 110 CONCEPTS IN PHYSICAL FITNESS 2  
 Examines the general concepts of health-related physical fitness in a lecture-laboratory setting. *Open to all students. Area C*

PE 111 ORIENTATION TO PHYSICAL EDUCATION 1  
 Examines the history and present status of the profession. Allied fields are reviewed. The course serves a guidance and advisement function.

Activity Courses—open to majors only	Credits
PE 170 PHYSICAL FITNESS	1
PE 171 WEIGHT TRAINING	1
PE 173 BASKETBALL	1
PE 174 SWIMMING	1
PE 175 TRACK AND FIELD	1
PE 180 CARDIOPULMONARY RESUSCITATION	1
PE 271 VOLLEYBALL	1

PE 273 TUMBLING 1

PE 274 GYMNASTICS 1

PE 370 TENNIS 1

PE 371 BADMINTON 1

PE 372 MOVEMENT FUNDAMENTALS 1

PE 374 SOCCER 1

PE 210 PERSONAL AND COMMUNITY HEALTH 2  
 Prereq.: BIO 111. Individual health problems of college students as well as optimum health patterns for the school, community and home. *Area C*

PE 213 ANATOMY IN PHYSICAL EDUCATION 3  
 Prereq.: BIO 111. Study of structure and function of human body with emphasis upon skeletal, muscular, nervous and respiratory systems as applied to P.E. activities. *Area C*

PE 214 PHYSIOLOGY IN PHYSICAL EDUCATION 3  
 Prereq.: PE 213, CHEM 111. Study of the function of the human body with emphasis on the muscular, circulatory, respiratory and nervous systems as applied to physical education activities.

PE 215 PHYSIOLOGICAL ASPECTS OF THE HUMAN PERFORMANCE OF THE AGING 3  
 This course will stress the physiological responses by exercise and the physiological rationale for lifelong physical activities for the aged.

PE 216 KINESIOLOGY 3  
 Prereq.: PE 213, 214, PHYS 111. Analysis and application of principles of mechanics as they relate to motor skills in physical education.

PE 217 CARE AND TREATMENT OF ATHLETIC INJURIES 3  
 Prereq.: PE 213. Prevention and treatment of athletic injuries with opportunity for practical application.

PE 218 SCIENTIFIC BASIS FOR ATHLETIC TRAINING 3  
 Prereq.: PE 217. Conditioning, prevention and care of injuries, use of training room; rehabilitation—mechanical, hydro and electrotherapy. Designed to increase the effectiveness of athletic coach as an athletic trainer. *Spring.*

PE 220 ELEMENTARY CURRICULUM PRACTICUM 3  
 The first part of the course involved a study of the elementary school curriculum in Physical Education. The second portion provides a limited pre-student teaching experience in an elementary setting. *Spring.*

PE 301 RHYTHMICS IN THE ELEMENTARY SCHOOL 3  
 The use of music in all aspects of the elementary school physical education program. Simple instruments such as Tom-Tom, bongo drum and lummi sticks are used. *Spring.*

PE 303 FIRST AID 1  
 Theory and practice of first aid in school and community is presented. Persons who qualify may receive American Red Cross certificates. *Area C*

PE 304 SECONDARY METHODS IN PHYSICAL EDUCATION 3  
 Prereq.: Admission into the Professional Program of Teacher Education. Curricular content of physical education for secondary teaching is discussed and analyzed. Methods and techniques of teaching are presented and opportunities for teaching provided. Course is a prerequisite to student teaching. *Open only to Physical Education majors.*

PE 305	EVALUATION IN PHYSICAL EDUCATION	3	PE 359	COACHING SWIMMING AND DIVING	1
Prereq.: MATH 104 and admission to the program. Measurements in health and physical education. Emphasis on modern tests of physical fitness, skills, knowledge and general motor ability.			Tactics and strategies in coaching interscholastic swimming and diving.		
PE 306	RECREATION AND THE AGING PROCESS	3	PE 360	COACHING TENNIS	1
A study of the needs of the aged as applied to the provisions of recreational services in community and institutional settings. This course will provide methodology in one-to-one and group methods in leisure, fitness or health services for the aging.			Tactics and strategies in coaching interscholastic tennis.		
PE 314	BASEBALL OFFICIATING	2	PE 361	COACHING TRACK: JUMPING EVENTS	1
Rules and techniques of officiating interscholastic and intercollegiate baseball. The course includes field experience and classroom lecture. <i>Fall.</i>			Tactics and strategies in coaching interscholastic track.		
PE 315	PRACTICUM IN ATHLETIC TRAINING I	3	PE 362	COACHING TRACK: RUNNING EVENTS	1
Prereq.: Permission of instructor. Provides 300 clock hours of actual service under the direction of a certified athletic trainer. The student gains practical experience in treating injured athletes.			Tactics and strategies in coaching interscholastic track.		
PE 316	PRACTICUM IN ATHLETIC TRAINING II	3	PE 363	COACHING TRACK: WEIGHT EVENTS	1
Prereq.: PE 217, 315 and permission of instructor. A second 300-clock hour experience providing actual experience under the direction of a certified athletic trainer. The student gains further experience in treating injured athletes.			Tactics and strategies in coaching interscholastic track.		
PE 317	THERAPEUTICS IN ATHLETIC TRAINING	3	PE 400	GRADED CARDIAC EXERCISE TESTING	3
Prereq.: PE 217. Designed to teach the athletic trainer the basic concepts of therapeutic exercise programs used in the athletic training room. <i>Fall.</i>			Prereq.: Permission of instructor. Provides and opportunity to study theories, concepts, procedures and techniques necessary for a cardiologist exercise specialist. Basic understandings of exercise prescription, community programs, intervention and rehabilitation, and cardiac exercise programs will be emphasized. <i>Majors in Physical Education and Health Fitness only.</i>		
PE 332	PSYCHOLOGICAL ASPECTS OF SPORT	3	PE 401	IMPLEMENTATION AND EVALUATION OF HEALTH FITNESS PROGRAMS	3
Psychological aspects of sport participation are reviewed with emphasis on coach and player issues. Topics will include "burn out," stress management, arousal, motivation. Course aims to broaden student background in these topics and the interpersonal relationships between coaches and players at the adolescent and youth sport levels. Majors and concentrates in Physical Education only. <i>Spring.</i>			Prereq.: PE 404, 400. The development and implementation of health/fitness programs in schools, business and community agencies. Organization and administration of health/fitness programs including the key components of exercise, weight control, nutrition, stress management and low-back pain. <i>Majors in Physical Education and Health Fitness only. Fall (E).</i>		
PE 333	COACHING FOOTBALL	2	PE 402	ORGANIZATION AND ADMINISTRATION OF PE	3
Football theory and practice, details of each position, training and managing, techniques of developing offensive and defensive tactics and comparisons of various systems. <i>Fall.</i>			Prereq.: Admission into the Professional Program of Teacher Education. Administrative procedures involved in conducting physical education activities, arranging programs, providing facilities and handling staff-class details, finance, publicity, interscholastic and intramural activities.		
PE 334	COACHING BASKETBALL	2	PE 403	METHODS IN PHYSICAL EDUCATION FOR THE AGING	3
Coaching and training of basketball teams, fundamentals of passing, dribbling, pivoting and shooting; psychology of game and various methods of defense and offense. <i>Fall.</i>			An examination of appropriate activities and methods of teaching physical education for the elderly.		
PE 335	COACHING BASEBALL	2	PE 404	EXERCISE PHYSIOLOGY	3
Techniques of batting, pitching, how to play various positions and strategy of the game. <i>Spring.</i>			Prereq.: PE 213, 214. The physiological factors which affect human performance in physical education and athletics will be studied. The acute and chronic effects of exercise on the respiratory, circulatory and muscular systems will be emphasized. <i>Majors in Physical Education and Health Fitness Studies only. Fall and Spring.</i>		
PE 341	PRACTICUM IN ATHLETIC COACHING	3	PE 405	ELEMENTARY METHODS IN PHYSICAL EDUCATION	2
Prereq.: PE 332. Provides a 300-clock hour practical experience in athletic coaching under the supervision of an established public school coach. Practical application of material learned in the classroom is emphasized.			Prereq.: PE 372 and admission to Professional Program in Teacher Education. Application of the child-centered, problem-solving approach as a method to learning fundamental concepts of movement. Discussion observation and laboratory experience will provide theoretical background. <i>Majors in Physical Education program (B.S.Ed.) only. Fall and Spring.</i>		
PE 353	COACHING BADMINTON	1	PE 406	ADAPTED PHYSICAL EDUCATION	3
Tactics and strategies in coaching interscholastic badminton.			Prereq.: PE 213, 214, 305, 372. An introductory course which surveys the physical education programs which are appropriate for exceptional children. Topics include the obese child, the orthopedically handicapped, children with perceptual motor problems and children who mentally deviate from normal. <i>Spring.</i>		
PE 355	COACHING GYMNASTICS: APPARATUS	1			
Techniques of coaching apparatus events in gymnastics.					
PE 356	COACHING GYMNASTICS: TUMBLING	1			
Techniques of coaching tumbling events in gymnastics.					
PE 357	COACHING SOCCER	1			
Tactics and strategies in coaching interscholastic soccer.					

- PE 407 HUMAN PERSPECTIVES IN SPORT 3  
Prereq.: Senior or graduate status. This course offers students an opportunity to inquire into the nature and expression of man in sport. Topics include the issue of competition and winning, Amateurism vs. Professionalism, the values of sport, causes and results of spectator mania. *Spring*.
- PE 410 TOPICS IN EXERCISE SCIENCE 3  
Prereq.: Permission of instructor. Selected topics in exercise science. May be repeated for a total of 6 credits provided the same topic is not repeated.
- PE 420 PERCEPTUAL AND MOTOR DEVELOPMENT 3  
Prereq.: PSY 235, PE 305, 213, 214, 372. Surveys the information concerning motor learning for the young learner. Special emphasis upon perceptual-motor learning. *Fall*.
- PE 422 MOTOR LEARNING 3  
Prereq.: PSY 235, PE 305, 213, 214. Examines the principles of motor learning which affect skill acquisition on the part of the secondary and post-secondary school learners. *Spring*.
- PE 440 THERAPEUTIC MODALITIES IN ATHLETIC TRAINING 3  
Prereq.: PE 217, 218. Provides the student with the opportunity to study the effects of therapeutic modalities on athletic injuries. Topics will include pain and pain control, basic electrical and mechanical modality principles and modality implications and contraindications. Emphasis will be placed on the safe operation and application of the varied modalities. *Alternate Spring*.
- PE 443 PRACTICUM IN EXERCISE COUNSELING 3  
Prereq.: PE 171, 213, 404, 400. Provides an opportunity for students to gain 150 clock hours of field experience in the Health Fitness Lab conducting prescribed exercise programs, usually for therapeutic and convalescent purposes. *Majors in Physical Education or Health Fitness Studies only. Fall and Spring*.
- PE 444 INTERNSHIP IN HEALTH FITNESS 6  
Prereq.: PE 443, admission to program. An eight-week period of time during the senior year will be spent in a corporate fitness or commercial fitness establishment where the student will demonstrate his/her ability to conduct a fitness/exercise program. *Majors in Physical Education or Health Fitness Studies only. Fall and Spring*.
- PE 445 INTERNSHIP IN ATHLETIC TRAINING 6  
Prereq.: PE 315 and admission to the program. An eight-week period will be spent in an athletic department of the public school or college level where the student will demonstrate his/her ability to conduct an athletic training program.
- PE 490 INDEPENDENT STUDY IN PHYSICAL EDUCATION 1-3  
Prereq.: Senior or graduate standing and permission of Department chairperson. Reading and research in approved topics under the guidance of a member of the Department. May be repeated for a total of 3 credits.

## PHYSICS

- PHYS 111 INTRODUCTORY PHYSICS I 3  
For students who do not plan to major or minor in science. Includes study of selected topics from mechanics, heat, electricity and light and modern physics. Not open to students who have received credit for Sci. 115. Two lectures and one two-hour laboratory per week. *Mode 8*
- PHYS 113 THE SOUND OF MUSIC 3  
An introductory course covering the physical basis of music, sources of sound, transmission and detection of sound waves, characteristics of sensation of sound and their physical correspondents, and general con-

sideration of architectural acoustics. Two lectures and one two-hour laboratory per week. *Spring. Mode 8*

- PHYS 115 PHYSICS OF SAILING 3  
Physical principles which find application in sailing will be studied. Selected readings, discussions, classroom demonstrations, field investigations with models and demonstrations on board sailboats. Two lectures and one two-hour laboratory per week. *Mode 8*
- PHYS 121 GENERAL PHYSICS I 4  
Prereq.: MATH 121 or 125 (may be taken concurrently). Fundamental principles of mechanics and properties of matter; heat and sound. Three lectures and one three-hour laboratory each week. *Mode 8*
- PHYS 122 GENERAL PHYSICS II 4  
Prereq.: PHYS 121. A continuation of PHYS 121; electricity — DC and AC, magnetism, optics and atomic phenomena. Three lectures and one three-hour laboratory per week. *Mode 8*
- PHYS 125 UNIVERSITY PHYSICS I 4  
Prereq.: Math 122 (may be taken concurrently). An introductory course for science/engineering students which uses calculus. Fundamental principles of mechanics, heat and sound. Three lectures and one three-hour laboratory per week. Credit not given to students who have had PHYS 121. *Mode 8*
- PHYS 126 UNIVERSITY PHYSICS II 4  
Prereq.: PHYS 125. Continuation of PHYS 125. The study of electricity, magnetism and optics. Three lectures and one three-hour laboratory per week. *Mode 8*
- PHYS 202 INTRODUCTION TO MATHEMATICAL PHYSICS 3  
Prereq.: MATH 222. Specific applications of differential and integral calculus and vector analysis in various coordinate systems to physical problems in the fields of mechanics, optics, thermodynamics, electromagnetics and quantum mechanics.
- PHYS 220 MECHANICS I 3  
Prereq.: PHYS 122 or 126, MATH 222 (may be taken concurrently). Vector formulation of kinematics and dynamics of particles and rigid bodies. Topics include Newton's laws, momentum, energy, moving coordinate systems, central force motion and the harmonic oscillator. *Spring*.
- PHYS 225 OPTICS 4  
Prereq.: PHYS 122 or 126, MATH 221 (may be taken concurrently). A study of geometrical and physical optics. Topics include lens and mirror theories and applications, interference and diffraction phenomena including holography, and polarization. Matrix methods are employed where applicable. Three lectures and one three-hour laboratory per week. *Fall*.
- PHYS 250 INTERMEDIATE LAB I 1  
Prereq.: PHYS 125, 126 and 220 or 320 (may be taken concurrently). A laboratory course with experiments performed in mechanics, heat and thermodynamics. One three-hour laboratory per week. *Spring*.
- PHYS 305 FOUNDATIONS OF ELECTRICITY & MAGNETISM 3  
Prereq.: PHYS 220 and MATH 222. Electrostatics, circuit theory, electromagnetic fields of steady and alternating currents, solutions of LaPlace's equation, Maxwell's equations and propagation of electromagnetic waves. *Fall*.
- PHYS 320 HEAT AND THERMODYNAMICS 3  
Prereq.: PHYS 122 or 126, MATH 222. Nature and measurement of heat, thermoproperties of matter, thermodynamic processes and introductory statistical mechanics. *Fall*.



PHYS 331 ELECTRONICS I 3  
 Prereq.: PHYS 122 or 126, MATH 221 (may be taken concurrently). A unified treatment of solid state devices and their applications in filters, regulators, power supplies, oscillators, amplifiers and control devices. An introduction to digital circuits such as logic gates. Two lectures and one three-hour laboratory period per week. *Fall.*

PHYS 332 ELECTRONICS II 3  
 Prereq.: PHYS 331. A continuation of PHYS 331. Digital circuitry including flipflops, counters, ADC and DAC, shift registers, microprocessor architecture, instruction set, addressing and interfacing. Two lectures and one three-hour laboratory per week. *Spring (E).*

PHYS 338 DIGITAL SYSTEMS LABORATORY 1  
 Prereq.: CS 376 (may be taken concurrently). Laboratory experiments and designs that lead to understanding of concepts of digital systems, using logical and sequential networks. One three-hour lab per week.

