The University of Bridgeport admits students regardless of sex, race, color, creed, or national or ethnic origin to all the rights, privileges, programs and activities generally accorded or made available to students of the University. The University of Bridgeport does not discriminate on the basis of gender, sexual orientation, age, race, color, national or ethnic origin, creed, political affiliation, or disability in the administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other University administered programs. The University of Bridgeport is an equal opportunity employer.

Every effort is made to ensure the accuracy of the information in this catalog, but the University of Bridgeport reserves the right to make changes without prior notice. The most current version of the catalog is available on the University website (www.bridgeport.edu). The University of Bridgeport provides the information herein solely for the convenience of the reader and, to the extent permissible by law, expressly disclaims the creation of a contract or any liability which may otherwise be incurred. The use of the words “he” and “she” refers to any members of the University community.

Catalog of the University of Bridgeport, September 1, 2010.

Published by the University of Bridgeport.

Postage paid Bridgeport, Connecticut.
President’s Message

Welcome to the University of Bridgeport! You are about to become part of one of America’s truly unique institutions of higher learning. As the University’s President, I travel quite often and enjoy telling people about the “UB advantage.”

Our students embark upon a journey that will prepare them for a career and also prepare them to better understand the world and their place in it. Here at UB we have students from 80 different countries and 44 states. Nowhere in America will you find so many students from so many different countries and in so intimate a campus setting.

Whether it is in the classroom or in social activities, you will begin to interact with people from all corners of the world. The average class size of 15 students helps ensure that every student gets the necessary attention from the professors as well as a chance to participate in exciting, challenging discussions. The cross-fertilization of cultures and ideas is an everyday experience for our students and creates what biologists call “hybrid vigor.”

Whether you come to UB to acquire a high quality liberal arts education, a knowledge of computer science and engineering, academic training in business, the arts or the healing sciences, you will certainly leave here with more than that. You will have the opportunity to gain a global perspective on world issues and cultures.

We at the University of Bridgeport believe that the object of education, beyond career training, is character development. We encourage our students to involve themselves in one of our many student clubs, a theater production, student government or community service. It is often in these extracurricular activities one has the opportunity to explore and develop as yet untapped aspects of our character.

The hallmark of a truly educated person is one who applies their knowledge to serving their community. That is what I call the “UB experience.”

It is our sincere hope that you will come to call UB your home. Our beautiful campus, located in historic New England, has a proud 8 decade long tradition of educating students who have made a difference in the world. We encourage our students to take advantage of the many opportunities afforded them here on campus and in the region. We hope they also take the time to explore nearby New York City’s many cultural offerings.

Enrollment begins a lifelong association with UB, first as students and later as loyal alumni. I always appreciate your feedback and look forward to getting to know you.

Sincerely,

Neil Albert Salonen
Correspondence

Mailing Address

UNIVERSITY OF BRIDGEPORT
Bridgeport, Connecticut 06604
Telephone Number: 203-576-4000
Toll Free in CT: 1-800-972-9488
Toll Free in NY, NJ, PA, MA, NH, VT, RI: 1-800-243-9496
Specific inquiries should be addressed as follows:

ADMISSIONS INFORMATION
Office of Admissions
126 Park Avenue
Bridgeport, CT 06604
1-800-EXCEL-UB (1-800-392-3582)
(203) 576-4552
Fax: (203) 576-4941
E-mail: admit@bridgeport.edu

COLLEGE OF CHIROPRACTIC
ADMISSIONS
(888) UB-CHIRO
E-mail: chiro@bridgeport.edu

COLLEGE OF NATUROPATHIC MEDICINE ADMISSIONS
(203) 576-4108
E-mail: natmed@bridgeport.edu

ACUPUNCTURE INSTITUTE ADMISSIONS
(203) 576-4109
E-mail: acup@bridgeport.edu

BILLING INFORMATION AND PAYMENTS
Bursar (203) 576-4472
Fax: (203) 576-4581
E-mail: bursar@bridgeport.edu

SCHOLARSHIPS AND STUDENT FINANCIAL SERVICES
(203) 576-4568
Fax: (203) 576-4570
E-mail: finaid@bridgeport.edu

STUDY ABROAD
(203) 576-4699
E-mail: studyabroad@bridgeport.edu

STUDENT DEVELOPMENT
Dean of Students
(203) 576-4393
Fax: (203) 576-4394
E-mail: deanofstudents@bridgeport.edu

TRANSCRIPTS AND ACADEMIC RECORDS
Office of the Registrar
(203) 576-4634
Fax: (203) 576-4941
E-mail: registrar@bridgeport.edu

ACADEMIC RESOURCE CENTER
(203) 576-4290
E-mail: arc@bridgeport.edu

ACUPUNCTURE INSTITUTE
(203) 576-4122
E-mail: acup@bridgeport.edu

COLLEGE OF CHIROPRACTIC
(203) 576-4279
Fax: (203) 576-4351
E-mail: chiro@bridgeport.edu

COLLEGE OF NATUROPATHIC MEDICINE
(203) 576-4108
Fax: (203) 576-4941
E-mail: natmed@bridgeport.edu

ENGLISH LANGUAGE INSTITUTE
(203) 576-4860
Fax: (203) 576-4861
E-mail: esl@bridgeport.edu

FONES SCHOOL OF DENTAL HYGIENE
(203) 576-4138
Fax: (203) 576-4220
E-mail: fones@bridgeport.edu

INTERNATIONAL COLLEGE
(203) 576-4966
Fax: (203) 576-4967
E-mail: intlcoll@bridgeport.edu

NUTRITION INSTITUTE
(203) 576-4667
E-mail: nutrition@bridgeport.edu

PHYSICIAN ASSISTANT INSTITUTE
(203) 576-2399
Fax: (203) 576-2400
E-mail: cervonka@bridgeport.edu

SCHOOL OF ARTS AND SCIENCES
(203) 576-4239/4268
Fax Number: (203) 576-4051
E-mail: artsandsciences@bridgeport.edu

COUNSELING
(203) 576-4175
Fax: (203) 576-4200
E-mail: counseling@bridgeport.edu

SCHOOL OF CONTINUING AND PROFESSIONAL STUDIES
IDEAL PROGRAM
(203) 576-4800
E-mail: idealinfo@bridgeport.edu
www.bridgeport.edu/ideal

OFFICE OF DISTANCE EDUCATION
(203) 576-4851
E-mail: ubonline@bridgeport.edu

UB STAMFORD CENTER
5 Riverbend Drive
Stamford, CT 06907-4585
(203) 358-0700
Fax: (203) 967-3735
E-mail: ubstamford@bridgeport.edu

UB WATERBURY CENTER
(203) 576-4851
E-mail: ubwaterbury@bridgeport.edu

SCHOOL OF BUSINESS
(203) 576-4384
Fax: (203) 576-4388
E-mail: mba@bridgeport.edu

SCHOOL OF EDUCATION
(203) 576-4219
Fax: (Dean): (203) 576-4102
E-mail: education@bridgeport.edu

SCHOOL OF ENGINEERING
(203) 576-4111
Fax Number: (203) 576-4766
E-mail: engr@bridgeport.edu

For all other information, Call (203) 576-4000
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  141 Industrial Design (B.S.)
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Academic Calendar

**Fall Semester 2010**

(Every effort is made to ensure the accuracy of the information contained in the Academic Calendar, but the University of Bridgeport reserves the right to make changes without prior notice.)

Monday–Tuesday, April 1–August 31
*Change of Schedule*

Friday, August 27
*Late Registration (5:00–7:00 p.m.)*

Monday, Monday, August 30
*Classes Begin*

Monday, September 6
*No Classes—Labor Day*

Friday, September 17
*Last Day to Apply for December Graduation*

Friday, September 17
*Last Day to Drop Courses Without an academic penalty—No “W” Grades*

Friday, September 10
*Last Day to elect Pass/Fail*

Friday, September 10
*Last day to Add Courses*

Monday-Friday, October 18–22
*Mid-Semester Examination Week*

Monday, October 25
*Mid-Semester Grades Due*

Friday, November 5
*Last Day to Withdraw from Classes with “W” Grades*

Monday ? Friday, November 8–19
*Register for Spring 2011 Semester*

Wednesday-Sunday, November 24–28
*Thanksgiving Recess—No Classes*

Friday, December 10
*Last Day of Classes*

Monday–Friday, December 13–17
*Final Examination Week*

Monday, December 20
*Final Grades Due*

**Spring Semester 2011**

(Every effort is made to ensure the accuracy of the information contained in the Academic Calendar, but the University of Bridgeport reserves the right to make changes without prior notice.)

Monday, January 17
*No Classes—Martin Luther King Day*

Tuesday, January 18
*Classes Begin*

Tuesday–Friday, January 18–21
*Change of Schedule*

Friday, January 28
*Last Day to Elect Pass/Fail and Last day to Add Courses*

Friday, February 4
*Last Day to Drop Classes Without Penalty—No “W” Grade*

Friday, February 11
*Last Day to Apply for May Graduation & Participate in Commencement*

Monday–Friday, March 9–13
*Mid-Semester Examination Week for all Students*

Saturday–Sunday, March 12–20
*Spring Break—No Classes*

Monday, March 21
*Mid-Semester Grades Due*

Friday, April 1
*Last Day to Withdraw from Classes with “W” Grades*

Monday–Friday, April 4–8
*Register for Fall 2011 Semester*

Friday, April 29
*Last Day of Classes*

Monday–Friday, May 2–6
*Final Examination Week*

Saturday, May 7
*Commencement*

Monday, May 9
*Final Grades Due*
## Academic Calendar

### Fall Semester 2011

(Every effort is made to ensure the accuracy of the information contained in the Academic Calendar, but the University of Bridgeport reserves the right to make changes without prior notice.)

- **Friday, August 26**
  - Late Registration

- **Monday, August 29**
  - Classes Begin

- **Monday–Tuesday, August 22–August 30**
  - Change of Schedule

- **Monday, September 5**
  - Labor Day—No Classes

- **Tuesday, September 9**
  - Last Day to elect Pass/Fail

- **Tuesday, September 9**
  - Last day to Add Courses

- **Friday, September 16**
  - Last Day to Apply December 2011 Graduation

- **Monday, September 16**
  - Last Day to Drop Courses Without a Penalty—No “W” Grades

- **Monday–Friday, October 17–21**
  - Mid-Semester Examination Week

- **Wednesday, October 24**
  - Mid-Semester Grades Due

- **Monday, November 4**
  - Last Day to Withdraw from Classes with “W” Grades

- **Monday–Friday, November 7–18**
  - Register for Spring 2012 Semester

- **Wednesday–Sunday, November 23–27**
  - Thanksgiving Recess—No Classes

- **Friday, December 10**
  - Last Day of Classes

- **Monday–Friday, December 12–17**
  - Final Examination Week

- **Friday, December 19**
  - Final Grades Due

### Spring Semester 2012

(Every effort is made to ensure the accuracy of the information contained in the Academic Calendar, but the University of Bridgeport reserves the right to make changes without prior notice.)

- **Friday, January 13**
  - New Student Registration w/Advisors

- **Monday, January 16**
  - Martin Luther King Day—No Classes

- **Tuesday, January 17**
  - Classes Begin

- **Tuesday–Friday, January 9–18**
  - Change of Schedule

- **Friday, January 20**
  - Last Day for readmission Applications

- **Monday, January 27**
  - Last Day to Elect Pass/Fail and Last day to Add Courses

- **Friday, February 3**
  - Last Day to Drop Classes Without Penalty—No “W” Grade

- **Friday, February 10**
  - Last Day to Apply for May Graduation and Participate in Commencement

- **Monday–Friday, March 5–9**
  - Mid-Semester Examination Week for all Students

- **Saturday–Sunday, March 11–18**
  - Spring Break—No Classes

- **Wednesday, March 19**
  - Mid-Semester Grades Due

- **Friday, March 30**
  - Last Day to Withdraw from Classes with “W” Grades

- **Monday–Friday, April 4–8**
  - Register for Fall 2012 Semester

- **Friday, April 27**
  - Last Day of Classes

- **Monday–Friday, April 30–May 4**
  - Final Examination Week

- **Saturday, May 5**
  - Commencement

- **Monday, May 7**
  - Final Grades Due
Health Sciences Academic Calendar

**Fall Semester 2010**

(Every effort is made to ensure the accuracy of the information contained in the Academic Calendar, but the University of Bridgeport reserves the right to make changes without prior notice.)

Tuesday, August 3
NPLEX Part I Examination

Wednesday–Friday, August 4–6
NPLEX Part II Examination

Thursday, August 5
*College of Naturopathic Medicine*
Orientation and Registration

Monday, August 16, 3:00–5:00 p.m.
*Acupuncture Institute*–Orientation and Registration

Monday, August 16
Classes Begin

Tuesday, August 24
Fones School of Dental Hygiene
Professional Day

Monday, September 6
Labor Day (Holiday)

Friday–Sunday, September 10–12
Chiropractic National Boards
Examinations: Parts I-III

Monday–Friday, October 11–15
Midterm Examination Week

Saturday–Sunday, October 24–25
Health Sciences Admissions Open House

Friday–Sunday, November 12–14
Chiropractic National Boards
Examinations: Part IV

Friday, November 19
Clinic Entrance Examination–College of Chiropractic

Wednesday–Sunday, November 24–28
Thanksgiving Holiday—No Classes

Monday–Friday, November 29–December 3
Spring 2011 Registration

Tuesday, November 30
4th Semester OSCE

Friday, December 10
Last Day of Classes

Sunday, December 12
College of Chiropractic Graduation

Monday–Friday, December 13–17
Final Examination Week

Monday, December 20
Final Grades Due

**Spring Semester 2011**

(Every effort is made to ensure the accuracy of the information contained in the Academic Calendar, but the University of Bridgeport reserves the right to make changes without prior notice.)

Tuesday, 1/4
Clinics Open

Friday, 1/7
Orientation and Registration

Monday, 1/10
Classes Begin

Tuesday, 1/11
Application Deadline—Chiropractic National Board Examinations: Parts I-III

Monday, 1/17
*Martin Luther King, Jr.* Day—No Classes

Tuesday, 2/1
NPLEX Part I Examination

Wednesday–Friday, 2/2–2/4
NPLEX Part II Examination

Monday–Friday, 3/7–3/11
Midterm Examination Week

Saturday–Sunday, 3/12–3/14
Spring Break—No Classes

Friday–Sunday, 3/18–3/20
Chiropractic National Boards
Examinations: Parts I-III

Sunday, 4/10
White Coat Ceremony, College of Chiropractic

Monday–Friday, 4/11–4/15
Fall 2011 Registration

Thursday–Friday, 4/14–4/15
Clinic Entrance Examination, College of Chiropractic

Tuesday, 5/3
4th Semester OSCE

Friday, 5/13
Last Day of Classes for Health Sciences

Monday – Friday, 5/16–5/20
Final Examination Week for Health Sciences

Sunday, 5/22
Health Sciences Commencement Ceremony

Monday–Friday, 5/23–8/12
Clinic Summer Session

Monday, 5/23
Final Grades Due
Health Sciences Academic Calendar

**Fall Semester 2011**

(Every effort is made to ensure the accuracy of the information contained in the Academic Calendar, but the University of Bridgeport reserves the right to make changes without prior notice.)

Friday, August 12
*Orientation and Registration*

Monday, August 15
*Classes Begin*

Monday, September 5
*Labor Day (Holiday)—No Classes*

Monday–Friday October 10–14
*Midterm Examination Week*

Wednesday–Friday, November 23–27
*Thanksgiving Holiday—No Classes*

Monday–Friday, November 28–December 2
*Spring 2012 Registration*

Friday, December 9
*Last Day of Classes*

Sunday, December 11
*Health Sciences Graduation*

Monday–Friday, December 12–16
*Final Examination Week*

Monday, December 19
*Final Grades Due*

**Spring Semester 2012**

(Every effort is made to ensure the accuracy of the information contained in the Academic Calendar, but the University of Bridgeport reserves the right to make changes without prior notice.)

Friday, January 6
*Orientation and Registration*

Monday, January 9
*Classes Begin*

Monday, January 16
*Martin Luther King Day—No Classes*

Monday–Friday, March 5–9
*Mid-Semester Examination Week for all Students*

Saturday–Sunday, March 11–18
*Spring Break—No Classes*

Monday–Friday, April 9–13
*Fall 2012 Registration*

Friday, May 11
*Last Day of Classes*

To be determined
*Commencement*

Monday–Friday, May 14–18
*Final Examination Week*

Monday, May 21
*Final Grades Due*
Programs of Study

Undergraduate Programs

FONES SCHOOL OF DENTAL HYGIENE
Dental Hygiene (A.S., B.S.)

INTERNATIONAL COLLEGE
Criminal Justice and Human Security (B.A.)
  Comparative Justice
  Criminology
  Human Security
International Political Economy and Diplomacy (B.A.)
  Americas Studies
  Asia-Pacific Studies
  Middle East Studies
  Peace and Development Studies
Martial Arts Studies (B.A.)
  Judo
  Tae Kwan Do
  Tai Ji
Mass Communication (B.A.)
  Advertising
  Communication
  Fashion Journalism
  Journalism
  International Communication
  Sports Journalism
  Public Relations
Social Sciences (B.A.)
  Criminal Justice
  History
  International Studies
  Political Science
  Pre-Law
  Psychology
  Sociology
World Religions (B.A.)
  Religion, Conflict Analysis and Mediation
  Religion and Community Service
  Religion and Culture

SCHOOL OF ARTS AND SCIENCES
Biology (B.A., B.S.)
English (B.A., B.S.)
  Creative Writing
  Literature
General Studies (A.A., A.S.)
General Studies (B.S.)
  Business Studies
  Science, Engineering or Computer Related Fields
  Humanities
  Internet Applications
  Natural Sciences/Mathematics
  Social Sciences
Health Sciences (B.S.)
  Exercise & Fitness
  Nutrition
Pre-Professional Programs
  Pre-Acupuncture
  Pre-Chiropractic
  Pre-Dental
  Pre-Medicine
  Pre-Naturopathic Medicine
  Pre-Pharmacy
  Pre-Physician Assistant
  Pre-Veterinary
Human Services (B.S.)
  Literature and Civilization (B.A.)
  Creative Writing
  English
  History
  Philosophy
Mathematics (B.A., B.S.)
Medical Laboratory Science (B.S.)
Music (B.Mus.)
  Jazz Studies
  Music Business
  Music Education
  Music Performance
Psychology (B.S.)

SCHOOL OF BUSINESS
Accounting (B.S.)
Business Administration (A.A., B.S.)
Fashion Merchandising (A.A., B.S.)
Finance (B.S.)
International Business (B.S.)
Management & Industrial Relations (B.S.)
Marketing (B.S.)

SCHOOL OF ENGINEERING
Computer Engineering (B.S.)
Computer Science (B.S.)

SHINTARO AKATSU SCHOOL OF DESIGN
Graphic Design (B.F.A.)
  New Digital Media
Industrial Design (B.S.)
Interior Design (B.S.)

Graduate Program

INTERNATIONAL COLLEGE
East Asian Pacific Rim Studies (M.A.)
Global Communication
Global Management
International Political Economy and Development
Negotiation and Diplomacy
Global Development and Peace (Grad Certificate)
Global Development and Peace (M.A.)
Conflict Analysis and Resolution
Global Communication
Global Management
International Political Economy and Development
Global Media and Communication Studies (M.A.)
Global Communication
New Media Communication

SCHOOL OF ARTS AND SCIENCES
Counseling (M.S.)
  Clinical Mental Health Counseling
  Human Resource Development
  Human Services
  Student Personnel
Counseling (6th Year)

SCHOOL OF BUSINESS
Accounting (M.B.A.)
Finance (M.B.A.)
General Business (M.B.A.)
Global Financial Services (M.B.A.)
Human Resource Management (M.B.A.)
Information Systems and Knowledge Management (M.B.A.)
International Business (M.B.A.)
Management (M.B.A.)
Marketing (M.B.A.)
Operations (M.B.A.)
Small Business and Entrepreneurship (M.B.A.)
Specialized Business Programs (M.B.A.)

SCHOOL OF EDUCATION
Education (M.S.)
Elementary Education (C.A.S.-6th Year)
Secondary Education (C.A.S.-6th Year)
Programs of Study

Educational Administration and Supervision  
(C.A.S.-6th year)
Remedial Reading and Remedial Language  
Arts (C.A.S.-6th Year)
Educational Leadership (Ed.D.)

**SCHOOL OF ENGINEERING**

Biomedical Engineering (M.S.)
Computer Engineering (M.S.)
Computer Science (M.S.)
Electrical Engineering (M.S.)
Mechanical Engineering (M.S.)
Technology Management (M.S.)
Computer Science and Engineering (Ph.D.)

For graduate degree interdisciplinary concentrations and professional certificates please see the GRADUATE STUDIES DIVISION of this Catalogue.

**Health Sciences Programs**

**ACUPUNCTURE INSTITUTE**

Acupuncture (M.S.Ac.)

**COLLEGE OF CHIROPRACTIC**

Chiropractic (D.C.)

**COLLEGE OF NATUROPATHIC MEDICINE**

Naturopathic Medicine (N.D.)

**FONES SCHOOL OF DENTAL HYGIENE**

Dental Hygiene (M.S.)
   - Dental Hygiene Administration and Management
   - Dental Hygiene Education
   - Dental Hygiene Practice
   - Dental Public Health

**NUTRITION INSTITUTE**

Human Nutrition (M.S.)

**PHYSICIAN ASSISTANT INSTITUTE**

Physician Assistant (M.S.)
General Information
Introduction

Mission
The University of Bridgeport offers career-oriented undergraduate, graduate, and professional degrees and programs for people seeking personal and professional growth. The University promotes academic excellence, personal responsibility, and commitment to service. Distinctive curricula in an international, culturally diverse, supportive learning environment prepare graduates for life and leadership in an increasingly interconnected world. The University is independent and non-sectarian.

History
The University of Bridgeport was founded in 1927 as the Junior College of Connecticut — the first junior college chartered by any legislature in the northeastern states. The college had as its purpose, in the words of the founders, to develop in students “a point of view and a habit of mind that promotes clear thinking and sound judgment in later professional and business experience.” Although UB has changed in many ways since then, this commitment to student preparation and community service remains central to its mission.

The Junior College of Connecticut became the University of Bridgeport in 1947, when the Governor of Connecticut chartered the institution as a four-year university with authority to grant the baccalaureate degree. By that time, the former Barnum estate at Seaside Park had been purchased and grown in students, faculty, programs and buildings was rapid. The College of Arts and Sciences and the College of Business were added at once, and the colleges of Nursing, Education, and Engineering soon after. The Junior College expanded its offerings through a merger with the Weylster Secretarial Junior College of Milford, Connecticut, and through the addition of the Fones School of Dental Hygiene (at its inception in 1949 the only such school in Connecticut and the second in New England).

By 1950, the University had moved from the original Fairfield Avenue location to the present Seaside Park campus, which has since grown from 22 to 52 acres. Enrollment was nearly 3,500 students, including a number of international students, taught by a faculty of 183 men and women. In 1951 the University awarded its first Master’s degree. In 1953 the University expanded its programs when Arnold College, the oldest coeducational school of physical education in the United States, merged with and was incorporated into the College of Education.

In January 1979 UB inaugurated its first doctoral degree program, Educational Leadership, and in 1991 the College of Chiropractic was established, representing the first affiliation of a chiropractic school with a university in the United States. In 1992 significant financial support from the Professors World Peace Academy (PWPA), a non-profit organization of academicians dedicated to world peace through education, enabled the University of Bridgeport to continue its programs in the aftermath of a major labor dispute. In 1996 the University established the College of Naturopathic Medicine.

University of Bridgeport Today
The University today continues its commitment to excellence as it maintains its tradition of responding to the changing needs of society through the liberal arts and its professional programs. Programs are focused so that students receive the kind of personal advising and attention usually found only at small colleges. Furthermore, the University takes full advantage of its location in a progressive urban setting, using regional resources as “living laboratories” to supplement the traditional academic instruction offered on the campus. Through co-operative education programs, students can learn from experience by integrating classroom studies on campus with supervised employment in industrial, service, and government sectors.

The University through its schools and colleges offers a variety of undergraduate and graduate degree programs from associate through doctoral levels. In addition, the University’s College of Chiropractic awards the Doctor of Chiropractic degree; College of Naturopathic Medicine awards the Doctor of Naturopathic Medicine and Acupuncture awards the Master of Science in Acupuncture.

The IDEAL Program of the School of General Studies offers undergraduate courses with flexible scheduling for part-time adult students, at the main campus, at the branch campuses in Stamford, CT, and in Waterbury, CT.

The University sees its student body as a valuable resource. Approximately 5,100 students were enrolled in 2009-2010, sixty percent of whom are full-time, coming from 44 states and 80 foreign countries and representing a rich diversity of ethnic and cultural backgrounds.

Faculty
The UB instructional staff consists of 125 full-time faculty, and nearly all hold doctoral or terminal degrees in their fields. The regular faculty is augmented by approximately 368 adjunct faculty.

Faculty honors include Fulbright Scholars, National Science Foundation Fellows, Ford Fellows, National Endowment for the Humanities Fellows, American Council for Learned Societies Scholars, Phi Beta Kappa Scholars, Phi Kappa Phi Scholars and Sigma Xi Scholars.

Accreditations and Memberships
The University of Bridgeport is accredited by the New England Association of Schools and Colleges.

The University also is accredited by the Board of Governors of the Connecticut Department of Higher Education. National accreditations of professional programs have been granted by the following accrediting bodies in the areas noted:

The Educator Preparation Programs are accredited by the Connecticut State Department of Education under NCATE standards.

Council of Dental Education of the American Dental Association — associate (A.S.) degree program in Dental Hygiene.

Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology — baccalaureate (B.S.) degree program in Computer Engineering.

The Accreditation Commission for Acupuncture and Oriental Medicine, candidacy for accreditation, Master of Science in Acupuncture (MS-Acup).

Commission on Accreditation of the Council on Chiropractic Education — doctoral (D.C.) degree program in Chiropractic.

Council on Naturopathic Medical Education—
Introduction

The University of Bridgeport is an accredited institutional member of the National Association of Schools of Art and Design. The Association of Collegiate Business Schools and Programs has accredited the Bachelor of Science (B.S.) and the Master of Business Administration (M.B.A.) programs. Business programs have also been approved for pre-law study by the Connecticut State Bar Examining Committee and the accounting program has been registered by the New York State Board of Regents.

The University holds membership in the American Council on Education, the American Association of University Women, the American Association of Colleges for Teacher Education, the Connecticut Conference of Independent Colleges, the Council of Graduate Schools, the College Board, and the National Council of Equal Opportunity Programs, the American Association of Naturopathic Medical Colleges, the Acupuncture and Oriental Medicine Alliance, the American Association of Oriental Medicine, the Connecticut Distance Learning Consortium, the American Society for Engineering Education, the Association of Chiropractic Colleges, the National Association of Independent Colleges and Universities, the National Association of College and University Business Officers, the Commission on Accelerated Programs, the Council for Adult and Experiential Learning, the National Association of College Admissions Counselors, the New England Association of College Admissions Counselors, and NASFA (Association of International Educators), the Institute of International Education.

Campus and Campus History

The University of Bridgeport is located fifty-five miles from New York City. Bridgeport, Connecticut’s largest city, borders the 55-acre campus to the north. Seaside Park and the Long Island Sound, with some of the finest sandy beaches between New York and Cape Cod, mark the southern boundary. The unique location of the campus offers a variety of advantages to the University community. The Sound and the Park are settings for studies in marine biology and for the enjoyment of sun and recreation.

The city and county provide opportunities for becoming involved in work-study programs with schools, government and some of the country’s largest Fortune 500 and multi-national corporations.

The architectural diversity of UB’s seventy-five buildings, from stately homes as well as newer structures of modern design, reflects the origins and progress of the university and also embodies its twofold commitment to solidity and change. The entrance to Marina Dining Hall, was once the entrance arch to the estate of Phineas Taylor Barnum, who served as Mayor of Bridgeport from 1875 to 1876 and played a crucial role in the city’s cultural and economic development. Bryant Hall, with its inlaid mosaic entryway and ornately carved banisters and ceilings, was built in 1895 for inventor Waldo C.Bryant. The Carstensen Hall is a facsimile of a pavilion at the 1893 Columbian Exposition. It was designed in 1899 for the chemist George Edwards, whose research led to improving the durability of silver plate. Between the campus and Seaside Park is the Perry Arch, designed by Henry Bacon, who also designed the Lincoln Memorial in Washington D.C.

The more modern buildings house academic and student life on campus:

The Arnold Bernhard Arts and Humanities Center is a focal point for the cultural life of the University and of the Greater Bridgeport community, as well as the center for the study and appreciation of art, music, cinema, design and drama. Facilities include classrooms, studios, the 950-seat Andre and Clara Mertens Theater, the small in-the-round experimental Austin W. Mather Theatre, the Littlefield Recital Hall, and the Art Gallery. Located on the ninth floor is the Henry B. duPont III Tower Room, used for meetings and receptions.

The John J. Cox Student Center provides social, recreational, and extracurricular cultural programs. It has a social hall with a seating capacity of 400; lounges and meeting rooms; a games room and bowling alley; the office of The Scribe (the campus newspaper); the studio and transmitter of WPKN (an independent non-commercial FM radio station); and offices of the Student Congress and student clubs and organizations, as well as offices of the Student Development division.

The Charles A. Dana Hall of Science is designed for study and research in biology, chemistry, physics, and geology. There is a 285-seat lecture auditorium, and the unique Science Wall of Honor commemorating thirty-seven of the world’s “Immortals of Science.” It is also the home of the School of Arts and Sciences.

Eleanor Naylor Dana Hall provides facilities for the Physician Assistant Program and the graduate program in Human Nutrition.

The UB Health Sciences Center houses the UB Clinics in Acupuncture, Chiropractic, Dental Hygiene, and Naturopathic care. Also it is the home to the Administration for the Acupuncture Institute, College of Naturopathic Medicine and the Fones School of Dental Hygiene.

The Harvey Hubbell Gymnasium is the center for intercollegiate sports programs, and the general physical education activities of the University. It seats 2,500 spectators.

Mandeville Hall houses the School of Business and a major computer laboratory.

The College of Chiropractic Building has class and conference rooms, offices, a laboratory, and an auditorium seating two hundred people. It is equipped with the modern facilities necessary for the professional programs offered by the Chiropractic faculty.

The Technology Building provides the engineering disciplines with the special capabilities and equipment needed for programs in mechanical, electrical and computer engineering.

The Magnus Wahlstrom Library is the academic and physical heart of the campus. The nine-story building is home to many different types of information resources, collections, and services.

The “Garden Level” houses the Office of the Registrar, The Bursar and Financial Aid, Career Services as well as the School of Continuing and Professional Studies and the IDEAL program. The Six floor is home to the Office of Admissions. The Seventh floor is home to the Division of Administration and Finance and the Office of the Provost. The Eighth floor is home to the Office of the President.

The Wheeler Recreation Center offers opportunities for students to enjoy recreational sports. Wheeler has a 25-meter pool with
Introduction

one-meter and three-meter diving boards and adjacent steam room and sauna facilities. The field house has a multi-purpose area for tennis, basketball, and volleyball, with a jogging track around the perimeter. In addition, there are courts for racquetball and handball.

Security Services

The University offers a combination of security services that include a Securitas Security Service USA managed public safety force, escort services, and twenty-four-hour monitored access to all residence halls.

Also, each full-time student at the University is provided a small personal alarm locator (PAL) that allows one to signal for help instantly from anywhere on campus in an emergency. Small and easily carried, a student summons help with the touch of a button. The signal sends information about who the student is and where that student is located to a central computer in the Campus Security Office.

Social and Cultural Opportunities

Cultural events at the University of Bridgeport offer entertainment of high quality. Art exhibits, theatre productions, dance ensembles, classic cinema, lectures and concerts by UB groups, including the Jazz Ensemble are regularly scheduled.

Student organizations of the University plan a wide range of social programs from movies to dances, rock concerts, international festivals, coffee houses, lectures and comedy acts.

The University’s schedule of events in the fine and performing arts is complemented by its location in the center of Fairfield County, one of the country’s most desirable recreational and cultural areas. New England village greens and historic communities are within easy reach of the campus. The Southern Connecticut area is home to the Westport Country Playhouse and New Haven’s Long Wharf and Yale Repertory theatres. The cultural resources of New York and Boston are within convenient traveling distance by car, bus, or train.

International Activities and Study Abroad

The University of Bridgeport offers a wide range of opportunities for students to learn about other cultures and to understand American culture. Students from approximately 80 countries attend the University. Through formal events such as the annual International Festival sponsored by the Office of International Affairs and the International Relations Club, and through informal contacts in and out of class, students from different cultures are able to meet and get to know one another.

Study Abroad

There is opportunity for foreign study and travel. Students may choose to spend a summer, a semester, or an entire academic year abroad. They may receive credit for work done at a foreign university provided they follow the usual procedure of obtaining permission to take courses off-campus. In the past, students have pursued such programs at The Institute for American Universities in Aix-en-Provence, France, The American College in Paris, University of Grenoble, University of Madrid, University of Valencia, the Young Judea Year Course in Israel, and The London School of Economics. Students interested in such programs should consult with their department chair.

Through the Italian HISp committee a scholarship is awarded for a summer program in Italy at the University of Siena.

More recently students have also pursued study abroad at the American University of Dubai, at Hanseo, Yonsei and Sun Moon Universities in Korea, at the International Christian University in Japan, at Fudan University in China and at University in Taiwan.

Computing Facilities

The Office of Information Technology Services provides computing, information, and networks services to the entire campus community.

A campus-wide fiber optic network for data communication provides data connectivity for students, faculty, and staff. A state-of-the-art digital network system offers students, faculty, and staff access to all on-campus computing resources, as well as remote computing resources via the Internet.

The Office of Information Technology Services maintains the University-wide computing infrastructure for academic and administrative use, utilizing state-of-the-art computing and network solutions. 2000 on 30+ servers on campus. All central and distributed computers and about 1000 workstations and other devices are connected to the campus network, providing each user with access to computing resources. Every faculty and staff member has a PC or laptop connected to the campus network. Phone, cable, and high speed data connectivity is extended to all residence hall rooms.

In addition to numerous departmental computing labs, The Office of Technology Information Services manages public student labs, located in Mandeville Hall, Engineering and Technology Hall, and Wahlstrom Library Learning Commons All computers support general purpose applications, such as word processing, spreadsheets, graphics, and data base management systems. The Stamford and Waterbury centers each have general computer labs to support those students attending classes at those facilities.