PHYS 339 COMPUTER ELECTRONICS I 4  
 Prereq.: MATH 122 and junior standing. A study of basic electrical elements leading to an understanding of analog and digital circuits used in computers. For computer science, physical science and life science majors. Not open to students with credit for PHYS 331. Three lecture hours and one three-hour lab per week. *Fall. Mode 8*

PHYS 340 COMPUTER ELECTRONICS II 4  
 Prereq.: PHYS 339. The investigation of microprocessor devices, architecture, instruction set, addressing and interfacing. Experimentation with microcomputer systems and peripherals. Three lecture hours and one three-hour laboratory per week. *Spring. Mode 8*

PHYS 350 INTERMEDIATE LAB II 1  
 Prereq.: PHYS 305 or 425 (may be taken concurrently). A laboratory course with experiments in electrical measurements and modern physics (Planck's constant, charge to mass ratio of the electron, Millikan's oil drop experiment, etc.). One three-hour laboratory per week. *Fall.*

PHYS 411 MECHANICS II 3  
 Prereq.: PHYS 220. Mechanics of continuous media, wave motion, special relativity and introduction to Lagrange's and Hamilton's equations. *Spring. (O)*

PHYS 425 MODERN PHYSICS 3  
 Prereq.: PHYS 305. Special theory of relativity; quantum aspects of matter and of electromagnetic radiation, hydrogen atom, optical and X-ray spectra. *Fall.*

PHYS 426 MODERN PHYSICS II 3  
 Prereq.: PHYS 425. PHYS of solid state, statistical mechanics, radioactivity, nuclear models and reactions, and introduction to particle physics. *Spring.*

PHYS 442 ELECTROMAGNETICS 3  
 Prereq.: MATH 222, PHYS 305. Field theory of electromagnetism. Magnetic fields of current, magnetic materials, electromagnetic induction of Maxwell's Equations. *Fall. (O)*

PHYS 450 ADVANCED LABORATORY 1  
 Prereq.: PHYS 331, 425. A study of the 400 kV Van de Graaf accelerator, particle detection electronics and a study of induced nuclear reactions. Once three-hour laboratory per week. *Spring.*

PHYS 452 INDEPENDENT STUDY IN PHYSICS 1  
 Prereq.: Approved plan of study by arrangement with supervising instructor and approval of Department chairperson. Special work in laboratory or theory to meet individual requirements in areas not covered by regular curriculum. May be taken more than one semester up to a limit of 4 credits.

PHYS 470 QUANTUM MECHANICS 3  
 Prereq.: MATH 222, PHYS 425. Introduction to the mathematical and physical foundations of non-relativistic quantum theory. Emphasis will be on the operator formalism of quantum theory, the Heisenberg Uncertainty Principle, the relationship between classical and quantum descriptions and solutions to the Schrodinger equation. *Spring.*

PHYS 480 STUDENT INTERNSHIP IN PHYSICS 3  
 Prereq.: Senior standing and permission of the student's adviser. Restricted to physics majors pursuing the B.A. degree. Students participating in the program will serve as interns obtaining outside industrial and/or research experiences in an environment directly related to their program. Before commencing work, a play of the internship program must be approved by an Advisory Committee of Physics faculty members. *Either semester on demand.*

PHYS 490 TOPICS IN PHYSICS 3  
 Selected studies in physics which are not offered presently in the curriculum of the department. Course may be repeated for different topics. No topic may be taken for credit more than once. *Irregular.*

## POLICE WORK (Human Services)

HS 205 POLICE WORK I 3  
 Applied basic course which will provide a survey and introduction to crime and police work.

HS 206 POLICE WORK II 3  
 Prereq.: HS 205 or permission of instructor. An introduction to the practicalities of Connecticut Criminal Law.

## POLISH

POL 111 ELEMENTARY POLISH I 3  
 Functional approach to grammar. Development of facility in speaking, understanding, reading Polish. Not open to students with one year of high school study. *Fall. Area B [I]*

POL 112 ELEMENTARY POLISH II 3  
 Prereq.: POL 111 or equivalent. Functional approach to grammar. Development of facility in speaking, understanding, reading Polish. Continuation of Polish 111. *Spring. Area B [I]*

POL 125 INTERMEDIATE POLISH I 3  
 Prereq.: One year of college Polish or equivalent. Principles of Polish structure are reviewed. Short stories and poems are read and discussed. Conversation and composition topics given to improve oral and written expression. *Fall. Area B [I]*

POL 126 INTERMEDIATE POLISH II 3  
 Prereq.: POL 125 or equivalent. Continuation of Polish 125. Further work in written and oral expression. *Spring. Area B [I]*

## POLITICAL SCIENCE

PS 104 THE WORLD'S POLITICAL SYSTEMS 3  
 A comparative survey of the structures and functions of the national governments of selected industrialized and Third World nations, such as the U.S., Soviet Union, Britain, France, India, Nigeria and Brazil. Scope and methods of political science and key policy issues will be treated in a comparative context. *Mode 7 [I]*

PS 110	AMERICAN NATIONAL GOVERNMENT	3	PS 338	INTERNATIONAL ORGANIZATION	3
	Structure, functions, services and problems of government and politics at the national level. Required of all majors. <i>Mode 7</i>			Basic assumptions, objectives, growth, problems and prospects of international organizations such as the League of Nations, the U.N. and its specialized agencies, the O.A.S. <i>Irregular. Mode 7 [I]</i>	
PS 230	AMERICAN STATE AND LOCAL GOVERNMENT	3	PS 339	INTERNATIONAL LAW	3
	Organization and major problems of state and local government in the United States with attention to intergovernmental relations, federalism, and contemporary issues. <i>Mode 7</i>			Nature and functions of international law in the international community, in theory as well as in practice. <i>Mode 7 [I]</i>	
PS 231	CONDUCT OF AMERICAN FOREIGN POLICY	3	PS 340	PUBLIC ADMINISTRATION	3
	Theories, processes and problems of American foreign policy and the craft of diplomacy, with special attention to contemporary issues. <i>Mode 7 [I]</i>			Prereq.: PS 104 or 110. A study of administrative theory and the politics of bureaucracy. Assigned readings, field projects and research papers. <i>Mode 7</i>	
PS 232	ANCIENT AND MEDIEVAL POLITICAL THOUGHT	3	PS 341	LABOR AND POLITICS	3
	Political thought from Plato to Machiavelli. <i>Fall. Mode 7</i>			Prereq.: PS 104, 110, 230 or permission of instructor. Examination of the interests, role and activity of organized labor in the political process, with emphasis on regional, state and local issues. Topics include legal structure, labor-management conflicts, ideological perspectives, conflict and discord within the labor movement, and relationships with other interest groups. <i>Irregular. Mode 7</i>	
PS 235	INTERNATIONAL RELATIONS	3	PS 343	POLITICAL LEADERSHIP	3
	Introduction to study of international relations, including international politics, international law and morality, international organization, international conflict and cooperation and the foreign policies of the major powers. <i>Mode 7 [I]</i>			Prereq.: PS 104, 110 or instructor's permission. An analysis of political leadership and its rule in the political process. <i>Mode 7</i>	
PS 240	POLITICAL ORGANIZING	3	PS 344	INTERPRETATION OF POLITICAL DATA	3
	Prereq.: PS 104, 110, 230 or permission of instructor. Study of how to organize, develop and operate political campaigns and movements. Training in practical aspects of politics. Examination of federal and state laws affecting political activity, such as campaign financing and establishment of political action committees. Theories and techniques of mobilizing support, utilizing volunteers, developing media exposure and forming coalitions. <i>Irregular. Mode 7</i>			Prereq.: PS 104, 110 or permission of instructor. Basic introduction to computer applications in political science and use of computers and analytic skills in such areas as domestic and international politics, research, administration, policy studies and political campaigns. <i>Mode 7</i>	
PS 320	POLITICAL DEVELOPMENT IN AFRICA AND LATIN AMERICA	3	PS 345	INTERNATIONAL TERRORISM	3
	Prereq.: PS 104, 110 or permission of instructor. A survey of the process of political development and the impact of economic, social, historical and ideological factors in these two regions. Specific attention will be given to the application of the various models and theories of political development in the course. <i>Mode 7 [I]</i>			An examination of definitions, history, philosophy and theories of international terrorism, as well as tactics and strategies of terrorist groups and responses of governments, with emphasis on policy alternatives and civil liberties dilemmas for democratic countries combatting terrorism. <i>Mode 7 [I]</i>	
PS 330	AMERICAN PARTIES AND INTEREST GROUPS	3	COMM 360	PARLIAMENTARY LAW AND POLITICS	3
	Prereq.: PS 104, 110 or permission of instructor. Historical development and current operation of party organizations in the United States, with attention to voting behavior, interest and pressure groups, influence of news media, etc. <i>Mode 7</i>			See COMMUNICATION.	
PS 331	AMERICAN CONSTITUTIONAL LAW	3	PS 380	CONFLICT AND NEGOTIATION	3
	Prereq.: PS 104 or 110. Great constitutional issues through the study of Supreme Court decisions. Origins of judicial review in <i>Marbury v. Madison</i> to current issues, exclusive of civil liberties. In addition to the traditional case approach, attention is given to a behavioral understanding of judicial decision making. <i>Mode 7</i>			Prereq.: PS 104, 110 or permission of instructor. Forms of conflict between and within nations, such as war and revolution, of tactics (guerilla warfare, terrorism, strikes and civil disobedience), and of conflict resolution (negotiation, diplomacy, arbitration, and bargaining) including both theory and case studies. <i>Mode 7 [I]</i>	
PS 332	CIVIL LIBERTIES	3	PS 415	GOVERNMENT, BUSINESS AND PUBLIC POLICY	3
	Prereq.: PS 104 or 110. Constitutional safeguards of liberty and property. Special attention to privileges and immunities, equality and civil rights. <i>Mode 7</i>			Prereq.: PS 104 or 110. Analysis of the pattern of interaction between business and government in the American administrative and political process, with attention to how we as members of society are affected by and may influence this process. <i>Spring. Mode 7</i>	
PS 334	MODERN POLITICAL THOUGHT	3	PS 430	THE AMERICAN PRESIDENCY	3
	Critical consideration is given to modern political thinkers, origins, developments and present significance. <i>Spring. Mode 7</i>			Prereq.: PS 104, 110 or permission of instructor. Office of President and place in the political system, colonial antecedents and modern counterparts. Emphasis on the presidency's functional and institutional development, contemporary role in politics and public policy, and interplay between man and office. <i>Mode 7</i>	
PS 336	WEST EUROPEAN GOVERNMENTS	3	PS 431	THE LEGISLATIVE PROCESS	3
	Comparison of selected West European political systems, mainly in Britain, France and West Germany. Other countries may be included. <i>Mode 7 [I]</i>			Prereq.: PS 104, 110 or permission of instructor. Structure, behavior and operation of U.S. Congress. Comparison with state legislatures. Interrelationships with Executive and judicial branches. Problems of popular representation. Analysis of growth and expansion of governmental control through social legislations and administrative rule-making. <i>Mode 7</i>	

- PS 432            URBAN POLITICS AND GOVERNMENT            3  
Selected urban conditions and problems such as housing, the racial crisis, power structure, the resolution of conflict, local ideology, inter-governmental relations, partisan politics, group behavior, forms of government, politics of planning, regionalism, transportation and communication. Field research projects. *Mode 7*
- PS 433            TWENTIETH CENTURY  
POLITICAL THOUGHT            3  
Contemporary approaches to political theory, such as socialism, conservatism, liberalism and group therapy. *Mode 7*
- PS 434            GOVERNMENT AND POLITICS OF  
THE MIDDLE EAST AND NORTH AFRICA            3  
Historical background, contemporary setting, political processes and major problems of some of the countries of Middle East and North Africa. *Mode 7 [I]*
- PS 435            THE SOVIET UNION AND  
EASTERN EUROPE            3  
Government and politics of U.S.S.R. and of selected Eastern European countries such as Poland, Hungary and Yugoslavia. *Mode 7 [I]*
- PS 438            POLITICS AND ADMINISTRATION OF  
DEVELOPING NATIONS            3  
Evolution of self-government in former colonial areas of the world with special emphasis on Asia and Africa. *Mode 7 [I]*
- PS 444            POLISH POLITICS AND SOCIETY            3  
Analysis of inter-war socio-political issues and the impact of World War II; the Communist takeover and the Stalinist era; patterns of liberalization and reaction from Gromulka to date. *Mode 7 [I]*
- PS 445            PUBLIC POLICY ANALYSIS  
AND EVALUATION            3  
Prereq.: Permission of instructor or two courses in political science, geography, economics or sociology; plus completion of, or simultaneous registration in, PS 344, Soc. 400 or MATH 125. An investigation in perspectives and methods of measuring public policies.
- PS 446            THE BUDGETARY PROCESS            3  
Prereq.: PS 110 and 340. Examination and analysis of budgeting as an administrative and political process, with attention to techniques and reform efforts.
- PS 447            ADMINISTRATIVE LAW            3  
Prereq.: PS 110. PS 331 and 340 recommended. The study of administrative agencies and legal boundaries within which they operate. Constitutional law and the Uniform Administrative Procedures Act will be applied to agency rule-making and regulation. Current controversies over the role of administrative agencies.
- PS 448            THE POLITICS OF HUMAN SERVICES            3  
A study of the politics and administration of government programs that deal with human problems such as poverty, crime, health, manpower development and housing. *Mode 7*
- PS 480            GOVERNMENT INTERN EXPERIENCE            3  
Prereq.: Junior or senior status with 2.50 grade point average or higher. Students who apply and are admitted to this program are assigned to work in State and local government departments and agencies for a minimum of two days a week. To be taken concurrently with PS 481; not open to students who have completed PS 482 and 483.
- PS 481            INTERN SEMINARS AND RESEARCH            3  
Prereq.: Junior or senior status with 2.50 grade point average or higher. Open only to students concurrently enrolled in PS 480. Seminars and research projects and papers related to work assignments of PS 480.

- PS 482            GOVERNMENT INTERN EXPERIENCE            6  
Prereq.: Junior or senior status; a minimum of 3.00 grade point average unless special Departmental discretionary exception is approved by the Dean of Arts and Sciences. Students who apply and are admitted to this program are assigned to work on a full-time basis, five days per week, with the State legislature or administrative department or agencies. Must be taken concurrently with PS 483; cannot be taken by students who have completed PS 480 and 481. No more than 3 credits may be taken by students who have completed PS 482 may be applied toward a Political Science major.

- PS 483            INTERN SEMINARS AND RESEARCH            6  
Prereq.: Junior or senior status; a minimal 3.00 grade point average unless special Departmental discretionary exception in approved by the Dean of Arts and Sciences. Open only to students concurrently enrolled in PS 482. A series of seminars, assigned readings and completion of a substantial research project related to work assignment of PS 482. No more than 3 credits of PS 483 may be applied toward a Political Science major.

- PS 490            DIRECTED READINGS IN  
POLITICAL SCIENCE            3 or 6  
Prereq.: Permission of instructor. Individual programs of study for students with special abilities or interests in political science. *On demand.*

- PS 491            ADVANCED STUDIES IN  
POLITICAL SCIENCE            1-6  
Prereq.: Permission of instructor. Extensive study of selected problems in political science. *On demand.*

- PS 492            POLICY STUDIES            3  
Prereq.: PS 110 and 340. Analysis and evaluation of specific policy issues at the state and national levels of government. Topics will vary from year to year. If topics differ, may be taken more than once. Not for graduate credit. *Irregular.*

## PSYCHOLOGY

- PSY 112          GENERAL PSYCHOLOGY I            3  
Major areas involved, with emphasis on scientific methods and application to systematic study of human behavior. Required of all Psychology majors and concentrates in the B.A. and B.S. programs. *Mode 6*
- PSY 164          GENERAL PSYCHOLOGY II            3  
Prereq.: PSY 112. Intensive study in general psychology, in areas of sensation, perception, emotion, motivation and higher mental processes. Emphasis on current experimental work in these areas. *Spring. Mode 6*
- PSY 200          LEARNING AND MEMORY            3  
Prereq.: PSY 112. Introduction to theories, methods and research in the study of learning and memory including language and problem solving. *Mode 6*
- PSY 221          RESEARCH METHODS IN PSYCHOLOGY I            3  
Prereq.: PSY 112 and STAT 215. An introduction to research problems in psychology, with an emphasis on experimental designs which employ a single independent variable. Each student will plan an independent research project. Two-hour lecture and two-hour laboratory per week. Required for all Psychology majors. *Fall. [c]*
- PSY 222          RESEARCH METHOD IN PSYCHOLOGY II            3  
Prereq.: PSY 221. Controlled experiments are contrasted with non-experimental designs, such as naturalistic observation, surveys and field studies. Factorial, mixed and multivariate designs are discussed. Each student will complete the independent project proposed in PSY 221. Two hour lectures and two-hour laboratory per week. Required of all Psychology majors. *[c]*

- PSY 235 CHILD AND ADOLESCENT DEVELOPMENT 3  
Human development (physical, emotional, social and intellectual) from infancy through adolescence. No credit given to students with credit for PSY 236. *Mode 6*
- PSY 236 LIFE-SPAN DEVELOPMENT 3  
Human development from conception through old age, considering physical, emotional, social and intellectual factors. No credit given to students with credit for PSY 235. *Mode 6*
- PSY 237 APPLIED PSYCHOLOGY 3  
Prereq.: PSY 112. Application of psychology to selected areas, such as marketing, management, consumer behavior and personal adjustment. *Mode 6*
- PSY 240 THE PSYCHOLOGY OF POLITICS 3  
Examining the process by which political behavior interacts with and influences individual psychological behavior. *Fall. Mode 6*
- PSY 255 PSYCHOLOGY OF LEARNING (ELEMENTARY) 3  
Prereq.: PSY 235. Introduction to psychology of learning for the elementary school teacher. Not open to students who have had or are taking ELED 255.
- PSY 256 PSYCHOLOGY OF LEARNING (SECONDARY) 2  
Prereq.: PSY 235 or 236. Introduction to psychology of learning for the secondary school teacher. Not open to student who have had or are taking EDSEC 256.
- PSY 281 COGNITIVE PSYCHOLOGY 3  
Prereq.: PSY 112. Overview of current theory concerning the processing of information by the human mind. Emphasis placed on relevant contributions from the areas of perception, memory, language and thinking. *Fall. Mode 6*
- NOTE: FOR 300- TO 400-LEVEL COURSES BELOW — JUNIOR STANDING IS RECOMMENDED FOR 300-LEVEL COURSES; JUNIOR OR SENIOR STANDING IS REQUIRED FOR 400-LEVEL COURSES.**
- PSY 330 ABNORMAL PSYCHOLOGY 3  
Prereq.: PSY 112 and one other psychology course. Symptoms, causes and treatment of deviate behavior, anxiety disorders, psychoses, personality disorders, substance abuse disorders.
- PSY 342 SENSORY PROCESSES 3  
Prereq.: PSY 222 (may be taken concurrently). Study of the psychophysical processes by which organisms gather information about their environments. *Spring.*
- PSY 351 PSYCHOLOGICAL TESTS AND MEASUREMENTS 3  
Prereq.: Two courses in psychology and MATH 104. Principles and problems basic to construction, choice and use of psychological measuring instruments, and study of application to diagnosis. *Fall.*
- PSY 362 CHILD PSYCHOLOGY 3  
Prereq.: PSY 235 or 236. Advanced study of special topics in child psychology. Emphasis is on topics in areas of personality development, social learning and cognition, particularly as they relate to behavioral origins in middle childhood.
- PSY 363 ADOLESCENT PSYCHOLOGY 3  
Prereq.: PSY 235 or 236. Research studies pertaining to adolescence, with special emphasis on psychological development and problems characteristic of the age. *Mode 6*
- PSY 365 PSYCHOLOGY OF THE EXCEPTIONAL CHILD 3  
Prereq.: PSY 235 or 236 or equivalent. Psychological characteristics of exceptional children (gifted, retarded, emotionally disturbed, physically handicapped, etc.) with emphasis on implications of these characteristics for classroom procedures. *Mode 6*
- PSY 372 SOCIAL PSYCHOLOGY 3  
Prereq.: Two courses in psychology. Influence of social factors on behavior, cognition and emotions of individuals. Analysis of methods of research in social setting.
- PSY 385 HUMANISTIC PSYCHOLOGY 3  
Prereq.: Two courses in psychology. A study of humanistic approaches to the understanding of behavior. Focus is on the healthy personality and its potential for self-actualization.
- PSY 390 HUMAN BEHAVIOR AND SEXUALITY 3  
A scientific study of human behavior with regard to the sexuality of man and woman in husband-wife, parent-child, peer group relationships, etc. Discussions and readings to include the meaning of human sexuality in areas such as birth control, planned parenthood, premarital sex, the double standard, utilizing an inter-disciplinary approach such as psychology, sociology, science and off-campus professional resource people (physicians, psychiatrists, clergy, attorneys). *Spring. Mode 6*
- PSY 428 PSYCHOLOGY OF ADULTHOOD 3  
Prereq.: PSY 235 or 236. A study of behavior dynamics and developmental processes from early adulthood through old age and death. *Mode 6*
- PSY 429 PSYCHOLOGY OF AGING 3  
An examination of the normal changes in human behavior that occur with biological, cognitive and psychological aging. Course work includes observation in a local facility for elderly persons.
- PSY 435 ORGANIZATION AND PERSONNEL PSYCHOLOGY 3  
A consideration of structure, problems, human behavior and personnel functions in various types of organizations. *Mode 6*
- PSY 440 MOTIVATION 3  
Prereq.: Three courses in psychology. Physiological and psychological variables in selected motivational processes. Problems of measurement, empirical findings and theoretical research. Selected readings in contemporary literature.
- PSY 445 AN INTRODUCTION TO CLINICAL PSYCHOLOGY 3  
Prereq.: PSY 330 and three other psychology courses. Nature of clinical psychological practice with introduction to administration of selected psychological tests.
- PSY 446 INTRODUCTION TO THE PSYCHOLOGY OF COUNSELING 3  
Prereq.: Three courses in psychology. An introduction to the basic assumptions and theoretical approaches in the counseling process. Students wishing to become trained as counselors are advised to contact the Department of Counselor Education and Human Services. *Irregular.*
- PSY 448 PSYCHOLOGY OF WOMEN 3  
A review of research and theories pertaining to the psychology of women. The dynamic aspects of being female in the development of cognitive, emotional, motivational and social behavior is emphasized. Psycho-social implications and consequences of changing sex roles will be examined. *Mode 6*
- PSY 450 PHYSIOLOGICAL PSYCHOLOGY 3  
Prereq.: One laboratory course in biological sciences and two courses in psychology. Analysis of relationships between bodily processes and behavior. *Fall.*

- PSY 454 DRUGS AND BEHAVIOR 3  
Prereq.: PSY 112. Overview of the major classes of psychoactive drugs and their effect on the brain and behavior. Legal drugs such as alcohol and caffeine and illegal drugs are considered. *Fall. Mode 6*
- PSY 460 BEHAVIOR MODIFICATION: THEORY AND PRACTICE 3  
Prereq.: PSY 200 or permission of instructor. Application of learning principles to the modification of both normal and abnormal behavior. The settings for application include areas such as personal, social and marriage counseling; individual and group psychotherapy; formal and informal education and reeducation; personal, vocational and correctional rehabilitation.
- PSY 462 PSYCHOLOGY OF EARLY CHILDHOOD 3  
Prereq.: PSY 235 or 236. Study and observation of young children (birth to age six), with emphasis on the development origins and dynamic processes of behavior within this age range.
- PSY 470 THEORIES OF PERSONALITY 3  
Prereq.: Three courses in psychology. Nature of personality theory and major contemporary theories of personality, including empirical evidence relevant to these theories.
- PSY 475 AN INTRODUCTORY COURSE IN PSYCHOANALYTIC THEORY 3  
Prereq.: PSY 112 or equivalent. A study of psychoanalytic theories. Freud's original formulation of a dynamic theory of personality will be viewed from the perspective of contemporary psychoanalysis. *Irregular.*
- PSY 480 PSYCHOLOGY OF DYING AND DEATH 3  
Prereq.: PSY 112 or equivalent. Psychological issues of death, dying and suicide. Topics include death and denial, fear of death, grief and bereavement, child's and adolescent's view of death, psychological stages of dying and euthanasia. *Mode 6*
- PSY 490 HISTORY AND SYSTEMS OF PSYCHOLOGY 3  
Prereq.: PSY 112, three other courses in psychology and junior standing. Historical study with emphasis on general philosophical bases, development of psychology as an experimental science and comparative analysis of principal modes of psychological inquiry.
- PSY 496 INTERNSHIP IN PSYCHOLOGICAL APPLICATIONS 3  
Prereq.: Written permission of instructor. Supervised work in public and private agencies and institutions requiring the application of psychological principles. A study of appropriate references and a written report of procedures and conclusions required. May be repeated for a total of 6 credits.
- PSY 498 TOPICS IN PSYCHOLOGY 1-3  
Prereq.: Junior, senior or graduate standing or permission of instructor. Study of selected topics in psychology. Topics announced each semester. May be repeated with different topics for a total of 6 credits.
- PSY 499 INDEPENDENT READING AND RESEARCH IN PSYCHOLOGY 1-3  
Prereq.: Junior, senior or graduate standing and written permission of instructor. Directed independent studies in psychology. May be repeated for a total of 6 credits. *On request.*

## QUANTITATIVE ANALYSIS

- QA 201 BUSINESS STATISTICS 3  
Prereq.: STAT 104 Application of statistical analysis as used by the business administrator. Lab arranged.

- QA 420 QUANTITATIVE ANALYSIS FOR BUSINESS DECISIONS 3  
Prereq.: QA 201. The use of quantitative principles for decision making in business. Development of an understanding of the concepts and criteria for making decisions. Emphasis will be on the elements of statistical decision theory, and the use of linear relationships as they apply to production control, inventory control and other management decisions. Discussion will include the advantages and limitations of the quantitative techniques in current use in management situations.

- QA 305 PRODUCTION/OPERATIONS MANAGEMENT 3  
Prereq.: QA 201, MGT 301. Basic principles of productive systems and the analytical techniques which are required in the designing and continual operation of productive systems. Emphasis will be placed upon how these basic principles can be applied to production (manufacturing) and also to service-type industries.

- QA 425 BUSINESS SIMULATION ANALYSIS 3  
Prereq.: MIS 201 and MGT 301. Development, application and evaluation of computer-based decision systems. PERT and CPM network analysis. Simulation as a research and decision-making tool. The use of one of the simulation languages in conjunction with a digital computer.

## READING

- RDG 140 READING EFFICIENCY 3  
Student's reading is analyzed and training is provided to improve vocabulary, comprehension and rate. Study skills needed in college work are given attention. *Area C*

- RDG 200 DEVELOPMENTAL READING IN ELEMENTARY SCHOOL 3  
Prereq.: PSY 235. Physiological and psychological aspects of reading materials and methods applicable for group and individual instruction in Grades 1 through 6.

- RDG 330 TEACHING LANGUAGE ARTS 3  
Prereq.: RDG 200. Developmental aspects of language activity in listening, speaking, writing and reading areas of communication in elementary school. Attention to methods and materials which enhance classroom procedures in language arts.

- RDG 440 TEACHING READING IN SECONDARY SCHOOL 3  
Materials and methods of systematic learning of reading skills through Grade 12.

## RECREATION

### (Physical Education/Health Fitness)

Students in majors other than Physical Education must take 2 credit hours from the following:

General Activity Courses—open to all students Credits  
REC 120-233 are Area D courses.

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|---------|-----------------------------|---|
| REC 120 | PHYSICAL FITNESS ACTIVITIES | 1 |
| REC 121 | CYCLING                     | 1 |
| REC 124 | DOWNHILL SKIING             | 1 |
| REC 141 | VOLLEYBALL                  | 1 |
| REC 142 | SOFTBALL                    | 1 |
| REC 159 | TRAMPOLINING                | 1 |
| REC 160 | RACQUETBALL                 | 1 |
| REC 162 | BADMINTON                   | 1 |
| REC 163 | BOWLING                     | 1 |
| REC 164 | FENCING                     | 1 |
| REC 166 | TENNIS                      | 1 |

REC 168	WEIGHT TRAINING	1
REC 169	GOLF	1
REC 200	BEGINNING SWIMMING	1
REC 230	INTERMEDIATE SWIMMING	1
REC 232	ADVANCED LIFE SAVING	1
REC 233	WATER SAFETY INSTRUCTOR'S COURSE	2

Prereq.: Current Senior Life Saving Certificate.

RUS 225	RUSSIAN COMPOSITION AND DICTION	3
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Prereq.: RUS 126 or instructor's permission. Self-expression by means of frequent compositions in Russian; systematic drills in pronunciation and intonation. *Fall. Area B [I]*

RUS 305	LITERARY MASTERPIECES SINCE 1800	3
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Prereq.: RUS 225 or equivalent. Introduction to major works in Russian literature since 1800. *Spring. Mode 3*

## RELIGIOUS STUDIES

REL 105	DEVELOPMENT OF CHRISTIAN THOUGHT	3
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A critical survey of the central, formative ideas of Christian thought and their development from New Testament times to the present. *Fall. (E) Mode 1*

REL 110	WORLD RELIGIONS	3
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An investigation of the essence of religion, the variety of religious phenomena and systems, and various approaches to the study of religion. *Mode 1 [I]*

REL 111	WORLD RELIGIONS SEMINAR	1
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An in-depth study of materials covered in Religious Studies 110 (World Religions), and essay writing. Open only to students currently enrolled in Religious Studies 110.

REL 220	CONTEMPORARY RELIGIOUS THOUGHT	3
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Prereq.: REL 105, 115 or permission of instructor. A survey of principal religious thinkers who have shaped 20th century religious thought. *Spring. (E)*

REL 357	SPECIAL TOPICS IN RELIGION	3-6
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A study of selected topics in the religion to be announced. Students may not take this course under the same topic more than once. *Fall (O) Mode 1*

See also relevant courses offered in Anthropology, English, History and Philosophy.

## RUSSIAN

RUS 111	ELEMENTARY RUSSIAN I	3
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Elements of Russian linguistic structure. Facility in speaking and understanding the language is developed rapidly by the direct method. Not open to students with one year of high school study. *Fall. Area B [I]*

RUS 112	ELEMENTARY RUSSIAN II	3
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Prereq.: RUS 111 or equivalent. Continued study of Russian linguistic structure with further practice in speaking and writing. Intensive and extensive reading. No credit will be given to students with previous credit for more advanced coursework in Russian except by permission of the Department chairperson. *Spring. Area B [I]*

RUS 125	INTERMEDIATE RUSSIAN I	3
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Prereq.: One year of college Russian or equivalent. Principles of Russian language structure reviewed. Short stories and plays are read and discussed. Conversation and composition based on topics of general interest are practiced as a means of improving oral and written expression. No credit will be given to students with previous credit for more advanced coursework in Russian except by permission of the Department chairperson. *Fall. Area B [I]*

RUS 126	INTERMEDIATE RUSSIAN II	3
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Prereq.: Russ. 125 or equivalent. Continuation of Russian 125. No credit will be given to students with previous credit for more advanced course work in Russian except by permission of the Department chairperson. *Spring. Area B [I]*

RUS 441	ADVANCED ORAL PRACTICE I	3
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Prereq.: Instructor's permission. Development of fluency in oral self expression. Speech analysis to improve pronunciation and intonation. *Fall. [I]*

RUS 442	ADVANCED ORAL PRACTICE II	3
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Prereq.: RUS 441 or instructor's permission. Further practice in oral self-expression. *Spring. [I]*

## SCIENCE AND SCIENCE EDUCATION

SCI 115	GENERAL PHYSICAL SCIENCE	3
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An introduction to the basic principles of physics and chemistry. Two lectures and one two-hour laboratory a week. *Mode 8*

SCI 120	TOPICS IN THE NATURAL SCIENCES	3
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An interdisciplinary, thematic approach to a major subject of current interest. The biological, chemical, earth and physical sciences aspects of the subject will be explored. For students not majoring, minoring or concentrating in the natural sciences. The specific topic to be taught in any semester will be listed and described in the registration materials for that semester. Courses may be repeated for different topics. *Fall. Mode 8*

SCI 412	LEARNING AND CURRICULUM STUDIES IN SCIENCE	2
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Prereq.: BIO 211, E. SCI 111 or any other Earth Science course. Materials of instruction and techniques of guiding children's understanding of environment.

SCI 414	SPECIAL METHODS IN ELEMENTARY SCIENCE	3
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Prereq.: SCI 412 and Intermediate Concentration in Science. Special methods and materials included new science programs which have developed for the teaching of science in the elementary school with special emphasis on the intermediate grades.

SCI 417	TEACHING OF SCIENCE IN THE SECONDARY SCHOOL	2
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Problems related to such matters as science objectives and trends, curriculum materials, textbooks, equipment and visual aids. Discussion of teaching problems as they arise in student teaching.

SCI 418	TEACHING SCIENCE IN THE OUT-OF-DOORS	3
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Prereq.: Two science courses. Development of leadership skills and instructional techniques necessary for teaching science in the outdoor classroom. The methods and materials for developing and conducting an outdoor education program in science is discussed. Three hours a week; field studies are required. *Fall.*

SCI 420	HISTORY OF SCIENCE	3
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Prereq.: Three courses in science or mathematics. Historical development of biological and physical science, interdependence of various areas of science and relations of scientific progress to society.

SCI 425	SCIENCE AND MODERN THOUGHT	3
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A survey of the interaction of the natural sciences and other disciplines and the development of contemporary society. The treatment of scientific topics will be non-technical with emphasis placed on their cultural and intellectual aspects. *Irregular. Mode 8*

SCI 452 INDEPENDENT STUDY IN SCIENCE 1-3  
 Prereq.: Approved plan of study by arrangement with the supervising instructor and approval of a Department chairperson. Includes special work in the laboratory or study of theory to meet the individual requirements in areas not covered by the regular curriculum. May be taken for more than 1 credit up to a limit of 4 credits. *On request.*

SCI 453 ENVIRONMENTAL INTERPRETATION INTERNSHIP 3  
 Prereq.: Prior completion of two field trips to environmental education facilities approved by advisory committee and senior standing. Responsible experiences in an environmental education facility. Before commencing the internship, a plan of the internship must be approved by the Advisory Committee on Environmental Interpretation. Not for graduate credit. *Fall, Spring.*

SCI 485 STUDIES IN SCIENCE 1-3  
 Prereq.: Permission of instructor. Selected studies in the sciences which are not offered presently in the curriculum of the science departments. Course may be repeated for different topics, but the student may not take this course for credit under the same topic more than once.