The University’s Portal (myub.bridgeport.edu) provides access to their email and other student-designated resources. All students have a free Web space and additional space for storing critical data. Additional facilities permit students to review schedules and perform grade-lookup.

The Office of Information Technology Services also includes wireless access in all study lounges on each floor of each residence hall. General wireless areas include the Wahlstrom Library as well as a popular student gathering location in Knight’s End Café.

Media Services and the TAP program provide support for setting up student UB accounts and wireless issues. Students who need assistance can go to the Print/Copy Center on the first floor of the library for help. Support is available during the hours of operation of the library.
### Computer Lab Facilities:

<table>
<thead>
<tr>
<th>Lab</th>
<th>Building</th>
<th>Room</th>
<th>Units</th>
<th>Type</th>
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</thead>
<tbody>
<tr>
<td><strong>Academic Resource Center</strong></td>
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<tr>
<td>ARC Lab</td>
<td>Dana Hall</td>
<td>Rm. 110</td>
<td>25</td>
<td>PC</td>
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<tr>
<td><strong>All Students</strong></td>
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<td></td>
</tr>
<tr>
<td>General</td>
<td>Eng &amp; Tech</td>
<td>Rm. 301</td>
<td>40</td>
<td>PC</td>
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<td>Purpose</td>
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<td>40</td>
<td>PC</td>
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<tr>
<td></td>
<td>Wahlstrom Library 1st Fl.</td>
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<td>PC</td>
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<tr>
<td><strong>Arts and Sciences</strong></td>
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<tr>
<td>Dana</td>
<td>Dana Hall</td>
<td>Rm. 131</td>
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<td>PC</td>
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<tr>
<td>(chemistry)</td>
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<tr>
<td>General</td>
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<td>Fashion</td>
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<tr>
<td>Education</td>
<td>Carlson Hall</td>
<td>Rm. 2</td>
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<tr>
<td><strong>Engineering</strong></td>
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<tr>
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<tr>
<td>Tech building</td>
<td>Eng &amp; Tech</td>
<td>Rm. 111</td>
<td>25</td>
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<tr>
<td>PC labs</td>
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<td><strong>ELI</strong></td>
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<td>Language Lab</td>
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<td><strong>Fones School of Dental Hygiene</strong></td>
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<tr>
<td>Clinic</td>
<td>Warner</td>
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<td>32</td>
<td>PC</td>
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<td><strong>International College</strong></td>
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<tr>
<td>Mass Comm.</td>
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**Library**

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<tbody>
<tr>
<td><strong>Database lab</strong></td>
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**Naturopathic Medicine**

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<tr>
<td>Naturopathic</td>
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**SASD - Shintaro Akatsu School of Design**

<table>
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<tr>
<th>Design</th>
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<th>Rm. 406</th>
<th>24</th>
<th>Mac</th>
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<tbody>
<tr>
<td></td>
<td>ABC Hall</td>
<td>Rm. 607</td>
<td>22</td>
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<tr>
<td></td>
<td>ABC Hall</td>
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<td>Mac</td>
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**SCPS - School of Continuing and Professional Studies**

<table>
<thead>
<tr>
<th>Stamford</th>
<th>Stamford Campus</th>
<th>2</th>
<th>PC</th>
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<tbody>
<tr>
<td>Library</td>
<td></td>
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</tr>
<tr>
<td>Stamford</td>
<td>Stamford Campus</td>
<td>22</td>
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<tr>
<td><strong>Public lab</strong></td>
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</tr>
<tr>
<td>Waterbury</td>
<td>Waterbury Campus</td>
<td>20</td>
<td>PC</td>
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</tbody>
</table>

PC: Pentium 4 Systems  
Mac: G4 / Dual Core Systems  
S/U (Sun/Unix): Sparc Workstations

General Purpose systems have Microsoft Office as standard software installations.
Admissions

Dean of Admissions: Bryan Gross

Office of Admissions
126 Park Avenue
Bridgeport, CT 06604

203-576-4552 • 1-800-EXCEL-UB
Fax: 203-576-4941
E-mail: admit@bridgeport.edu
Internet Home Page: http://www.bridgeport.edu

Admissions Policy

All University of Bridgeport applications are reviewed and evaluated on an individual basis. The University of Bridgeport admits qualified students regardless of race, color, sex, religion, age, national and ethnic origins or handicap. Applications are accepted and reviewed on a rolling basis, throughout the year.

Application

An application may be obtained from the Office of Admissions, 126 Park Avenue, University of Bridgeport, Bridgeport, Connecticut 06604. A non-refundable application fee must accompany the application. Checks should be made payable to “The University of Bridgeport.” For further information, please call (203) 576-4552 or toll free 1-800-EXCEL-UB (392-3582).

You can also apply online by visiting our website at www.bridgeport.edu or email us for more information at admit@bridgeport.edu.

All interested students are encouraged to visit the University of Bridgeport to meet with an Admissions Counselor and tour the campus.

Undergraduate Applicants

FIRST YEAR STUDENTS

Freshman candidates must submit:

A. An Application for admission
B. An official high school transcript or G.E.D. (General Equivalency Diploma)
C. SAT or ACT scores
D. FAFSA (if applying for financial aid)
E. Application Fee

Dental Hygiene applicants are also required to submit a personal statement and two letters of recommendation.

The University of Bridgeport reserves the right to waive the need for certain documents or to request additional documentation.

SECONDARY SCHOOL PREPARATION

The Admissions Committee places emphasis on the quality of the preparatory work of each applicant.

An applicant should be a graduate of a regionally accredited secondary school and should present sixteen acceptable units of academic work, including four units in English, three units in Mathematics, two units in a lab science, two units in the social sciences and a minimum of five electives. An applicant who has not satisfied the distribution of college requirements, but has presented convincing evidence of the quality of his/her high school work, may be admitted with the provision that the deficiencies must be removed before being granted major status in their respective academic program.

Students are admitted for both the Fall and Spring terms. Students must notify the Office of Admissions if it is their intention to defer their enrollment.

ENTRANCE TESTS

All applicants for admission as full-time freshmen are required to take the Scholastic Aptitude Test (SAT) or American College Testing Program Exam (ACT). Applicants should have their scores sent directly to the Office of Admissions.

SCHOLASTIC APTITUDE TEST (SAT)

SAT
The College Board
P.O. Box 6200
Princeton, NJ 08541-6200
(609) 771-7600
www.collegeboard.com

AMERICAN COLLEGE TESTING (ACT)

American College Testing
P.O. Box 168
Iowa City, IA 52243
(319) 337-1360
www.actstudent.org

TRANSFER STUDENTS

An applicant who has attempted 12 or more semester hours at an institution recognized by the Council for Higher Education Accreditation is considered a transfer applicant. The Admissions Staff will evaluate transfer credit and core credit. For further details, see catalog section on core curriculum. Requests for core credit based on a course meeting the “spirit” of the core will be referred to the chair of the Core Committee for evaluation.

TRANSFER CANDIDATES MUST SUBMIT:

A. An Application for admission
B. Proof of high school completion or G.E.D. (General Equivalency Diploma).
C. An official copy of all college transcripts from each post-secondary institution previously attended. An applicant who fails to indicate attendance at a previous institution at the time of application may forfeit eligibility for transfer credit.
D. FAFSA (if applying for financial aid).
E. Application Fee

The University of Bridgeport reserves the right to waive the need for certain documents or to request additional documentation.

Transfer credit is normally awarded only for courses in which a grade of “C” or better is earned. Dental Hygiene applicants are required to submit an official high school transcript, official SAT/ACT scores, a personal statement, and letters of recommendation.

The status of any applicant admitted before the opening date of the term in which they plan to enter. This will enable the student to receive a timely evaluation of their transfer credit and appropriate academic advisement and pro-

For further details and requirements, please visit the University of Bridgeport’s website at www.bridgeport.edu or contact the Office of Admissions.
Admissions

Students are admitted for both the Fall and Spring terms. Students must notify the Office of Admissions if it is their intention to defer their enrollment.

Students are required to complete their last thirty semester hours at the University of Bridgeport and meet course requirements as described in each program to be eligible for a degree. A maximum of 66 credits may be awarded from two-year colleges and 90 credits from accredited four-year institutions. Transfer credit is awarded on a course by course basis.

Special Instructions for Specific Majors

DESIGN PORTFOLIO REQUIREMENTS

SASD is looking for a passion for art and design in a portfolio. We recommend that students choose from the following for inclusion in their portfolio: drawings, paintings, posters, photography or video, sculpture, ceramics, fashion, or work for a school yearbook or class.

Submissions should contain 10-12 samples of your work. Portfolios may be emailed, mailed in on DVD, posted to a personal website, or hand delivered in hard copy form.

If a student does not have art or design work or attends a school that does not provide art or design classes, he or she may contact SASD for an assignment to complete at home. In these cases, we encourage students to visit SASD so a faculty member can provide both examples and materials.

Please contact sasd@bridgeport.edu for further information.

DENTAL HYGIENE

Freshman Students: Graduation from a regionally accredited secondary school. A high school background that includes four years of English, two years of Math, one year of College Prep Chemistry with a laboratory, one year of College Prep Biology with a laboratory and courses in social studies. An overall B is recommended. All students who are applying as a full time freshman must take the SAT or the ACT.

Transfer Students: A student who has attempted 12 or more semester hours at a regionally accredited institution is considered a transfer applicant. A College Biology course with a laboratory, a College Chemistry course with a laboratory, and a College Math course are academic prerequisites for transfer students. A minimum grade of C or higher in all pre-requisite courses and a GPA of a 2.5 or above is required.

Students without science prerequisites may begin at the Fones School in a pre-dental hygiene curriculum upon recommendation of the Director. Clinical students must begin in the fall semester of an academic year and attend full time.

MUSIC

Applicants should call the Department at (203) 576-4407 for information.

STUDENT ATHLETES

The University of Bridgeport offers a full program of NCAA Division II intercollegiate sports, including basketball, baseball, cross-country, swimming and soccer for men, and basketball, softball, cross-country, gymnastics, swimming, volleyball, lacrosse and soccer for women. Athletic scholarships are available. All students who wish to participate in intercollegiate athletics are required to register with the NCAA Initial-Eligibility Clearinghouse. For more information and a Clearinghouse registration form, please contact your high school guidance office or the UB Athletic Department at (203) 576-4735.

Undergraduate Testing Information

TEST OF ENGLISH AS A FOREIGN LANGUAGE (TOEFL)

Students whose first language is not English and who have been in an American high school for less than two years should submit the result of the Test of English as a Foreign Language (TOEFL), administered by the Educational Testing Service.

TOEFL/TSE Services
P.O. Box 6151
Princeton, NJ 08541-6151 USA
(609) 771-7100

www.ets.org/toefl

International Applicants

The University of Bridgeport enrolls students from more than 90 nations. To be considered for admission, students must complete the International Student Application which can be obtained by writing the Office of Admissions, University of Bridgeport, Bridgeport, CT 06604 U.S.A., by fax at 203-576-4941 or on-line at http://www.bridgeport.edu. A non-refundable fee should accompany the application. Checks should be made payable to “The University of Bridgeport.”

Official copies of original transcripts of all academic work must be submitted along with the official, literal, word for word, English translations. In addition, students are required to demonstrate that sufficient funds are available to meet the cost of tuition, fees and living expenses. The Financial Statement is included in the International Student Application.

Immigration Status Change Request

A non-refundable payment of one semester tuition will be required in order to support a change of status to F1 status. A refund will be offered if the change of status is denied by the United States Citizenship & Immigration Services or US Embassy/Consulate.

English Language Requirements

Those whose native language is not English are required to show English language proficiency. You can demonstrate proof of English Language competency by meeting any one of the criteria listed below.

1. A minimum TOEFL (Test of English as a Foreign Language) score of 61 (IBT) for undergraduate students and a minimum score of 80 (IBT) for graduate students.

2. IELTS (Cambridge Testing) undergraduate score band of 6.5 and graduate score band of 7/7.5.

3. A transcript from an accredited American university indicating a grade of “C” or above in one semester of college English Composition.
Admissions

4. A Verbal SAT score of 400 or above; or ACT English score of 19 or above.
5. An official letter certifying completion of ELS (English Language Service) through their highest level.
6. An official letter certifying completion of CSE (The Center for English Studies) through level 7.5.
7. A Michigan Test of English as a Foreign Language score of 85 or above.
8. A Prueba de Aptitud Academica (PAA) English achievement score of 500 or above.
9. A level of “Advanced” on the English Language Proficiency Test of the College Board.
10. A letter certifying completion of level 12 at the University’s English Language Institute (ELI).
11. Attainment of a satisfactory score of the University of Bridgeport’s English Language Assessment Battery – 65 or better for undergraduates, and 75 or better for graduates.
12. WAEC, WASSCE, CXC, GCSE, “O” level or “A” level certificate score of C or better on the English language examination.
13. A score of 4 or better on the “English A” higher level examination in the International Baccalaureate program.

If you are unable to demonstrate English Competency as indicated, you will be placed in the appropriate level of English language instruction at the University of Bridgeport’s English Language Institute (ELI). If you have any questions or need additional information, please call the Office of Admissions at (203) 576-4552.

Information on the intensive program of English as a Second Language offered by the University’s English Language Institute may be obtained by contacting: English Language Institute, Carlson Hall, University of Bridgeport, Bridgeport, CT 06604, U.S.A.; Telephone: (203) 576-4860; Fax: (203) 576-4861; E-mail: esl@bridgeport.edu; Internet: http://www.bridgeport.edu/eli.

INTERNATIONAL CANDIDATES MUST SUBMIT:
A. A completed admissions Application for International Students.
B. An official transcript of all previous academic work along with a literal English translation.

C. Documentation that sufficient funding is available to meet the University’s tuition and fees and living expenses.

Scholarships
The University offers scholarships to many undergraduate and graduate students who have a successful high school or two-year college record. UB is known for its affordable private school education. The University believes that a student’s achievement should be recognized and rewarded. With this goal in mind, UB’s unique scholarship program rewards academic excellence, community service, leadership and special talent.

Admissions Policy Regarding Home-Schooled Applicants
The University of Bridgeport welcomes applications from individuals who have completed all or part of their education in a homeschooled environment. The admissions staff would be aided in evaluating student performance if the applicant can provide as many of the following items as possible.
1. SAT or ACT Scores (required)
2. A record of academic work completed which is equivalent to that required of graduates from an accredited high school. This should include grades, credit hours, and a grade point average.
3. An interview with the department chairperson or designated faculty member of the department in which the applicant is seeking admission.
4. A written evaluation of the student’s academic competence by the parent(s) or teaching adult.
5. A writing sample from the applicant.
6. A portfolio exhibiting what the applicant has accomplished in the areas of math and science and a detailed reading list. *If the student has a GED this will also be used in the admission process. This, however, is not a requirement.

Graduate Applicants
Applicants to the University of Bridgeport are required to have an undergraduate degree from an accredited institution or from a recognized international university. Official transcripts of all previous course work should be sent directly to the Office of Graduate Admissions.

Admission decisions are based primarily on an applicant’s undergraduate record. A prospective student who is currently completing undergraduate study should submit an official transcript complete to the date of application. In most cases, an admission decision will be made on the basis of a partial transcript, contingent upon completion of the baccalaureate degree. Registration will not be permitted until a final, official transcript is submitted to the Office of Admissions.

Generally, students may be admitted for any term — fall, spring or summer. Should a student be unable to enter the university during the term for which admission is granted, the offer of acceptance will remain open for one calendar year. After one year, a new application will be required.

Please refer to the individual graduate program for admissions requirements specific to that major.

TRANSFER CREDITS
The Dean may allow up to six semester hours (eight hours in the case of laboratory courses) of graduate transfer credit from a regionally accredited college. The courses should have been completed recently with a grade of “B” or better and be comparable to UB’s Graduate courses.

Specific colleges of the university and certain programs have additional requirements for admission, details of which are included in the individual program listing in this catalog.

Graduate Testing Information

GRADUATE MANAGEMENT ADMISSION TEST (GMAT)
Administered by the Graduate Management Admissions Council. Scored on a scale of 0-60. Scores for verbal, quantitative and a composite score.

Educational Testing Service
P. O. Box 6103
Princeton, NJ 08541-6103
(609) 771-7330
Admissions

Email: gmat@ets.org

GRADUATE RECORD EXAMINATION (GRE)
Administered by the Educational Testing Service. Scored on a scale of 200-800.
General GRE is composed of questions aimed at measuring aptitude and not specific subject knowledge.
Subject GRE’s are designed to measure competency in a specific subject area.
Educational Testing Service
P. O. Box 6000
Princeton, NJ 08541-6000
(609) 771-7670

MILLER ANALOGIES TEST (MAT)
Administered through a network of controlled testing centers licensed by the Psychological Corporation.
The MAT is a high-level mental ability test requiring the solution of problems stated as analogies. It consists of 100 partial analogies that are to be completed in 50 minutes. Tests are scored in raw format and in percentiles based on the intended major and on the general population of MAT examinees.
Miller Analogies Test
The Psychological Corporation
19500 Bulverde Rd.
San Antonio, TX 78259
(210) 339-8710
Email: scoringservices@harcour.com

PRAXIS
ETS - The Praxis Series
P.O. Box 6051
Princeton, NJ 08541-6051
1-609-771-7395

Connecticut Contact
For information about Connecticut’s teacher assessment requirements, contact:

Connecticut State Department of Education Bureau of Educator Standards and Certification
PO Box 150471 – Room 243
Hartford, CT 06115-0471
Telephone: 1-860-713-6969
Fax: 1-860-713-7017

TEST OF ENGLISH AS A FOREIGN LANGUAGE (TOEFL)
TOEFL/TSE
P. O. Box 6151
Princeton, NJ 08541-6151 U.S.A.
(609) 771-7100

Special Admission Considerations

SPECIAL STUDENTS
A Special Student is permitted to take courses for credit on a part-time basis, as a non-degree candidate, as long as the student has met the prerequisites for the course.
A Special Student may become a matriculating student if he or she meets the appropriate requirements for admission. However, a Special Student is subject to any changes in graduation requirements instituted prior to actual matriculation. Candidates for matriculation may attend as Special Students up to the completion of 12 credits. A maximum of 12 credits taken as a non-matriculating student may be applied to a student’s requirements for graduation, with program approval.

Interviews, Information Sessions and Campus Tours
We encourage applicants to meet with a member of the Graduate Admissions staff and their respective academic department to discuss academic and career goals as well as the particular concerns of admission and financial assistance. The Admissions Office is open Monday through Thursday from 8:30 a.m.- 5:00 p.m., Friday from 8:30 a.m.-4:30 p.m. and on designated Saturdays. Tours of the campus are scheduled Monday-Friday by appointment throughout the year. The Office of Admissions is located on the 6th floor of the Wahlstrom Library.
For more information about interviews, information sessions, and campus tours please contact the Office of Graduate Admissions, at (203) 576-4552 or toll-free 1-800-EXCELB or check the website at www.bridge-port.edu.
Tuition, Fees and Other Expenses

Please see website for current academic year for tuition, fees and other expenses.

HEALTH AND ACCIDENT INSURANCE
(Mandatory for all full-time undergraduate, international and residential students)

A change for UB insurance coverage is mandated for all full-time undergraduate, international and residential students’ accounts. Domestic students who presently have medical insurance coverage may complete an online waiver. Replacement coverage for waiver consideration must meet minimum standards for basic Medical/Surgical Expenses. A copy of the policy must be attached to the waiver request. Waivers will not be accepted after the sixth week of the semester. Policy commences August 1 for 12 months.

PROPERTY INSURANCE
The University does not assume responsibility for the loss of personal property of students either on or off the campus. It is recommended that students protect themselves against such losses by consulting with their own (or with their parent’s) insurance agent in regard to coverage provided by existing policies, if any; or by purchasing private property insurance. Information may be obtained at the Residential Life Office, (203) 576-4228, or email reslife@bridgeport.edu.

TUITION INSURANCE
Tuition Insurance is also available (optional) which refunds tuition when specifically covered circumstances occur during the semester (family circumstances, illness, etc). For additional information contact the Office of Student Financial Services at (203) 576-4568 or email bursar@bridgeport.edu.

INSTITUTIONAL
UNDERGRADUATE/GRADUATE
REFUND POLICY

DEPOSITS REFUNDS
Tuition Deposit — 100% Refund (Non Refundable after June 1st)
Room Deposit — No Refund

TUITION REFUNDS
• Refunds are based on tuition charges.
• Failure to withdraw properly will result in the issuance of a Withdrawal/Failure grade and responsibility for payment in full.
• Proper withdrawal is granted upon presentation of the approved and signed Withdrawal Form to the Registrar’s Office at 126 Park Avenue, Wahlstrom Library Garden Level, Bridgeport, CT 06604
• Note that withdrawal from individual classes or the University may affect financial aid and other eligibility.
• Students who are suspended or expelled from the University during the academic year are responsible for all changes related to the semester in which the suspension or expulsion occurred.
• Refunds will not be given to students who have an outstanding balance.
• Refunds are based on the schedule below and determined by the date of notification to the Registrar’s Office, not the date of last class attended.

UNDERGRADUATE & GRADUATE & HEALTH SCIENCES
Fall & Spring Semesters

| Before the 1st Day of classes | 100% |
| During 1st Week | 100% |
| During 2nd Week | 80% |
| During 3rd Week | 60% |
| During 4th Week | 40% |
| During 5th Week | 20% |
| After 5th Week | No Refund |
| Summer Session |
| Before the 1st Day of classes | 100% |
| After the start of classes | No Refund |

HUMAN NUTRITION (On Campus Only)

| Before 1st Day of Class | 100% |
| Before 2nd Session | 100% |
| Before 3rd Session | 75% |
| Before 4th Session | 50% |
| After 4th Session | No Refund |

IDEAL Program

| Before Term Start Date | 100% |
| During the 1st Week | 100% |
| During 2nd Week | 75% |
| During the 3rd Week | 50% |
| After 3rd Week | No Refund |

ELI TUITION REFUND
No Refund

FEE REFUND
• If a student withdraws prior to the start of the semester, all fees will be refunded. Once a semester begins, there are no refunds of fees.
• All student fees are for a full semester and are not refundable.
• Room and board charges are for a full semester and are not refundable.
• If the course is cancelled, all fees are refunded.

Any outstanding balance on a student’s account is deducted from the tuition credit. Any credits resulting in a refund to the students account as authorized by the Office of Student Financial Services, will require approximately three weeks for processing. The Office of Student Financial Services does not provide check cashing services for students. All banking services required by students must be personally arranged with local banking facilities. The University does have an ATM banking machine located in the Security Office (Norseman Hall).

FEDERAL FINANCIAL AID RETURN OF TITLE IV
A statutory pro-rate refund applies to any student who is a recipient of federal financial aid funding (Title IV) and leaves the school on or before the 60% point in the enrollment period for which he or she has been charged. After the 60% point in the enrollment period, a student has earned 100% of the SFA program funds. Students may contact the Office of Student Financial Services (203-576-4568, finaid@bridgeport.edu) for additional information on the Federal Title IV regulations regarding student refunds.
Tuition, Fees and Other Expenses

All students who receive federal financial aid and withdraw from the University are subject to a Federal Title IV return of funds policy. Federal Title IV refund will be made in this order:

1. Federal Direct Unsubsidized Loan
2. Federal Direct Subsidized Loan
3. Federal Direct PLUS Loan
4. Federal Perkins Loan
5. Federal Pell Grant
6. Federal Supplemental Educational Opportunity Grant
7. Other Title IV aid programs
8. Other federal sources of aid
9. Other state, private, or institutional aid
10. The Student

UNIVERSITY OF BRIDGEPORT
STUDENT ACCOUNT PAYMENT POLICY

To best serve you and your financial needs as a student at the University of Bridgeport, it is important that you become familiar with the university’s account payment policy. We have provided the information below to help you better understand the terms of your payment obligations. Please review this document carefully. If you have any additional questions, please contact the Student Financial Services Office at 203.576.4568.

University of Bridgeport students are financially responsible upon registration for all charges incurred. Charges generally include, but are not limited to, tuition, fees, housing, meal plans, and other miscellaneous charges.

Students must make an acceptable payment arrangement with the Student Financial Services Office at the start of the term. Acceptable payment arrangements for all charges, less the application of approved University of Bridgeport financial aid, must be either:

- Payment in full; or
- An approved University of Bridgeport payment or deferment plan

A student who complies with the above shall be considered in good financial standing. A student participating in an approved University of Bridgeport payment or deferment plan must make timely payments pursuant to the arrangement to remain in good financial standing. Outstanding balances are subject to a late fee and interest charge.

All charges must be satisfied in full by the last day of the term in order to receive grades, transcripts, diplomas and other University of Bridgeport services.

Please note—For students who are not in good financial standing the following shall occur:

- At 30 Days after the Beginning of the Term: A balance held will be placed on the account which will preclude the student from registering for a subsequent term, receiving a diploma, a transcript, or other University of Bridgeport services.
- At 45 Days after the Beginning of the Term: A late fee of $250.00 dollars will be assessed.
- At 180 Days after the Beginning of the Term: The student account may be sent to an outside collection agency. The student will be responsible for all amounts due PLUS the costs and expenses of collection PLUS reasonable attorney’s fees and expenses to the extent permitted by applicable law.

PAYMENT ALTERNATIVES

The University of Bridgeport understands that families look for as many options as possible to make financing an education more convenient and affordable. Tuition Management Systems of Warwick, RI, offers a wide array of valuable options. The available options are described below. If you have any questions, please feel free to contact: Tuition Management Systems at 1-800-722-4867 or (401) 849-1550 or www.afford.com; the Office of Student Financial Services, or Admissions.

INTEREST-FREE 10 OR 9-MONTH PAYMENT PLAN

The Interest-Free Monthly Payment Plan, enables families to spread all or part of their tuition, room, board, and fees over 10 or 9 equal monthly payments. One of the major benefits of this option is that there are no interest charges. For detailed information about the payment plans, call Tuition Management Systems (TMS) at 1-800-722-4867 or (401) 849-1550; or write to the company at 171 Service Avenue, Warwick, RI 02886.

Those interested in payment plan options should determine the cost of attending the University for the coming year, subtract all net financial aid received (excluding Federal Work-Study), and budget the remaining balance through Tuition Management Systems. If your monthly payment exceeds your ability to pay, the BorrowSmart option is available through TMS and may help you meet the cost of attendance by combining the Interest-Free Monthly Payment Plan with a low-interest loan.

The first payment is due on July 1st or August 1st and the last payment is due on April 1st (10 or 9 equal payments). The Plan is very flexible, allowing participants to increase or decrease their budget amount as needed. An annual enrollment fee for the Payment Plan option is applicable for each academic year.

TUITION PAYMENT PROCEDURES

Payment is due by the first day of the academic period (semester or term whichever is applicable). If you register after classes begin, payment is due upon registration. Those students who register early, an invoice will be mailed to the preferred address on file before classes begin. If a student needs to update his/her mailing address call or e-mail to Registrar’s Office (203-576-4635, at registrar@bridgeport.edu) for assistance. Students who register within a week of the beginning of classes may not receive a tuition invoice; payment is due at the time of registration. Students who register late should contact the Office of Student Financial Services by phone at (203) 576-4130, (203) 576-4881, (203) 576-4472 or by fax (203) 576-4581 or by email at bursar@bridgeport.edu to obtain an invoice and make payment arrangements. A late payment fee per semester is charged to the account of students who do not arrange an approved form of payment by the due date. In addition, course registration may be canceled. Students for whom courses are canceled for nonpayment may re-register after the late fee(s) and tuition charges are paid. Automatic registration does not occur, nor will registration be allowed in sections that have been filled in the interim if courses were canceled for nonpayment.
Tuition, Fees and Other Expenses

PAYMENT BY CASH, CHECK, OR MONEY ORDER
Payments by cash, check or money order can be made directly to the Cashier located on the Garden Level of Wabblstrom Library, or payments can be mailed to the Cashier’s Office, University of Bridgeport, 126 Park Avenue, Bridgeport, CT 06604. If you pay by check or money order, please record your University of Bridgeport Student I.D. number on the check or money order. The U.B. Cashier will add your student I.D. number to any check or money order, when one is not indicated.

PAYMENT BY WIRE TRANSFER
Payment can be wired directly to the U.B. Cashier who may be contacted for wiring instructions at (203) 576-4568 or e-mail at cashier@bridgeport.edu.

PAYMENT BY CREDIT CARD
Students may pay their tuition bill using VISA, MasterCard, American Express or Discover Card. Payments can be made in person at the U.B. Cashier’s Office located on the Garden Level of Wablstrom Library or at the Stamford or Waterbury centers. To make a credit card payment by phone, call 203-576-4682. Payments made by fax must include type of credit card, card number, expiration date, amount of payment, name on the credit card, the address associated with the credit card, and a daytime phone number. Payments should be faxed to the University of Bridgeport Cashier’s Office at (203) 576-4581. For additional information you may email the Cashier’s Office at cashier@bridgeport.edu.

WEBAdvisor ONLINE PAYMENT
The University of Bridgeport has an online payment option for WebAdvisor users (www.bridgeport.edu/webadvisor). Students may pay their tuition bill using VISA, MasterCard, American Express or Discover Card.

To make payments follow these steps:
- Log in to WebAdvisor: www.bridgeport.edu/webadvisor
- Login using your UBNet ID and Password and click on the submit button
- Click on the “Make a Payment” link located at the upper left corner of the screen
- Click on the “Make a Payment” link located at the “Financial Profile” section
- Click on the “Pay on My Account”
- Enter desired payment amount at “Payment Amount” section
- Select type of credit card (VISA, MasterCard, American Express or Discover Card), enter credit card number, credit card expiration date, name on the credit card and an email address.
- Click Submit after reviewing the data entered above.
- Remember to Log Out.

DEFERMENT PAYMENT OPTION (DIRECT PAYMENT)
Students eligible for an external scholarship or for whom an employer pays their tuition may qualify for the deferment/direct payment option. Consult your sponsor to determine if a direct billing agreement has been established with the University of Bridgeport. If one has been established, you need a letter, on company letterhead, from your sponsor that includes your name, eligible program, maximum tuition amount where the bill should be sent. The letter should be forwarded to the Office of Student Financial Services, at 126 Park Avenue, Bridgeport, CT 06604 or faxed a 203- 576-4581.

Students are responsible for obtaining a deferment payment/direct billing option letter from their sponsor for the initial registration and ensure that it is received at the Office of Student Financial Services by the tuition due date. Students who are unable to obtain a deferment payment/direct billing letter by the payment deadline must pay their tuition prior to the start of the semester. Students must pay any fees not covered by the employer’s deferment/direct payment plan at time of registration.

Should employment cease with sponsor or conditions of sponsorship are not met, the student is responsible for all tuitions and fees. A financial obligation continues to exist when using a financial aid deferment. Therefore, a transcript hold will be applied to the student record throughout the deferment period. Official transcripts will not be released until all University of Bridgeport financial obligations have been satisfied.

TUITION REIMBURSEMENT
Students who receive tuition reimbursement may defer fifty percent (50%) of their course tuition for up to thirty (30) days after the semester ends. To facilitate reimbursement, upon request, a grade and fee report will be mailed to every student who has a company letter on file; email grade_fee@bridgeport.edu to process this request. To defer partial tuition, the following requirements must be met:
1. All prior balances must be paid.
2. A letter on company letterhead that states the company policy and verifies the student’s eligibility must be submitted to the Office of Student Financial Services each semester.
3. A down payment of fifty percent (50%) percent must be paid to UB’s Cashier at time of registration.
4. Payment of the deferred tuition must be received by the University Cashier within thirty (30) days of the end of the semester for which the deferment was granted. Deferred tuition is due by the deferred due date regardless of whether the student has been reimbursed by the employer.

FINANCIAL AID DEFERMENT WITHOUT FEE (DOMESTIC STUDENTS)
Domestic students who receive a Financial Aid award letter may deduct each certified award amount (signified by an “A” rather than an “E” in the ACT field on the award letter) from their balance due. Lender fees (usually 1%) should be deducted from each loan award, excluding Perkins loans. When an “E” appears in the ACT field, this usually indicates an action is required before the award will be credited to the student’s AR account. In these cases, students must contact the Office of Student Financial Services at 203-576-4568 for assistance in determining which action is necessary for the financial aid to be credited to their account. Please note work-study awards are not deducted from the amount due since the student will be eligible to earn up to this amount through student employment. Federal Regulations require the University
to issue a paycheck directly to the student for hours worked.

**PERKINS LOANS:**
Perkins loan recipients must electronically sign for their Perkins loan advance every year within the first two weeks of the start of classes to ensure credit of this award to their account.

**FEDERAL DIRECT LOANS:**
Loan origination fees will reduce the amount of loan funds received. These fees (normally 1%) should be deducted from the amount shown in the award letter before deducting the amount of these funds from the final bill.

**ALTERNATIVE LOANS:**
Alternative loans are private loans offered through a lending institution and are not a part of federal student aid programs. Interest rate and repayment provisions vary from lender to lender. It is the responsibility of the student to research and understand the implications of borrowing an alternative loan.

**BOOKSTORE**
Purchasing your textbooks and school supplies is now even easier. Books may be purchased at the On-Campus Bookstore located at 225 Myrtle Avenue, Mandeville Hall Annex (across from the Student Center) or via the Internet at www.bridgeport.edu/bookstore. In addition to the required course texts, the On-Campus Bookstore carries supplies, materials, UB memorabilia and much more. For additional information contact the Bookstore at (203) 576-4804, fax (203) 576-4802, or email bookstore@bridgeport.edu.

*Bookstore’s normal hours of operation are*: 9:00am to 5:00pm on Monday, Tuesday, and Thursday; 9:00am to 7:00pm on Wednesday; 9:00am to 4:00pm on Friday.

* Rush and summer hours change

**CHANGE OF ADDRESS**
A student must complete a Change-of-Address form in the Registrar’s Office whenever a change is made in his or her local or mailing address. This will avoid misdirection of grades, registration materials, and appropriate financial documents.

**I.D. CARDS & P.A.L.**

**STUDENT IDENTIFICATION CARDS**
A photo identification card must be obtained at the security department between the hours of 8 a.m. – 4 p.m. Monday through Friday. Registration confirmation is required. Upon activation, the ID card serves as a library and meal card and provides access into the residential halls to the resident students. A fee will be charged for replacement of lost, stolen, misplaced or damaged ID cards.

**PERSONAL ALARM LOCATOR (P.A.L.)**
All students are provided a Personal Alarm Locator (PAL). This device must be obtained through the security department 24 hours a day, 7 days a week. The PAL allows an individual to summon help immediately in the case of an emergency within the campus boundaries. The small and easily carried device acts as a beeper, sending signals to the security office computer system when activated. Once activated, the computer screen provides the individual’s personal information, photo ID and the location from where the device was activated. The information is viewed by the dispatcher and is passed on to the patrol officers. Officers immediately respond to the call in search of the individual who activated the device.
Student Financial Services

Application Procedures
New domestic students are encouraged to begin to apply for financial aid at the same time they are seeking admission. Applicants for financial aid need to:
1. Complete the Free Application for Federal Student Aid (FAFSA) by going to www.FAFSA.ed.gov. Be sure to include the University’s school code, 001416, on the FAFSA.
2. Submit copies of the student’s and parents’ federal tax forms upon request from the Office of Student Financial Services.
3. Upon request from the Office of Student Financial Services, submit immigration documentation certifying permanent resident status, if you are a non-U.S. citizen applying for need-based financial aid.
Continuing students must reapply for financial aid each year no later than March 1 to be given full consideration for aid for the following academic year. Students must:
1. Complete the Free Application for Federal Student Aid (FAFSA) by going to www.FAFSA.ed.gov. Be sure to include the University’s school code, 001416, on the FAFSA.
2. Submit copies of student’s and parents’ federal tax forms upon request from The Office of Student Financial Services.

Satisfactory Academic Progress
In order to maintain eligibility for financial aid a student must maintain satisfactory academic progress, which is measured quantitatively and qualitatively each academic term. For a student to be making satisfactory academic progress the student must meet the following qualitative GPA standards and have completed, with a passing grade, at least 68% of the cumulative attempted credits.

CREDITS ATTEMPTED     MINIMUM C.G.P.A. (including transfer credit)
1 – 24                1.5
25 – 48                1.7
49 – 90                1.9
91 or more             2.0

FINANCIAL AID PROVISIONAL STATUS
Students not meeting satisfactory academic standards for a given academic term, as outlined above, are notified in writing and will be placed on financial aid probation for one semester for which they may receive their aid. At the end of the probationary semester, satisfactory academic progress will be reviewed. If the student meets the minimum standards as outlined, the probationary status will be lifted. If minimum standards are not met, the student will forfeit his or her future eligibility for financial aid and will be notified in writing.

Students who have not maintained eligibility to receive financial aid due to unsatisfactory academic progress may appeal for one additional semester of probationary eligibility. Also, the student must include an academic improvement plan, signed by the student’s academic advisor or Dean, outlining the steps the student will follow to improve their GPA and/or completion rate. Appeals must be submitted to the Office of Student Financial Services within 10 calendar days of receipt of notice of action taken for committee review. The decision of the committee is final. Late or incomplete appeals will not be accepted or reviewed.

REINSTATEMENT OF AID
If a student is re-admitted, the University will consider the student’s application for financial aid. Reinstatement of aid is not automatic and the student must submit a letter to The Office of Student Financial Services requesting a reinstatement. In order to remain eligible for aid, students must meet the minimum academic progress standards as outlined or lose eligibility for the following semester.

FINANCIAL AID RETURN POLICY
Students withdrawing from all courses should see financial aid as it is important to discuss withdrawal and refund as it pertains.
Student Financial Services

to the individual student, and its implications for balances owed to the University, federal student loan repayment and future eligibility for financial assistance.

Return of Institutional Aid
Students withdrawing within the University’s Tuition Refund Schedule (see Tuition, Fees and Other Expenses) will have the same schedule applied to their University of Bridgeport aid.

Return of Federal Aid
If you have been awarded federal (Title IV) aid and you withdraw before completing 60% of the semester your financial aid award will be recalculated, according to the percentage of the semester you have completed. The formula for calculating this percentage is:

(Days enrolled) - (Official breaks of five days or longer).

Total number of class days in the semester

Financial Assistance Programs
The University of Bridgeport believes that a student’s achievements should be recognized and rewarded. Our scholarships and grants enable students who have potential and want to benefit from a high quality academic program. Students who qualify must enroll as and maintain full time traditional status. Undergraduate awards are renewable for up to four years based on satisfactory academic progress and good standing at the University. Students who are enrolled in accelerated/professional courses are not eligible for these awards.

GRADUATE ASSISTANTSHIPS
Graduate Assistantships are available. Please contact the Office of Graduate Assistantships (203) 576-4111.

University of Bridgeport Merit Award
Financial need is not required for merit based scholarships which are awarded at time of admission based on criteria set forth by the Office of Admissions.

University of Bridgeport Grant
Awarded to undergraduates with financial need.

Federal Title IV Programs

FEDERAL PELL GRANT
Pell Grants are awarded to undergraduate students who have not earned a bachelor's or professional degree. Pell Grant awards are based upon the student’s Estimated Family Contribution (EFC), enrollment status, cost of attendance, and the number of credit hours in which the student is enrolled. The maximum grant a student can receive for the year is determined by the government.

FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT (FSEOG)
The FSEOG is a grant that does not have to be repaid. Priority is given to the neediest students with the lowest EFC’s who are PELL eligible. Students who have submitted their financial aid applications by the University’s deadline will be given first priority. All other students will be given consideration for FSEOG funds on a first come first serve basis pending the availability of funds. FSEOG awards vary based on need and U.S. Department of Education allocation to the University.

FEDERAL ACADEMIC COMPETITIVENESS GRANT (ACG)
The ACG is a grant awarded to students in their first or second undergraduate year of college, who are Pell eligible, and have completed an academically rigorous high school program as recognized by the U.S. Department of Education. First year awards are $750 and second year awards are $1,300. This program is scheduled to end June 30, 2011.

NATIONAL SCIENCE AND MATHEMATICS ACCESS TO RETAIN TALENT GRANT (SMART)
The SMART Grant is awarded to students in their junior or senior year, who are Pell eligible, have 3.0 cumulative GPA and are majoring in certain science, math and technology fields. Students who qualify for this grant will receive $4,000. This program is scheduled to end June 30, 2011.

FEDERAL WORK STUDY (FWS)
The Federal Work Study Program provides jobs for undergraduate students who demonstrate financial need. The amount of the FWS award is based on both the student's need and the availability of funds at the University. While there are several FWS jobs available on campus, students are also encouraged to work in community service related jobs.

FEDERAL PERKINS LOAN
A Federal Perkins Loan is a low interest (5%) loan for both undergraduate and graduate students who demonstrate exceptional financial need. Students who have submitted their financial aid application by the University’s deadline will be given first priority. All other students will be given consideration on a first-come first-served basis pending the availability of funds. Award amounts vary based on need and U.S. Department of Education Allocation to the University.

FEDERAL DIRECT LOANS (SUBSIDIZED and UNSUBSIDIZED)
All student loans will now be originated in the Direct Loan Program, in which the Federal government makes loans directly to students. Both Direct Loan programs require the borrowers to complete an Entrance Counseling and the Master Promissory Note. To obtain more information about the Federal Direct Loan programs, you can visit the website at: www.studentloans.gov

The Direct Subsidized Loan is awarded to students who demonstrate financial need. The federal government pays all interest costs for Direct Subsidized borrowers while the borrowers are in school, and during grace and deferment periods.

The Direct Unsubsidized Loan is awarded to students who do not meet financial need or need to supplement their Direct Subsidized Loans. Borrowers may defer payment of interest during school, grace, and deferment periods, but remain responsible for all interest that accrues (accumulates).

Undergraduate Dependent students may borrow as freshman up to $5,500 (including up to $3,500 Subsidized) per year;
Parents of dependent students may apply for a parent PLUS LOAN to help their child's educational expenses. The parent must be the student's biological or adoptive parent. The parent must not have an adverse credit history (must be credit worthy). The parent must complete the plus loan application and sign the Master Promissory Note (MPN).

**FEDERAL DIRECT GRADUATE PLUS LOAN**
The Graduate/Professional seeking degree students can borrow a Direct PLUS Loan to help them cover their educational expenses. The amount of loan they can borrow is up to their cost of attendance minus the Federal Direct Subsidized and Unsubsidized Loans for the award year. The student must complete the Direct PLUS Loan application and sign the Master Promissory Note every academic year.

**State Programs**
Financial assistance programs are available to qualified students from the state of Connecticut, including the Connecticut Independent College Student Grant. Many other states also have scholarship programs for residents of their state. For more information, contact your state's agency for higher education.

**Connecticut Independent College Student Grant (CICSQ)**
As an independent university, the University of Bridgeport participates in the Connecticut Independent College Student Grant Program. Connecticut undergraduate students who enroll on a full-time basis at the University and who demonstrate financial need are considered for this grant. The amount of the grant varies from year to year and is based upon state allocations.

**Capitol Scholarship Program (CSP)**
Connecticut residents who are undergraduate students can apply to the Connecticut Board of Higher Education for consideration. Eligibility is based on SAT scores of at least 1,800, or rank in the top 20% of their high school class. Financial need is also a criterion. Applications are available at high schools or at www.ctdhe.org and must be submitted by February 15. Students who are recipients of CSP awards must follow the state renewal process each academic year.

**Named Scholarships**

**UNDERGRADUATE**

**Alumni Athletic Scholarship Fund.** The Alumni of the University have established the Fund to be awarded to deserving athletes. Preference will be given to athletes in sports not fully funded by the University. This Alumni Fund was started in 1988 through the generosity of Alumni Association President Armand Cantafio ’57.

**The Michael J. Autuori Scholarship.** For academic excellence in Anatomy and Physiology for a student in the Fones School of Dental Hygiene.

**The Rudolph F. Bannow Memorial Scholarship.** Established by the employees of Bridgeport Machines, Inc., in memory of the late Rudolph F. Bannow, president of Bridgeport Machines, Inc., trustee of the University, and civic leader.

**The Sayde and Samuel Baum Scholarship Fund.** Established by Gerald Baum of Fairfield, president of Eastern Bag and Paper Company, with his wife, Louise, in honor of his parents who founded the company. Income will be awarded to employees or children of employees of the Eastern Bag and Paper Company.

**The Alfred V. Bodine Memorial Scholarship Fund.** Established by contributions from friends in memory of Alfred V. Bodine and by a bequest from the estate of Mr. Bodine. Alfred Bodine was a Bridgeport industrialist and civic leader and was chairman of the University of Bridgeport Board of Trustees at the time of his death.

**Bridgeport Dental Association Fones Scholarship.** To be awarded to a prospective Fones School of Dental Hygiene student based upon academic standing as determined by UB’s Student Financial Service Office.

**George C. Brown & Carol M. Wright Alumni Scholarship.** Established by Alumni George C. Brown ‘64 and Carol M. Wright ’88. Income from interest on the endowment will be awarded annually to a student who has exhibited an interest in the Middle East and desires a better understanding of the region’s politics, history, arts or culture.
Student Financial Services

**Armand J. Cantafio Scholarship.** Established by Armand J. Cantafio, President of Northeast Electronics Corporation. To be awarded to a two or four year student in the Health Sciences who is from Fairfield County and is in need of financial aid.

**Allison Yeonsil Choi Scholarship.** The Allison Yeonsil Choi Scholarship was established in 2005 by family and friends in honor of Allison Yeonsil Choi, a University of Bridgeport Alumna. The award is available to those majoring in World Religions or whose primary field of study is either philosophy or history. It is meant to help the student with the purchase of books, software, or other materials related to their studies. Competition for this award will be announced in the Fall beginning in 2009.

**Class of 1973 Scholarship.** Established by the 1973 Senior Class as a class gift, the scholarship is open to all undergraduates presently enrolled at the University.

**The John and Wanda Cox Scholarship Fund.** Established by the family and friends of Mr. and Mrs. Cox in honor of their 25th wedding anniversary and additional gifts received upon the death of Mr. Cox, who was Vice President for University Relations. The annual income is awarded to a worthy and needy student from the Greater Bridgeport area.

**The Mr. Leigh Danenberg and Mrs. Elsie Nicholas Danenberg Scholarship.** Established by Leigh Danenberg in honor of his parents, both of whom were lifetime authors, journalists, and historians. The award will be made to an undergraduate junior or senior journalism major meeting need and academic standing requirements. First consideration is given to Fairfield County, then Connecticut residents, with special preference to students involved in activities such as The Scribe, or student government.

**Harold Dart Endowed Scholarship.** The income shall be used by the Music Department at the discretion of the chair of the Music Department. Special preference to be given to an outstanding piano student for a yearly award as determined by the Music Department faculty.

**Dean Francis X. Di Leo Memorial Scholarship.** The Dean Francis X. Di Leo Memorial Scholarship Fund was established by members of the Di Leo family, colleagues, friends and graduates of the University of Bridgeport School of Business and Public Management in honor of the former dean of the college. The income from the invested principal is awarded to deserving full-time, part-time graduate or undergraduate students enrolled in the School of Business.

**Catherine Doyle Scholarship.** Established by Frank P. Doyle. Income to be awarded to deserving students, with academic promise and financial need, who are pursuing careers in the Health Sciences.

**Dr. Frank J. Dunnigan Scholarship.** Established by funds from the Prentice-Hall Foundation. Scholarship grants will be awarded to exceptionally qualified students majoring in Business who may be either an entering freshman or have reached any other class level.

**Educational Foundation of America.** Established by the Educational Foundation of America to be awarded to students pursuing health related careers at the University of Bridgeport who have proven academic ability, financial need and are from Fairfield County.

**The Bernard & Eva Ettlinger Scholarship Fund.** Annual income from the fund provides an award for worthy students of academic promise and financial need from the State of Connecticut.

**The Jeffrey S. Ferguson Memorial Scholarship.** Established by Arthur and Ann Ferguson in memory of their son Jeffrey, an outstanding student while at the University, whose death left much potential unfulfilled. First preference is given to a student in Computer Science who is academically gifted and in need of financial aid.

**The Milton H. Friedberg Scholarship Fund.** Made possible by a gift from the Milton H. Friedberg Fund, Inc. The income from this fund is used for a scholarship, preferably to a student majoring in accounting, otherwise to another student from the School of Business.

**The Harry Allison Goldstein Memorial Scholarship.** Made possible by contributions from the friends of Mr. Goldstein. Mr. Goldstein had been secretary of the University’s Board of Trustees. The scholarships are awarded annually to a student.

**The Gould Scholarship Fund.** Financed from funds of the Gould Foundation, Inc., established under the will of Elizabeth B. Gould. Awards are made to qualified entering freshman women from Fairfield County with provisions for renewal. The scholarships provide $1,500 in the freshman year, $1,250 in the sophomore and junior years, and $1,000 in the senior year. Preference is given to students with academic promise, demonstrated leadership qualities, and financial need.

**Kenneth and Lancy Gray Scholarship.** The Lancy A. Gray Scholarship is made possible by Dr. Kenneth Gray (currently a member of the UB Board of Trustees) and his wife Doris to honor the memory of their daughter Lancy. She died in 2000 at the age of fifteen, by which time she had already become an accomplished linguist and cellist.

University undergraduates in good academic standing, as well as incoming freshmen and transfer students are invited to apply if they have a demonstrated need for financial assistance based on existing FAFSA and University of Bridgeport standards and have an interest in fostering understanding amongst people of different cultures. Applicants must submit an essay of 600 words or more on the topic “Fostering Understanding Amongst People of Different Cultures.”

The Scholarship is awarded annually.

**The Michael and Ida Hoffman Family Fund.** Established by Mr. and Mrs. Sidney Hoffman and Mr. and Mrs. Maurice Hoffman in memory of their parents. It honors Michael and Ida Hoffman “who understood and were grateful for the freedom and blessings of America and is to be granted to a student who gives promise of being worthy of this tradition.”

**Harvey and Joan James.** Established by alumni Harvey James ’74 and his wife Joan James. The income generated from the endowment will be awarded annually to a returning student who has demonstrated leadership in academics, campus life, and service to the community.

**The Joseph T. and Julia A. Kasper Memorial Scholarship.** Established in memory of Joseph T. Kasper and Julia A. Kasper, his wife, by the Kasper Group, Inc. Mr. Kasper, who founded the firm in 1920, served as Bridgeport’s City Engineer during the 1960s. Scholarship assistance will be awarded to one African-American or Hispanic student.
Student Financial Services

graduating from each of the three Bridgeport high schools and expressing interest in engineering and its related fields. Should there be no eligible candidate as defined above, the criteria can be expanded in consultations with fund representatives.

The Reverend Dr. Martin Luther King Memorial Scholarship Fund. A gift to the University for an endowed scholarship by the members of the Class of 1968.

The Charles and Dorothy Kishibay Scholarship Fund. Established by Professor Charles Kishibay and wife Dorothy. The income provides assistance to junior or senior students in good standing, preference given to students from Connecticut, majoring in Industrial Design.

The Fred E. Lacey Memorial Scholarships. Established by a bequest from the late Fred E. Lacey, former president of the Lacey Foundation. The scholarships are awarded annually to an upperclass student.

The Paul P. and Paulette Liscio Scholarship Fund. Established by Dr. and Mrs. Paul Liscio, the income from the fund is awarded annually to students in the Fones School of Dental Hygiene. This scholarship is available to students from the State of Connecticut who demonstrate scholastic achievement and financial need.

The Bruce Allen Littlefield Memorial Scholarship. Established by contributions from family and friends to perpetuate the memory of the son of President Emeritus and Mrs. Henry W. Littlefield. In keeping with his interests, students majoring in courses leading to the profession of law are given first preference. The scholarship is awarded annually to an upperclass student.

Dr. Henry W. Littlefield Scholarship Fund. Established in honor of UB President Emeritus, Dr. Henry W. Littlefield. Awarded to entering freshmen or transfer students with excellent academic records. Preference to residents of Southwestern Connecticut.

Sid Litwalk Alumni Scholarship for the Performing Arts. Established by long-time friend of the University and valued alumnus Syd Litwalk 52. Income from the endowment is awarded annually to a student in the performing arts who has demonstrated an exemplary level of commitment.

The Jasper McLery Scholarship. Created by friends to honor the late Mayor of Bridgeport at the time of his seventy-eighth birthday. Interest from the fund provides scholarships to Bridgeport students in varying amounts depending on need.

The Charles E. Merrill 50th Anniversary Scholarship. Established by the Charles E. Merrill Trust in recognition of the University's 50th Anniversary. The Merrill Trust was founded by Charles E. Merrill in 1914. Mr. Merrill founded the investment firm of Merrill, Lynch, Pierce, Fenner & Smith, Inc. in 1941.

Palisades Educational Foundation. Established by the Palisades Educational Foundation to be awarded to students pursuing health related careers at the University of Bridgeport who have proven academic ability, financial need, and are from Fairfield County.

The Gerald L. Phillippe Memorial Scholarship. Made possible by members of the Elfun Society, Bridgeport Chapter, of the General Electric Company. The annual income from the endowment is used for a scholarship or scholarships for needy and worthy students of families residing in Fairfield County. First preference is given to students of the minority community.

Harriet Radler Memorial Scholarship. Established by Louis Radler, alumnus and member of the Board of Trustees, provides an annual award with first preference given to a needy, deserving, part-time student.

Harriet M. Radler Memorial Merit Scholarship. Established by Louis Radler, President of Chesco Industries. Scholarship to be awarded to a student enrolled in the Health Sciences, residing in Fairfield County, with academic promise and financial need.

The Mark L. Ritter Alumnus Scholarship. Established to encourage a Marketing major and permanent resident of New York State to pursue studies at the University and who is need of financial aid.

Natalia B. Romalis Scholarship. The scholarship is to be given to a Mathematics major for “Academic Excellence in Mathematics.”

The Director of the Division of Mathematics & Sciences will appoint a committee of faculty from that division to select the recipient.

Joceyline Poisson Scholarship Fund. Scholarship is awarded to students in Fones School of Dental Hygiene who show academic promise and financial need and are from Fairfield County and/or the state of Connecticut.

Clarence D. L. Ropp Scholarship. Established by the class of 1963 in honor of Dr. Clarence D.L. Ropp, retired dean of the College of Arts and Sciences, in appreciation of his dedicated service and devotion to the University for over thirty-five years. The income from this fund is awarded to a needy senior or seniors who have earned a specified cumulative quality-point ratio.

Wanda B. Russo Health Science Scholarship Fund. Established by Dr. Robert Russo and Wanda B. Russo, a Trustee of the University. Students in Health Sciences residing in Fairfield County, with academic promise and financial need are eligible.

The Scott A. Ryan Memorial Scholarship Fund. Established by Mr. and Mrs. Martin J. Ryan, Jr., in memory of their son. It is awarded on an annual basis to a deserving student majoring in Business.

The Etta and Jack Sabarsky Scholarship. Established by Neil and Michael Mellen in honor of Etta and Jack Sabarsky, in appreciation of the support and encouragement they have given to Neil and Michael at important times in their lives. Awarded annually to a senior majoring in Business who is in financial need and could not complete his/her studies without this scholarship.

The Sam Silverstone Memorial Scholarship. Presented by his daughter, Augusta Silverstone, in memory of her father, and awarded on the basis of need to a graduate of a Bridgeport public high school.

The Drs. Louise and Anthony Soares Scholarship in Teacher Education. The scholarship will be awarded annually, with first preference given to a graduating senior at the University of Bridgeport wishing to pursue a teaching certification or a master’s degree in Education at UB. If that person is not available, the scholarship may be awarded to an individual presently enrolled...
and Human Resources Department, who have specific, significant, and/or limiting physical disabilities.

**OTHER SCHOLARSHIPS**

**The Dr. E. H. Arnold Alumni Scholarship.** Awarded to a student registered in the Arnold College Division who has exemplified high scholarship, leadership, and character, and is in need of financial assistance.

**The Bigelow Family Scholarship.** Two Bigelow Scholars will be chosen from each class. The recipients must be from the region and have an academic record that shows success in the past and promise for the future.

**Alain M. Chaneles Memorial Scholarship.** Established by the TRW Corporation for the benefit of a student in Computer Engineering.

**The Cheesbrough-Pond’s Inc., Scholarship.** Provides full tuition to a student majoring in Science and entering the senior year.

**Connecticut Society of Certified Public Accountants.** Provides for two $500 scholarships. One recipient must hold junior status and one senior status; both recipients must major in Accounting. The students being considered for the scholarships will have their names submitted to the Accounting Department for approval.

**The Eileen M. D’Angelo Memorial Endowed Scholarship.** Awarded annually to a full-time second year student in the College of Naturopathic Medicine, who has maintained a 3.0 grade point average and shows financial need. Preference will be given to candidates returning to school after two or more years of work experience; participating in outdoor activities and/or athletic sports; and balancing perspective and concern for the environment.

**The Fones Alumnae Scholarship.** Supported by the alumnae of the School of Dental Hygiene, provides an award of $100 each year to a member of the sorority or to a woman Biology major who has completed her freshman year.

**The Robert J. and Phyllis P. Tobin Scholarship.** Established by Mr. Tobin and Mrs. Tobin, a University of Bridgeport alumna. Income from the endowment provides an annual scholarship to a freshman student who has achieved high academic grades in secondary school, who has demonstrated leadership qualities, has good character, and requires financial assistance.

**George R. Wetpler Memorial Scholarship Award.** Established by a gift of the Harvey Hubbell Foundation in memory of George R. Wetpler, a Trustee of the University of Bridgeport. The annual income is used for Engineering scholarships.

**Alfred R. Wolff Scholarship.** To be awarded to applicants or students in financial need whose academic record and personal qualities show a potential for success in a helping or social service. First consideration will be given to applicants in the Counseling

**AWARDS AND PRIZES**

**The Altrusa Club of Bridgeport, Connecticut District I Award.** Made annually to a senior woman in Business who has demonstrated the highest potential for success in her chosen field and is recommended by her Department Chairman.

**Alumni Association Award.** The $100 award is given annually by the Alumni Association to an outstanding freshman scholar.

**The Bridgeport Dental Association Grant/ Award.** Given each year by the Bridgeport Dental Association, with the annual approval of its Board of Directors, to a freshman student entering the Fones School of Dental Hygiene who demonstrates financial need and resides within the six towns, Greater Bridgeport region. This region includes the City of Bridgeport and the towns of Easton, Fairfield, Monroe, Stratford and Trumbull.

This $1,000 award is to be used to purchase the student’s required instrument kit and text books.

The recipient will be identified by the Office of Financial Aid and selected in consultation with the Director and faculty of the School of Dental Hygiene. In the event that more than one candidate is eligible for this award, the final determinant will be the highest grade average upon entrance.
Student Financial Services

Dr. E. H. Arnold Memorial Award. Presented each year to the male and female seniors of the Arnold Division who best exemplify the characteristics in which Dr. Arnold firmly believed. The recipients receive a key and their names placed on a plaque which is retained by and displayed at the University.

Kappa Omega Epsilon Service Award. The award and certificate is presented annually to at least one part-time student who has demonstrated a record of service to fellow students, Metropolitan College part-time studies program, the University of Bridgeport and the community.

The James Borona Memorial Scenic Art Award. Established by Helen Borona, whose husband’s craftsmanship and art were an inspiration to students. The award is presented annually to a student of Scenic Art, on the basis of talent, devotion, financial need and dedication to craftsmanship.

The Elizabeth Carrozza Memorial Award. Established by alumnae of the Fones School of Dental Hygiene in memory of Elizabeth Carrozza, a 1963 graduate of Fones School, who lost her life in a tragic automobile accident in 1967. An annual award is made to a Fones student who has shown outstanding achievement in clinical work.

The Otto W. Heise Science Award is to be awarded annually to a junior or senior majoring in science. First choice will be given to a student residing in Newtown, second choice to a student residing in Fairfield County, and a final choice to a student residing in Connecticut.

The Robert W. McDowall Memorial Award. Annual award for a deserving student in the Business Division of the School of Business or the School of Science, Engineering, or Technology, contributed by Mr. and Mrs. George Mezzanotte.

The Horace B. Merwin Award. The income is awarded annually to a graduating senior in the Business Division of the School of Business and the School of Science, Engineering and Technology who has demonstrated qualities of leadership in University activities, has maintained good academic standing, and has evidenced high ethical standards. The award is a memorial to the late Horace B. Merwin, trustee.

Milton Millhauser Prize in Fiction Writing. Awarded bi-annually in honor of Professor Millhauser who taught at the University of Bridgeport from 1947-1975.

The Molly Schermer Award. Given annually in her memory by her son, A.J. Schermer, to a graduating senior in Business or Engineering who, in the opinion of a faculty committee has substantially contributed to the community by effective participation in religious, civic, or health and welfare activities.

Graduate Scholarships

Applications are available in January of each year for the following year’s graduate scholarships.

SCHOOL OF BUSINESS & SCHOOL OF ENGINEERING

Iris L. Bresky Memorial Scholarship offers support for students in the HISP program. First preference is to an Argentine student majoring in Computer Engineering or Business Administration.

Dean Francis X. DiLeo Memorial Scholarship Fund was established by alumni, faculty and friends of the late Dean Francis X. DiLeo. Income from this fund provides partial scholarship awards to deserving students on the basis of academic excellence and leadership.

SCHOOL OF EDUCATION

The Drs. Louise and Anthony Soares Scholarship in Teacher Education is awarded annually, with first preference given to a graduating senior at the University of Bridgeport wishing to pursue a teaching certification or a master’s degree in Education at UB. If that person is not available, the scholarship may be awarded to a student at the graduate level who has achieved a 3.0 QPR on an undergraduate basis and has financial need.

The Augusta Silverstone Memorial Scholarship. Given by her sister, Minnie Silverstone, in recognition of Augusta’s contributions as an educator and counselor with the Bridgeport Board of Education. Income will be awarded as financial aid to a graduate student in either the School of Education or the Division of Counseling and Human Resources. First preference is to be given to students who have come through or plan to work within the Bridgeport school system.

Alfred R. Wolff Scholarship is awarded to applicants or students in financial need whose academic record and personal qualities show a potential for success in helping or social service. First consideration will be given to applicants in the Division of Counseling and Human Resources, who have specific, significant, and/or limiting physical disabilities.

HALSEY ITALIAN GRADUATE SCHOLARSHIP PROGRAM

The Halsey Italian Scholarship, named after Dr. James H. Halsey and his wife, Julia, was established in 1967. This scholarship provides the opportunity each fall semester for a graduate student from the University of Siena to study at the University of Bridgeport and live with an American host family. In addition, the scholarship is awarded to up to three eligible American students from our local area pursue study in the Italian language for a two-month period at a University in Italy.

Applicants must meet all requirements for admission to their requested program of study. Information and application forms may be obtained by writing to:

Halsey Italian Scholarship Committee
c/o International Office
University of Bridgeport
126 Park Avenue
Bridgeport, CT 06604
Student Affairs

Dean: Kenneth Holmes  
John J. Cox Student Center  
244 University Ave., Bridgeport, CT 06604  
Telephone: (203) 576-4392 or 4393  
E-mail: deanofstudents@bridgeport.edu

The contribution of the Division of Student Affairs to the University of Bridgeport and its students arises out of the special perspective which members of the student affairs staff have about students and their growth and development, their experiences, and their campus environments. This perspective draws on research about teaching and learning, and on assumptions which emphasize the importance of community, diversity, and individual differences to the educational experience.

The Student Life program is administered through the Division of Student Affairs by the Dean of Students. It includes career services, counseling and disability services, health services, interfaith center, international student affairs, residence life, student conduct, student activities and community services.

The Division of Student Affairs enhances and supports the mission, goals, and objectives of the University of Bridgeport as an international, culturally diverse supportive learning environment preparing graduates for life and leadership in an increasingly interconnected world. In this role, the staff of the student affairs division has a diverse and complicated set of responsibilities: to advocate for the common good while championing the rights of the individual; to encourage intelligent risk-taking while setting limits on behavior; to promote independent thought while teaching interdependent behavior.

The extent to which the University is successful in creating a climate in which these contradictory ends can coexist is reflected in how well students are able to recognize and deal with such contradictions both during and after their college experience. The Division of Student Affairs is committed to assisting students and the University of Bridgeport community as they seek to meet the challenges inherent in balancing these complex and often competing goals.

—Adopted from A Perspective on Student Affairs, National Association of Student Personnel Administrators, 1987.

Students are encouraged to take an active role in the life of the campus community, where there are many opportunities to contribute to group decisions, practice leadership, sort out priorities and make personal choices. Students at the University of Bridgeport are responsible for making their own decision and forming their own judgments concerning personal, social and academic activities. They share the responsibility for maintaining the educational climate needed for learning and for personal growth. The University retains high expectations of appropriate behavior, and expects that when students decide to enroll they will abide by all the rules of the University.

When the University deems it necessary it reserves the right to notify the parent or guardian to whom a student is financially dependent regarding the health, academic or disciplinary status of the student. (Dependency is defined by Section 152 of the 1954 Internal Revenue Code).

Services

ADVISING  
All students are assigned a faculty advisor through their departments and colleges. It is incumbent upon the student to meet with his/her advisor on a regular basis. (See Academic Regulations).

CAREER SERVICES CENTER  
The Career Services Center is a comprehensive career counseling and resource center dedicated to empowering students as active participants in their own career development. The Career Services Center is open to all students and alumni seeking assistance with career related issues. Career Services staff meets individually with students to discuss major selection, career decision making, graduate school preparation, as well as job and internship planning. Appointments are available in the center, and online resume and cover letter critiques are available as well. In addition, the center offers a variety of online resources and educational materials.

The Career Services Center offers career fairs and other related events throughout the year. A variety of local, national, and international organizations list full-time, part-time, and internship positions with the center. Students and alumni are encouraged to view these listings on the Career Services website and register on-line to get updates about events and participate in our resume referral program.

For more information contact our office at 203-576-4466 or visit our website at www.bridgeport.edu/career

ORIENTATION  
New student orientation programs are designed to introduce students to the University of Bridgeport community. The orientation program begins a few days prior to the start of classes. This gives incoming students the opportunity to get settled in their new environment and to become familiar with their academic program. Formal and informal social and informational sessions provide students with the opportunity not only to learn about the University’s policies, but to meet and socialize with other students. All new students are expected to attend.

STUDENT ACTIVITIES AND PROGRAMS  
Extracurricular activities are an important part of the college experience. Students plan programs and activities that are of interest to them. The professional staff works with individual students as well as with the various organizations and clubs to meet the intellectual, social, and cultural needs of the University community. There are many opportunities for students to participate in the planning of these activities.

ORGANIZATIONS AND CLUBS  
The University supports a wide range of student clubs, organizations and special interest groups that expand and cultivate the academic, professional and cultural interests of students. Each group develops, within broad University guidelines, its own policies and programs with the assistance of a faculty or staff advisor.

The following is a list of clubs and organizations that were registered for the 2010/2011 academic year:

- Alpha Kappa Alpha Sorority Inc., African Student Association, Alpha Phi Alpha Fra-
Student Affairs


FRATERNAL ORGANIZATIONS
Fraternities and sororities contribute to University social life and offer opportunities for the development of leadership skills and provide volunteer service to the campus and to the greater Bridgeport community.

VOLUNTEER OPPORTUNITIES
UB students are actively involved in making significant contributions to those in need in the greater Bridgeport community. Some of the programs UB students are involved in include tutoring local elementary and high school students, sponsoring parties and dances for area youth, visiting the elderly, assisting at soup kitchens and food banks, sponsoring clothing and food drives and organizing fundraisers for local charities. Listings of community service opportunities can be found through the Office of Campus Activities & Community Services room 117, Student Center, as well as on-line through the Student Affairs website, http://www.bridgeport.edu/communityservice.

FACILITIES
Although opportunities for social activities occur everywhere on campus, the following facilities are used for student-related social, recreational, and organizational activity.

John J. Cox Student Center provides many facilities for student life activity. The Social Room, Campus Information Center, meeting rooms, commuter-student lounge, Knight’s End café, student-run coffeehouse, game room and billiards room are all part of the Student Center. Offices for campus organizations such as the Student Government Association, “The Scribe” student newspaper, as well as several other student organizations, are also housed in this facility. The Student Center is also home to several offices of the Division of Student Affairs. Programming in the Student Center ranges from dance parties, concerts, semi-formals and special dinners to movies, lectures and fashion shows.

Carstensen Hall gives special opportunities to students who are seeking to maintain and enrich their spiritual life on campus. Carstensen Hall houses the Interfaith Center. Adjacent to the Student Center, it provides a quiet, warm atmosphere in which both worship and fellowship are part of every day.