## SOCIAL SCIENCES

SSCI 315 METHODS IN SOCIAL STUDIES FOR THE MIDDLE SCHOOL 3  
 Open only to majors in Elementary Education. Introduction to the techniques of teaching the skills and concepts from the social science disciplines. *On demand.*

SSCI 420 TEACHING SOCIAL STUDIES IN SECONDARY SCHOOLS 2  
 Prereq.: Acceptance as a major in Social Sciences or History and eligible for student teaching. Concepts, methods and materials for teaching social studies in secondary schools. *Fall, Spring.*

SSCI 450 MIDDLE EAST SEMINAR 3  
 An interdisciplinary seminar in selected Middle Eastern problems.

## SOCIAL WORK

SW 100 SEARCH IN SOCIAL WORK 3  
 Overview of the field of social work. Titles and themes may vary from section to section. Some field volunteer work required. *Mode 6*

SW 226 INTRODUCTION TO SOCIAL WELFARE POLICY 3  
 Introduction to the field of social work, with emphasis on the historical development and current status of social welfare policies. Some volunteer work required. *Fall.*

SW 227 HUMAN BEHAVIOR IN THE SOCIAL ENVIRONMENT 3  
 Prereq.: SW 226, PSY 235 or permission of the instructor. Continuation of PSY 235 with emphasis on developmental stages in the social environment and the role of the social worker. Some volunteer work required. *Spring.*

SW 360 SOCIAL WORK METHODS I: WORKING WITH INDIVIDUALS AND FAMILIES 3  
 Prereq.: SW 226, 227, PSY 235 or permission of instructor and admission to Social Work major. Investigates the relationship between the social worker and the individual in the context of family. Discusses needs assessments and worker intervention strategies with individuals and families. Some volunteer work required. *Fall.*

SW 361 SOCIAL WORK METHODS II: WORKING WITH GROUPS 3  
 Prereq.: SW 226, 227, PSY 235 or permission of instructor and admission to Social Work major. The relationship of the social worker to groups, including small groups, activity and therapeutic groups and large community groups. Discusses group dynamics, including formation, development and termination. Some volunteer work required. *Spring.*

SW 433 INDEPENDENT STUDIES IN SOCIAL WORK 3  
 Prereq.: Senior standing in the Social Work major and permission of the instructor and Department chairperson. Student must present a written study proposal to the Department chairperson at least one week prior to registering for this course. Readings and research in selected areas of social work. Some volunteer work required. *On request.*

SW 435 SOCIAL WORK PRACTICUM 6  
 Prereq.: SW 226, 227, 360, 361, PSY 235 or permission of instructor and demonstrated potential for professional skill. Individual and group projects under the direction of the Social Work faculty, normally undertaken in conjunction with various community and State agencies and designed to give the prospective worker the necessary familiarization with actual social work practices. May be repeated once.

SW 436 THE WORLD OF THE PHYSICALLY DISABLED 3  
 Prereq.: Permission of the instructor. The course will examine both historical and current social perspectives toward this unique population as well as explore societal attitudes, pressures, policies and programs in both the public and private sectors which impinge upon the lives of people with disabilities. *Irregular. Mode 6*

SW 437 SOCIAL WORK WITH CHILDREN 3  
 Prereq.: Permission of the instructor. Examines the role of the social worker in helping to meet the needs and protect the rights of children in relation to child welfare agencies, child guidance clinics and public schools. Students will explore methods of communication with children experiencing problems. *Irregular. Mode 6*

SW 478 CURRENT TOPICS IN SOCIAL WORK 3  
 Prereq.: Permission of instructor. Analysis and evaluation of special topics in the general field of social work. Topics will vary from year to year. If topics vary, may be taken more than once. *Irregular.*

## SOCIOLOGY

SOC 100 SEARCH IN SOCIOLOGY 3  
 Introduction to processes and value systems of sociology. Theme and title may vary from section to section. Cannot be used to meet requirements for the major. *Mode 6*

SOC 110 INTRODUCTORY SOCIOLOGY 3  
 Introduction to the study of society and how people form and change the groups in which they participate. Systematic study of the relations between culture, personality, group structure and the major social institutions. *Mode 6*

SOC 111 SOCIAL PROBLEMS 3  
 Conditions or patterns of behavior that are considered to be harmful to society or its members, about which it is considered that something should be done. Included as possible topics are sexism, physical and mental health, drug and alcohol abuse, sexuality, inequality, discrimination, environmental problems and abuses of power. *Fall. Mode 6*

SOC 217 THEORIES OF SOCIAL ORGANIZATION 3  
 Aa analysis of models of social organization developed by leading classical and contemporary social theorists. Course will focus on the

models developed by such theorists as Karl Marx, Max Weber, Emile Durkheim, George Mead and Erving Goffman, comparing and contrasting their respective contributions. *Mode 6*

SOC 221 THE SOCIOLOGICAL IMAGINATION 3  
An introduction to the research contributions of selected modern sociologists. Emphasis will be upon the examination of both findings and methods of inquiry. *Mode 6*

SOC 231 MINORITIES AND SOCIAL INEQUALITY 3  
Prereq.: SOC 110. Selected minority groups, their history, social and interactional patterns and position in the social structure of the United States. The nature of social inequality and its relationship to minority group status. *Fall. Mode 6*

SOC 232 CITIES AND URBAN LIFE STYLES 3  
Prereq.: SOC 110. An examination of the development of preindustrial cities and how they differ from modern urban areas. Research on differences between suburban and urban life will be explored as well as contrasting lifestyles which coexist within urban areas. Post-World War II policies which helped to lead to many of today's problems will be identified and discussed. *Fall. Mode 7*

SOC 233 THE FAMILY 3  
The family in its social context, including cross-cultural perspectives and theories of family structure and change. The contemporary American family and its emerging alternatives will be studied, with special reference to the family life cycle, and current issues in family studies. *Mode 6*

SOC 234 SOCIAL INTERACTION 3  
Prereq.: SOC 110. Study of social behavior arising out of group contexts. Analysis of development and change of self-concepts and leading theories of social interaction. *Spring. Mode 6*

SOC 235 INTRODUCTION TO THE CRIMINAL JUSTICE SYSTEM 3  
Introduction to the structure and operation of the criminal justice system in the United States. Attention will be focused on the individual and institutional level. Topics include entrance into the criminal justice system, differential treatment of offenders, and the enforcement, judicial and penal subsystems. *Fall. Mode 6*

SOC 240 SEX ROLES AND SEXISM 3  
Sociological and feminist perspectives on gender, sex roles and institutional sexism. Physiology versus sex-role socialization; gender and social institutions (family, poverty, rape and violence, health, crime and deviance, work, language and the media). Sexism as it affects men. The Women's Movement. *Irregular. Mode 6*

SOC 330 SOCIOLOGY OF RELIGION 3  
Prereq.: SOC 110, 221 or Religion concentration. Religion as a sociological phenomenon. Social function of religion and critical analysis of functionalist school. American religious institutions and secularization in modern society. *Spring. (E)*

SOC 331 CRIMINAL PROCEDURE AND THE COURTS 3  
Prereq.: SOC 110, 235. The organization and function of American courts, trial procedures, pre- and post-trial motions; legal procedures regarding arrest, interrogation, search and seizure, constitutional protections for the accused. *Spring.*

SOC 332 THE SOCIOLOGY OF POVERTY 3  
Prereq.: SOC 110. Analysis of poverty conditions and their causes in historical and cross-cultural perspectives. Role of poor in the larger social system and on the way needs and potentialities of the poor are determined. *Spring. Mode 6*

SOC 333 LAW ENFORCEMENT AND SOCIETY 3  
Prereq.: SOC 110, 235. A comprehensive examination of the function of law enforcement in society. Emphasis is placed on such areas as police operations, discretion, police-community relations, due process, use of deadly force, and police corruption and deviance. *On demand.*

SOC 334 AMERICAN SOCIETY 3  
Prereq.: SOC 110. The United States viewed as an advanced technological society in socio-cultural transition. Concentrates upon those major trends which characterize this society's movement into the post-industrial age. *Fall. (E) Mode 6*

SOC 335 POWER, CONFLICT AND SOCIAL CLASS 3  
Prereq.: SOC 110. Exploration of ways in which some groups have dominated others throughout history and how exploitive dynamics continue today. Tactics used to acquire and maintain power, and models of power which purport to describe the distribution of power at the national level in America will be critically evaluated. The relationship between an individual's control of valued economic resources and his or her social power available for everyday interaction will be noted, using samples from such groups as the elderly, women, nonwhites and middle-aged white males. *Fall. (E) Mode 7*

SOC 336 SOCIOLOGY OF DEVIANCE 3  
Prereq.: SOC 110. Deviance as types of persons and behaviors which violate the norms of a social group, as well as attempts to control or limit such persons or behaviors. A historical and cross-cultural perspective will be used to analyze a variety of deviant types of individuals and behaviors. *Mode 6*

SOC 337 SOCIOLOGY OF CRIME 3  
Prereq.: SOC 110. Introduction to field of criminological research and analysis. Combined sociological and historical perspective for analyzing the meaning and commission of crime, function of criminal law and correction, and theoretical explanations of various criminal responses. *Fall. Mode 6*

SOC 338 SOCIOLOGY OF PUNISHMENT 3  
Prereq.: SOC 110. Discussion of rationales used historically to justify various punishments and their manifestations in American society today. The purposes and tasks of agents of social control are addressed as well as the organization of prison life. Alternatives to incarceration are evaluated, and the "treatment" model of dealing with convicted offenders is critically analyzed in terms of who benefits. *Spring. (O) Mode 6*

SOC 339 JUVENILE DELINQUENCY 3  
Prereq.: SOC 110. The social context of juvenile delinquency, including theories of delinquent behavior, significant problem areas, characteristics of delinquent individuals, and the treatment and control of delinquency. *Spring. Mode 6*

SOC 340 SOCIOLOGY OF AGING 3  
Prereq.: SOC 110. Analysis of demographic changes, role shifts, age stereotyping, institutionalization and their implications for the treatment and status of the elderly. Exploration of the processes of aging in the later years, and the impact of the same on people's lives. *Fall. Mode 6*

SOC 400 RESEARCH METHODOLOGY 3  
Prereq.: SOC 110, 221. Research design, hypothesis, formulation, sampling, questionnaire and interview schedule design and application, measurement, collection of data, processing and coding for computer tabulation. *Fall.*



- SOC 401 DEVELOPMENT OF SOCIOLOGICAL THOUGHT 3  
Prereq.: SOC 110. Development of sociological thought from its original evolutionary emphasis to the early 20th century: differences between social and sociological thought. The contributions of Spencer, Marx, Durkeim, Simmel, Weber and selected other classical theorists. *Fall.*
- SOC 402 CONTEMPORARY SOCIOLOGICAL THOUGHT 3  
Prereq.: SOC 110. Sociological thought from early 20th century to present time. Compares and contrasts contemporary schools of sociological thought: consensus, conflict, symbolic interaction and systems theories. *Spring.*
- SOC 410 ANALYSIS AND INTERPRETATION OF SOCIAL DATA 3  
Prereq.: SOC 400. Continuation of SOC 400. Analysis of specific research projects including construction of tables, attitude scales, statistical analysis and inferences, and computer applications. *Spring.*
- SOC 411 POPULATION AND SOCIETY 3  
Prereq.: SOC 110. Investigation of determinants and consequences of demographic trends emphasizing a historical cross-cultural approach. Special attention to population policies. *Fall. Mode 7*
- SOC 433 INDEPENDENT STUDIES IN SOCIOLOGY 3  
Prereq.: Senior standing and permission of instructor. Student must present a written study proposal to the Department chairperson at least three weeks prior to registering for this course. Readings and research in selected field of sociology. *On request.*
- SOC 435 SUPERVISED FIELD STUDIES IN CRIMINAL JUSTICE 3  
Individual or group projects or internships under faculty direction. Undertaken in an organization or program related to the criminal justice system.
- SOC 440 DEATH AND DYING: SOCIOLOGICAL IMPLICATIONS 3  
Prereq.: SOC 110. The different cultural, social and historical perspectives on death and their impact on social roles and institutional change. The problems faced by the health care profession in meeting the needs of the terminally ill and the bereaved. Student will be required to have a field experience with a terminally ill patient and/or bereaved family. *Spring. (E) Mode 6*
- SOC 452 COMPLEX ORGANIZATIONS 3  
Prereq.: SOC 110. Systematic study of large scale, bureaucratic organizations with emphasis on relations among the organization's members, the organization as a social entity, and its social and physical environment. *Spring.*
- SOC 475 SEMINARS IN SOCIOLOGY 3  
Prereq.: SOC 110. An examination of selected topics in sociology. *Irregular.*
- SOC 478 CURRENT TOPICS IN SOCIOLOGY 3  
Prereq.: SOC 110. Analysis and evaluation of special topics in the general field of sociology. Topics will vary from year to year. This is not a seminar. If topics differ, may be taken more than once. *Irregular.*

## SPANISH

\*Not open to speakers of Spanish. See SPAN 190/191.

- \*SPAN 111 ELEMENTARY SPANISH I 3  
Foundations of Spanish phonetics are established through a direct, conversational approach. Not open to student with one year of high school study. *Area B [I]*

- \*SPAN 112 ELEMENTARY SPANISH II 3  
Prereq.: SPAN 111 or equivalent. The study of spoken and written Spanish is continued along with analysis of Spanish language structure. No credit will be given to students with previous credit for more advanced coursework in Spanish except by permission of the Department chairperson. *Area B [I]*
- \*SPAN 114 BASIC SPANISH REVIEW 3  
Prereq.: Two years of Spanish in high school or equivalent preparation. Refresher course in structure patterns and sound systems of the Spanish language. This course does not apply toward the major or minor requirements in Spanish. *Area B [I]*
- \*SPAN 115 CONVERSATIONAL SPANISH I 3  
Prereq.: Two years of high school Spanish or equivalent. Designed to develop language fluency in everyday life situations. Instructional techniques will be used to meet student needs. May not be counted toward a major, minor or concentration. *Irregular. Area B [I]*
- \*SPAN 125 INTERMEDIATE SPANISH I 3  
Prereq.: One year college Spanish or equivalent. Principles of Spanish language structure reviewed. Short stories and plays are read and discussed. Conversation and composition on topics of general interest. No credit will be given to students with previous credit for more advanced course work in Spanish except by permission of the Department chairperson. *Area B [I]*
- \*SPAN 126 INTERMEDIATE SPANISH II 3  
Prereq.: SPAN 125 or equivalent. Continuation of SPAN 125. No credit will be given to students with previous credit for more advanced course work in Spanish except by permission of the Department chairperson.\* *Area B [I]*
- SPAN 190 SPANISH FOR SPANISH SPEAKERS I 3  
Prereq.: Permission of instructor. A course designed to improve diction, reading and writing skills and to study grammar of standard Spanish and dialect variations. Short stories and plays are read and discussed. Eligible Spanish speakers will take this course in place of Spanish 125. *Fall. Area B [I]*
- SPAN 191 SPANISH FOR SPANISH SPEAKERS II 3  
Prereq.: Permission of instructor. Continuation of Spanish 190. Further study of grammar and additional practice in diction, reading and writing. Eligible Spanish speakers will take this course in place of Spanish 126. *Spring. Area B [I]*
- SPAN 225 SPANISH COMPOSITION AND DICTION I 3  
Prereq.: SPAN 126 or instructor's permission. A course to train students in self-expression by means of frequent composition in Spanish, in addition to systematic drills in pronunciation and intonation. *Fall. Area B [I]*
- SPAN 226 SPANISH STRUCTURE AND IDIOM 3  
Prereq.: SPAN 126 or equivalent preparation. A course designed to develop correct idiomatic usage and fluency of expression. *Spring. Area B [I]*
- SPAN 305 LITERARY MASTERPIECES SINCE 1700 3  
Prereq.: SPAN 225 or 226 (may be taken concurrently). Introduction to the major works in Spanish literature since 1700. *Spring. Mode 3*
- SPAN 315 SPANISH CIVILIZATION 3  
Prereq.: SPAN 225 or 226 (may be taken concurrently). Cultural evolution of Spain with emphasis on modern period. *Fall. [I]*
- SPAN 316 LATIN AMERICAN CIVILIZATION 3  
Prereq.: SPAN 225 or 226 (may be taken concurrently). Cultural evolution of Latin America with emphasis on modern period. *Spring. [I]*

SPAN 335 SPANISH COMPOSITION AND DICTION II 3  
Prereq.: SPAN 225. Additional practice in written and oral expression. *Fall. [I]*

SPAN 336 ADVANCED STRUCTURE AND IDIOM 3  
Prereq.: SPAN 226. Additional practice in idiomatic usage and verbal fluency. *Spring. [I]*

SPAN 360 LITERARY MASTERPIECES TO 1700 3  
Prereq.: SPAN 225 or 226 (may be taken concurrently). Introduction to great works of Spanish literature from the Middle Ages to 1700. *Fall. (E) Mode 3*

SPAN 371 POETRY AND DRAMA OF THE GOLDEN AGE 3  
Prereq.: SPAN 305. Outstanding poets and dramatists including Garcilaso de la Vega, Fray Luis de Leon, Lope de Vega, Tirso de Molina and Calderon de la Barca. *Spring. (E)*

SPAN 376 SPANISH AMERICAN LITERATURE II 3  
Prereq.: SPAN 305 or permission of instructor. Readings and interpretation of great works of Spanish American literature from end of Romanticism to present. *Fall. [I]*

SPAN 380 SPANISH LITERATURE OF 18TH AND 19TH CENTURIES 3  
Prereq.: SPAN 305 or permission of instructor. Neo-classic, romantic and realistic movements with selected readings of novel, poetry and drama. *Fall. [I]*

SPAN 410 BUSINESS SPANISH I 3  
Prereq.: SPAN 126 or equivalent. Development of skills geared to specific situations which would be encountered in business offices, foreign firms, travel agencies and the like. *Fall. [I]*

SPAN 411 BUSINESS SPANISH II 3  
Prereq.: SPAN 410 or permission of instructor. Additional practice in the oral and written skills needed for bilingual work situations; emphasis on commercial translation. *Spring. [I]*

SPAN 435 SPANISH PHONETICS AND DICTION 3  
Prereq.: Instructor's permission. Phonetic theory and practice designed to help students improve oral expression. *Fall. [I]*

SPAN 441 ADVANCED ORAL PRACTICE I 3  
Prereq.: Permission of instructor. Development of fluency in oral self-expression. Speech analysis to improve pronunciation and intonation. *Fall. [I]*

SPAN 442 ADVANCED ORAL PRACTICE II 3  
Prereq.: SPAN 441 or permission of instructor. Continuation of SPAN 441. *On request. [I]*

SPAN 451 CONTRASTIVE STRUCTURES OF ENGLISH AND SPANISH 3  
Scientific analysis of Spanish as contrasted with English; phonetic theory, description of morphological systems and syntactic analysis. Applications of these principles to the writing of structural drills and practice therein. *Spring. [I]*

SPAN 460 ADVANCED GRAMMAR AND COMPOSITION 3  
Prereq.: SPAN 335 or equivalent. Course in written expression of Spanish, particularly in idiomatic free composition, designed to establish appreciation for Spanish style and to develop ability to express shades of meaning. *Irregular. [I]*

SPAN 471 20TH CENTURY SPANISH LITERATURE I 3  
Prereq.: Permission of instructor. Detailed study of the Generation of '98. *Fall (O) [I]*

SPAN 472 20TH CENTURY SPANISH LITERATURE II 3  
Prereq.: Permission of instructor. Representative authors and literary movements after the Generation of '98. *Spring (E). [I]*

SPAN 476 CERVANTES 3  
Prereq.: Permission of instructor. *Don Quixote*, with consideration of Cervantes' other writing. *On request.*

## SPECIAL EDUCATION

\*Pending approval

SPED 420 BASIC MANUAL COMMUNICATION I 3  
An introduction to the Manual Alphabet and American Sign Language of the Deaf designed to provide basic skill in non-verbal communication.

SPED 421 BASIC MANUAL COMMUNICATION II 3  
Prereq.: SPED 420 or permission of instructor. A continuation of the Manual Alphabet and American Sign Language for the Deaf designed to provide further skill in non-verbal communication.

SPED 470 EDUCATING THE HANDICAPPED STUDENT 3  
Examines growth and development of exceptional students, including handicapped and gifted and talented, those who may require special education, and methods for identifying, planning for and working effectively with the special needs population in an educational setting. Open to sophomores. Meets State of Connecticut requirement for teacher certification. *Area C*

SPED 480 CHARACTERISTICS AND EDUCATION OF THE EMOTIONALLY DISTURBED 3  
An overview of the education of the emotionally disturbed. Topics include: characteristics, identification, etiology and theoretical approaches.

SPED 481 CHARACTERISTICS AND EDUCATION OF THE LEARNING DISABLED 3  
An overview of the education of the learning disabled. Topics include: characteristics, identification, etiology, types of disabilities and theoretical approaches.

SPED 482 CHARACTERISTICS AND EDUCATION OF THE MENTALLY RETARDED 3  
An overview of the education of the mentally retarded. Topics include: characteristics, identification, classification, etiology, development and theoretical approaches.

SPED 483 APPLIED BEHAVIORAL ANALYSIS IN EDUCATION SETTINGS 3  
Prereq.: Admission to the professional program. Specific procedures for the analysis and modification of student behaviors in regular and special education settings.

SPED 484 EDUCATIONAL ASSESSMENT OF THE EXCEPTIONAL LEARNER I 3  
Prereq.: Admission to the professional program. An in-depth examination of formal and informal assessment materials and techniques used in evaluating self-help skills, processing abilities and academic achievement in individuals with learning and/or behavior problems. Topics include: procedures for test selection and the scoring and interpretation of test results.

SPED 485 EDUCATIONAL ASSESSMENT OF THE EXCEPTIONAL LEARNER II 3  
Prereq.: SPED 480, 481, 482, 484. Further emphasis on the administration and interpretation of assessment instruments. Topics also include data integration, specialized assessment methods and the communication of assessment results.

SPED 486 METHODS AND MATERIALS FOR THE EXCEPTIONAL LEARNER 3  
 Prereq.: RDG 200 or equivalent, SPED 480, 481, 482, 484 and 487. Adapting and creating materials and methods in language arts, mathematics, science, social studies and career/vocational education. Existing materials in these areas will also be examined.

SPED 487 PROGRAM PLANNING AND CURRICULUM FOR THE EXCEPTIONAL LEARNER 3  
 Prereq.: Admission to the Professional Program and SPED 480, 481, 482 and 484. May be taken concurrently. An examination of techniques for classroom organization and planning, writing goals and objectives, developing Individualized Education Programs and organizing and structuring group instruction.

\*SPED 488 PRACTICUM WITH EXCEPTIONAL LEARNERS I 6  
 Prereq.: RDG 200 or equivalent, SPED 480, 481, 482, 483, 484, 486, 487. SPED 483 and 486 may be taken concurrently. Supervised teaching in special education classrooms, agencies or institutions. Attendance at seminars is required. Students must make application to the Special Education office before October 1 (for Spring) and before February 10 (for Fall) and April 15 (for Summer).

\*SPED 489 PRACTICUM WITH EXCEPTIONAL LEARNERS II 6  
 Prereq.: SPED 488. SPED 485 may be taken concurrently. Supervised teaching in special education classrooms, agencies or institutions. This experience will involve a different setting, age group and type of exceptionality from SPED 488. Attendance at seminars is required. Student must make application to the Special Education office before October 1 (for spring) and before February 10 (for fall).

SPED 498 INDEPENDENT STUDY IN SPECIAL EDUCATION 3  
 Directed independent studies in special education. May be repeated for a total of 6 credits.

## STATISTICS

STAT 104 ELEMENTARY STATISTICS 3  
 Prereq.: Placement Exam OR ECM 099. Intuitive treatment of some fundamental concepts involved in collecting, presenting and analyzing data. Topics include frequency distributions, graphical presentations, measures of relative position, measures of variability, probability, probability distributions (binomial and normal), sampling theory, regression and correlation. No credit given to students with credit for STAT 215 or 315. *Mode 2*

STAT 215 STATISTICS FOR THE BEHAVIORAL SCIENCES I 3  
 Prereq.: ECM 099 or Placement Test. An introductory treatment of research statistics used in behavioral sciences. Quantitative descriptive statistics, including frequency distributions, measures of central tendency and variability, correlation and regression. A treatment of probability distributions including binomial and normal. Introduction to the idea of hypothesis testing. No credit given to students with credit for STAT 104 or 315. *Fall. Mode 2*

STAT 216 STATISTICS FOR THE BEHAVIORAL SCIENCES II 3  
 Prereq.: STAT 215 or permission of instructor. Continuation of STAT 215. Survey of statistical tests and methods of research used in behavioral sciences, including parametric and nonparametric methods. *Spring. Mode 2*

STAT 315 MATHEMATICAL STATISTICS I 3  
 Prereq.: MATH 222 (may be taken concurrently). Theory and applications in statistical analysis. Combinations, permutations, probability, distributions of discrete and continuous random variables, expectation and common distributions (including normal).

STAT 416 MATHEMATICAL STATISTICS II 3  
 Prereq.: STAT 315. Continuation of theory and applications of statistical inference. Elements of sampling, point and interval estimation of population parameters, tests of hypotheses and the study of multivariate distributions. *Spring.*

STAT 451 APPLIED STOCHASTIC PROCESSES 3  
 Prereq.: STAT 315 and MATH 228. An introduction to stochastic processes. Topics include Markov, Poisson, birth and death, renewal and stationary processes. Statistical inferences of Markov processes are discussed. *Spring. (E)*

STAT 453 APPLIED STATISTICAL INFERENCE 3  
 Prereq.: STAT 104 or 215 or 315. Statistical techniques used to make inferences in experiments in social, physical and biological sciences and in education and psychology. Topics included are populations and samples, tests of significance concerning means, variances and proportions and analysis of variance. *Fall. MODE 2*

STAT 455 EXPERIMENTAL DESIGN 3  
 Prereq.: STAT 216 or 416. An introduction to experimental designs in statistics. Topics include complete randomized blocks, Latin square and factorial experiments. *Fall. (E)*

STAT 456 STATISTICS LABORATORY 3  
 Prereq.: CS 151 and STAT 216 or equivalent. A study of SAS, one of the major statistical procedures and analysis. *Spring. (E)*

STAT 465 NONPARAMETRIC STATISTICS 3  
 Prereq.: STAT 216 or 416. A general survey of nonparametric or distribution-free test procedures and estimation techniques. Topics include one-sample, paired-sample, two-sample and k-sample problems as well as regression, correlation and contingency tables. Comparisons with the standard parametric procedures will be made and efficiency and applicability discussed. *Fall. (O)*

STAT 467 LINEAR MODELS 3  
 Prereq.: STAT 416 and MATH 228. An introduction to the methods of least squares. Topics include general linear models, least squares estimators, inference and hypothesis testing. *Fall (O)*

STAT 475 MATHEMATICAL STATISTICS III 3  
 Prereq.: STAT 416 or equivalent. Continuation of theory and applications of statistical inference. Advanced topics in the estimation of population parameters and the testing of hypotheses. An introduction to Bayesian methods, regression, correlation and the analysis of variance. *Fall. (E)*

STAT 476 TOPICS IN STATISTICS 3  
 Prereq.: Permission of instructor. Topics depending on interest and qualifications of the students will be chosen from sampling theory, decision theory, probability theory, Bayesian statistics, hypothesis testing, time series, or advanced topics in other areas. May be repeated under different topics to a maximum of 6 credits. *Spring. (O)*

## TECHNICAL COURSES

Laboratory courses designed to develop technical competence; for majors in Technology Education, Industrial Technology and Engineering Technology, and, where indicated, to satisfy Area C General Education requirements.

TC 112 INSTRUMENT DRAWING 3  
Techniques of instrument drawing. Emphasis on lettering, visualization, pencil and ink drawing techniques, pictorial drawing and design layout procedures. May not be substituted for TC 121. [c] Area C

TC 113 INTRODUCTION TO INFORMATION PROCESSING 2  
Concepts of information and principles of processing to increase its value and usefulness. Lecture, demonstration and laboratory experiences include modeling and use of various information systems. Required of all majors in Technology Education. [c] Area C

TC 114 INTRODUCTION TO ENERGY PROCESSING 2  
Survey of energy conversion systems, including aspects of energy transmission and control employed by industry to increase its value and usefulness. Laboratory experiments include development and use of various energy systems. Open to all students. Required of all majors in Technology Education. Area C

TC 118 INTRODUCTION TO MATERIAL PROCESSING 2  
Principles and concepts of how industry changes forms of raw materials to increase value and usefulness. Laboratory work and demonstrations to develop awareness of nature and characteristics of raw materials, thereby permitting associations to be made regarding selection of processes by which materials may be changed. Open to all students. Required of all majors in Technology Education. Area C

TC 121 TECHNICAL DRAFTING 3  
Concepts of precise visual communication as employed in drafting room practice. Required of all majors in Technology Education. [c] Area C

TC 122 COMPUTER AIDED DESIGN FOR CONSTRUCTION 3  
Concepts of Computer Aided Design applied to engineering drawings and schematics for the architectural, civil and electrical systems of the construction industries. A laboratory course utilizing Intergraph/Microstation and AUTOCAD application software or equivalent. [c]

TC 212 GRAPHIC ARTS INDUSTRIES 3  
Introduction to graphic communications. Letterpress, printing, offset lithography, screen process printing, elementary bookbinding, mimeo duplicating and spirit duplicating are discussed. Open to all students. Required of all majors in Technology Education. [c] Area C

TC 213 ELECTRICAL ENERGY 3  
A study of the electrical nature of matter, its conduction and magnetic properties. Focus on the behavior of electricity as a phenomenon. Area C

TC 214 MECHANICAL ENERGY 3  
Prereq.: TC 114 or consent of instructor. A study of laws and concepts involved in the conversion, transmission and control of mechanical energy. Experiences will include the analysis of common mechanical and fluid-mechanical circuits. Area C

TC 215 MATERIALS AND PROCESSING 3  
A laboratory course to develop concepts involved in the efficient processing of multiple materials. Appropriate hand tools and equipment are employed to demonstrate the relationship between materials, properties and processes. Attention is given to procedures common to a variety of manufactured products. Fall. Area C

TC 216 MATERIAL PROCESSING II (METALLICS) 3  
Prereq.: TC 118 or consent of instructor. Comprehensive study of and experiences with those materials which possess metallic characteristics and manufacturing processes. Required of all majors in Technology Education. Area C

TC 217 MATERIAL PROCESSING III (PLASTICS AND CERAMICS) 3  
Prereq.: TC 118 or consent of instructor. Comprehensive study of and experiences with nonmetallic materials which possess, under certain conditions, a degree of plasticity. Synthetic, organic materials (plastics) and inorganic materials (ceramics); and manufacturing processes. Spring. Area C

TC 223 ELECTRICAL CIRCUITS: DC 3  
Prereq.: Math placement equivalent to MATH 111 or higher. DC electrical circuits with emphasis on analysis, modeling and troubleshooting. Fall. Area C

TC 233 ELECTRICAL CIRCUITS: AC 3  
Prereq.: TC 223, MATH 115 and PHYS 111. AC electrical circuits with emphasis on analysis, modeling and troubleshooting. Spring. Area C

TC 255 MATERIALS OF CONSTRUCTION 3  
Prereq.: MATH 115 and IT 150. Investigates the strength and other properties required of various materials used in construction. The testing, proper use and application of aggregates, concrete, structural steel and timber will be emphasized. Area C

TC 261 INTRODUCTION TO GRAPHIC DESIGN AND COLOR 3  
A course designed to introduce the student to typography and typographic design. Design in brochures and packaging will be studied as well as theory and practice of full color printing. Lecture and laboratory. [c]

TC 303 ELECTRO-MECHANICAL CONVERTERS 3  
Prereq.: TC 213, or TC 233, PHYS 121 or permission of instructor. A study of the analysis and design of electric motors, generators, transformers and their control systems, with emphasis on application and performance characteristics. Fall. Area C

TC 313 ELECTRICAL POWER SYSTEMS 3  
Prereq.: TC 213 or 233 or PHYS 122 or permission of instructor. Commercial, industrial and residential applications of the National Electrical Code and Contemporary Wiring practices and techniques. Spring. Area C

TC 316 METALS MACHINING 3  
Prereq.: TC 216 or permission of instructor. Study of and experiences in techniques of machining, precision measurement and heat treatment of metallic materials. [c]

TC 321 COMPUTER-AIDED DRAFTING 3  
Prereq.: TC 112 or 121 or 254 or permission of the instructor. Laboratory-based instruction to the utilization of the computer in preparing architectural, civil, mechanical, electrical, piping and pictorial drawings. [c]

TC 323 ANALOG CIRCUITS 3  
Prereq.: TC 233 or permission of instructor. Analog circuits and their application. Includes the examination of power supplies, amplifiers and oscillators. Fall. [c] Area C

TC 324 FLUID POWER SYSTEMS 3  
A study of the design and fabrication, diagnosis and repair of fluid power systems, including hydraulics, pneumatics and fluidics.