Wheeler Recreation Center is a complete recreation physical fitness facility with a 25 meter, 6 lane pool; two racquetball courts; three multi-purpose indoor courts for tennis, volleyball, and basketball; a martial arts studio, a free-weight room, a 16 station universal gym room, saunas, steam bath and indoor track. Students use the Center for personal recreation, intramural team events, and organized group events. Aerobics, swimming, yoga, weight training, lifeguard training, first aid/CPR training, and tennis lessons are offered. Tae Kwon Do is also offered.

MEDIA
The University supports a student news publication, the Scribe. The residence halls, as well as the staff of the Student Development Division, publish informational newsletters as well.

PART-TIME STUDENT SERVICES
Part-time students may use all of the services available to full-time students. Admission staff members provide entry counseling to determine if students are “traditional” or “non-traditional” and make appropriate assignments to the colleges.

Traditional students are those enrolled in a regular program on the Bridgeport campus in the usual University manner in terms of scheduling and location. Non-traditional students are those enrolled in adult degree programs and those attending class at UB-Stamford Center or any of our other branch campuses.

Since many part-time students are employed or have responsibilities at home, schedules have been arranged so that most students come to class two nights per week. Some courses are offered on Mondays and Wednesdays and others on Tuesdays and Thursdays, while others are arranged in special scheduling formats. Information describing new student orientation, campus resources, workshops, student publications, social and cultural activities may be obtained from the Student Programming Office.

RELIGIOUS LIFE
Although the University of Bridgeport is non-sectarian according to its charter, it does not ignore the ethical and moral ideas common to all religions.

The University calendar does not reflect observance of religious holidays but University policy holds that all students are free to observe their respective holidays without prejudice.

Ministers and/or advisors are available to be members of religious groups on campus. A sanctuary and a Moslem Prayer Room are also available. Facilities are available for meditation, quiet study, recreation, group meetings, dinners, and religious services.

Permanent space needs will be considered by a committee consisting of the Dean of Students, the Academic Provost, the Building Manager and the University Attorney. Temporary space request are to be made to the Building Manager.

The focal point of Carstensen Hall/Interfaith Center is Carstensen Protestant Chapel. The building and the Chapel were named in memory of Hazel Weed Carstensen by Trust Agreement.

STUDENT CONDUCT
The mission of the Student Conduct Office is to articulate and oversee the consistent implementation and enforcement of the University’s Student Code of Conduct.

The goals are:
- to educate the University community regarding the Student Code of Conduct;

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HEALTH REQUIREMENTS

HEALTH EXAM FORM
A pre-entrance physical examination completed by a physician must be submitted to Student Health Services prior to or at the start of classes with the exception of part-time domestic students and IDEAL students. All International Students must submit a completed pre-entrance physical examination form.

MENINGITIS IMMUNIZATION
Connecticut Public Act No. 01-93 requires all students who reside in on-campus housing to provide proof of meningitis vaccination.
Connecticut Public Act No. 89-90 requires all new students and returning students born after December 31, 1956 to provide proof of immunization against measles and rubella. You are required to provide proof of one Rubella Vaccine and two doses of measles vaccine:

MEASLES, MUMPS, RUBELLA IMMUNIZATION
1. First dose on or after 12 months of age and given in or after 1969.
2. Second dose given on or after January 1, 1980.
3. Laboratory evidence (blood test) of immunity is acceptable in lieu of administration of vaccine, but you must provide proof of immunity with a Laboratory slip.
4. History of having had the disease is not acceptable documentation of immunity.

VARICELLA (CHICKENPOX) IMMUNIZATIONS
1. Two vaccines (12 weeks apart if vaccinated between 1 and 12 years and at least 4 weeks apart if vaccinated at age 13 years).
2. Laboratory evidence (Blood Test) of immunity is acceptable in lieu of administration of vaccine, but you must provide proof of immunity with the laboratory slip.
3. A documented history of having had the disease by a medical doctor or public health department is acceptable documentation.
4. Students born in the United States before 1980 are exempt.

Students registering at the University of Bridgeport are required to bring proof of immunization listed above prior to registration. Students who will be residing in on-campus housing will also be required to provide proof of meningitis immunization.

TUBERCULIN TESTING
Tuberculin Testing (PPD) is required within six months prior to admission to the University. Tuberculin Testing is not required for IDEAL students, though it is highly recommended by Student Health Services.

HEPATITIS B VACCINE
College students are at an increased risk of developing a Hepatitis B infection. All students are strongly encouraged to be vaccinated for Hepatitis B.

STUDENT HEALTH INSURANCE
All full-time undergraduate students, all students living in campus housing, all athletes and all Health Sciences majors are required to participate and are automatically enrolled in the Injury plan at registration.
All full-time undergraduate students and all students in campus housing are required to participate and are automatically enrolled in the Sickness plan at registration and charges are added to their account, unless proof of comparable coverage is furnished by the deadline date indicated on the Waiver Card.
All international students are required to participate and are automatically enrolled in both the Injury and Sickness plans at registration and charges are added to their account. Coverage for international students cannot be waived.
Part-time students taking at least 6 credit hours and graduate students who are not international students, or living in campus housing may participate in the Injury and Sickness plans on a voluntary basis.
Dependents of those enrolled for both Injury and Sickness may also participate on a voluntary basis.

COUNSELING SERVICES
Counseling Services offers psychological treatment opportunities to all undergradu-
Student Affairs

Immigration, employment and the semesters. We also provide professional giving necessary information throughout newsletter Diversity Crossroads as well as Coffee Hour and publishing a bimonthly arrival by offering a monthly International exchange visitors may experience upon difficulties our international students and social and cultural differences, and personal-employment eligibility, financial questions, topics including maintaining status, travel, We provide information on a wide range of their degree programs.

IMMIGRATION STATUS CHANGE REQUEST
A non-refundable payment of one semester tuition will be required in order to support a change of status to F1 status. A refund will be offered if the change of status is denied by the United States Citizenship & Immigration Services or US Embassy/Consulate.

LIVING ON CAMPUS
The University offers a variety of housing options. Students have the choice of a single, double, double-as-single, triple or triple-as-a-double room, each with a different price structure. Room preference assignments are subject to availability with some restrictions. Efforts are made to match new roommates by preferences stated in their housing contract. Students may seek a change in roommates after the first week of classes but before October 1 (fall semester) or March 1 (spring semester). Because the University is not responsible for theft or damage to personal property, students are advised to obtain renter's insurance, or ensure coverage under their parents' homeowner's policy.

Residential Life
The University recognizes the important contribution that life in the residence halls can make in a student's total educational experience. Each hall is staffed by a Residence Director and Resident Advisors on each floor. Their efforts are coordinated through the Office of Residential Life. Residence hall staff have the responsibility of enforcing University policies, procedures and regulations as they relate to residential living and promoting, with the active cooperation of residents, an environment that supports academic achievement.

INTERNATIONAL STUDENT SERVICES
The International Student Services is part of the Division of Student Affairs. Our goal is to ensure institutional compliance with federal regulations and to assist international students and scholars, their dependents, and prospective students with immigration matters and adjustment to life in the United States. We strive to facilitate an environment where students can develop a clear understanding of the cultural issues faxing international students and offer supportive counseling to address their needs.

For more information call (203) 576-4454, email: counselingservices@bridgeport.edu or visit us on the web at: www.bridgeport.edu/cs

DISABILITY SERVICES
The University of Bridgeport is committed to providing services to qualified students with disabilities so that they receive an equal educational opportunity. In compliance with Section 504 of the Rehabilitation Act, the American with Disabilities Act and the Connecticut State Laws, we provide reasonable accommodations to reduce the impact of disabilities on academic functioning or upon other life activities in a University setting. All accommodations are determined on an individual basis. If a student with a disability would like to be considered for accommodations, he/she must initiate the request, prior to or at the beginning of the academic semester and provide supporting documentation.

For further information call (203) 576-4454, email: disabilitieservices@bridgeport.edu or visit us on the web at: www.bridgeport.edu/disability.

REIMBURSEMENT
We also provide professional expertise on immigration, employment and taxation issues by holding seminars and workshops.

Upon arrival on campus, all new international students and scholars report to this office for passport check-in. A mandatory immigration and personal safety information session is also required for all international students.

RESIDENCE AND MEAL PLAN REQUIREMENTS
All students who are full-time undergraduates are required to live in University residence halls unless they meet one or more of the following criteria:

1. Those who have attained the age of 21 by the first day of classes.
2. Those who have accumulated 90 academic credits (including transfer credits) by the first day of classes.
3. Those who are living at home with parents, a spouse or other immediate relatives within a 15 mile driving distance of the University.

Exceptions to this policy must be requested from the Office of Residential Life in writing and approved by the Director of Residential
Life by the first day of classes. The Residential Life “Easy Living” package includes both room and a choice of meal plan options. Meals are served three times daily, with the exception of Saturday and Sunday when two meals are served. The Dining Hall is closed during vacation periods as scheduled in the University calendar. Kosher meals are available through the Dining Hall upon request.

Winter and summer housing is available on a limited basis and under separate contract. Additional requirements may apply.

The Residence Hall and Meal contracts, once signed by the student, are binding for the academic year (not the semester).

**Student Conduct and General Standards**

Students at the University of Bridgeport are expected to respect the rights of others, exercise responsible judgment and follow high standards of personal conduct. Students are expected to involve themselves in activities that promote the welfare of the University and to behave with courtesy and restraint toward fellow students and University staff. The University fosters a multicultural, international environment and does not condone or tolerate discrimination on the basis of gender, sexual orientation, race, color, religion, age, national or ethnic origin, creed, political affiliation, or handicap. The University strives to create an atmosphere of mutual trust between individuals, promoting self-discipline, and community standards.

At the same time, the University maintains concern about the behavior of its students both on and off campus. In the maintenance of its academic, social and health standards, the University reserves the right to be the sole determiner as to whether a student should be removed from residence life, receive fines or sanctions, be suspended or expelled, granted a leave of absence or dismissed. A student suspended, expelled from the University is responsible for the full payment of his/her financial charges for the semester.

Students are expected to conform to all governing regulations of the University as outlined in the *Key to UB* (Student Handbook), the *Catalog* and all official notifications of policy. A student will be subject to University disciplinary procedures if his/her on or off-campus behavior results in violations of these regulations, civil and/or criminal law. Disciplinary action, notification of charges, disciplinary procedures, appeals and a review of actions that may lead to disciplinary procedures are identified and described in the *Key to UB* (Student Handbook). It is the responsibility of the student to familiarize him/herself with all University and Residence Hall codes, regulations and policies, all available on-line.
Academic Regulations and Procedures

GENERAL INFORMATION

The Advising System

The University provides academic and personal services to support each student's effort to gain the best possible undergraduate education. Selecting a course of study, choosing a major, and deciding upon a career are crucial decisions for every student. The Advising System functions to assist students in designing their programs according to their individual interests and needs.

Students are assigned a faculty advisor upon acceptance to the University. Faculty advisors are available for consultation throughout the student's tenure for purposes of academic advisement and assistance with course selection. Advisors approve registrations for traditional undergraduates and program or major changes for all students. For assistance with non-academic concerns, professional counselors are available through the University's Student Affairs Division.

 Interruption of Studies

WITHDRAWAL FROM A COURSE

Undergraduate students may withdraw from any course with advisor approval. Graduate students may withdraw from any course other than a Thesis, Independent Study, Research or equivalent. Course withdrawals may be requested up to the last date to withdraw from courses as published in the course schedule book or academic calendar. To withdraw from a course, obtain a Schedule Adjustment Form from the Office of the Registrar and take it to your advisor. Advisor’s signature is required to withdraw from any course. Return the signed withdrawal form to the Office of the Registrar for processing.

If a student officially withdraws from a course during the first three weeks of a class, no grade will be reported and the course will not appear on the student's transcript. On occasions a withdrawal is granted after the first 20 days for reasons beyond the student's control as determined by the student's advisor. In these cases, a "W" will be posted on the student's transcript for the course. When a student registers for a course, but ceases to attend class without filing an application for withdrawal a grade of “F” shall be posted to the student's transcript. Tuition refunds for course withdrawals will be calculated according to the University's official refund policy. Federal Financial Aid awards are subject to adjustment when a student withdraws from the University. Cessation of attendance, notice to instructors, or telephone calls to the University, does not constitute official withdrawal from the University.

WITHDRAWING FROM THE UNIVERSITY

Students who withdraw from all courses and thus from the University, must file an Application to Withdraw at the Office of the Registrar. Students must meet with the Dean of Students prior to submitting the withdrawal form to the Registrar.

No student is considered officially withdrawn and no refund of tuition will be made unless the student has contacted the Office of the Registrar.

If a student fails to register for a semester without being granted a leave of absence, or the leave of absence has expired, the student will be administratively withdrawn from the University.

CANCELLATION

Students presently enrolled may cancel their registration or officially withdraw for the subsequent semester while completing the current one. Students must contact the Office of the Registrar to cancel classes.

INTERNATIONAL STUDENT ATTENDANCE POLICY

International students must pursue a full-time course of study to maintain status and are responsible to attend scheduled classes. Failure to attend classes may lead to termination of SEVIS records. Before making changes to their schedules, International students must speak with an academic advisor and consult with International Student Services. ISS is located on the Garden Level of Wahlstrom Library.

Readmission

REGULAR READMISSION

A student who officially or unofficially withdraws from the University must apply for readmission. Readmission is necessary with any break in attendance for full-time students and after a break of more than one semester for part-time students. A student who withdraws officially, or unofficially, and subsequently applies for readmission is required to meet the degree requirements and conditions current at the time of readmission. Students who have attended another accredited institution in the interim must present complete official transcripts with their application for readmission.

Applications for readmission are available from the Registrar's Office.

READMISSION IN CASES OF DISCIPLINARY EXPULSION AND SUSPENSION

Disciplinary expulsion and suspension may be incurred as a result of unacceptable conduct. See the Key to UB for rules, regulations and procedures for readmission.

LEAVE OF ABSENCE

Students who must discontinue enrollment for less than one academic year and who have a commitment to return to the University must submit a written request for a Leave of Absence to the Office of the Registrar. A copy of this request must also be sent to the Dean or Director of the student's program. Students who are in good academic standing and who have met all University requirements may return to the University at the beginning of any semester within the one-year Leave of Absence period.

A leave of absence may be extended for an additional year upon approval of the program Dean or Director. A written request is required for consideration of an extended leave of absence and the leave will be noted on the student’s permanent record.
Academic Regulations and Procedures

FIVE YEAR RULE FOR UNDERGRADUATE STUDENTS

Students who interrupt their studies for a period exceeding five years must obtain written permission from the Dean of their College or Director of the School to apply previously earned credits toward their degree.

Application for Graduation

Applications must be presented to your Department Chairperson (major area and minor area) in time to be filed with the Dean of your College by the application deadline. Undergraduate students should consult with their faculty advisor a semester before their graduation date so that a Graduation Checklist can be completed. Such consultation enables the advisor to check the student’s records for discrepancies and allows some time during the last semester to resolve problems if any are to appear. The fulfillment of the graduate requirements is the student’s responsibility.

For deadlines for graduation applications, please see the Academic Calendar.

Students who are required to take a course/s after the expected graduation date must reapply for graduation and pay an additional application fee.

All blanks on the application form must be completed. Diplomas will be printed exactly as the name appears on the application form. The University of Bridgeport holds one ceremony in May of each year. A fee must be paid whether or not you participate in the ceremony. Diplomas are normally mailed within 45 days of the end of the term for which a student is graduating. Release of diplomas is dependent on fulfillment of the graduation process, please email the Registrar at registrar@bridgeport.edu so that your records can be updated.

Transcripts

Students may request official transcripts to be mailed to other institutions, prospective employers, or other authorized agencies, by completing a transcript request from available in the Office of the Registrar. Please allow ten (10) days for requests sent by mail to be processed. Each graduating student will receive one free, unofficial copy of his/her transcript together with his/her diploma upon graduation. Subsequent transcript requests must be made to the Office of the Registrar in writing. Transcripts will be mailed to the address listed on the transcript request form.

UNDERGRADUATE REGULATIONS & PROCEDURES

Classification of Undergraduate Students

A student who has formally applied for admission to the University and has been admitted to one of its Colleges as a degree candidate is a matriculated student. An applicant admitted with permission to take courses for which he or she is qualified, but not as a degree candidate, is a special student. Special students may later apply for matriculation and are subject to the same academic regulations as matriculated students.

Only matriculated students carrying at least twelve semester hours are eligible for election to class and other offices (with the exception of the Part-time Student Council, and University Senate).

FULL-TIME STUDENTS

Normal academic progress is maintained by a student who:

1. Has been accepted into a degree program;
2. Is fulfilling the requirements of that degree program as described in this Catalog;
3. Has a cumulative quality point ratio of at least 2.0 (“C” average), or that required by the specific degree program if it is higher than 2.0; and
4. Registers for and completes at least 12 semester hours of credit each term (excluding co-op terms).

PART-TIME STUDENTS

Normal academic progress is maintained by a student who:

1. Has been accepted into a degree program;
2. Is fulfilling the requirements of that degree program as described in this Catalog;
3. Has a cumulative quality point ratio of at least 2.0 (“C” average), or that required by the specific degree program if it is higher than 2.0; and
4. Registers for and completes at least 12 semester hours of credit each term.

CLASS STANDING

Students are classified according to the number of college hours satisfactorily completed:

Freshman 0-30 semester hours
Sophomore 31-60 semester hours
Junior 61-90 semester hours
Senior 91 and above

THE MAJOR

Most students matriculating in programs leading to an Associate's or Bachelor's degree declare a major when they are admitted to the university.

The student must earn a grade of “C-” or better in every major course. However, the student’s overall quality point ratio in major courses must be at least 2.0. In some cases, departmental requirements may exceed these minimums. If a student earns a grade of “D” or “F” in a course in the major field, he or she must obtain a written statement from the department chair specifying the procedure necessary to remedy the deficiency and remain in the major.

THE MINOR

The University offers the option of selecting a second area of specialization. Like the major, the minor was conceived to provide a unified, coherent program in a discipline or area of knowledge. While requiring a second focus for the student’s intellectual interests, it enables him or her to investigate the important concepts of a specific area and to acquire a firm basis for further study.

In terms of career preparation, the minor
Academic Regulations and Procedures

option can complement a regular major program or it may add an entirely new dimension to the traditional curriculum.

Students who wish to pursue a minor should obtain the application in the Dean’s or Director’s office of the College or School in which the minor is offered.

Minors may be assigned in the following areas:

- Accounting
- Americas Studies
- Asia Pacific Studies
- Business Administration
- Business Economics
- Chemistry
- Computer Engineering
- Computer Information Systems
- Computer Science
- Criminal Justice
- Education
- Electrical Engineering
- Engineering
- Fashion Merchandising
- Finance
- Fine Arts
- Graphic Design
- Philosophy
- Gerontology
- History
- Human Services
- Illustration Biology
- Industrial Design
- Interior Design
- International Business
- International Political Economy & Diplomacy
- Legal Assistant Program
- Literature & Civilization
- Management & Industrial Relations
- Marketing
- Martial Arts
- Mass Communications
- Mathematics
- Mechanical Engineering
- Middle East Studies
- Modern Language
- Music
- New Media Studies
- Nursing
- Peace and Development Studies
- Political Science
- Psychology
- Sociology
- Social Science
- Theatre Arts
- World Religions

UNSPECIFIED STATUS

Unspecified status is designed primarily for those students who have not yet chosen a specific field of concentration within their College. The courses which they take under these circumstances will fulfill the majority of general college requirements during the first and second year of study.

Students who have been admitted to unspecified status must follow the procedures for change of major in order to become admitted to a specific major and must declare a major by the end of the sophomore year.

CHANGE OF MAJOR

If after matriculation a student wishes to change a major, it must be initiated by the student through the office of the senior administrator of the College or School. In some cases, change of program may require a reevaluation of semester hours earned at UB or transferred from another institution. It is the student’s responsibility to consult with the chair of the anticipated major department to formulate a curriculum plan for the completion of that degree.

REGISTRATION FOR COURSES

The student must formally register for courses during the regular or early registration period. All changes for the semester are payable in full before or during registration unless the student has applied for the deferred payment plan. A program of fifteen to sixteen semester hours constitutes a normal load. No student will be permitted to register for more than eighteen semester hours in any one semester without the prior written approval of the appropriate College Dean or School Director. Only students who are designated by the Office of Admissions as part-time students are eligible to register for less than 12 semester hours unless it is a student’s final semester.

CHANGE OF REGISTRATION

All changes of registration require the prior written approval of the student’s faculty advisor. Students shall refer to the published course schedule and Key to UB to determine additional approval procedures and requirements for all program changes. The student must submit all approved changes of registration, including course withdrawals, to the Office of the Registrar by the published deadlines.

CLASS ATTENDANCE

Undergraduate students are expected to attend their classes regularly. The instructor shall specify in the course syllabus at the beginning of the semester the extent to which the attendance factor will be taken into account when grades are calculated. Due allowance, however, will be made for such factors as illness, inclement weather, and severe personal or family problems.

UNIVERSAL ENGLISH

All student papers submitted to any instructor at the University must be of University standard in form, spelling, punctuation and literary organization. Instructors may refuse to read or to correct papers that are not in keeping with the standards of good English usage.

Grades and Quality Points

A semester hour is the unit by which credits are measured. A quality point is the numerical value assigned to letter grades A-F. Each grade is assigned quality points as shown below. The faculty uses the following criteria as bases for determining letter grades: “A” excellent; “B” above average; “C” average; “D” minimal pass; “F” failure; “I” or “R” incomplete; and “W” withdrawal. Letter grades may be assigned with “+” and “-” signs. Other grades include pass-fail (earned under the University Pass/Fail Program): “S” - satisfactory completion of course requirements; and “U” - has not completed course requirements.

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<thead>
<tr>
<th>GRADE PER SEMESTER HOUR</th>
<th>QUALITY POINTS</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>4.00</td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
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<tr>
<td>B</td>
<td>3.00</td>
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<tr>
<td>B–</td>
<td>2.67</td>
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<tr>
<td>C+</td>
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<td>0.67</td>
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The cumulative quality point ratio (QPR) is determined by dividing the number of semester hours attempted into the number of quality points earned. Non-credit courses and grades of pass in pass/fail courses are exempted from the computation of the quality point ratio. Incomplete (“I” or “R”) grades are not included in this computation until converted to a letter grade.

REPEATED COURSES

Students may repeat any course at any grade level below ‘A’. The grade from the first repeat of a given course will replace the first-time grade for the computation of the QPR, the original grade however, will remain on the transcript. Grades earned on subsequent repeats of the course will be included in the computation of the QPR. All repeated courses will be so indicated on the transcript.
PASS/FAIL OPTION
(FREE ELECTIVES ONLY)
Undergraduate students may elect to take up to 6 courses in an academic degree program on the pass/fail basis. Only free electives may be chosen for the pass/fail option, and no more than two courses may be on that basis in a given semester. Request to take a course on the pass/fail basis must be made in writing on the appropriate form after registration in the course, but absolutely no later than the tenth day of scheduled classes in a regular semester, the fifth day for a ten-week course, or the third day for a five-week course. Students should review the complete regulations with their advisors before requesting the pass/fail option through the Registrar’s Office.

INCOMPLETE WORK
Incomplete grades (“I” or “R”) must be recorded by the date stipulated by the Registrar at the end of the semester. No incomplete will be so recorded by the Registrar unless it is accompanied by a clear indication from the course instructor of the nature of the work to be made up. The Registrar will provide appropriate forms with grade sheets. This information will be placed in the student files.

a. An “I” (incomplete) grade designates incomplete work in a course at the time of grading for reasons beyond the student’s control and determined to be bona fide by the instructor. These would include absence from a final examination or inability to complete terminal assignments due to illness, employment conflicts, etc. In such cases where the “I” grade is awarded the incomplete will revert to a failing grade if the unfinished work is not satisfactorily completed by the end of the semester immediately following the one in which the incomplete was granted, exclusive of the summer sessions. This time can be extended by the instructor for legitimate reasons.

b. A grade of “R” indicates incomplete work in thesis, research, or undergraduate or graduate student project courses. The “R” grade must be removed within a period of time specified by the instructor/mentor/project advisor or director. It must be within the maximum time allowable for degree completion in the academic program where the degree is being sought.

“W” GRADE
No student may withdraw from a course without the knowledge of his/her academic advisor, as indicated by that advisor’s signature on the change of schedule form. Withdrawal “W” grades are assigned based on the following policy statements:

1. If the student officially withdraws from a course during the official change of registration period, that course does not appear on the student’s transcript. This includes withdrawals initiated by the student and those initiated by the University (e.g., cancellation of course sections).

2. If a student officially withdraws from a course after the official change of registration period, but before the end of the official withdrawal period in a given semester or summer session, a grade of “W” is assigned and that course remains on the student’s transcript. Courses with the grade of “W” do not count toward the QPR but do count toward “hours attempted.”

3. The names of students who have officially withdrawn from a course and received the grade of “W” are so listed on the class roster for the balance of the semester.

4. Any exceptions to the above, including “late” withdrawals, must be individually approved by the appropriate Dean or Director and the Provost before they become official and are recorded.

CARNEGIE UNIT OF CREDIT
Note: The application of the Carnegie unit of credit has implications for graduation requirements, transfer credit policy, faculty load and for measuring program hours/income. The Carnegie Unit of Credit provides a guideline on the amount of time that an undergraduate is expected to dedicate to a one semester hour course in order to receive one semester hour of academic credit. The University of Bridgeport calibration of the Carnegie Unit of Credit is as follows:

Onsite Lecture Classes: To receive one semester hour of academic credit, the student is expected to attend a 50 minute lecture class per week and spend approximately two hours on assignments and study outside of the classroom throughout a fifteen week semester.

Online or Blended Learning Classes: Through Blackboard, Wimba or other online tools and blended learning, students would be expected to complete 2.5 hours of activities per week over fifteen weeks to receive one semester hour of academic credit. This would include activities such as reading and responding to posted course materials, discussion board postings, and Skype or Wimba discussions.

Onsite Activity-based Classes: One hour and forty minutes of engagement in discipline-based activity and fifty minutes of study per week throughout fifteen weeks.

Clinics, Studios and Laboratory-Based Class: 2.5 hours of laboratory, clinical or studio activity per week for 15 weeks.

Independent Study: 2.5 Semester hours of Study per week over a 15 week Semester.

Other Forms of Learning: Academic credit based on a demonstration of competency in defined academic outcomes will be the exception and will be based on accepted instruments approved by the Deans and Program Chairs. These can include CLWEP, CLEP tests, or examination of a portfolio by trained academicians in the discipline in which the student seeks credit.

In all of these learning formats, contact hours and/or study/assignment hours would be increased each week in a summer or concentrated session to assure compliance with unit of credit guidelines.

Approved by University of Bridgeport Senate, November 30, 2010

Off-Campus Study
Matriculated students are expected to take the courses for their degrees at the University of Bridgeport. Permission to take courses at other institutions for transfer credit will be given only for good and valid reasons and must be approved in advance and in writing by the student’s advisor. Permission will not be granted for courses currently offered by the University or courses within the last thirty semester hours before graduation, or for courses previously failed at the University.

Matriculated students may not take courses
Academic Regulations and Procedures

at junior or community colleges for transfer credit at the junior or senior level toward their degrees.

CREDIT FOR LIFE WORK EXPERIENCE (CLWEP)

Some students acquire mastery over course subject matter through prior work or training experience. Many departments have developed examination and other assessment procedures to provide the possibility of credit for those experiences which correlate to specific course offerings in the University Catalog.

CLWEP credit may not be used to satisfy the minimum University 30-hour residency requirement. CLWEP credit is included in the student’s semester hours earned at the University and also in the total number of UB hours used to determine eligibility for graduation honors. However, such credit is not computed in the student’s quality point ratio at the University. Information on subject matter and evaluation procedures is available in the office of the Dean of the School of Continuing and Professional Studies.

COLLEGE LEVEL EQUIVALENT PROFICIENCY EXAM (CLEP)

The University of Bridgeport participates in the Educational Testing Service’s College Level Equivalent Proficiency Exam program. The basic purpose of this program is to give the student and nontraditional learner a means for assessing their levels of achievement and for requesting college credit for such achievement.

Undergraduate students may earn up to 30 semester hours of credit (one year’s studies) by demonstrating subject area competence through testing. CLEP credit may not be used to satisfy the minimum University 30-hour residency requirement. CLEP credit is not included in the student’s credit hours earned at the University of Bridgeport and is not computed in the student’s quality point ratio at the University. CLEP credit is not considered in the total number of UB hours used to determine eligibility for graduation honors.

Information on subject matter and testing procedure is available in the office of the Dean of the School of Continuing and Professional Studies.

ADVANCED PLACEMENT

A student may enter the University of Bridgeport as a freshman, but with advanced standing toward a degree. Advanced standing may be achieved by taking the Advanced Placement examinations administered by the College Entrance Examination Board. A score of three or above allows the student to earn up to eight credits in one subject area. Well qualified students may also earn advanced placement by taking courses for college credit while in secondary school. Information regarding Advanced Placement is available in the Office of Admissions.

Academic Status of Students

The following policies and standards define the minimum requirements for maintaining academic status in the undergraduate degree programs of the University. Higher requirements may be established by the faculty for specific programs, subject to approval by appropriate College committees, the appropriate senior administrator of the College or School and the Provost. Such requirements are described in the appropriate section of this catalog.

NORMAL ACADEMIC PROGRESS

Normal academic progress refers to a student’s scholastic status in a degree program. The student who is not maintaining normal academic progress will be permitted to remain in a degree program while attempting to reestablish normal academic progress, unless and until the student is subject to academic separation as described below.

A student may be awarded a degree only when all degree requirements have been satisfied. In particular, a student who has failed to maintain normal academic progress at some point, must have reestablished normal academic progress before a degree is awarded.

Academic Separation

The following policies and procedures apply to all students, both matriculated and special.

FULL-TIME STUDENTS

In order to maintain satisfactory progress as a full-time student, it is necessary to attempt a minimum of 12 credits per semester. A full-time student whose quality point ratio is below 2.0 for a given semester is sent a letter of warning at the end of that semester.

A full-time student, who has attempted fewer than 19 semester hours and whose quality point ratio is below .75 is automatically separated at the conclusion of a spring semester.

A student is automatically separated from the University at the conclusion of a spring semester when the cumulative quality point ratio and UB semester hours attempted are as follows:

<table>
<thead>
<tr>
<th>UB Semester Hours Attempted</th>
<th>QPR</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>Below 1.5</td>
</tr>
<tr>
<td>48</td>
<td>Below 1.7</td>
</tr>
<tr>
<td>72</td>
<td>Below 1.9</td>
</tr>
<tr>
<td>96 or more</td>
<td>Below 2.0</td>
</tr>
</tbody>
</table>

* Retaking a course does not count toward this total.

Maintaining satisfactory academic progress is essential in order to remain eligible for financial aid. Please refer to the financial aid section for further information on maintaining eligibility for financial aid.

PART-TIME STUDENTS

A student is automatically separated from the University when the cumulative quality point ratio and UB semester hours attempted are as follows:

<table>
<thead>
<tr>
<th>UB Semester Hours Attempted</th>
<th>QPR</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>Below 1.5</td>
</tr>
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<td>48</td>
<td>Below 1.7</td>
</tr>
<tr>
<td>72</td>
<td>Below 1.9</td>
</tr>
<tr>
<td>96 or more</td>
<td>Below 2.0</td>
</tr>
</tbody>
</table>

READMISSION

A student who has been separated from the University under the above provisions may apply for readmission to the University no sooner than one full semester after separation. A readmission form is available from the Office of the Registrar. No course work at the University of Bridgeport is permitted during the period of separation.

NOTIFICATION

A student will be notified of his/her separation before the beginning of the following semester. It is, however, the student’s
responsibility to be aware of his or her academic status at all times.

APPEALS
Actions taken under the regulations pertaining to Academic Separation may have an immediate impact on a student’s eligibility for financial aid. Students may appeal actions taken pursuant to these regulations. Appeals must be made in writing directly to the Academic Separation Appeals Committee within ten calendar days of receipt of notice of the action taken. The decision of the Dean will be made within twenty-one calendar days of the date of the receipt of the appeal.

An appeal of separation from the University that is granted places the student in a probationary status. The conditions of this status, including its maximum duration, will be specified in the Committee decision granting the appeal.

Change of Status

FROM FULL-TIME TO PART-TIME
Students wishing to transfer from full-time to part-time status must secure the necessary forms from the Registrar’s Office.

FROM PART-TIME TO FULL-TIME
Students wishing to transfer from part-time to full-time status must secure the necessary forms from the Registrar’s Office.

Academic Honors

PRESIDENT’S LIST
A full-time student who, in a given semester, completes 12 or more semester hours with a quality point ratio of 3.7 or higher and with no incomplete grades is named to the President’s List at the end of the academic year. A part-time student who is matriculated and who, during a regular academic year, completes 12 or more semester hours with a quality point ratio of 3.2 or higher and with no incomplete grades is named to the Dean’s List at the end of that academic year.

DEAN’S LIST
A full-time student who, in a given semester, completes 12 or more semester hours with a quality point ratio of 3.2 or higher and with no incomplete grades is named to the Dean’s List at the end of that semester. A part-time student who is matriculated and who, during a regular academic year, completes 12 or more semester hours with a quality point ratio of 3.2 or higher and with no incomplete grades is named to the Dean’s List at the end of that academic year.

NATIONAL HONOR SOCIETIES
Honor societies include Phi Kappa Phi, all University; Beta Alpha, accounting; Kappa Pi, art; Alpha Sigma Lambda, part-time students; Pi Omega Upsilon, dental hygiene; Delta Tau Kappa and Pi Gamma Mu, international and national social science; Sigma Beta Delta, business administration; Eta Kappa Nu, electrical engineering; Upsilon Pi Epsilon, computer science; and Sigma Xi, research and scholarship; Lambda Pi Eta (The National Communication Studies Honor Society); Theta Alpha Kappa (The National Religious Studies Honor Society); Pi Sigma Alpha (The National Political Science Honor Society); Sigma Iota Rho, The Honor Society for International Studies.