- TC 333 DATA ACQUISITION AND CONTROL 3  
Prereq.: TC 213. An examination of digital electronic and microprocessor-based techniques for data acquisition and control. Interfacing, signal processing and computer communications are included. *Spring*. [c] Area C
- TC 334 MECHANISMS FOR AUTOMATION 3  
A study of the design and fabrication, diagnosis and repair of mechanical power systems, including mechanical transmission and control components. *Fall*.
- TC 342 POROUS PRINTING AND POST-PRESS OPERATIONS 3  
Fundamental operations and related information in post-press printing operations, rubber stamp making, and screen process printing. Study of layout, paper, ink and hand binding. *Area C*
- TC 344 RECIPROCATING ENGINES 3  
Prereq.: TC 114, 214. A study of theory, design, diagnosis and repair of liquid propane gas, diesel and gasoline fueled stationary and mobile reciprocating engines.
- TC 345 RELATED WOOD TECHNOLOGY 3  
Prereq.: TC 215. Comprehensive study of cabinet making, pattern making and upholstery. Experience will include veneering, plastic laminating and wood finishing. Basic characteristics of various period designs will be presented.
- TC 351 ESTIMATING FOR CONSTRUCTION 3  
Prereq.: IT 150, 254. Examination of the role of the construction estimator. Emphasis on pricing labor, material and equipment costs in the areas of sitework, concrete, masonry, steel and carpentry.
- TC 352 GRAPHIC DESIGN AND TYPOGRAPHY 3  
Prereq.: TC 212 or permission of the instructor. The study of type and its relation to paper. Emphasis will be on the relationship of type choice and context, purpose, space, audience and method of printing. Desktop publishing will be examined. [c] *Spring*. *Area C*
- TC 353 CONSTRUCTION SURVEYING 3  
Prereq.: MATH 115. Will provide the student with a series of activities which will acquaint the student with instruments and tools of the surveyor, and their uses in the techniques of field surveying. Emphasis will be on actual layouts of areas and elevations as done in construction.
- TC 355 CONSTRUCTION PLANNING 3  
Prereq.: TC 351. Examination of the role of the construction planner/scheduler. Emphasis on CPM scheduling using arrow and precedence diagram techniques. Procedures associated with determining project completion dates, progress schedule updating and project time reduction.
- TC 371 PLASTICS PROCESSING TECHNIQUES 3  
A study of the manufacturing techniques used in the plastics industry. Emphasis will be placed on the processes of extrusion, injection molding, blow molding, compounding and thermoforming. Correlation between the properties of a material and its processibility will be investigated. [c] *Area C*
- TC 405 APPLIED TECHNICAL TOPICS 1-3  
Prereq.: One related laboratory course. A laboratory-oriented course providing comprehensive study of a selected technological topic. Course may be repeated for maximum of 6 credits for different topics, but students may not take the course under the same topic more than once. *Irregular*.
- TC 414 SIZING AND INSTALLATION OF ACTIVE SOLAR HEATING SYSTEMS 3  
Principles and concepts of the sizing, installation, maintenance, diagnosis and repair of active solar heating systems. Included will be elements of component selection and application with emphasis on the system integrity and structural considerations. Lecture and laboratory. *Area C*
- TC 416 PRINCIPLES OF NUMERICAL CONTROL 3  
Prereq.: TC 316 or permission of instructor. A study of the principles and concepts essential for numerical control part programming and machine tool operations. Laboratory experiences will include word address programming, computer-aided programming and CNC machine tool setup and operation. [c]
- TC 426 PRACTICUM IN TECHNOLOGY EDUCATION 3  
Laboratory course of the analysis, development and implementation of selected content and instructional methods applicable to the teaching of Technology Education.
- TC 433 DIGITAL CIRCUITS 3  
Prereq.: TC 233 or permission of instructor. Digital circuits and their application. Includes the examination of Boolean Algebra, Gate Logic and a variety of special purpose integrated circuits. Not for graduate credit. *Spring*.
- TC 441 ARCHITECTURAL DRAFTING 3  
Prereq.: TC 121. Enables student to prepare specifications and drawings necessary for construction of a dwelling. Introductory experiences in use of survey equipment will be provided. Elements of school building construction and layouts. [c] *Area C*
- TC 442 LITHOGRAPHY 3  
Prereq.: TC 212 or consent of instructor. Photo-offset lithography, covering all phases of lithographic reproduction. Layout, composition, process camera work, platemaking and offset press work. Includes continuous tone photography. [c] *Area C*
- TC 443 ELECTRONIC COMMUNICATION 3  
Prereq.: TC 223, 233 and 323. A study of electronic communication systems. Provides a familiarization with the principles of telephone, AM and FM radio, television and microwave. Laboratory activities concern the design, fabrication, maintenance and servicing of systems. *Spring*.
- TC 444 POWER TRAIN DIAGNOSTICS 3  
Prereq.: TC 114, 124, 364. A study of the automotive clutches, torque counters, driveshafts, differentials, front and rear drive axles and transaxles; manual and automatic transmissions. Includes theory, diagnosis and service procedures. *Spring*.
- TC 445 CONSTRUCTION INDUSTRIES 3  
Prereq.: TC 215. Comprehensive study of carpentry and related construction industries. Emphasis toward gaining modern concept of wood technology. *Spring*.
- TC 446 TOOL & DIE FUNDAMENTALS 3  
Prereq.: TC 416 or permission of instructor. Introductory study of and experiences in design and construction of tools, dies and work-holding devices used in tooling for manufacturing. [c]
- TC 452 GRAPHIC DESIGN AND PRODUCTION 3  
Prereq.: TC 212 or permission of the instructor. The study of the relationship between design and production. Emphasis will be on board layout and design techniques as well as electronic aided layout and design. *Area C*
- TC 453 MICROPROCESSORS 3  
Prereq.: TC 433. A study of microprocessor operation, programming, interfacing and application. Not for graduate credit. *Fall*.

TC 455 CONSTRUCTION PROJECT MANAGEMENT 3  
 Prereq.: TC 352. Examination of the role of the construction project manager. Emphasis on administrative procedures, quality control, time and cost control, resource management, field office practices, construction processing, job site meetings and correspondence.

TC 461 ADVANCED TECHNICAL DRAFTING 3  
 Prereq.: TC 121. Opportunity is offered to students to increase background in drafting techniques and application through study of descriptive geometry, and making of production and illustration-type drawings as used in industry today. [c] Spring. Area C

TC 462 ADVANCED GRAPHIC ARTS TECHNIQUES 3  
 Prereq.: TC 442. Integrated experience of advanced instruction in both letterpress and offset printing. Experiences will include advanced camera work leading to halftone photography, process color photography and other camera manipulations. Cultural and historical aspects of graphic arts and industrial visitations. [c] Area C

TC 463 PROGRAMMABLE LOGIC CONTROLLERS 3  
 Prereq.: Junior standing. Not for graduate credit. A study of programmable sequence controllers, and programmable logic controllers for motion and process control. The role of feedback as a control strategy, regulators and servomechanisms is included. Fall. [c] Area C

TC 471 TECHNICAL ILLUSTRATION AND RENDERING 3  
 Prereq.: TC 121 or 112 or permission of the instructor. The study of pictorial drawings with emphasis on technical illustration and rendering. Shades and shadows, inking and air brushing techniques will be covered. Area C

TC 472 INTRODUCTORY AND PUBLICATIONS PHOTOGRAPHY 3  
 Professional and laboratory course for instructors and students interested in photography. Principles of camera, camera handling, exposure, lighting, taking black-and-white pictures and slides, composition, developing, printing and enlarging. Darkroom plans and equipment listings will be evaluated. Students will prepare black-and-white pictures and slides. Field trips to selected photographic studios. Open to all students. Summer. Area C

TC 474 TRANSPORTATION/MARINE 3  
 A study of marine transportation and marine power train and control systems. Emphasis is on outboard power heads, outboard lower units, stern drives and marine gear assemblies. Also studied will be theory, description of operation, installation and maintenance of various control systems and components used in marine vehicles. Experiences will include the diagnosis and repair of marine systems. Area C

## TECHNOLOGY EDUCATION

Courses designed to develop professional competence; for majors in Technology Education

TE 110 TECHNOLOGICAL SYSTEMS 3  
 A holistic perspective of technological systems and their impacts on social institutions. Focus on human endeavors in the development, use and control of technology. Fall. Mode 5

TE 199 ORIENTATION TO TECHNOLOGY EDUCATION 1  
 Orientation to teaching Technology Education. Develops a sense of professional behavior, purpose and identity. Introduces planning of technical lessons, teaching Technology Education and laboratory safety procedures. Spring.

TE 395 THE SPECIAL NEEDS STUDENT IN TECHNOLOGY EDUCATION 3  
 Introduction of pre-service Technical Education personnel to the problems and concerns associated with the mainstreaming of students with special needs into the Technology Education laboratory. Instructional strategies and laboratory modifications appropriate to the solution of common problems and concerns will be discussed. Field experiences are an integral part of the course. Fall.

TE 399 PROFESSIONAL STRATEGIES OF TECHNOLOGY EDUCATION TEACHING 2  
 Prereq.: Must be taken prior to or concurrent with TE 400; junior or senior standing required. Stresses the background needed for student teaching and professionalism as a teacher of Technology Education. The development, presentation and evaluation of student-prepared lessons unique to TE laboratories will be emphasized. Preparation for student teaching assignments will be included. Fall.

TE 400 TEACHING OF TECHNOLOGY EDUCATION 3  
 Prereq.: Acceptance into the Professional Program. A professional course which stresses preparation for student teaching, or supervised teaching, and objectives, planning techniques and problems of teaching Technology Education at the secondary, middle and elementary school levels. Required of all undergraduate majors in Technology Education, and graduate students in the Technology Education certification program. This course is a prerequisite to student teaching. Fall.

TE 410 COMMUNICATION SYSTEMS 3  
 Prereq.: 24 hours of technical courses including TC 113, 121 and 212, or permission of instructor.  
 Laboratory application of graphic and electronic communication systems which extend human capability with focus on how the individualized components function together as a given system. Research and lab activities will include computer-aided design, desktop publishing, photography and telecommunications. Lecture/lab. Fall. (O)

TC 420 PRODUCTION SYSTEMS 3  
 Prereq.: 24 hours of technical courses including TC 118 and 215, or permission of instructor. Laboratory application of the systems and technical means used to manufacture and construct products. Students will create designs, prototypes, tooling, transport devices, advertising strategies, line production techniques and quality control mechanisms. Lecture/lab. Spring. (E)

TE 428 RESEARCH AND EXPERIMENTATION 3  
 Prereq.: Completion of 18 semester hours of required technical (T.C.) courses. Planning, directing and evaluating effective research procedures with emphasis on the application of research and experimentation to the teaching of Technology Education and its relationship to mathematics, science and social studies. Fall.

TE 430 TRANSPORTATION SYSTEMS 3  
 Prereq.: 24 hours of technical courses including TC 114 and 214, or permission of instructor. Laboratory application of the systems which extend the means of transportation beyond the physical capability of the human body. Includes terrestrial, atmospheric, marine and space transportation technologies and their social, environmental and economic impact. Lecture/lab. Fall. (E)

TE 450 TECHNOLOGICAL ENTERPRISE 3  
 Prereq.: TE 410, 420 and 430, or permission of instructor. Synthesis of the production, transportation and communication systems used to organize and operate an entrepreneurial business endeavor through laboratory application. Lecture/lab. Spring. (O)

TE 459 TECHNOLOGY EDUCATION IN THE ELEMENTARY SCHOOL 3  
 Prereq.: Junior standing. Elective for Technology Education majors who wish to examine technology education activities suitable for elementary school. Integrating such activities with typical grade school curriculums.

# THEATRE

TH 099 THEATRE PRACTICUM No Credit

Prereq.: Theatre major status. Required of Theatre majors each semester. All students must complete a minimum of two practicums in the areas of technical theatre and front-of-house. Participation in theatre production activities, such as acting, directing, technical-backstage, costuming, box-office, ushering and other production concerns. Duties will be assigned each student with hours arranged at beginning of each semester. (This course carries no load credit.)

TH 100 SEARCH IN THEATRE 3

Exposure to ideas, values and experiences in theatre. Concerns may vary from section to section. *Mode 4*

TH 110 INTRODUCTION TO THEATRE 3

Introduction to theatre as a social institution, entertainment medium and art form. Alternate general requirement to introductory courses in art and music. *Mode 4*

TH 111 STAGECRAFT 3

Constructing and rigging scenery for different stages. Two lecture and average of three hours laboratory work per week. *Spring. Mode 4*

TH 115 PLAY PRODUCTION 1

Open to all students who enjoy working on plays. Students may elect to work in stagecraft, lighting, sound, scene painting or properties, costuming, or front-of-house management. An average of three hours laboratory work per week is required. May be repeated for maximum of 6 credits. *Mode 4*

TH 117 LIGHTING 3

Lighting techniques in modern theatre practice. Two lectures and average of three hours laboratory work per week. *Fall. Mode 4*

TH 121 COSTUMING 3

Brief history of costume and constructing costumes. Introduction to design principles. Two lectures and average of three hours laboratory work per week. *Fall. Mode 4*

TH 126 MAKEUP I 2

Laboratory course in stage makeup. Crew assignments on theatre productions are normally required. One two-hour session per week. *Spring (E), Fall (O)*.

TH 135 SPEAKING-VOICE DEVELOPMENT 3

Development of a more relaxed and vibrant speaking voice in dramatic performance through analysis of each student's non-clinical voice-use problems followed by drills and body-voice exercises to free body, breath and vocal tract. *Fall. Mode 4*

TH 143 THEATRE GAMES AND IMPROVISATIONS 3

Theatre games and improvisations to build concentration, relaxation, imagination and the ability to react, leading to heightened awareness and confidence in both exercises and very brief scenes. Exploration of the theatrical moment. *Mode 4*

TH 145 ACTING I 3

Prereq.: Major status or permission of instructor. Concentration, relaxation and freeing the imagination, body and voice. Improvisational exercises for exploration and discovery in relation to acting fundamentals. *Mode 4*

TH 151 DIRECTING I 3

Prereq.: Permission of the instructor. Introduction to script analysis and fundamentals of directing. *Fall. Mode 4*

TH 212 STAGE MECHANICS 3

Prereq.: TH 111 or prior permission of instructor. A study of multi-scene productions, including change-time factors and quick-change systems, as well as unit sets and machinery of the theatre. *Spring. (O) Mode 4*

TH 213 SCENE PAINTING I 1  
Laboratory/studio course in the techniques of painting scenery for the stage. Meets one hour each week. *Fall (O). Mode 4*

TH 214 SCENE PAINTING II 1  
Continuation of Scene Painting I. Meets for one hour each week. *Spring. (O) Mode 4*

TH 217 SCENO-GRAPHIC TECHNIQUES 1  
Prereq.: TH 111. Laboratory/studio course in various methods of graphic presentations of stage sets and designs, including measurements and specifications. Meets one hour each week. *Spring. (E) Mode 4*

TH 235 THEATRE MOVEMENT I 2  
Prereq.: PE 151 or 152 or permission of instructor. Development of an understanding of body placement and projection. Emphasis on body and spatial awareness in relation to environment. What, where, why and how of movement. Interaction of body and mind.

TH 236 THEATRE MOVEMENT II 2  
Prereq.: TH 235. Application of body-space-movement awareness to acting and characterization objectives. Physicalization of a character and movement in a scene. Reinforces and extends organic connections in characterization, assisting the actor to find the organic reality of his character.

TH 238 ADVANCED VOICE DEVELOPMENT 3  
Prereq.: TH 135. Expanding and developing range, flexibility and vibrancy of the speaking voice in dramatic performance. Development of effective articulation. TH 239 should be taken concurrently. *Spring. Mode 4*

TH 239 VOICE TUTORIAL 1  
Prereq.: TH 135 plus B.F.A. Acting major status or permission of instructor. Tutorial to solve speaking-voice problems through individual lessons and vocal coaching. May be repeated for a total of 6 credits.

TH 246 ACTING II 3  
Prereq.: TH 145. Emphasis on basic techniques of acting; introduction to scene study and characterization. *Spring.*

TH 251 STAGE MANAGEMENT 1  
Prereq.: TH 111 and 151. Study of function, duties and methods of operation of the stage manager, to include a study of the Actor's Equity Association contract.

TH 316 SCENE DESIGN 3  
Prereq.: TH 111 and 217 and Departmental permission. Designing scenery for various kinds of stages and plays. Work on ground plans and elevations, perspective drawing and finished design. *Fall. (E)*

TH 318 LIGHTING DESIGN 3  
Prereq.: TH 111, 117. Lighting design and layout for the proscenium, open and arena stages. Special emphasis on design problems, equipment and control systems. *Spring. (O)*

TH 327 MAKEUP II 2  
Prereq.: TH 126 or prior permission of instructor. Open to Theatre majors only. Advanced makeup projects with attention to mask building and prosthesis. Crew assignments on theatre productions are normally required. One two-hour session per week. *Fall. (E)*

TH 335 READER'S THEATRE 3  
Chamber or group theatre presented orally in theatre setting. Public performances part of course. *Irregular.*

TH 336 STAGE DIALECTS 3  
A survey of dialects for stage use with mastery of a select few. Dialect drills, practice and performance. *Spring. (E)*

TH 347 ACTING III 3  
Prereq.: TH 238, 246 or prior permission of instructor. Performance considerations in scene study and character development, with emphasis on contemporary plays. *Spring. (E)*

TH 352 DIRECTING II 3  
Prereq.: TH 151 or permission of the instructor. Production procedures, coaching methods and modern styles of interpretation. Class-work will include preparation of short scenes. *Spring.*

TH 373 THEATRE SURVEY I 3  
Prereq.: TH 110 or major or concentrate status. Theatre from 18th century to present day, including physical theatre, audiences, acting style and other elements of production. Representative plays from standpoint of performance. *Fall.*

TH 374 THEATRE SURVEY II 3  
Theatre from Greeks to 18th century. *Spring. (E)*

TH 455 MIME 3  
Prereq.: Theatre major and junior-senior standing for full-time students. Introduction to illusionary, isolation and technical elements of mime. Body movement as it relates to characterization, physical conditioning and circus skills. Introduction to clown work.

TH 447 ACTING IV 3  
Prereq.: TH 347 and Departmental permission. Performance considerations in scene study and role development, with emphasis on plays of varying styles and different periods. *Fall. (O)*

TH 449 PROFESSIONAL ACTOR PREPARATION 3  
Prereq.: TH 347 and permission of the instructor. Preparation and study of audition materials, resumes, portfolios, photos, interview techniques, agents, contracts and statistics as part of the student actor's readiness to face the professional job market. *Fall. (O)*

TH 470 HISTORY OF AMERICAN THEATRE 3  
American theatre from Colonial times to present, including physical theatre, audiences, acting and directing styles, and other elements of production. Representative plays from standpoint of performance. *Spring. (O)*

TH 481 PROJECTS: SCENERY 1-3  
Prereq.: TH 316 and Departmental permission. Individual projects in reading, research or production under guidance of member of Theatre staff.

TH 482 PROJECTS: COSTUMING 1-3  
Prereq.: TH 322 and Departmental permission. Individual projects in reading, research or production under guidance of member of Theatre staff.

TH 483 PROJECTS: ACTING A 1-3  
Prereq.: TH 347 and junior standing and Departmental permission. Individual projects in reading, research or production under guidance of member of Theatre staff.

TH 484 PROJECTS: ACTING B 1-3  
Prereq.: TH 483 and Departmental permission. Individual projects in reading, research or production under guidance of member of Theatre staff.

TH 485 PROJECTS: DIRECTING I 3  
Prereq.: Directing II (TH 352) and Departmental permission. Individual works as assistant director and stage manager for faculty-directed major production.

TH 486 PROJECTS: LIGHTING/SOUND, STAGE MANAGEMENT 1-3  
Prereq.: TH 318 and Departmental permission. Individual projects in reading, research or production under guidance of member of Theatre staff.

TH 487 PROJECTS: RESEARCH 1-3  
Prereq.: TH 374 or 470 or Departmental permission. Individual projects in reading, research or production under guidance of member of Theatre staff.

TH 488 PROJECTS: DIRECTING II 3  
Prereq.: TH 385 and Departmental permission. Individual direction of student production under faculty supervision.

TH 489 STUDIES IN THEATRE/DRAMA 3  
Prereq.: Prior permission of instructor. Selected area of theatre and/or drama not covered in other courses. Topic varies. May be repeated for credit. *Irregular. Mode 4*

TH 490 SUMMER THEATRE WORKSHOP 3 or 6  
Prereq.: Permission of instructor. Students in Summer Theatre Workshop learn theatre by participating in a true summer theatre production program. The core of the production company is comprised of faculty directors and designers. Enrollees in Summer Theatre Workshop work side-by-side with this highly experienced core company, filling out the cast and production staffs as needed. The faculty of the program endeavors to utilize students according to their desires and abilities. May be repeated for additional credit. *Summer only. Mode 4*

## TYPEWRITING

SA 190 PERSONAL TYPEWRITING 3  
Development of basic keyboarding/typewriting skills and related business applications. Three periods weekly. *Area C*

## VOCATIONAL-TECHNICAL EDUCATION

Courses designed to develop professional competence; for majors in Vocational Technical Education.

VTE 113 ANALYSIS AND TEACHING OF VOCATIONAL-TECHNICAL EDUCATION I 3  
Basic introductory course for students in Vocational Education. First principles of teaching and learning and their applications in the development of instructional objectives, occupational analysis techniques, progress records, skill and informational lesson plans, instructional sheets, written and performance tests and grading systems. (Those individuals who are employed at least half-time as vocational instructors in a public school system should take this course concurrently with VTE 117.)

VTE 116 ANALYSIS AND TEACHING OF VOCATIONAL-TECHNICAL EDUCATION II 3  
Prereq.: VTE 113. Additional development and application of principles and practices introduced in VTE 113. The selection and/or development of audio-visual materials, learning activity packages and techniques of individualizing instruction. Students develop and present planned lessons utilizing lecture-discussion and lecture demonstration techniques. (Those individuals who are employed at least half-time as vocational instructors in a public school system should take this course concurrently with VTE 118.)

VTE 117 SUPERVISED TEACHING FOR VOCATIONAL-TECHNICAL EDUCATION I 3  
Prereq.: VTE 113 or taken concurrently and employed at least half-time as a vocational teacher in a public school system. Beginning instructors in the vocational technical programs teach for one semester under the supervision of Central Connecticut State University TVTE faculty with emphasis on Connecticut teaching competencies in both classroom and shop/lab areas. Two seminars provide opportunity for identification of problems and solutions applicable to vocational teaching. Open to instructors in vocational technical education during their first calendar year of teaching.



VTE 118 SUPERVISED TEACHING FOR VOCATIONAL-TECHNICAL EDUCATION II 3  
 Prereq.: VTE 116 and VTE 117 (VTE 116 may be taken concurrently) and employed at least half-time as a vocational teacher in a public school system. Continuation of VTE 117 with an emphasis on integrating instructional theory and practice in the shop or related subject areas. Instructors teach for one semester under the supervision of Central Connecticut State University TVTE faculty. Two seminars provide opportunity for identification of problems and solutions applicable to vocational teaching. Should be taken in first year of teaching.

VTE 325 CURRICULUM DEVELOPMENT FOR VOCATIONAL EDUCATION 3  
 Systematic curriculum and instructional planning for the classroom vocational teacher commencing with vocational technical education program philosophies and goals and culminating with formal course, unit, lesson and individual curricular plans and materials including individualized learning activity packages. *Spring*.

VTE 328 SHOP ORGANIZATION AND MANAGEMENT 3  
 Physical aspects of vocational industrial buildings and shops. Purchase and inventory of supplies, selection and installation of equipment and development of desirable shop layouts. The basic philosophies and practices of exploratory work offered and the specialized training which follows. Industrial safety, public relations, use of instructional aids and development of programs for special groups. *Fall*.

VTE 329 TEACHING OF RELATED SUBJECTS 3  
 Unique characteristics of teaching related subjects. Qualifications of related instructor and procedures required in order to teach basic principles, trade-related applications and general life experience applications. The role of related subjects to the entire vocational-technical program. Primary emphasis is directed toward the preparation and evaluation of instructional materials which relate subject principles and concepts to basic trade applications. *On request*.

VTE 400 EVALUATING STUDENT ACHIEVEMENT IN VOCATIONAL TECHNICAL EDUCATION 3  
 Prereq.: VTE 113. Procedures for evaluating student achievement of instructional objectives with application in occupational education subjects. *Spring*.

VTE 415 PRINCIPLES OF VOCATIONAL EDUCATION 3  
 An introduction to the principles and philosophy of vocational education and its impact on society. A brief historical development of vocational education, supportive legislation, characteristics of the various program fields, delivery systems and current issues and problems. *Area C*

VTE 421 OCCUPATIONAL SPECIALIZATION 25  
 Award of academic credit for occupational experience through an occupational competency evaluation process. Candidates must demonstrate trade or occupational competency in technical knowledge and manipulative skills by passing a written and performance examination. Open to vocational technical instructors, occupational subjects teachers as well as others meeting the experience requirements. College credit will in general be awarded to those persons matriculated in the Vocational Technical Education B.S. degree program. Credit is entered on transcripts as "credit by examination" and a course grade is not recorded. Occupational competency examinations from the National Occupational Competency Testing Institute can be arranged through Central Connecticut State University. Persons interested in taking the competency examinations and obtaining college credit should contact Dr. Robert Rinas, Technology and Vocational Education Department, Central Connecticut State University, New Britain, Connecticut (Phone: 827-7413). *On request*.

VTE 430 OCCUPATIONAL UPDATE PRACTICUM 6  
 Practicum for vocational education teachers individually designed to update their skills and knowledges relative to occupational changes in business and industry. Teachers identify occupational specialty skills in

which they need greater proficiency. Formulate a framework of training objectives, participate in group seminars and acquire experiences within cooperating firms. Program supervision by University faculty with assistance by cooperating firm representatives. *On request*.

VTE 440 HUMAN RELATIONS IN THE WORKPLACE 3  
 A study of human relations with emphasis on self-awareness, role multiplicity and the effect of life stresses on the adult in the workplace. Attitudes, values, problem-solving and communication techniques are explored in the context of effective interpersonal relationships. Concepts of group dynamics and adult learning are addressed with emphasis on recognition and skill development. *Fall. Area C*

VTE 445 HEALTH OCCUPATIONS PRACTICUM 5  
 Prereq.: VTE 440 and permission of the Coordinator, Health Occupations Education program. Clinical experience in a selected health agency or institution for students of health occupations education. Practicum objectives are individualized to meet the desired goal of each student. The experience is offered under the guidance and supervision of the Health Occupations Education University faculty with the cooperation of the affiliating agencies per contractual agreement. Integral part of the B.S. program in Health Occupations Education. It provides the candidates with an opportunity to update their technical expertise. (Applications must be filed by March 15 for Summer and Fall semesters and by October 15 for the Spring semester. Applications are obtained from the Coordinators of the Health Occupations Education Program, Mrs. Haviland, at 827-7861.

VTE 450 PRINCIPLES AND ORGANIZATION OF COOPERATIVE WORK EDUCATION 3  
 The development and organization of work experience programs at the secondary school level. Examines those activities necessary to establish, maintain and improve cooperative work education programs. *Fall*.

VTE 455 RELATED INSTRUCTION AND REGULATIONS WITHIN COOPERATIVE WORK EDUCATION 3  
 Examines the relationships between work education, private industry and agencies within the State Department of Labor. Emphasis upon how these organizations interface related instruction and on-the-job training for the cooperative work education student.

VTE 470 ADMINISTRATION OF VOCATIONAL STUDENT ORGANIZATIONS 3  
 Organization, development and management of vocational student organizations, including history, legal structure and requirements, public relations, fund raising, development of leadership and evaluations procedure.

VTE 490 TOPICS IN VOCATIONAL TECHNICAL EDUCATION 1-3  
 Special purpose programs designed to meet the needs of selected groups of vocational teachers or directed independent studies for individual students. Provides a mechanism that encourages the vocational instructor to elect, with the guidance of University TVTE faculty, job-specific and short-term selective experiences to insure the instructor's technical expertise. May be repeated on different topics to a maximum of 6 credits. *Upon request*. (Contact VTE Department chairperson, 827-7379, prior to registration.)

## WORD PROCESSING

WP 204 WORD PERFECT—BASIC 1  
 An introduction to word processing using Word Perfect software. Acquaints users with advanced editing features as well as merging, specialized printing and archiving documents. *[c] Area C*

# DEPARTMENT CHAIRPERSONS

## *School of Arts & Sciences*

Department of Anthropology..... DAVID A. KIDECKEL  
Department of Art..... MICHAEL CIPRIANO  
Department of Biological Sciences..... LEON J. GORSKI  
Department of Chemistry..... JOHN MANTZARIS  
Department of Communication..... SARAH S. KING  
Department of Computer Science..... CLIFFORD L. PELLETIER  
Department of Economics..... RONALD R. DAIGLE  
Department of English..... ROSS J. BAIERA  
Department of Geography..... JAMES N. SNADEN  
Department of History..... DONALD G. SANFORD  
Department of Mathematical Sciences..... WILLIAM J. DRISCOLL  
Department of Modern Languages..... DONALD POMERANTZ  
Department of Music..... B. GLENN CHANDLER  
Department of Philosophy..... A.PABLO IANNONE  
Department of Physics & Earth Science..... ALI A. ANTAR  
Department of Political Science..... CHARLES W. KERR  
Department of Psychology..... WILLIAM O. SHERMAN  
Department of Sociology..... BURT R. BALDWIN  
Department of Theatre..... LOUISE B. JOHNSON

## *School of Business*

Department of Accounting..... VACANT  
Department of Business Education..... ALFRED W. BOULDEN  
Department of Finance..... SEYMOUR ROSENBERG  
Department of Management  
Information Systems..... MARIANNE D'ONOFRIO  
Department of Management and Organization..... IVAN BLANCO  
Department of Marketing..... CHARLES PROHASKA

## *School of Education & Professional Studies*

Department of Athletics..... BRENDA REILLY  
Department of Counselor Education  
and Human Services..... PAUL E. TARASUK  
Department of Educational Leadership ..... ROGER ZIEGER  
Department of Education Technology  
and Media..... MARY ANN PELLERIN  
Department of Nursing..... JUDITH HRICENIAK  
Department of Physical Education/  
Health Fitness Studies..... ROBERT E. TRICHKA  
Department of Reading and Language Arts..... BARRY DAVIES  
Department of Special Education..... LYNNE SNYDER  
Department of Teacher Education..... EDDIE JOYCE

## *School of Technology*

Department of Engineering Technology..... LENNARD LEMA  
Department of Technology and  
Vocational-Technical Education..... MICHAEL J. WILLIAMS  
Department of Industrial Technology..... WILLIAM W. DAVISON

# PRESIDENT'S CABINET

(Date of Appointment in Parenthesis)

JOHN W. SHUMAKER, Ph.D., University of Pennsylvania;  
*President (1987).*  
KAREN C. BEYARD, Ph.D., Arizona State University; *Acting  
Vice President of Academic Affairs (1986).*  
STEPHEN O. MITCHELL, Ph.D., Indiana University; *Vice  
President for Finance and Administration (1989).*  
ROBERT F. ARIOSTO, Ed.D., Teachers College-Columbia  
University; *Dean of Student Affairs (1986).*  
ADOLFO CHAVARRO, Ph.D., State University of New York-  
Stonybrook; *University Ombudsman and Assistant Professor of  
Psychology (1987).*  
GEORGE A. CLARKE, Ph.D., Pennsylvania State University; *Dean,  
School of Arts and Sciences (1984).*  
JUDITH A. DAVIDSON, Ph.D., University of Massachusetts;  
*Director of Athletics (1988).*  
HENRY S. ENCK, Ph.D., University of Cincinnati; *Executive  
Assistant to the President (1968).*  
THOMAS B. FLAHERTY, Ph.D., Tulane University; *Director of  
Planning (1970).*  
JOHNIE M. FLOYD, M.S., Central Connecticut State University;  
*Special Assistant to the President (1970).*  
LEWIS L. JONES, Ph.D., University of Iowa; *Associate Vice  
President for Academic Affairs (1987).*  
RICHARD L. JUDD, Ph.D., University of Connecticut; *Executive  
Dean for Institutional Advancement and University Affairs (1964).*  
PETER J. KILDUFF, B.A., Central Connecticut State University;  
*Director of University Relations (1989).*

CHARLES H. LYONS, Ph.D., Columbia University; *Director of  
International Affairs (1987).*  
JAMES J. MALONE, M.S., Central Connecticut State University;  
*Director of Information Systems (1968).*  
DONNA B. MUNROE, M.A., University of Connecticut; *Dean of  
Personnel Administration (1989).*  
FRANK RESNICK, M.S., Indiana University; *Director of Fiscal  
Affairs (1977).*  
HAKIM SALAHU-DIN, Ph.D., Kansas State University; *Director  
of Admissions (1990).*  
NANCY E. SEMINOFF, Ed.D., Wayne State University; *Dean,  
School of Education and Professional Studies (1988).*  
LARRY E. SHORT, D.B.A., University of Colorado; *Dean, School  
of Business (1986).*  
JEANNE SOHN, M.S.L.S., Drexel University; *Director of Library  
Services (1989).*  
NATALIE STIMPSON-BYERS, M.A., Montclair State University;  
*Director of Affirmative Action (1985).*  
JOHN R. WRIGHT, Ed.D., West Virginia University; *Dean,  
School of Technology (1989).*  
RICHARD P. WURST, M.S., Thomas Jefferson Medical College;  
*Associate Professor of Biological Sciences and President of  
the Faculty Senate (1967).*  
JOHN M. ZULICK, Ph.D., University of Connecticut; *Dean,  
College of Continuing Education (1971).*  
**PRESIDENT OF THE STUDENT GOVERNMENT**  
**PRESIDENT OF THE GRADUATE STUDENT ASSOCIATION**