Requirements for Undergraduate Degrees

The stipulations in the list immediately below are only those which are common to the awarding of the Bachelor’s degree. However, requirements specific to each College or School and to individual curricula and disciplines within each College or School also exist. The student must be especially careful to note all of these, since fulfillment of graduation requirements is the individual student’s responsibility. No permission for deviation from published requirements is official unless it is made in writing and signed by the senior administrator of the College or School from which the degree is sought. It is recognized that the requirements for graduation in individual schools may change. A student must meet the requirements for graduation which are current at the time of graduation, and consistent to the greatest extent possible with the degree requirements in existence at the time of the student’s entry into the major. However, whenever a program is altered it is the University’s responsibility to translate the student’s previously completed work into the new program requirements so that the continuously enrolled student is not penalized for the adaptation. The only exception would be when the state or other licensing agency imposes a new requirement. The common requirements for awarding the Bachelor’s degree follow.

A student must:
1. Have been admitted as, or have achieved the status of, a matriculated student in the College, and must have attained upper-class or major status.
2. Have completed the last thirty semester hours of work toward his or her degree under the direct auspices of the University. Under exceptional circumstances, the senior academic administrator may slightly modify this requirement.
3. Present an overall cumulative quality point ratio of at least 2.0 and, in addition, must have a quality point ratio of 2.0 or better in those courses taken for credit in the major. Each individual course in the major must be passed with a grade of “C-” or better. The student must have earned the number of semester hours of credit required by the College or School and must not deviate from the curriculum as displayed in this catalog without the written approval of the appropriate senior academic administrator or his/her designate.

GRADUATION HONORS
Candidates for graduation who have completed at least sixty semester hours of academic course work at the University of Bridgeport in their junior and senior years are eligible for honors upon recommendation of the appropriate College faculty. The following standards are used:
1. The Bachelor’s degree cum laude may be awarded to a student whose cumulative quality point ratio is at least 3.40.
2. The Bachelor’s degree magna cum laude may be awarded to a student whose cumulative quality point ratio is at least 3.60.
3. The Bachelor’s degree summa cum laude may be awarded to a student whose...
Academic Regulations and Procedures

cumulative quality point ratio is at least 3.80.

These standards are to apply to all students entering the University in the fall of 1995 and thereafter. These standards will also apply to any student returning to the University after a leave of absence. The extant standards will apply to all students who matriculated prior to the fall of 1995.

The Associate’s degree may be awarded cum laude to a candidate with a minimum quality point ratio of 3.2 and magna cum laude to those with 3.5. A minimum of 45 semester hours must have been earned at the University of Bridgeport.

**GRADUATE REGULATIONS AND PROCEDURES**

*For the Regulations and Procedures pertaining to the Graduate Professional Programs in Acupuncture, Chiropractic, Naturopathic Medicine and Human Nutrition, please see the appropriate program sections of this catalog.

**General Regulations**

1. The mere completion of courses and requirements does not guarantee continuation in the graduate program or advancement to degree candidacy.

2. Every student must consult with his/her assigned advisor to ensure a carefully planned program of studies.

3. A graduate student is expected to maintain a 3.0 QPR. A student whose a) semester (program term) QPR drops below 3.0; b) overall QPR drops below 3.0; or c) receives a grade of “D” or “F” in any course, will be placed on academic probation. If a, d or f occurs a second time, separation will occur. A graduate student who has been separated, may appeal in writing to the Dean of the student’s college within 10 days of the notice of such separation. The appeal will be reviewed by the Academic Appeals Committee of the Graduate Council. If the appeal is granted, the student will be placed on probation. All undergraduate courses taken by graduate students are subject to the same grading policy. A grade of C- or lower does not qualify for graduation credit.

4. Students may repeat any course at any grade level below “A”. The grade from the repeat of a given course will replace the first-time grade for the computation of the QPR. The original grade will remain on the transcript. All repeated courses will be so indicated on the transcript.

5. A graduate student is expected to complete his/her degree program within seven years of admission. A student may, for sound and valid reasons, request his/her Dean for an extension of this time limit. Such a request must have the approval of the student’s advisor, and Department.

6. The amount of graduate work transferable to a graduate degree is limited to two graduate courses. Courses applied to one degree or diploma normally are not transferable to a second degree or diploma. Courses presented for transfer credit must be graduate level study completed with a grade of “B” or above at an accredited institution. The transferred courses should have been completed within the past seven years.

7. The approval of additional transfer credit and waivers of the course time limit may be granted based on the approval of the Department Chair, School Director, and College Dean.

8. The requirements for a master’s degree shall include at least one of the following: a comprehensive examination, a written thesis based on independent research, or completion of an appropriate special project.

9. The graduate program in the School of Education requires that all grades applied toward the degree be C or better. The grade of C- cannot be used to satisfy degree requirements.

**Classification of Students**

**DEGREE STUDENTS**

All students who have formally declared their intent to pursue a program leading to a specified graduate degree are classified as Graduate Degree students and may fall into one of the following categories:

1. REGULAR

A student who has completed all the admission requirements and who has presented a background of scholarship and performance that indicates his/her capacity to profit from and complete a degree program is admitted as a regular degree student.

**PROVISIONAL**

A student who has met the general requirements for admission, but not those for full standing because the promise of achievement in the area of intended study cannot be accurately appraised at the time of admission, is admitted provisionally subject to conditions stated on the Certificate of Admission.

**DEGREE CANDIDATE**

A regular degree student who has successfully completed the first 12 hours of graduate study under the direction of assigned advisors and is, in the opinion of the faculty, worthy of continuing the pursuit of an advanced degree at the University, is a degree candidate. Application for degree candidacy must be filed with the major department after completion of 12 semester hours.

**MATRICULATION MAINTENANCE**

All regular and provisional graduate students must maintain matriculation continuously until all degree requirements have been met. Students may maintain matriculation in the following ways:

1. By registering for degree required course work.

2. By registering for continuous matriculation.

3. Ed.D. candidates must register for “Continuing Dissertation research.”*

Students who fail to register for each semester through one of the options above will automatically be separated from their program.

* See Insert for current year’s Tuition, Fees, and Other Expenses.

**NON-DEGREE GRADUATE STUDENTS**

**SPECIAL STUDENT**

A college graduate from an accredited institution, who elects to take courses for which he/she is qualified but who has not been admitted to a degree program, is classified

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*See Insert for current year’s Tuition, Fees, and Other Expenses.*
as a special student on the graduate level. If subsequently admitted to a degree program, there is no guarantee that courses taken as a special student will be counted towards the degree requirements; in any case, only twelve semester hours may be applied to a degree. Those graduate students classified as special graduate students are, therefore, urged to indicate to the Office of Admissions and the Registrar whether they wish to change their status to regular degree student prior to or immediately upon completion of twelve semester hours.

In order to register for graduate courses as a special student, a completed Application for Graduate Studies must be on file in the Office of Admissions.

**Evaluation and Grading of Course Work**

“A” indicates distinction; for work of exceptional quality.

“B” indicates above-average achievement; quality expected of a graduate student.

“C” indicates minimal achievement; not up to standards of graduate work.

“D” indicates below average achievement; no graduate credit possible.

“I” and “R” indicate incomplete graduate course work.

(a) An “I” (incomplete) grade designates incomplete work in a course at the time of grading for reasons beyond the control of the student and determined to be legitimate by the instructor. These would include absence from a final examination or inability to complete terminal assignments due to illness, employment conflicts, etc. In such cases where the “I” grade is awarded the incomplete will revert to a failing grade if the unfinished work is not satisfactorily completed by the end of the semester immediately following the one in which the incomplete was granted, exclusive of the summer sessions. This time can be extended by the instructor for legitimate reasons.

(b) A grade of “R” indicates incomplete work in thesis, research, or undergraduate or graduate student project courses. The “R” grade must be removed within a period of time specified by the instructor/mentor/project advisor or director. It must be within the maximum time allowable for degree completion in the academic program where the degree is being sought.

“W” indicates approved student withdrawal. In addition to the above, the grades of “A-”, “B+”, “B-”, “C+”, “C-” and “D+” may be assigned for graduate courses.

**Semester Hours Carried per Semester**

Nine semester hours of credit per term normally is considered a maximum full-time program for graduate students. A student desiring to take more than 12 semester hours must receive written permission from his/her advisor and the Dean or Director of the appropriate college or school.
The Core Curriculum

The University holds that professional and applied studies, and later success in careers, require a sophisticated and learned grasp of the artistic, communicative, cultural, social, historical and scientific achievements of the world; and that all learners and professionals should be able to interpret these domains and to communicate about them clearly and persuasively. All colleges and universities in the State of Connecticut are required by the Department of Higher Education to mandate that General Education courses compose “33 percent of the minimum requirements for the baccalaureate degree.” The University of Bridgeport fully supports the educational philosophy behind this mandate.

The University of Bridgeport also believes that General Education should reflect the University’s educational mission. The Core Curriculum draws upon the best traditions of American education and seeks to stimulate creativity, intellectual growth, and development of analytical thinking; but it also advances UB’s distinctive educational outlook, which is international in character and commitment. Thus the University requires that thirty-three of the forty hours of General Education be distributed within its Core Curriculum and allows the remaining seven hours to be taken as Liberal Arts electives.

The Core Curriculum is comprised of a coherent set of courses that reflect the mission of the University of Bridgeport. In particular, Core courses are chosen by the Core Commission because they encourage reflection upon the interdependent nature of the world, contribute to global awareness, and require interdisciplinary modes of instruction and integrative learning. All classes in this curriculum are reading-and writing-intensive and thus contribute to academic development and lay the groundwork for success in graduate schools or students’ chosen professions. The Core Curriculum represents what is best and distinctive about the University of Bridgeport.

THE UNIVERSITY’S CORE HAS THREE DIMENSIONS:
1. Skills
2. Heritage
3. Seminars

I. THE SKILLS SECTION (6 HOURS)
Skills classes help students learn how to think clearly, write effectively, and communicate accurately and persuasively. These courses, normally taken in the first semester, lay the foundation for all further study. The University of Bridgeport requires two such courses: one in composition, the other in mathematics.

English: English C101
Math: Math 105 or higher.

II. THE HERITAGE SECTION (21 HOURS)
Heritage classes introduce students to the artistic, communicative, cultural, social, historical and scientific achievements of the world. The courses below have been selected for inclusion in the Core Curriculum because they contribute to forming an international perspective about these achievements. The Core Curriculum aims to help students see the world in a distinctive way: as a plural but increasingly interdependent reality. Upper-level courses, are suggested to students who are completing Core requirements as upperclassmen, or who have focused academic interests in a particular area of enquiry. Enrolling in these upper-level courses requires the instructor’s permission. Full course descriptions can be found in Undergraduate Courses of Instruction section of the Catalog.

Three Hours of Fine Arts: C101 or one of the following approved electives
• ADSN 117, 118
• MUSC 121, 122, 203, 204, 205
• THA 103

Six Hours of Humanities: Humanities C201 and one of the following courses
• ENGL 180, 197, 207, 208, 209, 210, 212, 213, 215, 216, 223, 233, 252, 305, 325, 330, 332, 352, 357, 362
• HIST 100 (three 1-credit sections must be taken during the same semester), 222, 223, 233, 317, 336
• HUM 300
• PHIL 101, 103, 104, 203, 205, 216
• WREL 204, 205, 207, 208, 216, 321, 301, 321

Six Hours of Natural Science: six hours of C-designated courses (SCI C101, SCI C102, SCI C201), or six hours met by any combination of C-designated courses and/or upper-level lab science courses for which students meet the prerequisites.

Six Hours of Social Science: Social Science C201 and one of the following courses
• HIST 101, 102, 207, 208, 240, 250, 280, 301, 303, 315, 319, 326, 360
• MCOM 290
• PHIL 323, 324
• PS 101, 103, 204, 206, 207, 208, 209, 215, 304, 323, 324
• SOC 102, 204, 231, 310, 315
• SOCS 207
• WREL 102, 103, 305, 317, 348

III. SEMINARS (6 HOURS): FIRST YEAR SEMINAR AND CAPSTONE 390

The thematically focused First Year Seminar, taught from a common syllabus to all freshmen, is taken during the first semester of study. This seminar introduces students to the academic values of the Core Curriculum while inculcating habits of learning that will serve them throughout their undergraduate education and beyond. Through this seminar experience, students establish a foundation upon which the rest of the Core Curriculum stands.

The Capstone Seminars provide an academic context in which the skills and content of the previous thirty hours of the Core Curriculum can be synthesized and integrated. The Capstone is the “crowning achievement” of the Core Curriculum. As such, the seminars are limited to juniors and seniors who have completed at least 75 semester credit hours and all thirty hours in the Skills and Heritage sections of the core. No exceptions will be granted to this policy.

The Capstone Seminars consist of two parts, one internal, the other external. In the internal part, juniors and seniors register for a three-credit seminar which is limited to sixteen students. Each seminar takes a pur-
The Core Curriculum

ticular approach to a general theme—which in the past has included topics such as “Civilization” and “Frontiers.” Each seminar also assigns a common reading in addition to particular reading assignments for each section. On the basis of this reading, and collateral research, students are required to plan, present, and defend a point of view which forms the basis of a significant research paper. In the external part, all Capstone students are convened in a Plenary session. One student from each section is selected to present his or her research findings to the Capstone faculty, all currently registered Capstone students, and the invited University public.

The Capstone Writing Prize is awarded each semester by the Capstone faculty, in consultation with external readers, to the paper which best meets the standards of the capstone Seminar in research, analysis, content and presentation. The winning papers are bound and shelved in the Wahlstrom Library and the award is announced at the Honors Convocation.

NOTE ON COURSE TRANSFER POLICY:
The Core Commission allows twenty-seven hours of the Core to be transferred from other universities. The Capstone Seminar and at least one additional C-designated course must be taken at the University of Bridgeport.
Cooperative Education and Internships

Co-op Director: Tracy Rigia
Mandeville Hall, Room 23
(203) 576-4098

Cooperative Education

The University of Bridgeport offers an extensive voluntary cooperative education program, allowing students to combine classroom study with work experience in their chosen profession. Cooperative Education provides a practical application of academic studies plus opportunities to learn material that cannot be taught in the classroom.

Cooperative Education offers the additional bonus of providing paid work experience that can contribute to paying educational expenses and give the student the sense of being self-supporting.

- Theory and practice are more closely related.
- Motivation is increased as studies become meaningful.
- Work experience helps develop maturity and a sense of responsibility.
- Work experience helps to develop skills in human relations.
- Professional contacts may be made that can lead to permanent employment.
- Job opportunities help to test career objectives.
- Work experience gives students a distinct advantage in a very competitive job market.
- Co-Op graduates often start at a higher level job and with higher pay than students without experience.

CO-OP WORK ASSIGNMENTS

Work assignments are located by the University Co-Op Director and faculty in the schools. Assignments are related as closely as possible to the student course of study and career goals. The large majority of Co-Op jobs are located within 40 miles of the University. Some students locate their jobs near their homes outside of the normal Co-Op placement area, thus enabling them to increase their net earnings from Co-Op salaries.

Most undergraduate Co-Op students work part-time during the academic year and full-time during vacations. Graduate students have the option to work full-time or part-time during the academic year.

STUDENT SALARIES

Students are placed in regular jobs and normally are paid for their services by the cooperating employer. They perform under actual working conditions and are advanced on the basis of merit. Guarantees concerning job placement and pay cannot be offered. However, between the end of the Freshmen year and graduation, the typical Co-Op salary can represent a substantial portion of the total cost of a student’s education.

ACADEMIC CREDITS

Academic credit for Co-Op work experience is authorized by the dean and the faculty of the individual schools having Co-Op programs. Students must register and pay the 1-3 credit Co-Op fee for each work term.

ELIGIBILITY

The Co-Op program is open to all full-time students demonstrating their academic ability.

DOMESTIC UNDERGRADUATE STUDENTS

must complete two full terms at the University with a minimum 2.5 grade point average.

INTERNATIONAL UNDERGRADUATE STUDENTS

must complete one academic year at the University with a minimum 2.5 grade point average, have been in F-1 or J-1 visa status for a minimum of one academic year and have a thorough command of oral and written English.

DOMESTIC GRADUATE STUDENTS

must complete a minimum of four courses in their graduate program with a minimum 3.0 grade point average.

INTERNATIONAL GRADUATE STUDENTS

must complete one academic year in their graduate program with a minimum 3.0 grade point average, have been in F-1 visa status for a minimum of one academic year and have a thorough command of oral and written English.

INTERNATIONAL GRADUATE STUDENTS

must complete a minimum of four courses in their graduate program with a minimum 3.0 grade point average.

INTERNATIONAL GRADUATE STUDENTS

must complete one academic year in their graduate program with a minimum 3.0 grade point average, have been in F-1 visa status for a minimum of one academic year and have a thorough command of oral and written English.

INTERNATIONAL GRADUATE STUDENTS

must complete one academic year in their graduate program with a minimum 3.0 grade point average, have been in F-1 visa status for a minimum of one academic year and have a thorough command of oral and written English.

STUDENT SALARIES

Many students are able to combine a non-paid Internship position with a paid Co-Op work experience in a related field to earn not only a salary but exposure to more than one employment opportunity.

ACADEMIC CREDITS

Academic credit for Internship is awarded by the dean and faculty of the school offering the Internships.

Most Internships earn 3 academic credits per term.

ELIGIBILITY

Students are eligible to participate in Internships according to the course sequence described by their academic program of study.

INTERNATIONAL STUDENTS

must have been in F-1 or J-1 visa status for a minimum of one academic year and have a thorough command of oral and written English.

INTERNSHIP ASSIGNMENTS

Arrangements for Internships may be made with the University Internship Director, the student’s faculty advisor, or the Dean of the school.
University Library

University Librarian: Diane C. Mirvis
Associate University Librarian: Deborah Dulepski
Magnus Wahlstrom Library, Second Floor, Library Administration
126 Park Avenue, Bridgeport, CT 06604
Telephone: 203-576-4740
Fax: 203-576-4791
Email: dmirvis@bridgeport.edu
Website: http://www.bridgeport.edu/library

PHYSICAL RESOURCES
The Magnus Wahlstrom Library, part of the University’s Information Services, is centrally located on campus, occupying floor 1-4 of the Magnus Wahlstrom building. The Library is fully staffed and open seven days a week with both morning and evening hours. Students and faculty are offered a full range of reference and access services in a comfortable space that facilitates individual and collaborative study within a Library Commons model. Study Rooms may be reserved at the Information Desk. Computer workstations with Internet access are available, as well as a wireless support for those individuals with laptops. Copy machines and printers are also available in the Library. Fully equipped “Smart” Classrooms with media and an electronic whiteboard are also available. Interlibrary loan services can be arranged for books, with articles delivered electronically via email.

A full description of facilities, resources and services may be found at www.bridgeport.edu/library.

PRINT COLLECTIONS
The University maintains a comprehensive print, media, & anatomical collection that reflects the University curriculum. General and Reference material is housed in open stacks on the top 3 floors of the Library. Several special collections of archival and historical material are available for use by the University community as well as visiting scholars.

In addition, The Wahlstrom Health Sciences Collection is located on the 4th floor of the Library. It houses specialized collected works that support the Chiropractic, Dental Hygiene, Naturopathic, Acupuncture and Physician Assistant programs. The collection includes books, journals and anatomical models. Study space with wireless access, along with two large group study rooms, is available. Reference, and Evidence Based Medicine instruction, Reserve and Circulation services are provided to students at the 1st floor service desk.

DIGITAL LIBRARY SERVICES
The Wahlstrom Library extends its traditional services through its state-of-the-art digital library. It is fully committed to building a rich collection of scholarly materials that are fully accessible anytime, anywhere through the Internet using a single University sign on. Employing the Eureka! Integrated search platform, students and faculty can access tens of thousands of electronic journals, books and reports. The library also subscribes to more than 50 major databases. Electronic tutorials are provided on how to use each of library databases.

INFORMATION LITERACY INSTRUCTION
The Wahlstrom Library supports the University commitment to producing an information literate student body. Librarians are available at the Reference Desk, as well as staffing “drop in” sessions for individuals and study groups. An experienced staff of Librarians works closely with faculty to develop curriculum components and assessment tools. Our approach reflects a strong commitment to standards, as well as Evidence Based Practice. All Information Literacy and Instruction Librarians participate in delivering instruction in the classroom, online via Blackboard, and in laboratory settings. In addition, librarians provide instructional workshops for faculty and students in research and technology topics.
Office for International Programs

Thomas J. Ward
Office of International Programs
235 Carlson Hall
Bridgeport, CT 06604
203-576-4966

Mission
The Office of International Programs is committed to supporting the International dimension of the University’s Mission through maintaining the International Programs web page, which informs the University community of ongoing developments related to the institution’s international mission. The Office oversees the English Language Institute. It supports initiatives such as the annual International Education Week and it coordinates the work of the University’s Internationalization Committee. The Office of International Programs also has facilitated the University’s involvement with and ongoing participation in the American Council on Education (ACE) internationalization collaborative that includes some 76 colleges and universities throughout the United States.

Overseas Study
The Office of International Programs serves as an information clearing house for University of Bridgeport students who are interested in experiencing a year abroad or a semester abroad during their study at the University. Students are reminded that in order to be eligible, they must be a student in good standing and they need the approval of their advisor who is expected to review course selection with the student to assure that students will still be able to graduate in a timely manner. Students are reminded that they must receive their final 30 credits at the University of Bridgeport in order to graduate with a University of Bridgeport degree. Therefore, they should normally plan to study abroad in the Sophomore or Junior year.

Students interested in studying overseas are encouraged to contact 203-576-4966. The Office, which operates from the International College in Carlson Hall, has facilitated overseas study for UB students in a variety of venues including Brazil, the United Kingdom, Australia, Korea, Taiwan, China, and the United Arab Emirates. The Office also overseas summer study opportunities in Asia and in Latin America. The Office of International Programs has also placed students in contact with other approved American and overseas programs for international study. The Office provides students with written and web-based information on overseas studies. It can also assist UB domestic students in developing applications for overseas scholarship grants and teaching opportunities such as Gilman scholarship, the Boren scholarship, the Fulbright, Rotary International, and the JET program.

During the November International Education Week, which is sponsored by the US Department of State and the US Department of Education, the Office provides literature and helps to operate a table in the Marina dining hall where all UB students are provided with an opportunity to learn more about overseas study opportunities at the University of Bridgeport. The Office also works with the Offices of the President and the Provost in welcoming University officials from overseas and in developing collaborative efforts with such institutions.
The Martial Arts Institute

Director: Yonghong Kim
Assistant Professor of Martial Arts Studies

Instruction in the Martial Arts began at the University of Bridgeport in 1997. As interest in the Martial Arts grew, a decision was made in 2002 to create a Martial Arts Institute that would promote academic research into the Martial Arts. Since its inception in 2002, the Institute, through its Director, has established ties with the World Taekwondo Federation and in April 2004 the National Collegiate Taekwondo Tournament was conducted at the University of Bridgeport.

Since its creation, the Martial Arts Institute has conducted annual academic trainings for Martial Artists every January. The Institute has also hosted a number of Professors of Martial Arts from Asian universities such as Yonsei University and Korea University in Korea.
Support Services

Director: Roxie Ray
Charles Dana Hall, 2nd floor  
(203) 576-4290  
E-mail: roxieray@bridgeport.edu

Academic Resource Center
The Academic Resource Center (ARC) is designed to provide support to undergraduate students to help them succeed in college. Located on the second floor of Charles Dana Hall, rooms 246-248, the ARC provides tutoring and supplemental instruction for UB undergraduate courses.

Learner Services
Tutoring is available in a variety of subjects to students at no cost. Where numbers of students seeking help in one subject warrant it, small study groups are arranged with ARC staff serving as facilitators. In addition to tutoring in content areas, the Academic Resource Center offers group and individual presentations on study strategies and time management.

Although drop-in visits are allowed, scheduled appointments are recommended.

Online Tutoring
The Academic Resource Center participates in the online tutoring project managed by the Connecticut Distance Learning Consortium. Through this service, University of Bridgeport students have access to trained tutors from almost twenty member institutions in Connecticut and Vermont that provide almost 200 additional tutoring hours per week.

Director: Patricia Mulcahy-Enrt, Ph.D.
Wahlstrom Library, 5th floor  
(203) 576-4201  
E-mail: mulcahyp@bridgeport.edu

Center for Excellence in Learning and Teaching (CELT)
The Center for Excellence in Learning and Teaching is a University of Bridgeport initiative focused on retention of first year students and on faculty development in best practices for learning and teaching.

Through a Title III grant, the Center is offering faculty development in new technologies, retention strategies, and other areas of interest to the University of Bridgeport faculty community.

Professional Development
As part of the Center for Excellence in Learning and Teaching’s (CELT) initiatives, we offer a faculty professional development program. Our Title III grant provides funding for this initiative focusing on improving undergraduate retention and incorporating best instructional practices for the students we serve. Selected faculty will participate in a learning community that features the richness of small group discussions, offers a menu of choices for workshops about technological applications for instruction, and provides tutorials about retention tools for determining which students need academic support.

Scholar-in-Residence Program
The Faculty Scholar-in-Residence Program at the Center for Excellence in Learning and Teaching (CELT) is to promote scholarly inquiry in the areas of best practices for college learning and teaching and for undergraduate student retention. Each academic year one faculty member is selected from the University of Bridgeport faculty community; full-time and adjunct faculty members are eligible. The selected faculty member is supported with one course release during the fall or spring semester to complete his/her research.

Director: Aimee Tiu Wu
Wahlstrom Library, 5th floor  
(203) 576-4186  
E-mail: atiuwu@bridgeport.edu

Student Support Services
The Student Support Services Program (SSS) is funded by the Federal TRIO Programs and is designed to identify and provide services to a selective group of college students who meet eligibility criteria. All of our services are available at no cost with the intent of assisting students in accomplishing their goal of graduating from UB.

Services Offered
Academic Assistance to help students develop a plan to achieve their academic goals and to meet their individual needs. Career Planning to work with students to recognize career options and to design a strategy for realizing their career goals.

One-on-One and Small Group Tutoring for reading, writing, study skills, mathematics, science, and other subjects.

Group Study Sessions (Supplemental Instruction) for courses that are challenging for many students.

Workshops and Seminars on topics such as note taking, time management, developing good study habits, overcoming test anxiety, and stress management, are just a few.

Financial Aid Guidance to educate students about their financial aid options, the process of applying for financial aid, and their responsibilities.

Program Requirements
The student must be committed to do the following:

Meet with the academic counselor and learning specialist at least three times each semester. The first meeting must take place within the first four weeks of the semester.

Attend the orientation/welcome back event at the beginning of each semester.

Attend a minimum of two SSS sponsored events/workshops each semester.
Schools and Professional Programs
School of Arts and Sciences

Dean: Stephen Healey
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E-mail: artsandsciences@bridgeport.edu


Degree Programs

Biology (B.A. and B.S.)
with concentrations in:
- Environmental Biology
- Marine Biology
- Pre-Health Professional Options
- Counseling (M.S.)
- General Studies (A.A., A.S.)
- General Studies (B.S.)
with concentrations in:
- Business Studies
- Computer and Engineering Studies
- Humanities
- Internet Applications
- Natural Sciences/Mathematics
- Social Sciences
- Health Sciences (B.S.)
with concentrations in:
- Exercise and Fitness
- Nutrition
- Human Services (B.S.)
- Literature and Civilization (B.A.)
with concentrations in:
- Creative Writing
- English
- History
- Philosophy
- Psychology
- Mathematics (B.A. and B.S.)
- Medical Laboratory Science (B.S.)
- Music (B.Mus) with concentrations in:
  - Jazz Studies
  - Music Business
  - Music Education
  - Music Performance
- Psychology (B.S.)

FIRST YEAR STUDIES

Academic Resource Center

Mission Statement

The mission of the School of Arts and Sciences is to provide students with education of high quality in the knowledge, skills and values that will enable them to achieve success in their professions and become meaningful contributors to society. The School is committed to an interdisciplinary approach in its curricula while offering students opportunities for experiential learning, internships, and community service.

Our programs are designed with attention to the institutions we serve. The education we offer features acquisition of fundamental knowledge in a wide range of fields and an application-oriented approach to issues that are progressively more interdisciplinary.

Vision Statement

The vision statement serves as a guide in the development of the school’s programs and overall educational initiatives. The School of Arts and Sciences will provide students in its programs with:

Competence — i.e. knowledge and skills necessary to enable them to enter the work force, or to undertake graduate study, with success.

Critical Thinking — i.e. techniques of applied logic, categorization, and criticism which result in clear thinking, sound analysis, and balanced judgment.

Creativity — i.e. qualities of imagination, originality, curiosity, and daring.

Context — i.e. awareness of the historical, social, intellectual, environmental, and cultural setting appropriate to the field of study.

Communication — i.e. ability to express themselves lucidly and to present ideas effectively and distinctively, both formally and informally, orally, visually, literally, and musically.

Candor — i.e. honest standards, consistency in implementing them, and fair evaluation of achievement.

Concern — i.e. regular support and individual attention to all students, with additional opportunities for those who excel and remedial strategies for those who need them.

Description

The Arts and Sciences housed in the School include degree programs in Biology, General Studies, Graphic Design, Industrial Design, Interior Design, Literature and Civilization (with concentrations in Creative Writing, English, History, Philosophy, and Psychology), Mathematics, and Music. In addition, the School is responsible for those courses in composition, humanities, fine arts and natural sciences, mandated by the University’s core curriculum.

The School is committed to an interdisciplinary approach that it believes best prepares students for the challenges and opportunities of the twenty-first century, and for graduate school.

The Biology Program is designed to prepare students for further study in graduate or professional schools, or for employment in education, industry, or governmental service. Students may follow a general biology curriculum or elect an option in pre-chiropractic, pre-medicine, pre-dentistry, pre-naturopathy, pre-veterinary, marine biology, or zoology.

The Design Programs reflect the new realities of the work place and future trends, which gives a clear advantage to those who are well-prepared in creative thinking, traditional skills, and computer-based technologies. A Student can major in Graphic Design, Industrial Design, or Interior Design.

The General Studies Program gives adult learners, as well as traditional undergraduates, greater flexibility in completing their studies by offering broad areas of disciplinary concentration in place of more traditional majors. Students use this option to pursue careers in business and social science and as a pre-professional degree.

The First Year Studies Program develops, promotes, and administers programs and services for non-traditional student. This includes under prepared freshmen, who are given the opportunity to demonstrate their true ability. Students remain in the program for one to four semesters depending on their level of achievement. They use the record they have compiled to transfer into their major of choice at the University.
School of Arts and Sciences

The Literature and Civilization Program gives students a general foundation in the liberal arts while, at the same time, examining the connections within and between them. Within this major, students may opt for a concentration in Creative Writing, English, History, Philosophy or Psychology.

The Mathematics Program is designed to prepare the student for graduate work in mathematics and allied areas, industrial employment, secondary school teaching, and careers in quantitative areas of biological and social sciences.

The Music Program offers four distinct four-year programs leading to the Bachelor and Music degree: Music Education, Performance, Jazz Studies, and Music Business. Music students are required to complete music foundation courses and one of the four concentrations. The Music Business concentration reflects the growing complexity of the commercial music scene.

The School provides courses in Physics and Chemistry in support of the University's Science and Engineering programs.

The School also provides two years of study in modern languages and culture, both European (French and Spanish) and Asian (Chinese, Japanese, and Korean).

Internships, Co-operative Programs and Professional Opportunities

The School offers students a variety of options dependent on their major interests. In the Humanities programs there are opportunities for internships with state and local government organizations, newspapers and broadcast media, advertising agencies, and related commercial interests. The University's proximity to New York City, the media, art, and design center of the United States and the site of many museums, foundations and research institutes, offers students an exceptional variety of intellectual, cultural, and professional experiential learning possibilities. Our students are actively participating in summer programs in Biology, and working part-time in many corporate and consulting companies locally and nationally.

Accreditation

All degree programs in the School of Arts and Sciences are licensed and accredited by the State of Connecticut Department of Higher Education and the New England Association of Schools and Colleges. In addition, the School is an accredited institutional member of the National Association of Schools of Art and Design.

Admissions Criteria and Procedures for the First Year Studies Program

Students who aspire to one of the majors at the University, but whose academic performance in high school suggests developmental needs, are considered for admission to the Program in First Year Studies based on a review of their high school record, standardized test scores, and supporting documents (special attention is paid to recommendations and the applicant's essay).

For information concerning admission procedures, please refer to the section on University Admissions.

General Criteria for Degrees from the School of Arts and Sciences

In the Literature and Civilization majors, the Bachelor of Arts degree requires a minimum of 120 semester hours of acceptable work. Thirty to forty-eight semester hours may be devoted to the major, and at least half of these must be completed at the University unless this requirement is waived by the School Dean. The exact number of semester hours required for each major is listed in the section of the catalog entitled "Undergraduate Degree Programs".

In Visual Arts, the Bachelor of Fine Arts degree requires a minimum of 125 semester hours of acceptable work, of which 65% must be in the major and supportive courses. Individual critiques, with faculty in attendance, are required of majors at the end of each semester. At the end of the second year, a portfolio review establishes whether students have demonstrated their ability to
School of Arts and Sciences

continue in the program. A senior thesis presentation, including professional portfolio development, is required of all Visual Arts graduates of the School.

In Music, the Bachelor of Music degree requires a minimum of 126 semester hours. At the end of each semester, music majors must take an examination in their applied area before a jury of the faculty. At the close of the fourth semester, each music major is given a sophomore review. This review is a comprehensive critique of academic and applied work completed to date and determines whether the candidate continues as a music major.

In Biology and Mathematics majors the Bachelor's degree is awarded to the student who fulfills the following minimum requirements, in addition to those listed in the chapter on Academic Regulations.

1. Participation in such departmental seminars as the faculty prescribes.
2. Earning the total semester hours required for the individual curriculum as listed in the following pages.
3. Earning a "C-" or better in every course in the major and with a cumulative average of 2.0 in the major courses.

Each department designates the courses to be included in the major and decides the procedure necessary to remove each deficiency, including any "D" in a major course. When a course is a prerequisite to another, a "C-" or better in the prerequisite course may also be a requirement. Both B.S. and B.A. degrees are available in Biology and Mathematics.

First Year Studies Program

The First Year Studies Program (FYSP) is an academic unit which, utilizing a variety of support services, facilitates the transition of first-year students from high school to university life. Program advisors assist the students in the selection of appropriate courses while preparing them for admission into the major of their choice.

The FYSP team attempts to foster within their students a spirit of intellectual curiosity, personal responsibility, and commitment to academic excellence.

The FYSP is housed in the School of Arts and Sciences but is designed to prepare the under prepared student for majors in any of the Schools at the University of Bridgeport. The Program emphasizes strengthening study skills and awareness of college culture and protocol. Because these factors are essential for successful completion of a college degree, students in the FYSP must adhere to stringent academic and attendance guidelines. Support is provided in the form of intense advising, communication with the professors, and use, in some cases mandatory, of the Academic Resource Center. It is the goal of the First Year Studies Program to prepare its students for acceptance into the desired majors by the time they successfully complete their first thirty credits.
School of Business

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Assistant Dean and MBA Program Director:
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Undergraduate Advisor:
William Greenspan
Mandeville Hall
Telephone: (203) 576-4378
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Faculty: Albert, Gilmore, Greenspan, Kim, G.; Kim, J.; Kohn, Maron, McAdams, Miglo, Rigia, Sagner, Todd, Wang, Wu

Mission Statement
The School of Business advances the practice of business through the education of students and the scholarly and professional contributions of the Faculty. Through high quality innovative teaching, the School enhances critical thinking in its students, provides discipline knowledge thought theoretical and applied learning and develops skills that are necessary for success in business. Students drawn from local, regional and international communities learn in a supportive environment that facilitates understanding of business in a dynamic global environment.

Accreditation
All degree programs in the School of Business are licensed and accredited by the State of Connecticut Department of Higher Education and accredited by the New England Association of Schools and Colleges (NEASC).

In addition, the School of Business is professionally accredited by the Association of Collegiate Business Schools and Programs (ACBSP) to offer graduate and undergraduate degrees.

*ACBSP accreditation does not include AA degree in Business Administration.

UNDERGRADUATE DEGREE PROGRAMS
Accounting (B.S.)
Business Administration (A.A., B.S.)
Fashion Merchandising (A.A., B.S.)
Finance (B.S.)
International Business (B.S.)
Management and Industrial Relations (B.S.)
Marketing (B.S.)

Co-op and Internship Program
The School of Business requires all eligible students to gain practical experience before completion of the degree. The student can fulfill this requirement with outside business firms, non-profit organizations, government agencies and international organizations.

Undergraduate Admission Criteria and Procedures
A student is admitted to the School of Business through an evaluation of the high school transcript, class rank, and SAT scores. Successful applicants will have demonstrated potential in analytical reasoning, comprehension, written expression and critical thinking.

Past experience has shown that students who perform well in the School of Business have earned a Grade Point Average (GPA) of at least 2.5 in high school, above 1010 SAT, ranked in the top half of the class, achieved a "B" or better in Mathematics and English, and received good recommendations from the high school counselor.

Students transferring from undergraduate majors of other colleges must have earned a minimum GPA of 2.5.

General curriculum Policies and Requirements
The University Core Curriculum requires passing the mathematics competency exam or taking Mathematics 105. This competency is a prerequisite for CAIS 101. Students anticipating graduate study in the School of Business are advised to take Calculus as a free elective.

Upper division coursework provides students with a common body of managerial knowledge, multinational business studies, study in a major field, and an internship or business development project. For Bachelor of Science students the concentration of professional courses in the last two years builds upon the broad-based analytical tools and liberal arts foundation of the first two years.

GRADUATE DEGREE PROGRAMS
Master of Business Administration (M.B.A.)
The M.B.A. degree is offered for full time or part time study in a traditional or Executive M.B.A. format. Specific course requirements for the degree will provide students with a strong educational background. Students with a recent Bachelor’s degree and a good academic average at an accredited business college may be able to complete the M.B.A. with 30 semester hours of advanced study. Students with a Bachelor’s degree in a non business field generally require 54 semester hours to complete the M.B.A.

Mission Statement
The Master of Business Administration (M.B.A.) in General Administration at the University of Bridgeport develops effective and responsible leaders for business, industry, and government. Because the University of Bridgeport is located near the center of one of the nation’s major concentrations of corporate headquarters, our faculty and students will be a significant regional resource. Because businesses in this region are truly multinational, the M.B.A. curriculum encourages a global perspective.

To this end, the M.B.A. program at UB not only emphasizes traditional management skills but also stresses the technical and cultural preparation necessary to understand the increasingly complex international environment. In accomplishing this goal, teaching methods will include a mix of lecture, case study, experiential learning, and analysis of international sociopolitical issues.

Graduates of the University’s M.B.A. program will have the analytic and interpersonal skills to be effective leaders: they will be responsible leaders because they will have learned how to employ these skills to improve their communities as well as their companies.
Prerequisites, Criteria and Procedures

The applicant must present an appropriate baccalaureate degree from an accredited institution of higher education. Official transcripts of all previous work must be sent to the Office of Graduate Admissions.

No specific undergraduate curriculum is expected or preferred before entry to M.B.A. study. As a professional program the M.B.A. is designed to build upon undergraduate study in the arts, humanities, science, engineering or other curricula. Students with little experience with computers will be required to register for appropriate additional coursework in their first year of study.

New classes are admitted each fall and spring for full time or part time study. Summer course offerings also allow new admissions for part time study. Full time students may begin in summer for any remediation study, to ease their course load during the regular semesters, and in some cases to accelerate their study program.

Applications and supporting credentials for full time students should normally be submitted at least two months before the desired starting time, and for part time students at least one month.

Graduate Management Admission Test

(GMAT and TOEFL)

The GMAT is designed to measure aptitude for graduate study. It is not a test for knowledge in specific business subjects. The test is given regularly in the United States and some foreign countries. Application forms may be obtained from the Office of the Director of the M.B.A. or by writing directly to GMAT, Educational Testing Service, Box 966, Princeton, New Jersey, U.S.A. 08540.

Applicants whose principal language is not English must also take the Test of English as a Foreign Language (TOEFL). Students scoring below 550 will be retested upon arrival at the University and may be required to complete a portion of the University’s Intensive English Language Program. Information about TOEFL may be obtained from TOEFL, Educational Testing Service, Princeton, New Jersey, U.S.A. 08540.

Admission to the School of Business

The University of Bridgeport MBA Program is designed to help graduates achieve high levels of responsibility through knowledge and developed skills in their work, community, and the greater society. Toward this end, a variety of criteria are used to help faculty determine the ability of applicants to succeed in the rigors of the UB-MBA program.

A bachelor's degree in any discipline and a good academic record are considered the minimum criteria for admission. In addition, for applicants with little or no managerial or professional experience, the secondary admissions criteria are universally accepted objective measures. However, individuals who have already achieved a significant position of leadership and responsibility in their business community can be considered based on achievement measures.

ALL APPLICANTS:

All applicants should submit to the Office of Graduate Admissions:
1. An application to the MBA Program.
2. A personal statement giving the reason the applicant wishes to study in the program.

RECENT COLLEGE GRADUATES AND NON-PROFESSIONALS

Applicants for admission who received a bachelor’s degree within the previous three years, and those who do not qualify as experienced professionals (described below), must take the Graduate Management Admissions Test (GMAT).

Recent college graduate applicants should request the following to be submitted to the Office of Graduate Admissions:
3. Official transcripts of all previous college coursework.
4. Graduate Management Admissions Test scores (GMAT)
5. Two letters of recommendation.

EXPERIENCED PROFESSIONALS

Applicants for admission who have been working in a managerial or professional position for at least the previous three years may not be required to take the GMAT. Factors that will be considered include number of years in an exempt position along with the level and nature of responsibilities, and/or other graduate degrees or professional certifications.

Experienced professional applicants should provide and/or request the following to be submitted to the Office of Graduate Admissions:
1. Official transcripts of all previous college coursework.
2. A resume indicating management responsibilities for at least the past three years.
3. An essay regarding goals in pursuit of the MBA.
4. A letter of recommendation from your employment superior.
5. Any evidence of professional certification in fields requiring preparatory collegiate education (such as CPA, CFA, LLD, MD, DDS, etc.)

INTERNATIONAL APPLICANTS

An additional requirement of all applicants whose native language is not English is the Test of English as a Foreign Language (TOEFL). Any student scoring below 550 will be re-tested upon arrival and may be required to complete a portion of the University’s “Intensive English Language Program” before being allowed to register for MBA classes.

In all cases the Graduate Admissions Committee makes the final determination on admissions.

Requirements for Graduation

To qualify for the degree of Master of Business Administration, a student must fulfill the following minimum requirements:
1. Admitted to candidacy for the degree in the School of Business.
2. Satisfactorily complete all subject requirements in the program with an average grade of “B” or better (3.0 QPR).

3. File an application for the degree at the Records Office by the date published in the University Academic Calendar.

4. Complete all requirements within five years from the date of first graduate registration, unless a petition for extension of time is granted.

**Scholastic Standards**

Students are expected to maintain a 3.0 average. A student whose QPR drops below 3.0 will be placed on scholastic probation and may be dropped from the program unless a 3.0 average is achieved within the next 9 semester hours or unless substantial improvement is demonstrated in the semester following probation.

**Grading Policy**

Passing grades for graduate study range from A to C. Any work below C will be assigned an F. Incomplete work (I grade) must be completed within a year or it becomes an F. To continue in the M.B.A. program, a student should attempt to repeat immediately a course in which an F was received. In computing QPR, the grade from the first repeat of a course replaces the original grade.

Grades from transfer or waiver credits and from non M.B.A. or undergraduate courses taken after the beginning of the program are excluded from QPR calculations.

**Graduate Assistantships**

Research assistantships are available on a competitive basis for outstanding full time students. Graduate assistants may earn as many as nine semester hours a semester, and their eligibility is reviewed each semester. Full time assistantships require the recipient to work with faculty in the College for 20 hours a week during each semester, and 15 hours a week during the summer term.

**Scholarships and Awards**

The Director’s Award is a certificate presented annually to the top ranking Master of Business Administration graduate.

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### M.B.A./Management Engineering

M.B.A./Management Engineering courses offered by the College of Engineering are available for application to the M.B.A. degree. Specific courses for this study are selected and approved by the student’s faculty advisor and the Director of the M.B.A. program.

### Advisory Council and Faculty Fellows

Two groups of leading individuals, the Advisory Council and the Faculty Fellows, have been especially active in working with the School of Business.

**ADVISORY COUNCIL**

The Business School Advisory Council is composed of distinguished local business leaders. It offers opportunity for exchange of perspectives and knowledge between the University and the Business Community. A variety of ways are employed to achieve this end including periodic formal meetings that expose the work of faculty and students to the Council, on-site visits of faculty and students to member facilities, provision of opportunity for co-op student employment and internship, participation by council members as speakers in appropriate classes, as well as participation by council members in the evaluation of curriculum and teaching methods. The council is also called on from time to time to help develop and evaluate programs for the broader business community under the umbrella of the University’s Trefz Foundation and its Center for Venture Management.

Current members of the Council include David Bodine, CEO, Bodine Corporation; Ron Sharp, Partner, Pullman & Comley; Mike Roer, CEO, The Bridgeport Innovation Center; Chuck Matteson, CEO, Boomerang, Intl.; Jim Carbone, CEO, Modern Plastics Corporation; John Morgan, CEO, Seymour-Sheridan, Inc.; Ann Stoddard, CEO, The Country Mouse; Dean Hottie, Director of Taxation, Service American Corporation; Walter Lazarchick, CFO, Bridgeport Machines, Inc.

### FACULTY FELLOWS

Faculty Fellows are recognized in their particular fields, holding significant positions in business and management related professions. The Faculty Fellows have had an active role in working with students as guest lecturers and in meetings with large or small groups of students. This provides a strong supplement to the student’s formal education, helping bring real world problems into the classroom. Individuals who have served as Faculty Fellows include: Drummond C. Bell, chairman, National Distillers & Chemical Corporation; H. Kurt Blumberg, chairman, Irwin Industries; Alan W. Drew, vice chairman, Peabody International Corporation; S. Robert Breitharth, president, General Cable International, Inc.; George R. Dunbar, general manager, Circuit Devices Division, Westinghouse Electric Corporation; Leandro P. Rizzuto, chairman and president, Conair Corporation; George W. Harvey, chairman, president, CEO, Pitney Bowes Inc.; Betty Holland, chairman and chief executive officer, Omega Engineering Inc.; Roger M. Keefe, chairman of the Executive Committee, Connecticut Bank and Trust Corporation; Robert H. Sorenson, president and chairman of the Board, the Perkin-Elmer Corporation.

### CORPORATE SPONSORSHIP

SAS Institute Inc., is a corporate sponsor of the School of Business. SAS is the largest privately held software company in the world, delivering software and services to more than 35,000 business, government and university sites in 110 countries.
School of Education

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Teacher Preparation Programs
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Carlson Hall
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E-mail:

Intern Program
Director: Joyce Cook
Carlson Hall
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E-mail: joycecc@bridgeport.edu

Division of Educational Leadership
Director:
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MOD MAP Programming
Director, Operations and Student Services
Norma Atkinson
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(203) 576-4194
E-mail: natkinso@bridgeport.edu

Faculty: Cook, Cole, Flynn, Kirschmann, Kurz-Nutt, Maimon, Mulcahy, Mulcahy-Ennt, Mulready, Ngoh, Noto, Queenan, Ritchie

Mission Statement
The School of Education is dedicated to providing its students with the opportunity to become educated, productive, and morally concerned citizens of their city, country, and the world. To serve these ends, the School offers an array of professional programs designed to prepare students for careers and leadership positions in education and in human services. The School recognizes a specific obligation to feature training and experiences central to preparing students to respond effectively to the fundamental needs of the cities of Connecticut and the region.

Consistent with and supportive of the increasing national demand for better schools, the School has accredited programs which provide for the training of highly effective classroom teachers, options for students interested in teaching careers and incentives for better students to enter the teaching profession.

In pursuit of its objectives, the School of Education considers three requirements to be basic: a broad cultural background, intensive study in one particular field of knowledge, and professional training. To plan, conduct, and evaluate its program, the School draws on many resources of the University.

Through professional training and field experiences, the student gains solid knowledge of educational objectives; of school curricula, organization, and activities; of the nature of the learner and the learning process; and of the evaluation outcomes.

Accreditation
All degree programs in the School of Education are licensed and accredited by the Connecticut Board of Governors for Higher Education and the Commission on Institutions of Higher Education, New England Association of Schools and Colleges, Inc. The certification programs in Education are accredited by the Connecticut State Department of Education.

Admission Requirements
Candidates for admission to the graduate programs of the School of Education must present the following for review:

SCHOOL OF EDUCATION
EDUCATION
A. Bachelor's degree from an accredited institution or a recognized international institution.
B. Two letters of recommendation.
C. Minimum “B-” grade point average required.
D. Official copies of all undergraduate and graduate academic transcripts
E. Passage of PRAXIS I or waiver based on SAT or ACT.

EDUCATIONAL LEADERSHIP
A. A completed master's degree from an accredited institution.
B. GRE or Miller Analogies Test scores.
C. Personal statement that includes: reason for interest in doctoral program; description of personal and professional accomplishments.
D. Two letters of recommendation.
E. Demonstrated scholarship in the area of management.

Certification programs in designated areas lead to State licenses in teaching and administration.

Programs in the School of Education combine the practical needs of professional training with the theoretical grounding necessary for persons interested in quality preparation for leadership roles in their careers. The advanced degrees and the certifications open the doors to a range of career possibilities within traditional counseling and educational institutions, as well as in developing allied fields.

The Doctorate, in particular, leads to advancement in public services and businesses that value a combination of management and education skills.

Admission Criteria and Procedures
The General Admission policy and procedures for the University of Bridgeport are found in the chapter on Admissions. Policies and procedures for admission to the teacher certification programs are listed in the program descriptions in this catalog.

GRADUATE SCHOOL
The School of Education offers programs which lead to Master’s Degrees in Education (M.S.). Sixth Year (CAS) degrees are offered in Education. A Certificate Program in Remedial Reading and Remedial Language Arts and Reading and Language Arts Consultant are offered at the Sixth Year Level. A Sixth Year Diploma is also offered in Educational Administration and Supervision. A Doctoral Degree (Ed.D.) is offered in Educational Leadership.

Certification programs in designated areas lead to State licenses in teaching and administration.
Graduate Degree Programs

Instructional Technology (M.S.)
Education (M.S.Ed.)
Educational Administration and Supervision (6th Year Certificate of Advanced Studies-CAS)
Education (6th Year Certificate of Advanced Studies-CAS)
Educational Leadership (Ed.D.)

The university maintains accredited Educator Preparation Programs leading to certification in the following areas: Elementary Education (K-6); Middle Grades (4-8); Secondary Academic Subjects (7-12) in Biology, Business, Chemistry, Earth Science, English, General Science, History and Social Studies, Mathematics, and Physics; Music (PK-12); Remedial Reading and Remedial Language Arts (K-12); Reading and Language Arts Consultant (PK-12); and Intermediate Administration and Supervision (092).

For more information, please contact the School of Education at (203) 576-4219.

Graduate Intern Program in Education

The University offers an internship in Education. The Internship is an integration of graduate study and field experience in an elementary, middle, or secondary school. Graduate course work is tuition-free. The following options are available to the intern:

1. Internship for those who wish to be State certified as elementary, middle, or high school teachers
2. Internship for those already certified but who want to take advantage of the tuition-free program to pursue a Master’s degree or Sixth Year Certificate of Advanced Studies (CAS)
3. Internship for those who wish to earn a Master’s degree in Education (MSED) or a 6th Year Certificate of Advanced Studies (CAS) for work with young people in non-public American schools, schools in another country, or in other educational or training settings.

For more information, please contact the Director of the Intern Program at (203) 576-4193.

Registration Procedures

Students may register by mail two months prior to the opening of each semester. Mail registration forms are available from the Office of the Registrar, Wahlstrom Library, 126 Park Avenue, Bridgeport, CT 06604. A new student may use the mail registration procedure when issued by the Office of Graduate Admission. Registration in person may be made on the day of the registration indicated on the Academic Calendar. Registration for courses must not be construed as constituting acceptance into a graduate program.
School of Engineering

Dean: Tarek Sobh
Engineering Technology Building
221 University Avenue
Telephone: (203) 576-4111
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E-mail: sobh@bridgeport.edu

Associate Dean for Graduate Programs: Khaled Elleithy
Engineering Technology Building
Telephone: (203) 576-4703
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Faculty: Bach, Bajwa, Barkana, Dichter, Elleithy, Grodzinsky, Gupta, Hmurcik, Hu, Kongar-Bahtiyar, Lewis, Lee, Li, Liu, Mahmood, Pallis, Patra, Sobh, Tibrewal, Selig, Wu, Xiong, Zhang

Degree Programs

Biomedical Engineering (M.S.)
Computer Engineering (B.S., M.S.)
Computer Science (B.S., M.S.)
Computer Science and Engineering (Ph.D.)
Electrical Engineering (M.S.)
Mechanical Engineering (M.S.)
Technology Management (M.S.)

In the programs we offer, we are responsive to the technology-driven evolving trend in the workplace toward concurrent processes involving design, engineering, and technical project management, while providing a sound foundation built upon fundamental knowledge. We promote creativity and emphasize a team approach to problem-solving. Among institutions in the Northeast, we are uniquely positioned to offer integrated engineering curricula.

Since July 2004, the School has been offering the full M.S. degree program in Computer Science and in Technology Management through distance learning. For more information, please contact the department or visit http://www.bridgeport.edu/ub/dlearning/

Mission Statement

The School of Engineering of the University of Bridgeport provides educational opportunities and serves as a knowledge resource in the sciences, engineering and technology. Our clients are students, the companies that hire them, and various other institutions in Bridgeport and the surrounding region, the United States, and all parts of the world.

Our Programs are designed with attention to the institutions we serve. The education we offer features acquisition of fundamental knowledge in a wide range of fields and an application oriented approach to issues that are progressively more interdisciplinary. Graduates of our programs possess broad knowledge, professional training, and learning skills that enable their success in an evolving global economy and allow for the betterment of the communities in which they live.

Undergraduate

The Computer Engineering program prepares graduates for the practice of engineering at the entry level and helps graduates develop the ability to pursue a course of lifelong learning. A secondary aim is to provide a foundation for those interested in and qualified to pursue graduate studies. The program emphasizes a sound broad-based interdisciplinary technical education, with the integration of the practice of engineering design throughout the curriculum. The program in Computer Science prepares students to solve theoretical and applied problems relating to programming and programming applications. Acquiring both skills and fundamental knowledge is stressed in the curriculum. An additional goal is to provide students an excellent foundation for advanced study in graduate programs.

Graduate

The graduate offerings of the School of Engineering are intended for those who wish to enhance their expertise with an emphasis on professional applications. Accordingly, all programs for the Master of Science degree require at least one of the following: comprehensive examination, writing a thesis based on independent research, or completion of an appropriate special project.

Accreditation

All degree programs in the School of Engineering are licensed and accredited by the State of Connecticut Department of Higher Education and the New England Association of Schools and Colleges. The Bachelor of Science degree program in Computer Engineering is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

Admission Criteria and Procedures

UNDERGRADUATE ENGINEERING:

Students who perform well in the undergraduate programs are generally found to have met the following criteria:

A. SAT scores of 530(R) verbal and 560(R) math; or composite ACT score of 22.
B. Grade point average of “B”, (2.5) or better.
C. Rank in the top half of the high school graduating class.
D. Four years of mathematics; two lab sciences and an additional science unit in high school.

At the discretion of the Admissions Committee, students who meet two out of the above standards can be admitted into the major.

Graduating Engineering

MASTER OF SCIENCE DEGREES

Candidates for admission to Master of Science Degrees in the School of Engineering must present the following for review:

A. Bachelor of Science degree or its equivalent in Engineering or related applied Sciences from an accredited institution or recognized international institution.
B. Two letters of recommendation.
C. 2.8 recommended grade point average.
D. Demonstrated capacity for independent study and the ability to pursue graduate level work.

PH.D. DEGREE IN COMPUTER SCIENCE AND ENGINEERING

Students admitted to the Ph.D. program should have a master degree in computer science or engineering or related discipline with at least a 3.3 GPA. Interested students in the Ph.D. program without an M.S. degree must apply and be admitted into the
M.S. program first, and then upon finishing the M.S. degree, they would be eligible to apply for the Ph.D. program.

Students admitted from non-English speaking foreign countries, having a master’s degree in computer science and engineering will also be required to have a TOEFL score of at least 550. GRE’s are not required for admission into the program, but are recommended.

For information concerning undergraduate and graduate admission procedures, please refer to the section on University Admissions.

**General Criteria for Degrees from the School of Engineering**

Upon recommendation of the faculty of the School of Engineering the University of Bridgeport will award the Bachelor’s degree to the student of good character who fulfills the following minimum requirements, in addition to those listed in the chapter on Academic Regulations.

1. Participation in such departmental seminars as the faculty prescribes.
2. Earning the total semester hours required for the individual curriculum as listed in the following pages.
3. Earning a “C-” or better in every course in the major and with a cumulative average of 2.0 in the major courses. Each department designates the courses to be included in the major and decides the procedure necessary to remove each deficiency, including any “D” in a major course. When a course is a prerequisite to another, a “C-” or better in the prerequisite course may also be a requirement.

**Requirements for the Master of Science Degrees**

**ACADEMIC PERFORMANCE**

Students in a degree program who do not maintain a satisfactory record will be separated from the Graduate School. Normally, the accumulation of one “F” grade, or more than one “D” grade, or more than three “C” grades will result in separation.

**COURSE LEVELS**

- 400-499—Open to graduate students and to qualified undergraduates.
- 500-599—Open to graduate students only.
- 600-700—Open to Ph.D. students and to qualified MS students.

**TIME LIMITATION AND PROGRAM CONTINUITY**

All requirements for the degree of Master of Science must be completed within six years (twelve consecutive semesters) of the effective start of an approved graduate program of study. Once a program is initiated, the student must maintain continuous enrollment until completion.

Under certain circumstances, a student may be granted permission to interrupt his/her program by petitioning the Dean in writing, stating the underlying circumstances. Program interruption without formal permission will constitute grounds for dismissal from the Graduate School.

**DEGREE PROGRAM REQUIREMENTS**

All graduate students must have on file an approved program of study on the form provided. Programs of study are worked out between the student and his/her advisor to meet both the student's desires and the graduate faculty's philosophy of an integrated program. The program of study must carry the approval of the chair of the department awarding the degree. Changes in the approved program of study must be approved by the student’s program advisor and the department Chair.

**ENGINEERING COLLOQUIUM REQUIREMENT**

All Engineering students are required to register for the Engineering Colloquia Series (ENGR 400) once during their course of study. Students are expected to register in their first semester. Students who do not pass the course are required to repeat the course in a subsequent semester.

**GENERAL THESIS REGULATIONS**

MS Students are encouraged to include a thesis investigation in their approved program of study. Accumulation of thesis semester hours and work done during a thesis investigation must be continuous up to the time of its completion. Only those students designated as regular graduate students who have satisfied the following requirements will be permitted to accumulate thesis credits. During the semester prior to that in which the student desires to initiate his/her thesis investigation, he/she must have:

1. Included a thesis investigation in his/her approved program of study;
2. Sought and obtained a member of the graduate faculty who agrees to act as his/her thesis advisor;
3. Submitted a completed thesis investigation form to the department in which the degree is to be awarded;
4. Obtained a Thesis Committee, appointed by the department chair, consisting of three members of the graduate faculty (including the advisor as committee chair).

Students should obtain a copy of “Specifications for Master’s Thesis” from the office of the department chair which describes requirements in detail.

All theses in Engineering must be presented at a faculty-graduate seminar. It is the student’s responsibility to ensure that this requirement is fulfilled, and that written notice of the presentation is distributed to all interested persons at least one week before the event.

Students who are in the process of completing a thesis are required to register for at least two semester hours of thesis in each semester, including summer, that they actively engage in that activity under faculty guidance. Semester hours thus accumulated that total more than the approved program-of-study requirement are not counted toward the degree.

This procedure does not apply to Electrical Engineering, where students have up to 3 semesters (not counting the summer semester) to start and finish their project/thesis. For every semester they are not registered for any credits, they must take ELEG 596 (seminar) for 1 credit. They do not take ELEG 596 in the summer semester, unless it is their last semester.
Upon successful completion of the thesis, and acceptance by the Thesis Committee, provided all other requirements in the program of study are completed, the student becomes eligible for the degree.

**COMPLETION OF MASTER’S DEGREE**

The Master of Science degree will be awarded only to those students successfully completing the following requirements:

1. A minimum of 30 semester hours with a QPR of “B” or better in an approved program of study. The number of semester hours which may be transferred from another institution is an individual matter that will be reviewed by the major department, but is normally no more than 6 semester hours (8 semester hours in the case of laboratory courses).

2. Satisfactory completion of the state licensure requirements as prescribed by the faculty of the major department, and a favorable recommendation from the faculty upon review of the student’s program and performance, after the student has made formal application for a Master’s diploma.

When the degree is completed with a thesis, a minimum of eight courses of three semester hours each are required for the Master of Science degree in Electrical Engineering or Mechanical Engineering. For the Master of Science in Computer Science or Computer Engineering, nine courses of three semester hours each plus six semester hours (minimum) of thesis are required. For the Master of Science degree in Technology Management, nine courses of three semester hours each plus six semester hours (minimum) of thesis are required; for students holding the Bachelor of Science in Manufacturing Engineering or Industrial Engineering from an approved program, this requirement may be reduced to eight courses of three semester hours each, plus six semester hours (minimum) of thesis.

**COOPERATIVE EDUCATION PROGRAM**

The School of Engineering offers an optional cooperative education program. See the Cooperative Education section of this Catalog for further information.

The faculty of the School of Engineering encourages both undergraduate and graduate students to participate in the Co-Op program and acquire work experience in industry while studying here at the University of Bridgeport.

**Requirements for the Ph.D. degree in Computer Science and Engineering**

**TIME LIMITATION AND PROGRAM CONTINUITY**

All requirements for the Ph.D. degree must be completed within seven years (fourteen consecutive semesters) of the effective start of an approved graduate program of study. Once a program is initiated, the student must maintain continuous enrollment until completion.

**COMPLETION OF PH.D. DEGREE**

The Ph.D. degree in Computer Science and Engineering will be awarded only to those students successfully completing the following requirements:

1. Completion of the formal requirements for an MS degree in computer science or computer engineering, including a thesis.

2. An additional eight (3-credit hours) courses, or 24 credit hours, in the discipline, including no more than two independent studies.

3. A two-semester teaching practice requirement (3 credit hours each), for which students are to register with no fees. The students will be expected to teach lower undergraduate level classes, and/or assist professors as teaching assistants (i.e., perform a significant teaching role), thus giving Ph.D. graduates experience for an academic teaching career.

4. At least 15 semester hours of dissertation research, culminating in a dissertation proposal defense and dissertation defense.

5. Comprehensive examination: written and oral (proposal defense).

6. Publication of at least two journal papers, or one journal and two refereed conference papers, within the course of the Ph.D. topic research. These publications are not required to be single authored by the student and they might be coauthored with members of the dissertation committee.


International College

Dean: Thomas J. Ward
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303 University Avenue
Telephone: (203) 576-4966
Fax: (203) 576-4967
Email: ward@bridgeport.edu

Faculty: Benjamin, Healey, Katz, Kim, Lay, Rubenstein, Setton, Skott, Yu, van der Giessen, Ward, Wei

Degree Programs

CRIMINAL JUSTICE AND HUMAN SECURITY (B.A.)

CONCENTRATIONS/MAJORS

Comparative Justice ........................................ 12/15 S.H.
Criminology ............................................... 12/15 S.H.
Human Security .......................................... 12/15 S.H.

INTERNATIONAL POLITICAL ECONOMY AND DIPLOMACY (B.A.)

CONCENTRATIONS/MAJORS

Asia-Pacific Studies .................................. 12/15 S.H.
Peace and Development Studies ................. 12/15 S.H.
Americas Studies ................................... 12/15 S.H.
Middle East Studies ................................ 12/15 S.H.

MARTIAL ARTS STUDIES (B.A.)

CONCENTRATIONS/MAJORS

Taekwondo ............................................... 12/15 S.H.
Tai Ji ...................................................... 12/15 S.H.

MASS COMMUNICATIONS (B.A.)

CONCENTRATIONS/MAJORS

Advertising .............................................. 12/15 S.H.
Communication Studies ......................... 12/15 S.H.
Fashion Journalism ............................... 12/15 S.H.
International Communication ................ 12/15 S.H.
Journalism ........................................... 12/15 S.H.
Public Relations ................................... 12/15 S.H.
Sports Journalism .................................. 12/15 S.H.

SOCIAL SCIENCES (B.A.)

CONCENTRATIONS/MAJORS

Criminal Justice Program ......................... 12/15 S.H.
Pre-Law ................................................ 12/15 S.H.
History ............................................... 12/15 S.H.
International Studies ............................ 12/15 S.H.
Political Science ................................ 12/18 S.H.
Psychology ......................................... 12/15 S.H.

WORLD RELIGIONS (B.A.)

CONCENTRATIONS/MAJORS

Religion and Community Service ............ 12/18 S.H.
Religion, Conflict Analysis, and Meditation ... 12/18 S.H.
Religion and Contemporary Culture ........... 12/18 S.H.

GLOBAL DEVELOPMENT AND PEACE (M.A.)

CONCENTRATIONS/MAJORS

Conflict Analysis and Resolution
Global Communication
Global Management
International Political Economy and Development

Background and Focus

Founded in 2000 the International college of the University of Bridgeport offers social science-based programs aimed at preparing students for careers in international public service, international business, academia, government service, environment and the media. The College offers majors in Mass Communications, International Political Economy & Diplomacy, World Religions, Martial Arts Studies, and the Social Sciences.

Mission Statement

Through the degree program and the minors it offers the International College provides skills the needed by professionals in government, business and civil society to respond to the challenges and opportunities of globalization. The College stresses the genesis and evolution of modern democratic institutions while also offering insight into other fundamental forces that have shaped the world's cultures. Recognizing the importance of a broad cultural base, synthetic and analytical skills and a working knowledge of critical world languages, the International College encourages study of the cultural underpinnings of the world's major civilizations. It encourages overseas study during the student’s undergraduate study.

The International College's programs are designed to provide students with marketable skills that will enable them to render meaningful service in their careers. It encourages the study of conflict prevention and resolution and service learning. The College provides a wide-ranging academic preparation for scholars and practitioners who are interested in playing a role in the fostering of intercultural dialogue and global cooperation. The diverse, international student body of UB, serves as both a “living laboratory” and a “microcosm of the global world.” It provides real life context for this type of learning experience.

Advisory Board

The International College Advisory Board consists of national leaders who have had a distinguished career in fields such as diplomacy international business, and in civil society. The Advisory Board normally meets twice each year and reviews the College’s activities, interfaces with the Colleges faculty and students and it provides recommendations and feedback on the International College’s ongoing program development. Current membership of the Advisory Board includes Ambassador Phillip V. Sanchez, former US Ambassador to Colombia and to Honduras; Jim Nicholas, Executive Director of the Connecticut World Trade Association, Inc. and Executive Partner Global Business Resources USA, LLC; Clement Malin, former Vice President for International Relations Texaco; David Hornby, former Vice President of the Lyons Club of Fairfield and Export Manager of Wallach Surgical Supplies; Eileen Heaphy, Career U.S. Foreign Services Officer; Robert Sammis, Senior Financial Service Advisor and Noel Brown, Career United Nations official and former North American Director of the United Nations Environmental Program. The Advisory Board also includes International College alumni Tamami Kawamura ’05, a graduate student at Yale University, Grace Lee ’05 and Sana Sarr ‘04.

INTERNSHIPS, COOPERATIVE EDUCATION

Students of International College are strongly encouraged to obtain working experience through either the cooperative education program or the internship program. To participate in either co-op or internship, students must meet the following requirements:

a. be of junior standing
b. have completed at least 18 hours of coursework in the major
c. be a student in good academic standing
International College

at the University

Lifelong Learning
The International College offers colloquia for adult learners and continuing education courses for seniors and for professionals. It has recently organized two visits to China for adult learners and has done an extended series of colloquia on the Middle East.

Special Areas of Interest
The International College and UB students and faculty study and conduct programs and research on the United Nations system. The college has sponsored lectures, conferences, and seminars on the United Nations and other international organizations; or the impact of regional customs unions, international human rights; and programs or sustainable development. The College provides a forum where students representing their respective nations have organized constructive public symposia on border and ethnic divides in hotspots such as Bosnia, Kosovo, Kashmir, Tibet, and the Middle East. UB students participate in the Model United Nations at the National Model United Nations where they have won awards for positive papers and delegation performance.

International College and the Study of the United Nations
The International College of the University of Bridgeport research and studies, international organization and the UN in particular. The College especially encourages research in two areas:

1. The growing (and changing) role of non-governmental organizations vis-a-vis the United Nations and
2. The evolving nature of political and economic relations between the United Na-

tions and world powers, particularly the United States.