## FACULTY, ADMINISTRATIVE STAFF, LIBRARIANS

- FATEMAH ABDOLLAHZADEH, Ph.D., Loughborough University (England); *Associate Professor of Computer Science (1989)*.
- JEAN ALICANDRO, B.A., Central Connecticut State University; *Residence Hall Director (1984)*.
- PAUL L. ALTIERI, Ph.D., Boston College; *Professor of Economics (1975)*.
- GABRIEL D. ALUNGBE, Ph.D., University of Florida; *Assistant Professor of Engineering Technology (1991)*.
- ARTHUR H. ANDERSON, M.S.Ed., University of Hartford; *Assistant Dean of Continuing Education for Student Personnel and Counseling Services (1968)*.
- THOMAS ANDREWS, M.S., Central Connecticut State University; *Director of Clinical Practices, Associate Professor of Teacher Education (1968)*.
- NOBLEZA ANSUNCION-LANDE, Ph.D., Michigan State University; *Professor of Communication (1990)*.
- ALI ANTAR, Ph.D., University of Connecticut; *Chairperson, Professor of Physics/Earth Science (1980)*.
- NASH ARBID, D.E.S., Institut Catholique de Paris; *Instructor in Modern Language (1990)*.
- JAMES V. ARENA, Ph.D., University of Connecticut; *Assistant Professor of Chemistry (1989)*.
- MARCO A. ARENAS, Ph.D., University of Connecticut; *Associate Professor of Modern Languages (1965)*.
- NORMAN S. ASBRIDGE, M.A., Cambridge University; *Associate Professor of English (1970)*.
- EDWARD R. ASTARITA, M.S., Columbia University; *Associate Professor of Marketing (1975)*.
- KRISTIN ARONSON, Ph.D., University of Massachusetts; *Assistant Professor of Management and Organization (1990)*.
- LOUIS AULD, Ph.D., Bryn Mawr College; *Assistant Professor of Modern Languages (1987)*.
- CAROL SHAW AUSTAD, Ph.D., North Texas State University; *Assistant Professor of Psychology (1987)*.
- RICHARD T. AVRITCH, M.Ed., Boston University; *Associate Professor of Accounting (1966)*.
- STEPHEN A. BACON, Ph.D., University of New Hampshire; *Professor of Mathematics (1970)*.
- ANTHONY J. BAFUNDO, C.P.A./M.B.A., University of Hartford; *Assistant Professor of Accounting (1977)*.
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- GREGORY BELANGER, M.S., University of New Orleans; *Assistant Professor of English (1989)*.
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- STANISLAUS BLEJWAS, Ph.D., Columbia University; *CSU Professor of History (1974)*.
- DAVID BLITZ, Ph.D., McGill University; *Assistant Professor of Philosophy (1989)*.
- WILLIAM W. BOELKE, Ph.D., University of Connecticut; *Assistant Professor of Mathematics (1964)*.
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- ANNA M. BOULDEN, M.M., Yale University; *Professor of Music (1974)*.
- LAURA BOWMAN, Ph.D., Kent State University; *Assistant Professor of Psychology (1989)*.
- WILFRED E. BOYKIN, Ed.D., University of Virginia; *Professor of Mathematics (1969)*.
- GWENDOLINE BRATHWAITE, M.S., Central Connecticut State University; *Property Control Coordinator (1989)*.
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- MICHAEL A. BROWN, B.S., University of Vermont; *Associate Professor of Athletics (1988)*.
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- WILLIAM BROWN, Ph.D., Harvard University; *Professor of Political Science (1976)*.
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- RONALD BURNS, B.S., Ball State University; *Athletics (1990)*.
- SANDRA FLYNN BURNS, Ph.D., University of Connecticut; *Professor of Earth Sciences and Science Education (1972)*.
- THOMAS J. CALLERY, M.F.A., University of Oregon; *Assistant Professor of Theatre (1983)*.
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- SUSANNE CASIOPPO, M.S., Central Connecticut State University; *Instructor in Special Education (1990)*.
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- B. GLENN CHANDLER, Ph.D., Indiana University; *Chairperson, Professor of Music (1972)*.
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- GRACE L. CHESTER, M.S., Florida State University; *Assistant Professor of Mathematics (1965)*.
- CELIA C. CHOW, Ph.D., University of Illinois; *Associate Professor of Physics/Earth Science (1968)*.
- PAUL P. CHU, Docteur en Sciences Psychologiques, Université Libre De Bruxelles; *Associate Professor of Psychology (1969)*.
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- JUDITH A. COADY, Ph.D., Boston University; *Assistant Professor of Sociology (1990)*.
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- FAYE COHEN, M.S., Central Connecticut State University; *Assistant Professor of Business Education (1965)*.
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- WALTER B. CONNOLLY, M.A., Fordham University; *Associate Professor of English (1965)*.
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- DOROTHY COOK, Ph.D., University of Connecticut; *Professor of English (1973)*.
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- PHILLIP R. DOUVILLE, Ph.D., University of Connecticut; *Professor of Chemistry (1965)*.
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- WILLIAM J. DRISCOLL, Ph.D., University of Connecticut; *Chairperson, Professor of Mathematics (1969)*.
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- CHRISTOS EVANGELIOU, Ph.D. Emory University; *Assistant Professor of Philosophy (1991)*.
- LINDA JANE EVANS, Ph.D., Boston College; *Professor of Sociology (1973)*.
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- WILLIAM FARACI, Ph.D., University of Connecticut; *Associate Professor of Accounting (1970)*.
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- CARL FIORE, Ph.D., Fordham University; *Professor of Biology (1966)*.
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- ROBERT G. FRACASSO, J.D., Yale University; *Associate Professor of Finance (1976)*.
- FRANK J. FRANGIONE, Ph.D., University of Michigan; *Professor of Physical Education and Health Fitness Studies (1970)*.
- WEI-NING FU, Ph.D., Oklahoma State University; *Professor of Biology (1963)*.
- KWUN WING C. (JOSEPH) FUNG, M.A., University of Arkansas; *Assistant Professor of Finance (1989)*.
- JUDITH FULLER, Ph.D., Ohio State University; *(Visiting) Associate Professor of Art (1990)*.
- JOSEPH F. GABRIEL, M.A., University of Pennsylvania; *Associate Professor of English (1964)*.
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- VINCENT C. GAGLIARDI, M.F.A., University of Iowa; *Professor of Theatre (1968)*.
- DONALD R. GALLO, Ph.D., Syracuse University; *Professor of English (1973)*.
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- JOYCE C. GARNER, M.Ed., University of North Carolina; *Assistant Professor of Athletics (1966)*.
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- DAVID GERSTEIN, M. Phil., Columbia University; *Associate Professor of English (1960)*.
- GEORGE GEYER, M.S., Temple University; *Associate Professor of Physics/Earth Sciences (1964)*.
- MICHAEL GILKES, B.S., Cornell University; *Assistant Director of Admissions (1988)*.
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- ELEANOR GODWAY, Ph.D., York University (Toronto); *Assistant Professor of Philosophy (1987)*.
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- PAULINE T. GOSSELIN, M.S., North Carolina State University; *Assistant Professor of Physical Education and Health Fitness Studies (1962)*.
- DIAN GOTTLLOB, Ph. D., University of Iowa; *Counselor III (1989)*.
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- GLORIA HAMPL, M.S., Central Connecticut State University; *Assistant Professor of Psychology (1966)*.
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- JAMES C. LOUGHLIN, Ph.D., Clark University; *Professor of Economics (1968).*
- JACK A. LUCAS, Ph.D., Columbia University; *Professor of Anthropology (1962).*
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- EDWARD T. LYNCH, JR., M.B.A./J.D., University of Connecticut; *Associate Professor of Finance (1978).*
- KEVIN M. LYNCH, Ph.D., Duquesne University; *Professor of English (1968).*
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- NANCY MARTEL, B.S., University of Maine at Farmington; *Residence Hall Director (1968).*
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- RICHARD D. MARZI, M.S., Bowling Green State University; *Associate Professor of Mathematics (1965).*
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- FAITH W. MERRIMAN, M.S., University of Illinois; *Associate Librarian, Assistant Serials Librarian (1972).*
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- SEYMOUR ROSENBERG, Ph.D., University of Bradford(England); *Chairperson, Associate Professor of Finance (1981)*.
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- PAULA RUTH, Assistant Director, Connecticut Institute for Prevention of Alcohol and Drug Abuse (1990).
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- BRENT RUTKOWSKI, B.A., Wright State University; *Assistant Director of Athletics/Sports Information (1985)*.
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- EDWARD RYBCZYK, Ed.D., University of Bridgeport; *Director, CIET (1990)*.
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- EDWARD SARISLEY, P.E., Ph.D., University of Connecticut; *Associate Professor of Engineering Technology (1982)*.
- TOBI S. SCHEINBLUM, M.A., Harvard University; *Associate Professor of Biology (1966)*.
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- SAMUEL R. SCHULMAN, Docteur de l'Université de Paris; *Professor of Modern Languages (1965)*.
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- ALLEN R. SMITH, M.A., Western Michigan University; *Associate Professor of Geography (1970)*.
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## W

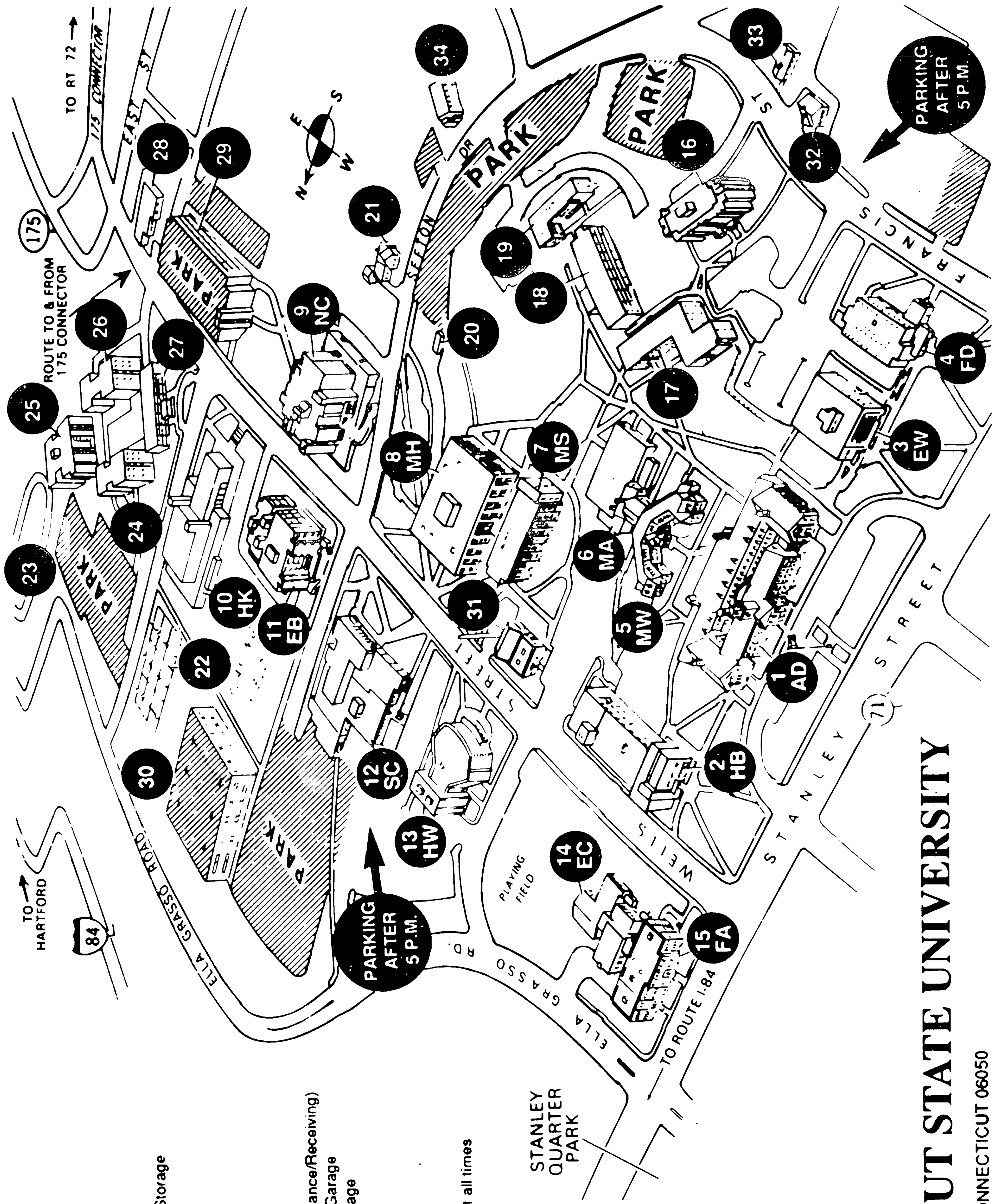
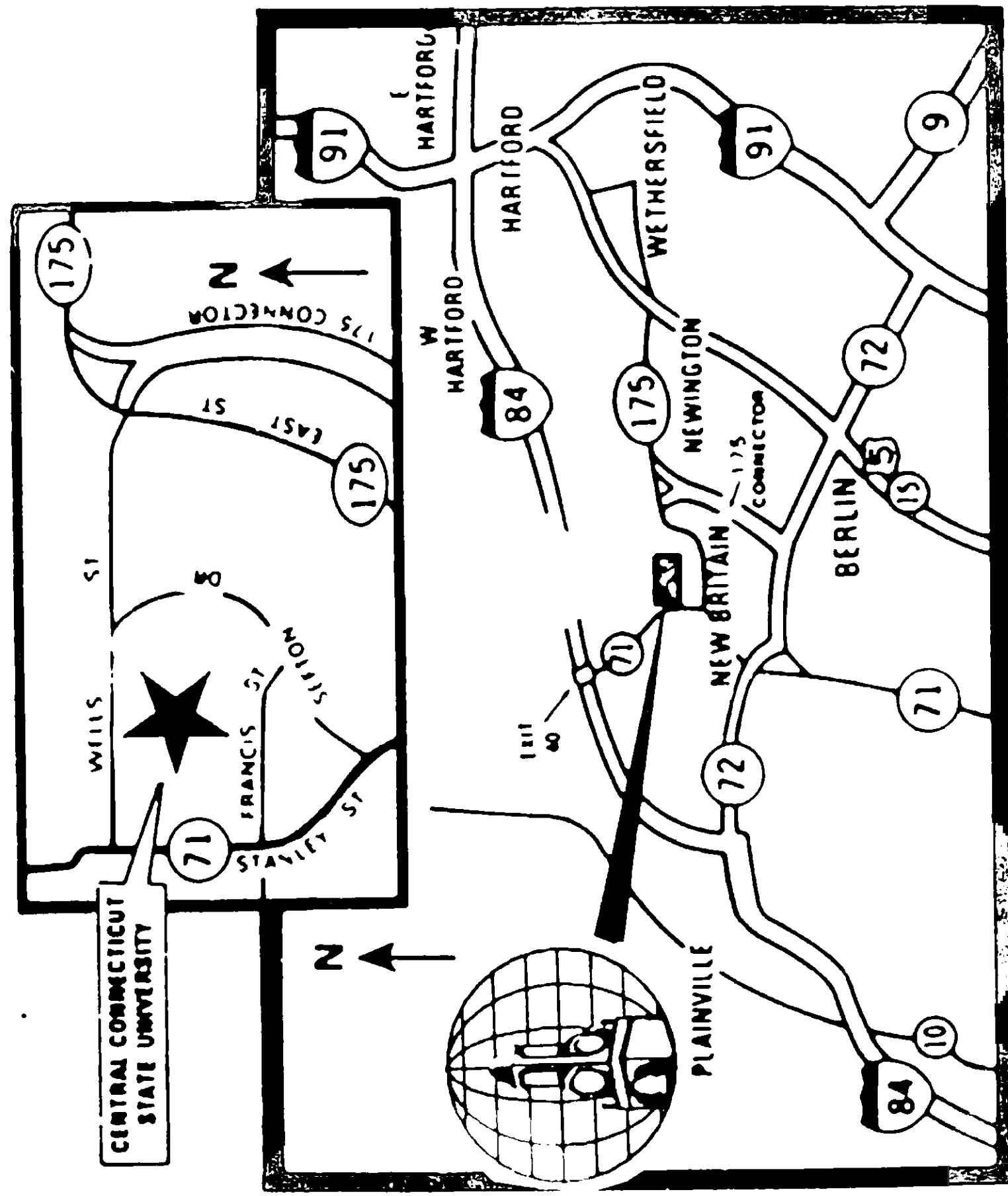
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## LEGEND

(Class Registration Card Codes in Parenthesis)

- |   |                                       |
|---|---------------------------------------|
| 1. Administration Building (AD)                   | 18. Beecher Hall                      |
| 2. Barnard Hall (HB)                              | 19. North Hall                        |
| 3. Willard Hall (EW)                              | 20. Student Activities Storage        |
| 4. DiLoreto Hall (FD)                             | 21. University Police                 |
| 5. Marcus White Hall (MW)                         | 22. Tennis Courts                     |
| 6. Marcus White Hall Annex & Health Services (MA) | 23. Arute Field                       |
| 7. Sanford Hall (MS)                              | 24. Gallaudet Hall                    |
| 8. Memorial Hall (MH)                             | 25. Vance Hall                        |
| 9. Copernicus Hall & Observatory (NC)             | 26. Sheridan Hall                     |
| 10. Kaiser Hall (HK)                              | 27. Sam May Hall                      |
| 11. Burrill Library (EB)                          | 28. East Hall (Maintenance/Receiving) |
| 12. Student Center (SC)                           | 29. Wells St. Parking Garage          |
| 13. Weite Hall/Auditorium (HW)                    | 30. North Parking Garage              |
| 14. Early Childhood Center (EC)                   | 31. Power Plant                       |
| 15. Maloney Hall (FA)                             | 32. Energy House                      |
| 16. Barrows Hall                                  | 33. Alumni House                      |
| 17. Carroll Hall                                  | 34. Newman House                      |

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