Admissions Criteria
A student is admitted to the majors in the International College of the University of Bridgeport after an evaluation of the high school transcript, class standing, counselor recommendations, and SAT scores. The student should demonstrate potential in analytical reasoning, comprehension, verbal expression, and a demonstrated interest in international affairs and/or world culture.

Accreditation
The degree programs of the International College of the University of Bridgeport are licensed and accredited by the State of Connecticut Department of Higher Education and the New England Association of Schools and Colleges (NEASC).
Shintaro Akatsu School of Design (SASD)

Director: Richard W. Yelle
Arnold Bernhard Center, room 810
84 Iranistan Avenue
Telephone: (203) 576-4222
Fax: (203) 576-4042
E-mail: ryelle@bridgeport.edu

Faculty: Arkay-Leliever, Becker, Benson, Capua, DuBois, Eichorn, Johnson, Kandalaff, Konsterlie, Larned, Massaro, McCollum, McIntyre, Miller, Mo Shin, Munch, Newton, Roeder, Ruzicka, Yelle

Degree Programs
Graphic Design (B.F.A.)

Concentration in New Digital Media

Industrial Design (B.A.)

Interior Design (B.A.)

Mission Statement
In keeping with a 60-year history of excellence, the mission of the Shintaro Akatsu School of Design (SASD) is to offer professional education in the design fields leading to baccalaureate degrees and successful careers in design. SASD develops students’ abilities to identify, analyze, and solve design problems using culturally sensitive and environmentally sustainable methodologies and technologies. SASD is committed to advancing the use of best-practices in all areas of design.

Professional Environment
Each student has a space for in-class assignments with an adjacent computer design studio, a clean room for large-scale mock-ups and a well-equipped model shop and a photography studio. In addition to the full time faculty, practicing professional designers are invited to teach studio courses ensuring that the student receives a practical and current education.

Portfolio Focus
An important semester event is the Open House; professional designers are invited to a portfolio review in a celebration of the student’s semester work. An aggressive summer internship program for the sophomore and junior students is key to their professional success. The senior thesis reinforces this internship experience. With the combination of a professional, robust portfolio and extensive internship experience our graduates are well prepared for an exciting and fulfilling career.

Computer Emphasis
We have a strong Computer Aided Design (CAD) emphasis balanced by traditional skill development. We use powerful programs that include Vellum 3D, form•Z, Photoshop, Illustrator, IronCAD, Alias Studio, Maya, Final Cut Pro, Premiere, Flash, and Solidworks. An example of our cutting-edge use of technology is in the Junior design studio, where students use the computer to directly create prototypes using stereolithography through a local high technology company.

Local Innovation
Connecticut has a spectacular history of innovation, invention, engineering, illustration, and design. Connecticut has the highest patents per capita. Many well-established corporations and a rapidly growing array of new high technology companies are in the immediate area. Bridgeport Machines, Dictaphone, Pitney Bowes, Remington, and Sikorsky Aircraft Corporation are next door and the World Headquarters of General Electric is in the nearby town of Fairfield. Evo, Product Ventures, Group Four Design, and 9th Wave are just a sample of the consulting animation, advertising, and interior design firms a short distance from Bridgeport.

Accreditation
SASD is an accredited member of the National Association of Schools of Art and Design (NASAD), the governing body of undergraduate and graduate art and design schools.
Division of Health Sciences

Vice Provost for Health Sciences:
David Brady
Wahlstrom Library, 7th floor
126 Park Avenue
Telephone: (203) 576-4676
E-mail: dbrady@bridgeport.edu

Mission Statement

The Division of Health Sciences includes the College of Chiropractic, the College of Naturopathic Medicine, the Acupuncture Institute, the Human Nutrition Institute, the Fones School of Dental Hygiene, and the Physician Assistant Institute. In accordance with the mission of the University, the Division of Health Sciences seeks to become a leader in the development of integrated healthcare, through education, research and clinical practice.

A variety of programs are offered at all levels throughout the Division. Undergraduate studies are currently offered in Dental Hygiene. Graduate, professional studies are offered in Acupuncture, Chiropractic, Naturopathic Medicine, Human Nutrition, Dental Hygiene and Physician Assistant Studies. The Division provides opportunities for students in different programs to interact through courses of common interest and by providing avenues for completion of multiple degrees within the Division.

Clinical services and outreach services provide care for those in the local urban area, through the University of Bridgeport clinics and off-campus clinical sites.

Recognizing the need for alternatives to traditional, on-campus study in the area of health sciences, the Division offers an online Masters program in Human Nutrition and an online Dental Hygiene degree completion program, and a graduate Dental Hygiene program.
The objectives of the Acupuncture Institute are to train and educate acupuncture students who prior to graduation:

1. Demonstrate competency in utilizing the four examinations to identify Traditional Chinese Medicine (TCM) diagnoses
2. Master TCM acupuncture and moxibustion techniques
3. Discriminate between modern and classical Asian treatment strategies in the care of individual patients
4. Adapt diagnosis and treatment strategies as needed for diverse patient populations
5. Analyze the conventional medical diagnoses and utilize conventional diagnostic tools in order to comprehend the severity and prognosis of each case, inform the OM diagnosis, and make timely referrals when appropriate.
6. Evaluate patient care from biomedical, pharmacological and Asian perspective in order to understand the medical context in which patients present and make appropriate treatment, consultation and referral decisions in integrative care settings as part of a collaborative health care team.
7. Value patients’ dignity and confidentiality

The mission of the University of Bridgeport Acupuncture Institute is to offer a comprehensive graduate-level education that prepares qualified candidates to become successful licensed acupuncturists. The University of Bridgeport Master of Science in Acupuncture degree program is an integrated unit of the University of Bridgeport, a private, non-sectarian, comprehensive university. The program seeks to advance the discipline of oriental medical acupuncture through educational, clinical and scholarly activities. The program educates its students to be productive, caring and responsible citizens and skilled healthcare professionals. By providing an outstanding professional education, the program will produce graduates with a high level of clinical skills who have the commitment and judgment necessary to act in the service of others.

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The objectives of the Acupuncture Institute are to train and educate acupuncture students who prior to graduation:
Acupuncture Institute

and national licensure requirements.

Tuition and Fees
(See Insert for current year’s Tuition, Fees, and Other Expenses)

Deposits
All charges are payable in full by the fourth day of the semester. A nonpayment fee will be assessed. The student receives no reduction in charges for temporary absence from classes or residence hall, and no refund if he or she is suspended or dismissed or leaves the University or residence hall for any cause. Students with outstanding balances will not be allowed to register for the following semester.

The student will not receive grades, a diploma, a certificate, or a transcript of his academic record until all financial obligations to the University have been met.

If an account becomes severely delinquent and the University is forced to submit the account to an outside agency for collection, the costs of same will be added to the student’s balance.

The tuition fee does not include the cost of books and supplies. These must be purchased by the student. The student should inquire about the cost of special materials, equipment and uniforms required for specialized courses.

The University does not assume responsibility for the loss of personal property of students either on or off the campus. It is recommended that students protect themselves against such losses by consulting with their own (or with their parents) insurance agent in regard to coverage provided by existing policies, if any; or by purchasing private property insurance through a private agent.

Curriculum
The Master of Science in Acupuncture degree program is three years in length (36 months) and is scheduled on a semester basis. The curriculum of this major consists of seven (7) distinct areas:

1. ACUPUNCTURE PRACTICE AND TECHNIQUES:
The nine (9) acupuncture courses introduce students to the theoretical and practical information of acupuncture therapy. The student becomes proficient in the clinical applications of acupuncture, moxabustion, cupping, electrical stimulation and bleeding techniques. The student learns to identify acupuncture points by anatomical location, palpation, and proportional measurement. The classification, function and indications for each acupuncture point are discussed and demonstrated. In addition to the twelve bilateral channels, two midline vessels and six other extra meridians, forbidden and contraindication of points are discussed. In addition, extra points, auricular points and other categories of acupuncture points are demonstrated and treatment techniques based on these extra meridians and points are discussed and practiced.

2. ORIENTAL THEORY, DIAGNOSIS AND APPLICATION:
The twelve (12) oriental medicine theory and diagnosis courses are designed to provide the student with an understanding of the scope, philosophy, theory and conceptual frame work of oriental medicine and how acupuncture specifically affects the body within the oriental treatment paradigms. Emphasis is placed on Traditional Chinese Medicine (TCM) diagnoses and effective treatment strategies.

3. WESTERN BIOMEDICINE:
The thirteen (13) western biomedical courses are designed to train the student fully about western medical terms, history taking, physical exam and diagnostic skills. The student learns how to make the appropriate referral and consultation, as well as the clinical relevance of laboratory and diagnostic tests and procedures.

4. HERBAL MEDICINE SURVEY:
The four (4) courses in herbal medicine and dietetics give the student a basic introduction to western and Chinese botanical medicine and TCM treatment philosophies relevant to herbal medicine and clinical diet therapies. Training in botanical medicine is limited in the Acupuncture Institute to three survey courses: Botanical Medicine, Introduction to Chinese Herbal Remedies and Patent Remedies. Information is provided on indications, contraindications and drug-herb interactions. In addition, the two courses in dietetics and nutrition help the student understand the role of nutrition in patients’ health. (Note that the course in western Biomedicine is listed under Western Biomedicine: ANT 521 Nutrition.)

5. MOVEMENT AND RESPIRATION STUDIES:
The six (6) movement and respiration courses are designed to enhance the student’s personal and energetic development. The student will be exposed to a wide variety of Asian movement practices that can be used to maintain their own and their patients’ health care needs. In addition to the movement studies, two courses in soft tissue treatment techniques are offered.

6. COUNSELING, COMMUNICATIONS AND PRACTICE MANAGEMENT:
The two (2) specific courses in this area enhance the students’ clinical skills, both in terms of diagnosing addressing patients’ psychological health and in the area of best business practices. In addition, the two second year seminars, cross referenced in the “Oriental Theory, Diagnosis and Application” (ATD) section help students learn the fundamental skills needed for private practice, ethical and legal considerations in health care and special considerations for practice in integrated care settings.

7. CLINICAL SERVICES:
The five (5) clinical services courses are designed to allow the student to develop clinical, interpersonal communication and decision-making skills. In addition, students learn professional conduct, efficiency and confidence in dealing with patients on a regular basis. From inception through the end of clinical training, the student has the opportunity to observe and work with advanced TCM
ACUPUNCTURE INSTITUTE

practitioners as well as other health care professionals. This allows the student to understand how and when to make appropriate referrals. Clinical internships are available in the UBAI on-campus clinic as well as in community and hospital outreach clinical sites. By the end of clinical training, each student will have seen a minimum of 380 patient visits and will have completed 830 hours of clinical training.

### ACUPUNCTURE CURRICULUM:

#### SEMESTER ONE

<table>
<thead>
<tr>
<th>NUMBER</th>
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Total All Semesters: 118 credits. Note that each preceptorship credit corresponds with 37 clock hours; each clinic credit corresponds with 28 clock hours. 830 clinical hours/1818 didactic training hours. Of the didactic training hours, 801 are in the basic sciences, 1017 in Traditional Chinese medicine.

#### CONTACT HOUR BY AREA:

**ORIENTAL THEORY, DIAGNOSIS AND APPLICATION** ........................................ 333

- Oriental History & Philosophy.......................... 18
- Oriental Medical Theory................................. 36
- Oriental Diagnosis I ..................................... 36
- Oriental Diagnosis II .................................... 36
- 1st Year Seminar 1 ....................................... 27
- 1st Year Seminar 2 ....................................... 27
- 2nd Year Seminar 2 ....................................... 27
- East-West Pathology ..................................... 36
- Oriental Internal Medicine ................................ 36
- Acute Case studies ....................................... 18
- Oriental Gynecology ..................................... 18
- Advanced Pulse & Tongue Diagnosis .................. 18

**ACUPUNCTURE PRACTICE AND TECHNIQUES** ............................................. 378

- Point Location 1 ........................................ 45
- Point Location 2 ........................................ 45
- Meridian Theory .......................................... 36
- Acupuncture Techniques 1 ................................ 72
- Acupuncture Techniques 2 ................................ 72
- Auricular Acupuncture ................................... 18
- Clean Needle Technique .................................. 54
- Japanese Acupuncture Techniques ..................... 18
- Pediatric Acupuncture .................................... 18

**ACUPUNCTURE RELATED STUDIES** .............................................. 252

- Tai Ji Chuan 1 .......................................... 27
- Tai Ji Chuan 2 .......................................... 27
- Qi Gong 1 ................................................ 27
- Qi Gong 2 ................................................ 27
- Oriental Massage 1 ...................................... 54
- Oriental Massage 2 ...................................... 54
- Oriental Dietetics ........................................ 36

TOTAL: OM theory, diagnosis, treatment and acupunture related studies: ........... 963

**HERBAL MEDICINE SURVEY** .................................................. 90

- Botanical Medicine ....................................... 36
- Intro to Chinese Herbal Remedies ...................... 18
- Patent Remedies ......................................... 36
Acupuncture Institute

WESTERN BASIC & BIOMEDICAL SCIENCES ........................................ 666
   Anatomy 1 ........................................... 72
   Anatomy 2 ........................................... 72
   Physiology 1 ........................................ 36
   Physiology 2 ........................................ 36
   Pathology 1 ........................................ 36
   Pathology 2 ........................................ 54
   Clinical Diagnosis 1 .............................. 90
   Clinical Diagnosis 2 .............................. 90
   Lab Diagnosis ....................................... 36
   Public Health ....................................... 36
   Pharmacology ...................................... 18
   Palpation/Massage ................................ 54
   Western Nutrition ................................ 36

COUNSELING, COMMUNICATIONS, ETHICS, PRACTICE MGT .................. 99
   2nd Year Seminar 1 ................................. 27
   Psychological Assessment ....................... 36
   Practice Management ............................. 36

CLINICAL EDUCATION ............................................. 830
   Preceptorship 1 .................................... 75
   Preceptorship 2 .................................... 75
   Clinical Internship 1 .............................. 245
   Clinical Internship 2 .............................. 215
   Clinical Internship 3 .............................. 220

TOTAL PROGRAM ............................................. 2,648

Total: 118 credits. Note that each preceptorship credit corresponds with 37 clock hours; each clinic credit corresponds with 28 clock hours. 830 clinical training hours/1818 didactic training hours. Of the didactic training, 801 are in the basic sciences, 1017 in Traditional Chinese Medicine.

COURSE IDENTIFICATION

Course identification is as follows:
   APT - Acupuncture Practice and Technique
   ATD - Oriental Theory, Diagnosis and Application
   AHM - Herbal Medicine Theory
   AWB - Western Biomedicine
   AMR - Movement and Respiration Studies
   ACS - Clinical Services

The course numbering system is as follows:
   500 level - courses offered in year one
   600 level - courses offered in year two
   700 level - courses offered in year three

The second digit identifies the semester the course is given in that academic year. The third digit indicates the area.

   e.g. APT 524
   APT - Acupuncture Practice and Technique
   5 - year one
   2 - second semester
   4 - fourth course in area sequence

GRADUATE POINTS

Grades earned by students are submitted to the Registrar utilizing the following designations. Grades earned are on a four (4) point scale with an “A” or 4 quality points being the highest grade attained. Grades with quality points are:

GRADE QUALITY POINTS

   A ........................................ 4.0
   B+ ........................................ 3.35
   B ........................................ 3.00
   C+ ........................................ 2.5
   C ........................................ 2.00
   D ........................................ 1.00
   F ........................................ 0.00

The cumulative quality point ratio (QPR) is determined by dividing the number of semester hours into the number of points earned. Transfer credits are not included in this computation.

Administrative Grades

In addition to the academic Grades submitted by faculty, the following Administrative Grades are also utilized.

   I - The grade of Incomplete “I” is used by the faculty to indicate that a student has not completed all course requirements. A student will have one week from the first day of the next term to meet with the faculty and complete all course requirements unless other arrangements are made with either the faculty member or the Program Director prior to the end of the term in which the course was taken. Upon completion of the course requirements the faculty will submit the earned grade. Failure by the student to meet with the faculty and complete the requirements in one week from the first day of the next term will result in the grade of “I” being converted to a grade of “F”.

   Any student with a grade of “F” or “W” will be required to register for and re-take that course in its entirety when the course is regularly scheduled. Any student with a grade of “F” or “W” will not be eligible to register for courses for which that course is a prerequisite.

   R - Students may repeat a course at any grade level below “A” but will replace the first-time grade for the repetition of the course. The first repeat grade level below “A”.

   TCR - This indicates transfer credit granted for equivalent work completed at another accredited institution.

   W - Withdrawal grades are assigned on the following policy statements:

1. If the student officially withdraws from a course during the official change-of-registration period, that course does not appear on the student's transcript.

2. If a student officially withdraws from a course after the end of the change-of-registration period, but before the end of the official withdrawal period, a grade of “W” is assigned and that course remains on the student's transcript. Courses with a grade of “W” do not count toward the QPR and do not count toward “hours attempted.”

3. The names of students who have officially withdrawn from a course and receive the grade of “W” are so listed on the class roster for the balance of the semester.

4. Any exceptions to the above, including late withdrawals, must be approved by the Director and Provost before they become official and are recorded. Poor academic performance does not constitute a valid reason for late withdrawal.
Acupuncture Institute

Academic Policies

ATTENDANCE REQUIREMENTS
Each student is expected to attend all lectures and laboratories and other activities associated with the total completion of a given course.

A student who is absent from class in excess of ten percent of the total class hours may have his or her grade reduced for lack of participation as outlined in the course syllabus. A student absent in excess of twenty percent of the total class hours will receive a grade of “F”.

REQUIREMENTS FOR GRADUATION
In order to be eligible for graduation from the Acupuncture program, candidates must meet the following criteria:

1. Have successfully completed a minimum of 36 months of resident study in an accredited institution. The last 2 semesters (34 credits) must have been in residence at the University of Bridgeport, Master of Science in Acupuncture degree program.
2. Have successfully completed all requirements of the educational program and have achieved a 2.75 cumulative grade point average.
3. Have been recommended for graduation by the Faculty and Administration.
4. Have satisfactorily met all financial obligations to the Master of Science in Acupuncture degree program, Office of Financial Aid, publications of the class yearbook and commencement exercises.
5. Have passed the Clinical Entrance Exam with a score of no less than 75%, the Clinical Exit Exam and all practical clinical examinations with a grade of 70% or better.

GOOD ACADEMIC STANDING
Good academic standing is achieved when a student is maintaining good grades, has met all financial responsibilities to the Master of Science in Acupuncture degree program and is not guilty of any breach of the standards governing ethical and clinical conduct.

ACADEMIC PROBATION
Academic probation occurs when the student’s cumulative grade point average falls below the required grade point average of 2.50 or if a student receives one grade of “F” or two more grades of “D” during a single semester. A student who is on academic probation is not in good academic standing and is not eligible to carry a full academic course load.

ACADEMIC REMEDIATION
A student who is on Academic Probation will be placed in a program of Academic Remediation and will be required to meet with the Director of the Institute. Academic Remediation requires a student to carry a reduced academic load. Students will be permitted to convert grades of “D” or “F” only by retaking the course the next time it is offered by the Acupuncture Institute.

Successful completion of a program of academic remediation requires a student to pass each repeated course with a “C” or better and have earned a cumulative GPA (CGPA) of 2.75 or better.

A student who has not earned a CGPA of 2.75 or better upon one semester of remediation but has shown substantial improvement in his or her course work will be allowed one more semester of remediation in order to achieve the CGPA of 2.75. A student in a program of academic remediation may ask the Director for a written definition of a minimum CGPA, or range of CGPA, which would be deemed to be substantial improvement, and for a written calculation of the semester of remediation GPA which would be necessary to achieve in order to bring the student’s CGPA into the range of substantial improvement. In such event the student shall countersign the written statement and deliver a copy of the signed document to the Director.

A student may not graduate with a grade of “D” on their transcript. Grades of “D” may not remain on the student’s transcript for more than one year and must be remedied by repeating the course and receiving a grade of “C” or better. This is not a limitation for the instructor, but rather a requirement to pass each course so that students have the appropriate level of proficiency to pass the NCCAOM Board Exams and become licensed acupuncturists. A student may remediate a grade only by retaking the course before graduation. If the student does not pass the course with a “C” or better, the student will be on Academic Probation and will be required to speak with the Director of the Acupuncture Institute before registering for any new classes.

ACADEMIC DISMISSAL
A student who after one semester of remediation does not show substantial improvement in his or her academic performance or after two semesters of academic remediation does not achieve a CGPA of 2.75 will be academically dismissed from the acupuncture program.

Academic dismissal may also occur if a student’s CGPA falls below 2.50, or if the student receives one “F” or two grades of “D” in one semester on a second occasion. Upon completion of the first semester, any student not achieving at least a 2.50 GPA will be academically dismissed from the program.

DISMISSAL FROM THE MASTER OF SCIENCE IN ACUPUNCTURE DEGREE PROGRAM
Academic inadequacies are not the only reason for dismissal form the Master of Science in Acupuncture degree program. The following is a list of additional causes for dismissal:

1. Failure to meet the generally accepted standards of ethical conduct and clinical practice. Dismissal of this nature is subject to review by a committee of peers, faculty and administration.
2. Pleading guilty or “nolo contendere,” or being found guilty of any crime involving moral turpitude or being felonious in nature.
3. Repeated violation of public policy, or the demonstration of behavior that created safety hazards and/or disrupts the order of the institution. Dismissal of this nature is subject to review by a committee of peers, faculty and administration.
4. Failure to meet financial obligations or commitments to the Master of Science in Acupuncture degree program.
WITHDRAWAL FROM THE PROGRAM

If a student withdraws from the University of Bridgeport Master of Science in Acupuncture degree program in good standing he or she is eligible for readmission. A student who withdraws when not in good academic standing or, who leaves without officially withdrawing, seriously jeopardizes his or her chances of future readmission.

If a student withdraws with plans to reenter at a later date, he or she should make this clear at the time of withdrawal.

All requirements for the Master of Science degree must be completed within five years from the first matriculation to graduation. If a student withdraws one or more times from the program, the cumulative absences must not exceed two years.

READMISSION TO THE PROGRAM

To be readmitted to the program after withdrawal, a student must write to the Director requesting readmission and indicate the date of re-entry desired. It is important to do this well in advance of such a date.

Minimum Requirements for Admission

All candidates for admission to the Master of Science in Acupuncture degree program must furnish proof of having acquired a baccalaureate degree, taken in accredited, degree granting institutions. Pre-professional education acquired must have been completed with a minimum cumulative Quality Point Ratio of 2.50 on a 4.00 scale.

All candidates must have completed the following specific courses as part of their pre-professional preparation:

- Communication/Language Skills
  6 semester hours
- Psychology
  3 semester hours
- Social Science/Humanities
  3 semester hours
- General Biology/zoology/Anatomy and Physiology (with lab) – any combination
  8 semester hours
- General Chemistry (with lab)
  8 semester hours
- All biology/zoology/anatomy and physiology, and chemistry courses must:
  - Be course suitable for students majoring in sciences
  - Consist of a first semester and second semester course in each subject
  - Be passed with a grade “C” (2.50 on 4.00) or better
  - Cumulative science quality point ratio must be 2.5 or better.
  - Have a related laboratory
  - Have been taken within the past seven years.
- Applicants must understand that possession of minimum requirements does not constitute a guarantee of acceptance.

The University of Bridgeport does not discriminate on the basis of sex, age, color, creed, ethnic origin or handicap in the administration of its education programs or on admission.

Application Procedures

Application for admission must include:

1. A properly competed Application for Admission form
2. A NON-REFUNDABLE application fee of $50.00
3. Official transcripts of all college records.
4. Two letters of recommendation.

International Applicants

International applicants must complete an Application for International Students as well as an Application to the Master of Science in Acupuncture degree program.

- Applicants who have complete pre-professional study in any foreign countries must submit official copies of the records of such study as well as certified translations. These records must be evaluated by an appropriate professional agency. Any fees charged by such an agency are the responsibility of the student. Following submission of these documents to the Master of Science in Acupuncture degree program, the Director of Health Sciences Admissions will make contact with the prospective student.
- All applicants whose native language is not English (including U.S. citizens) must demonstrate proficiency in English at a level appropriate for advanced scientific study. At a minimum, proficiency can be demonstrated in one of the ways listed below:
  1. A score of 550 or better on the Test of English as a Foreign Language (TOEFL) or a score of 90 on the internet version of the TOEFL test and at least the currently reported mean score on the Test of Spoken English (TSE). Information on the TOEFL/TSE can be obtained from TOEFL, P.O. Box 6151, Princeton, NJ 08541-6151, U.S.A., OR;
  2. Successfully graduate from the University of Bridgeport, ELI program.

Application Deadlines

Applications must be received prior to May 1. Applications will be accepted each year until the class has been filled.

Notification Of Acceptance

Applicants will be notified in writing of the decision of the Admissions Committee as soon as a decision is made.

Transfer Credit Policy

Students may apply to have some of the training required by the Acupuncture Institute for graduation transferred from another acupuncture degree-granting program, or an accredited school of post-graduate medical training. Transfer credit will be assessed by the Institute Director and is only awarded for courses similar in content and length, and with instructors similarly qualified as those given by the Acupuncture Institute. Students requesting transfer credit must provide an official transcript, a school catalog, if requested, and a course syllabus for any course for which transfer credit is requested. Documentation of the transfer credit awarded, and the institution from which transfer credit was awarded are kept in the student files. No less than 20 clinical credits and 14 didactic class credits must be completed at the Acupuncture Institute for a student to be eligible for graduation and the granting of the MS-Acupuncture degree. All students, including transfer students must complete the Clinic Entrance Exam with a score of no
less than 75%, the Clinic Exit Exam and all practical clinical examinations with a grade of 70% or better to be eligible for graduation.

All acupuncture oriental medical and western medical courses for which the student requests credits must:

- Be courses for a student majoring in the medical sciences, acupuncture or oriental medicine
- Be completed with a grade of “C” (2.00 on a scale of 4.00) or better
- Have equivalent contact hours and course content consistent with the Acupuncture Institute courses of the University of Bridgeport
- All international transcripts and course descriptions must be evaluated by an approved foreign credential evaluation service.

To receive transfer credit for any courses taken 3 or more years prior to entering the University of Bridgeport Acupuncture Institute, and for any course completed during an apprenticeship or other non-traditional or non-accredited learning environment, the student must demonstrate competency through examination. The passing grade for such exams is 75%.

**ADVANCED STANDING**

No more than 84 credits may transfer from another institution of acupuncture or oriental medicine. No less than 20 clinical credits and 14 didactic class credits must be completed at the Acupuncture Institute for a student to be eligible for graduation and the granting of the MS-Acupuncture degree. All students, including transfer students, must complete the Clinic Entrance Exam with a score of no less than 75%, the Clinic Exit Exam and all practical clinical examinations with a grade of no less than 70% or better to be eligible for graduation.

Advanced standing in the Acupuncture Institute requires evaluation of official transcripts and course descriptions from the institution of higher learning where the student received his or her training as described in “Transfer Credit” above. Foreign students must have their transcripts evaluated as described in above.

All acupuncture and oriental medicine courses for which the student requests credit must:

- Be courses suitable for a student majoring in the medical sciences
- Be completed with a grade of “C” (2.00 on a scale of 4.00) or better
- Be from an institution either accredited or candidate for accreditation with either the ACAOM or its international equivalent
- All international transcripts and course descriptions must be evaluated by an approved credential evaluation service.

To receive advanced-standing for courses taken 3 or more years prior to entering the University of Bridgeport Acupuncture Institute, and for any course completed during an apprenticeship or other non-traditional or non-accredited learning environment, the student must demonstrate competency through examination. The passing grade for such exams is 75%.

Former University of Bridgeport Naturopathic and Chiropractic students who started acupuncture training as a dual-degree student during their professional training who then took a leave of absence or withdrew from the Acupuncture Institute must demonstrate competency through examination for all work completed prior to withdrawal from the program, with the exception of the basic science (“AWB”-designated) courses, upon readmission to the program. All such previously completed coursework will then be treated as transfer credit and the time frame for completion of the MS-Acup degree will be 4 years (48 months) from the date of re-entry into the UBAI program.

Evaluation of advanced standing is completed by the Director of the Acupuncture Institute. A letter is sent to the student, with a copy available in the student file, of all coursework which is acceptable for transfer credit. The transfer credit grades will not appear on official transcripts from the University of Bridgeport and the grades from those classes not affect a student’s GPA.

Course prerequisites must be completed by all students, including those taking courses as auditors, before admission to a course will be granted. Exceptions may be made by permission of the Director under the following special circumstances:

- A student has skills equivalent to completion of the prerequisites from non-traditional training or experience (i.e. in an apprenticeship). Students may request a waiver from completing the prerequisites before taking more advanced courses. Students will have to complete all such courses or demonstrate competency through examination, before graduation from the Acupuncture Institute.
- A naturopathic or chiropractic student requires specific skills for an outreach clinic setting (e.g. clean needle technique and auricular acupuncture for NADA-style detox treatments)
College of Chiropractic

Dean: Frank Zolli
Elenore Dana Hall
30 Hazel Street
Telephone: (203) 576-4278
Fax: (203) 576-4483
E-mail: zolli@bridgeport.edu

Associate Dean for Academic Affairs: Anthony Onorato
Chiropractic Building
75 Linden Avenue
Telephone: (203) 576-4279
Fax: (203) 576-4351
E-mail: aonorato@bridgeport.edu

Director of Admissions: Michael Grandison
Telephone: (203) 576-4348
Fax: (203) 576-4483

Faculty: Azizi, Cantito, Funk, Galiger, Good, Harrison, Hughes, Kelliher, Lehman, Lisi, Mubs, Onorato, Perle, Perrault, Santhanam, Saporito, Sawitzke, Sherman, Synkowicz, Terry, Zolli

Chiropractic is the philosophy, art, and science which concerns itself with the relationship between structure and function of the human body, as that relationship may affect the restoration and preservation of health. The College of Chiropractic prepares students to be primary health care providers. Each student is educated to diagnose, to care for the human body, to understand and relate fundamental scientific information, and to consult with, or refer to other health care providers.

The University of Bridgeport College of Chiropractic is a non-profit, coeducational professional institution which grants the Doctor of Chiropractic (D.C.) degree to graduates who successfully complete four academic years of study including a clinical internship. The program is offered on a full-time basis with no students admitted to a part-time course of study. There are no prerequisites courses offered.

All requirements for the D.C. degree must be completed with-in seven years from the date of matriculation.

Degree
Doctor of Chiropractic (D.C.)

Accreditation & Membership
“The doctor of chiropractic degree program of the University of Bridgeport College of Chiropractic is accredited by the Commission on Accreditation of the Council on Chiropractic Education, 8049 N. 85th Way, Scottsdale, AZ 85258, 480-443-8877. The College of Chiropractic is also a member of the Association of Chiropractic Colleges.

Mission Statement
Provide a comprehensive, full-time education that prepares qualified candidates to become doctors of chiropractic.

Present a clinically relevant and integrated curriculum that is evidenced-influenced in regard to basic sciences, chiropractic principles and related health sciences.

To adhere to a curriculum that emphasizes:
- The body is an integrated unit;
- The body has intrinsic self-regulating and healing mechanisms;
- Structure and function are interrelated;
- The neuromusculoskeletal system can affect the functioning of other body systems and, in turn, can be affected by these systems.

Produce graduates who will be competent to practice as portal of entry chiropractic physicians, providing diagnostic services, health services, humanistic care and conservative methods of therapeutics to assist patients in achieving health and wellness.

Advance chiropractic and its knowledge base through scholarship and research.

Provide opportunities for faculty, students and staff to engage in activities which service the needs of the chiropractic profession and the public.

Provide for continuous improvement and quality of our programs through assessment, and by fostering an atmosphere of knowledge, growth and open discussions.

Curriculum
A Doctor of Chiropractic is a physician whose purpose is to meet the health needs of the public as a member of the healing arts. He/she gives particular attention to the relationship of structural and neurological aspects of the body and is educated in the basic and clinical sciences as well as in related health subjects. Chiropractic science concerns itself with the relationship between structure (primarily the spine), and function (primarily coordinated by the nervous system) of the human body as that relationship may affect the restoration and preservation of health.

“The DCP of the University of Bridgeport incorporates the understanding of chiropractic as a profession practicing primary health care, provides curricular and clinical evidence of that through outcome measures, and consists of education and training to prepare graduates to:

A. Practice direct contact health care as a portal-of-entry provider for patients of all ages and genders;

B. Assess the patient's general health status, complaints and problems leading to a diagnosis. Specific elements of patient assessment minimally include complete health history; review of systems; physical, biomechanical and neurological examination; the analysis of vertebral and extra-vertebral subluxation; and, when clinically indicated, diagnostic imaging, clinical laboratory, and/or specialized diagnostic procedures;

C. Develop a goal-oriented case management plan that addresses any subluxations or other neurobiomechanical problems, and that may include rehabilitation and/or other therapeutic modalities;

D. Develop appropriate doctor/patient relationships with continuity in the chiropractic management of health problems, and coordination of care with other health-care providers; and

E. Promote wellness by assessing health risk and providing problem-related, general and public health information, and lifestyle counseling.

The purpose of chiropractic professional education is to provide the student with a core of knowledge in the basic and clinical sciences and related health subjects sufficient to perform the professional obligations of a doctor of chiropractic.

A doctor of chiropractic is a primary care physician whose purpose as a practitioner of the healing arts, is to help meet the health
College of Chiropractic

needs of individual patients and of the public, giving particular attention to the structural and neurological aspects of the body.

The application of science in chiropractic concerns itself with the relationship between structure, primarily the spine, and function, primarily coordinated by the nervous system of the human body, as that relationship may affect the restoration and preservation of health.

Further, this application of science in chiropractic focuses on the inherent ability of the body to heal without the use of drugs or surgery.

As a gatekeeper for direct access to the health delivery system, the doctor of chiropractic’s responsibilities as a primary care physician include wellness promotion, health promotion, health assessment, diagnosis and the chiropractic management of the patient’s health care needs. When indicated, the doctor of chiropractic consults with, co-manages, or refers to other health care providers. (From the Council on Chiropractic Education Standards for Doctor of Chiropractic Programs, January 2007)

It is the purpose of the University of Bridgeport College of Chiropractic program to offer as a minimum those courses and objectives as suggested in the CCE standards. It is also the purpose of the UBCC program to offer a broad-based educational experience. In many cases, the educational program presented will go beyond the course offerings suggested by CCE and will also go beyond individual state laws and scope of practice.

The University of Bridgeport College of Chiropractic curriculum is divided into three phases: Basic Sciences, Clinical Sciences, and Clinical Services.

Basic Sciences

The basic Science curriculum instructs students in Anatomy, Physiology, Biochemistry, Microbiology, Public Health, and Pathology. These courses are offered primarily during the first two years of a student’s education. It is the purpose of this aspect of the program for students to develop an understanding of both normal and abnormal structure and function, homeostatic mechanisms, and to gain a foundation upon which the clinical sciences will be built.

Clinical Sciences

Students from their first semester onward are instructed in the Clinical Sciences. Course offerings include: Chiropractic History, Chiropractic Principles and Practice, Diagnosis, Radiology, Technique Procedures, Nutrition, and Physiological Therapeutics and Rehabilitation Procedures. Students are given in-depth training in the diagnosis and treatment of patients. Practical hands-on training is included beginning in Semester I and continuing to graduation. Information from the basic science curriculum is integrated into the clinical science course offerings and is a foundation upon which the clinical science courses build. Many of the clinical science courses have as a prerequisite successful completion of the basic science courses.

Clinical Services

The Clinical Services phase of the curriculum is the last and most important aspect of the UBCC program. Interns at the College’s Chiropractic Health Center care for patients under the supervision and direction of licensed doctors of chiropractic. To be eligible for this part of the curriculum, students must be in good academic standing, successfully completed all courses in Semesters I thru V, and successfully completed the clinical services entrance examination. During the Clinical Services portion of the program students will continue to receive training in the clinical sciences. They will also continue to be evaluated during their internship in order to remain eligible for clinical services. To continue in Clinical Services, students must remain in good academic standing. Towards the completion of the Clinical Services program students will be administered a clinical competency examination which must be successfully completed prior to graduation.

Because each course is integrated with other course offerings, students should be aware of the prerequisite and corequisite requirements. Throughout the curriculum every effort is made to insure the relevance of information to chiropractic principles and practice. The following is a breakdown, by subject, of the time devoted to each area of study within the curriculum.

Licensure Requirements and Career Opportunities

LICENSURE REQUIREMENTS

The Doctor of Chiropractic degree program offered by the University of Bridgeport College of Chiropractic is accredited by the Council on Chiropractic Education. As indicated in a previous section, the college meets or exceeds the minimum educational requirements suggested by the CCE. Students who receive the Doctor of Chiropractic degree from UBCC are eligible for licensure in all states, Washington, D.C., Puerto Rico, the Canadian Provinces and other foreign countries as regulated by local laws and regulations without restrictions. Licensure in many states require students to complete Parts I, II, III, and Physiotherapy examination as offered by the National Board of Chiropractic Examiners (NBCE). Additionally, states also require that students pass the Part IV Practical Examination offered by the NBCE. Students should contact the NBCE or the Federation of Chiropractic Licensing Boards (FCLB) for additional information pertaining to licensure where they wish to practice. The College maintains a directory published by FCLB in the library as well as within various offices located in the College of Chiropractic. The directory contains information pertaining to licensure and to scope of practice within each state.

CAREER OPPORTUNITIES

Approximately ninety (90%) percent of the students who have entered the UBCC have completed the requirements for graduation as outlined in this catalog. Most graduates of UBCC go directly into a private practice of their own. Other graduates work as an associate with an experienced doctor or they may rent space within an existing practice.

COMPLAINT PROCEDURES

Any complaint regarding the Doctor of Chiropractic Program and its compliance with the CCE Standards may be addressed to the following:

The Council on Chiropractic Education
8049 N. 85th Way
Scottsdale, AZ 85258-4321
Telephone: (480) 443-8877
Fax: (480) 483-7333
Website: www.cce-usa.org
## College of Chiropractic

### Semester Based Curriculum

(18 WEEK PROGRAM PER SEMESTER)

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>COURSE</th>
<th>LECT</th>
<th>LAB</th>
<th>SEM</th>
<th>CR.</th>
</tr>
</thead>
</table>

### YEAR ONE

#### SEMESTER ONE

| AN 511 | Cell and Tissue Microscopic Anatomy and Physiology | 3 | 0 | 54 | 3 |
| AN 512 | Functional Anatomy and Biomechanics I: Spinal Anatomy | 3 | 3 | 108 | 4.5 |
| PP 511 | Principles and Practice I: Chiropractic History and Philosophy | 2 | 0 | 36 | 2 |
| BC 511 | Biochemistry, Metabolism, and Nutrition | 2 | 0 | 36 | 2 |
| PP 512 | Principles and Practice II: Introduction to Evidence Based Practice | 2 | 0 | 36 | 2 |
| AN 513 | General Anatomy I: Viscera | 3 | 3 | 108 | 4.5 |
| TE 511 | Chiropractic Examination Skills I: Palpation and Biomechanics of the Spine and Pelvis | 2 | 0 | 36 | 2 |
| TE 511L | Chiropractic Examination Skills I: Palpation and Biomechanics of the Spine and Pelvis Lab | 0 | 3 | 54 | 1.5 |
| AN 514 | Clinical Embryology I | 1 | 0 | 18 | 1 |

#### SEMESTER TWO

| DI 521 | Diagnostic Imaging I: Normal Anatomy | 2 | 2 | 72 | 3 |
| PH 521 | Organ System Microscopic Anatomy and Physiology I | 2 | 0 | 36 | 2 |
| NS 521 | Neuroscience I | 3 | 0 | 54 | 3 |
| PP 523 | Principles and Practice III: Contemporary Chiropractic Studies | 2 | 0 | 36 | 2 |
| AN 525 | General Anatomy II: Head and Neck | 3 | 3 | 108 | 4.5 |
| AN 526 | Functional Anatomy II: Extremities | 3 | 3 | 108 | 4.5 |
| MB 521 | Clinical Microbiology I: Introduction to Infectious Diseases | 2 | 0 | 36 | 2 |
| TE 522 | Chiropractic Examination Skills II: Palpation and Biomechanics of the Extremities | 2 | 0 | 36 | 2 |
| TE 522L | Chiropractic Examination Skills II: Palpation and Biomechanics of the Extremities Lab | 0 | 3 | 54 | 1.5 |

### YEAR TWO

#### SEMESTER THREE

| NS 612 | Neurosciences II | 3 | 0 | 54 | 3 |
| PA 611 | Fundamentals of Pathology | 2 | 1 | 54 | 2.5 |
| PH 612 | Organ System Microscopic Anatomy and Physiology II: Clinical Microbiology II: Infectious Diseases | 4 | 2 | 108 | 5 |
| MB 612 | Technique Procedures I: Introduction to Full Spine Technique | 1 | 0 | 18 | 1 |
| TE 613 | Technique Procedures I: Introduction to Full Spine Technique | 0 | 3 | 54 | 1.5 |
| DX 612 | Diagnostic Skills I: Orthopedic and Neurology | 2 | 0 | 36 | 2 |
| DX 612L | Diagnostic Skills I: Orthopedic and Neurology Lab | 0 | 4 | 72 | 2 |
| DX 611 | Diagnostic Skills II: Physical Examination | 2 | 0 | 36 | 2 |
| DX 611L | Diagnostic Skills II: Physical Examination Lab | 0 | 3 | 54 | 1.5 |
| DI 612 | Diagnostic Imaging II: Normal Anatomy | 1 | 2 | 54 | 2 |
| BC 612 | Biochemistry, Metabolism and Nutrition II | 2 | 0 | 36 | 2 |

#### SEMESTER FOUR

| PA 622 | Systems Pathology | 4 | 1 | 90 | 4.5 |
| TE 624 | Technique Procedures II: Intermediate Full Spine and Upper Extremity Technique | 2 | 0 | 36 | 2 |
| TE 624L | Technique Procedures II: Intermediate Full Spine and Upper Extremity Technique | 0 | 4 | 72 | 2 |
| DI 623 | Diagnostic Imaging III: Bone Pathology | 2 | 2 | 72 | 3 |
| DX 624 | Laboratory Diagnosis | 3 | 0 | 54 | 3 |
| MB 623 | Public Health I: Intro to Public Health and Epidemiology | 2 | 0 | 36 | 2 |
| DX 623 | Diagnostic Skills III: Orthopedic and Neurology | 2 | 0 | 36 | 2 |
| DX 623L | Diagnostic Skills III: Orthopedic and Neurology Lab | 0 | 4 | 72 | 2 |
| TE 625 | Technique Procedures III: Soft Tissue | 2 | 0 | 36 | 2 |
| TE 625L | Technique Procedures III: Soft Tissue Lab | 0 | 2 | 36 | 1 |
| CN 621 | Clinical Nutrition: Treatment and Assessment | 1 | 0 | 18 | 1 |
| PP 624 | Principles and Practice IV: Evidence-Based Practice | 2 | 0 | 36 | 2 |

#### YEAR THREE

#### SEMESTER FIVE

| TE 716 | Technique Procedures IV: Intermediate Full Spine and Lower Extremity Technique | 2 | 0 | 36 | 2 |
| TE 716L | Technique Procedures IV: Intermediate Full Spine and Lower Extremity Technique | 0 | 4 | 72 | 2 |
| DI 714 | Diagnostic Imaging IV: Arthritis and Trauma | 2 | 2 | 72 | 3 |
| PT 711 | Physiological Therapeutics I: Modalities | 1 | 0 | 18 | 1 |
| PT 711L | Physiological Therapeutics I: Modalities Lab | 0 | 2 | 36 | 1 |
| DD 711 | Differential Diagnosis I: Internal Disorders | 5 | 0 | 90 | 5 |
| DD 711L | Differential Diagnosis I: Internal Disorders Lab | 0 | 2 | 36 | 1 |
| CN 712 | Clinical Nutrition: Treatment and Management | 2 | 0 | 36 | 2 |
| PH 713 | Toxicology & Pharmacology | 2 | 0 | 36 | 2 |
| TE 717L | Technique Procedures V: Soft Tissue II | 0 | 2 | 36 | 1 |
| ER 711 | Emergency Procedures | 1 | 2 | 54 | 2 |
| RS 711 | Evidence Based Practice I | 0 | 0 | 1 |
| PS 711 | Clinical Psychology | 2 | 0 | 36 | 2 |
| PP 715 | Principles and Practice V: Ethics | 1 | 0 | 18 | 1 |

#### SEMESTER SIX

| DI 725 | Diagnostic Imaging V: Chest and Abdomen | 1 | 2 | 54 | 2 |
| TE 728 | Technique Procedures VI: Advanced Chiropractic Technique I | 0 | 3 | 54 | 2 |
| TE 728L | Technique Procedures VI: Advanced Chiropractic Technique I Lab | 0 | 3 | 54 | 2 |
| DI 726 | Diagnostic Imaging VI: Positioning and Physics | 2 | 2 | 72 | 3 |
| DD 722 | Differential Diagnosis II: Neuromusculoskeletal | 4 | 0 | 72 | 4 |
| PT 722 | Physiological Therapeutics II: Rehabilitation | 2 | 0 | 36 | 2 |
| PT 722L | Physiological Therapeutics II: Rehabilitation Lab | 0 | 2 | 36 | 1 |
| DX 725 | Special Populations | 3 | 0 | 54 | 3 |
| CS 721 | Clinical Science I | 2 | 4 | 108 | 4 |
| MB 724 | Public Health II: Community Health and Wellness | 2 | 0 | 36 | 2 |
| BP 721 | Documentation and Insurance Protocols: Billing and Coding | 1 | 0 | 18 | 1 |

Total Hours: 18 145 768 26
### College of Chiropractic

**Basic Sciences**
- **ANatomy** .......................................................... 504
  - Cellular Anatomy and Physiology .................. 54
  - Functional Anatomy I: Spine ....................... 108
  - General Anatomy I: Visceral ...................... 108
  - General Anatomy II: Head & Neck ............... 108
  - Functional Anatomy II: Extremities ............. 108
  - Clinical Embryology ................................. 18
- **Physiology** ....................................................... 180
  - Organ Systems Physiology I & II ............... 144
  - Toxicology .................................................... 36
- **Biochemistry** ................................................... 72
- **Neurosciences** ................................................ 108
  - Neuroscience I ............................................. 54
  - Neuroscience II .......................................... 54
- **Pathology** .......................................................... 144
  - Fundamentals of Pathology ....................... 54
  - Systems Pathology ................................. 90
- **Microbiology/Public Health** ......................... 144
  - Clinical Microbiology/Infectious

**Clinical Sciences**
- **Clinical Services** ......................................... 2268
  - Principles, Practice and Philosophy ............ 144
    - Chiropractic History ......................... 36
    - Evidence Based Chiropractic ............... 36
    - Contemporary Chiropractic ................. 36
    - Research ................................................ 36
    - Radiology .................................................. 432
      - Imaging I ............................................. 72
      - Imaging II ......................................... 54
      - Bone Pathology .................................... 72
      - Arthritis .......................................... 72
      - Chest ............................................... 54
      - Positioning and Physics .................... 72
      - X-Ray Review ...................................... 36
    - Physiological Therapeutics .................. 126
      - Physiological Therapeutics I ............... 54
      - Physiological Therapeutics II: ............ 72
        - Rehabilitation .................................. 72
    - Differential Diagnosis ......................... 216
      - Differential Diagnosis I: Internal ....... 108
      - Differential Diagnosis II: NMS .......... 72
      - Psychology ......................................... 36
    - Chiropractic Skills and Technique .......... 756
      - Technique Skills I: Spine ................. 90
      - Technique Skills II: Extremities .......... 72
      - Technique Procedures I ................. 72
      - Technique Procedures II ................. 108
      - Technique Procedures III .............. 72
      - Technique Procedures IV .............. 108
      - Technique Procedures V ............... 36
      - Technique Procedures VI ............ 90
      - Technique Procedures VII ............ 108
    - Diagnosis ................................................. 414
      - Skills I: Physical Exam .................. 90
      - Skills II: Orthopedics .................... 108
      - Skills III: Neurology ...................... 108
      - Laboratory Diagnosis ...................... 54
      - Special Populations ......................... 54
      - Nutrition .......................................... 54

**Clinical Services**
- **Clinical Services** ......................................... 1158
  - Clinic I: Student Clinic ....................... 108
  - Clinic II ............................................... 450
  - Clinic III .............................................. 450
  - Clinic IV ............................................... 150

**Clinical Sciences**
- **Clinical Sciences** ......................................... 2268
  - Physical Therapy ..................................... 126
    - Physiological Therapeutics I ............... 54
    - Physiological Therapeutics II: ......... 72
      - Rehabilitation .................................. 72
    - Differential Diagnosis ......................... 216
      - Differential Diagnosis I: Internal ....... 108
      - Differential Diagnosis II: NMS .......... 72
      - Psychology ......................................... 36
    - Chiropractic Skills and Technique .......... 756
      - Technique Skills I: Spine ................. 90
      - Technique Skills II: Extremities .......... 72
      - Technique Procedures I ................. 72
      - Technique Procedures II ................. 108
      - Technique Procedures III .............. 72
      - Technique Procedures IV .............. 108
      - Technique Procedures V ............... 36
      - Technique Procedures VI ............ 90
      - Technique Procedures VII ............ 108
    - Diagnosis ................................................. 414
      - Skills I: Physical Exam .................. 90
      - Skills II: Orthopedics .................... 108
      - Skills III: Neurology ...................... 108
      - Laboratory Diagnosis ...................... 54
      - Special Populations ......................... 54
      - Nutrition .......................................... 54

**CLINICAL SCIENCES**
- **CLINICAL SCIENCES** .........................................
  - BP Business Procedures .......................... CH Chiropractic Exam Skills
  - CN Clinical Nutrition .............................. DD Differential Diagnosis
  - DI Diagnostic Imaging ............................. DX Clinical Diagnosis
  - RS Emergency Procedures ....................... PP Principles and Practice
  - PS Clinical Psychology ............................ PT Physiological Therapeutics
  - RS Research Skills .................................. TE Technique Procedures

**CLINICAL SERVICES**
- **CLINICAL SERVICES** .........................................
  - CS Clinical Services 

The course numbering system is as follows:
- **500 level** - courses offered in year one
- **600 level** - courses offered in year two
- **700 level** - courses offered in year three
- **800 level** - courses offered in year four

The next digit identifies the semester the course is given in that academic year. The third digit identifies the sequence within that discipline.

-e.g. AN 511
  - AN - Anatomy
  - 5 - year one
  - 1 - semester one
  - 1 - first course in discipline sequence
Grades earned by students are submitted to the Registrar utilizing the following designations. Grades earned are on a four (4) point scale with an “A” or 4 quality points being the highest grade attained. Grades with quality points are:

### GRADE QUALITY POINTS

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>B+</td>
<td>3.5</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>C+</td>
<td>2.5</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
</tr>
</tbody>
</table>

The cumulative quality point ratio (QPR) is determined by dividing the number of semester hours into the number of points earned. A grade of “D” is not an acceptable passing grade. Transfer credits are not included in this computation.

In addition to the Academic Grades submitted by faculty, the following Administrative Grades are also utilized.

### Administrative Grades

I  The grade of Incomplete “I”, is used by the faculty to indicate that a student has not completed all course requirements. A student will have one week from the last day of the term to meet with the faculty and complete all course requirements. Upon completion of the course requirements the faculty will submit the earned grade. Failure by the student to meet with the faculty and complete the requirements in one week from the last day of the term will result in the grade of “I” being converted to a grade of “F.”

Any student with a grade of “F” or “W” will be required to register and retake that course in it’s entirety when the course is regularly scheduled. Any student with a grade of “F” or “W” will not be eligible to register for courses for which that course is a prerequisite.

R  Students may repeat a course at any grade level below “A”. The first repeat will replace the first-time grade for the computation of the QPR.

TCR  This indicates transfer credit granted for equivalent work completed at another accredited institution.

W  Withdrawal grades are assigned based on the following policy statements:

1. If the student officially withdraws from a course during the official change-of-registration period, that course does not appear on the student’s transcript.

2. If a student officially withdraws from a course after the end of the change-of-registration period, but before the end of the official withdrawal period, a grade of “W” is assigned and that course remains on the student’s transcript. Courses with a grade of “W” do not count toward the QPR and do not count toward “hours attempted.”

3. The names of students who have officially withdrawn from a course and receive the grade of “W” are so listed on the class roster for the balance of the semester.

4. Any exceptions to the above, including late withdrawals, must be approved by the Dean and the Provost before they become official and are recorded. Poor academic performance does not constitute a valid reason for late withdrawal.

Academic policies used to manage and direct the academic program are:

1. Attendance Requirements
2. Requirements for Graduation
3. Good Academic Standing
4. Academic Warning, Probation and Dismissal
5. Dismissal from the College (Non-Academic)
6. Withdrawal from the Program
7. Reenrollment

### Satisfactory Academic Progress

Students enrolled in the UBCC Doctor of Chiropractic degree program are in good academic standing and are making satisfactory academic progress, if they have successfully achieved the following criteria upon completion of their most recent semester of course work:

1. Did not receive a grade of “F” or “D” in any course, and

2. Maintain a cumulative grade point average of 2.50 or better.

A student who has not achieved the above criteria is not making satisfactory academic progress and will be required to follow the criteria as outlined in the catalog regarding Academic Probation and Dismissal.

### Good Academic Standing

Good academic standing is achieved when a student is maintaining good grades, has met all financial responsibilities to the College and is not guilty of any breach of the stan-
ACADEMIC WARNING, PROBATION AND DISMISSAL

Safeguards have been built into the system to protect students who are not performing well academically from suffering academic failure. During the semester, the faculty reports to the Dean on a regular basis, concerning the grades of all students in their courses. If it is noted that particular students are doing poorly, these students will be contacted to set up an interview. The interview will consist of a discussion of the causes for the student’s poor performance and ways in which he or she might improve a grade.

ACADEMIC WARNING

Academic warning will result when the following is taking place:

1. The most recent semester quality point ratio falls below a 2.00.

ACADEMIC PROBATION

Academic Probation occurs when the student’s QPR falls below 2.50 or if a student receives a grade of “F or D” in one or more courses. A student on academic probation is not eligible to carry a full academic course load.

ACADEMIC REMEDIATION

A student on academic probation will be placed in a program of Academic Remediation. The student is required to meet with the Associate Dean of the College to determine what courses will be retaken to satisfy the requirements of Remediation. In general, academic Remediation requires a student to repeat all grades of “F or D”, carry a reduced academic load.

ACADEMIC DISMISSAL

A student who does not show substantial academic improvement after one semester of Remediation, or who is unable to achieve a QPR of 2.50 after two semester of Remediation will be dismissed from the College of Chiropractic.

Academic dismissal may also occur if a student’s QPR falls below a 2.50 on a second occasion.

Any student not achieving a QPR of at least 1.75 upon completion of the first semester of study will be academically dismissed from the College of Chiropractic.

DISMISSAL FROM THE COLLEGE

Academic inadequacies are not the only reasons for dismissal from the College or University. The following is a list of additional causes for dismissal:

1. Failure to meet the generally accepted standards of ethical conduct and clinical practice. Dismissal of this nature is subject to review by a committee of peers, faculty and administration.

2. Pleading guilty or “nolo contendere,” or being found guilty of any crime involving moral turpitude or being felonious in nature.

3. Repeated violation of public policy, or the demonstration of behavior that creates safety hazards and/or disrupts the order of the institution. Dismissal of this nature is subject to review by a committee of peers, faculty and administration.

4. Failure to meet financial obligations or commitments to the College or University.

WITHDRAWAL FROM THE PROGRAM

If a student withdraws from University of Bridgeport College of Chiropractic in good standing he or she is eligible for readmission. A student who withdraws when not in good academic standing or, who leaves without officially withdrawing, seriously jeopardizes his or her chances of future readmission.

If a student withdraws with plans to re-enter at a later date, he or she should make this clear at the time of withdrawal.

All requirements for the doctoral degree must be completed within seven years from the first matriculation to graduation. If a student withdraws one or more times from the program, the cumulative absences must not exceed three and one half years.

READMISSION TO THE PROGRAM

To be readmitted to the program after withdrawal, a student must write to the Associate Dean for Academic Affairs requesting re-admission and indicate the date of re-entry desired. It is important to do this well in advance of such a date.

Minimum Requirements for Admission

The University of Bridgeport College of Chiropractic does not discriminate on the basis of sex, age, color, creed, ethnic origin or handicap in the administration of its education programs or on admissions.

All candidates for admission must furnish proof of having acquired three years (90 acceptable semester hours or more) of study, creditable towards a baccalaureate degree, taken in accredited, degree-granting institutions. Pre-professional education acquired must have been completed with a minimum cumulative Quality Point Ratio of 2.50 on a 4.00 scale. A baccalaureate degree is recommended.

All candidates must have completed the following specific courses as part of their pre-professional preparation:

- Communication/Language Skills
- 6 Semester Hours
  - Psychology
  - 3 Semester Hours
  - Chemistry: General and Organic (w/ Lab)
  - 12 Semester Hours
    - General: 3 semester hours minimum
    - Organic: 9 semester hours minimum
  - Electives (Social Sciences/Humanities)
  - 15 Semester Hours
  - General Bio/Anat & Phys (w/ Lab)
  - 8 Semester Hours (2 consecutive courses)
  - General Physics (w/ Lab) and related Studies
  - 8 Semester Hours

All bio/anat & phys, chemistry and physics courses must:

- Be courses suitable for students majoring in sciences.

- Consist of a first semester and second semester course in each subject.

- Be passed with a grade of “C” (2.00 on a
College of Chiropractic

4.00 scale) or better. Cumulative science quality point ratio must be 2.25 or better.

- Have a related laboratory.

For Admission beginning with the fall 2003, all matriculants must furnish proof of having earned a minimum of 30 semester hours in upper division credits.

A personal interview is required. Under extenuating circumstances a telephone interview will be granted.

Applicants must understand that possession of minimum entrance requirements does not constitute a guarantee of acceptance. Each entering class is selected from a large pool of eligible candidates, a majority of whom have completed four-year degrees. Those students selected for acceptance usually have obtained grades which are substantially higher than the minimum requirement.

**Physical Qualifications for Admissions**

The following physical qualifications are required for participation in the doctoral degree program at the UB College of Chiropractic. These qualifications are essential for the preparation of the Doctor of Chiropractic. Students at the College must be able to perform at a high level of competency in all phases of classroom, clinic, and laboratory activities as they will ultimately use the knowledge attained as Doctors of Chiropractic.

The qualifications are as follows:

1. The student must possess the coordination and use of both upper limbs as their use is required for, among other skills, the performance of the chiropractic adjustment, the primary skill of a practicing Doctor of Chiropractic.

2. The student must possess manual dexterity so that he/she may perform in the various clinical, chiropractic, and basic science laboratories without posing a threat to him/herself, patients, or his/her fellow students' safety and well-being.

3. The student must have the ability to stand not only in the performance of manipulative procedures but others as well.

4. The student must have hearing and visual senses, appropriately assisted if needed, acute enough to individually record patient histories, to provide routine safety instructions, and perform stethoscopic and other auscultatory examinations, to read all forms of diagnostic imaging, and to perform microscopy examinations so that he/she can adequately interpret normal, abnormal, and pathological changes.

Handicapped persons will not be summarily denied admission, nor will higher scholastic requirements be demanded of them. They, like all other students, must carry out classroom, laboratory, and clinical assignments, including microscopic work, x-ray interpretation and techniques, or the equivalent, pass written, oral, and practical examinations and meet all the requirements of the College.

Cancellation of Admission or Registration

The college reserves the right to cancel the admission or registration of individuals whose attendance at the college, in the opinion of the appropriate administrative officers and dean, is not mutually beneficial to that person and to the institution.

Individuals who have registered at other educational institutions may not disregard such records and make application on the basis of high school and selected college transcripts.

Applicants who gain admission to the college on the basis of incomplete or fraudulent credentials or misrepresentations in their written application for admission may have their:

- admission and registration canceled without refund of any fees; and
- total credits rescinded that have been earned following such admissions; and
- future registration at the college prohibited.

**Pre-Professional Requirements for Licensure**

It is most important that all candidates for admission thoroughly investigate the specific requirements of each state in which they plan to practice. In some cases, pre-professional requirements must be completed prior to entrance into a chiropractic program in order to be qualified to apply for a state licensing examination.

**International Applicants**

International Applicants must complete an Application for International Students as well as an Application to the College of Chiropractic.

Applicants who have done pre-professional study in foreign countries must submit official copies of the records of such study as well as translations if the original records are not in English. Usually, these records must be evaluated by an appropriate professional agency. Any fees charged by such an agency are the responsibility of the student. Following submission of these documents to UBCC, the Director of Admissions will make contact with the prospective student.

If the applicant is a native of a foreign country, he or she must demonstrate proficiency in English at a level appropriate for advanced study. At a minimum proficiency can be demonstrated in one of the ways listed below:

1. A score of 550 or better on the Test of English as a Foreign Language (TOEFL) and a score of 50 or better on the Test of Spoken English(TSE). Information on the TOEFL/TSE can be obtained from TOEFL, P.O. Box 6151, Princeton, NJ 08541-6151, USA or;

2. Receipt of a grade “C” or better in one semester of English at an accredited U.S. college or university or;

3. A letter showing successful completion of the University of Bridgeport’s English Language Institute.

**Application Procedures**

Application for admission must include:

1. A properly completed Application for Admission form.

2. Application Fee.

The applicant must provide the following to the Director of Admissions:

1. Official transcripts of all college records.

2. Three letters of recommendation, one
must be from a health care professional.

**Selection of Candidates**

The University of Bridgeport College of Chiropractic is coeducational and does not discriminate against any applicant on the basis of sex, race, creed, color or national origin. (Title VI, Civil Rights Act 1964)

All eligible finalists are invited for a personal interview before any action is taken upon their application.

Among the qualities typical of most successful candidates for admission, the following are especially important:

1. Superior communication skills, both oral and written.
2. Evidence of strong motivation to becoming a helping professional and, more specifically, a chiropractor.
3. Initiative and honesty as evidenced in the candidates’ transactions within the application process and in all information submitted in support of the application.
4. Academic achievement which compares favorably with that of successful students at the University of Bridgeport College of Chiropractic.

**Application Deadlines**

Applications for admission may be submitted at any time.

**NOTIFICATION OF ACCEPTANCE**

Applicants will be notified in writing of the decision of the Admissions Committee as soon as a decision is made.

**Transfer Students**

**Transfer Credit**

The University of Bridgeport College of Chiropractic may grant transfer credit for courses taken in accredited professional and graduate schools. In doing so, the following requirements must be met:

1. The courses taken must have content equivalent to courses given at UBCC. If the UBCC course contains a laboratory, so must the course being considered for transfer.
2. A course being considered for transfer must have credits and hours equivalent to or greater than the same course at UBCC.
3. Any course to be transferred must have been passed with a grade of C or better. (2.0 on a 4.00 scale.)
4. A transferred course carries credit equal to the UBCC course for which credit is granted. The original grade earned is not transferred and does not affect the student’s QPR at UBCC.
5. In order to obtain transfer credit the student must have been granted an honorable withdrawal from the professional or graduate school attended. An overall Grade Point Average (GPA) of a 2.50 (on a 4.0 scale) or higher must be achieved in order to be considered for transfer status or advanced standing.

It is important to note that all transfer students must meet the entry level prerequisite requirements for first semester students regardless of having been accepted to the institution from which they are transferring. In many cases, UBCC’s requirements are higher than those for other chiropractic and professional schools.

Prospective transfer students should note that an admissions application to UBCC is needed in order to begin a review for transfer credit. Students wishing to transfer must provide the Admissions Committee with an official transcript and a catalog from the chiropractic, professional or graduate school/s from which they are transferring, as well as a syllabus from each course for which the student is requesting transfer credit.

**Advanced Standing**

Students who are accepted as transfer students may receive advanced standing if a substantial number of semester hours have been accepted by UBCC. This could possibly enable the student to complete the D.C. program in less than 8 semesters. Transfer credit may be granted either with or without advanced standing. Effective Fall 2005, The University of Bridgeport College of Chiropractic will grant no more than a maximum of 20% of advanced standing credit/hours towards our curriculum. A transfer student is eligible to receive no more than 42 transfer credits. Potential transfer students should be aware that in most cases they would have to complete approximately, 3 to 3 1/2 years at UBCC if accepted. If advanced standing is granted:

1. A special curriculum schedule will be made up for the student based on semester hours transferred and course availability.
2. Tuition will be calculated based on the number of credits being taken per semester multiplied by the single credit fee (if less than 14 credits per semester) at the time of the student’s attendance.

If advanced standing is not granted, but some semester hours are transferable, the student will be admitted to the first semester and will be exempt from courses for which transfer credit was granted.
College of Naturopathic Medicine

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Health Sciences Center
60 Lafayette Street
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Fax: (203) 576-4107
E-mail: gkhalsa@bridgeport.edu

Associate Dean for Academic Affairs: Elizabeth Pimentel, N.D.
Health Sciences Center
Telephone: (203) 576-4119
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Associate Dean for Clinical Affairs: Jennifer Johnson, N.D.
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Naturopathic medicine is an independent profession of primary health care physicians who integrate age-old traditions of healing with modern scientific diagnostic skills. Naturopathic physicians are the only modern health care providers who receive comprehensive training in what is now considered complementary and alternative medicines. While most naturopathic physicians provide comprehensive family care as private practitioners, new opportunities for practice in integrated health care settings, in education and in research are appearing at a rapid rate. The scope of practice is broad; the State Board of Examiners or other licensing authority in a jurisdiction should be consulted regarding the scope of practice.

For the past century, naturopathic doctors have championed natural and physiological treatment for the prevention and treatment of disease. While the term “naturopathy,” is little more than a hundred years old, it represents ideas of health care that go back to the beginning of time. Hippocrates’ recognition of the therapeutic value of food and the Ayurvedic physicians’ recognition of the importance of spirit to health are very much in line with modern naturopathic ideals.

Naturopathic medicine originated in the eastern United States when German immigrants integrated European nature cure with an eclectic blend of medical therapies being practiced in America. The first school of naturopathy was founded in New York City in the early years of the 20th Century. As the public interest in natural therapies declined during the middle of the century, the profession flourished primarily in the Northwest. In the last thirty years there has been increased public interest in natural health care and naturopathic medicine has been increasing in popularity. With the founding of the College of Naturopathic Medicine at the University of Bridgeport, naturopathic medical education has returned to the east coast of the United States.

The University of Bridgeport College of Naturopathic Medicine offers a professional program that requires four years of full-time academic and clinical study of the normal and abnormal structure and function of the human being; the diagnosis, treatment and prevention of disease, and the promotion of optimal health. There are no correspondence or distance-learning courses offered.

Degree
Doctor of Naturopathic Medicine (N.D.)

Recognition and Memberships
The naturopathic medical program offered by the University of Bridgeport College of Naturopathic Medicine is approved to offer the degree of Doctor of Naturopathic Medicine by the Connecticut State Department of Higher Education. The College is accredited by the Council on Naturopathic Medical Education (CNME). Address: PO Box 178, Great Barrington, MA 01230 - Phone: 413-528-8877 - email: staff@cnme.org. The University of Bridgeport is accredited by the Council on Institutions of Higher Education (CIHE) of the New England Association of Schools and Colleges (NEASC). The college offers a curriculum designed to meet the highest national standards for naturopathic medical education. UBCNM is an institutional member of the Association of Accredited Naturopathic Medical Colleges (AANMC).

Mission Statement
The Mission of the College of Naturopathic Medicine, an integral part of the University of Bridgeport, is to train naturopathic physicians who practice medicine in a way that supports the inherent healing wisdom of nature and facilitates health and optimal well being, while preparing them to become leaders in natural healthcare delivery, research, and education.

In support of this mission the College has the following Goals:

- The College will provide an education of the highest standards, with academic and clinical training based on the principles and philosophy of naturopathic medicine, leading to the degree of Doctor of Naturopathic Medicine.
- The College will encourage and support the development of its students to become competent, compassionate, and successful naturopathic physicians who engage in collaboration with other healthcare practitioners to fully address the healthcare needs of their patients.
- The College will respect cultural differences and will have an appreciation of traditional and conventional approaches to medicine.
- The College will conduct research to advance the understanding and knowledge of the natural health sciences.
- The College will serve the public and support the clinical education of its students by providing naturopathic healthcare at the College Clinic and at other locations throughout the community. The College will seek to provide healthcare to underserved and disadvantaged populations, and to provide health education for the general public.
- The College will maintain appropriate standards for professional conduct and accountability and encourage students to become honorable and dedicated professionals, committed to serve their communities and the naturopathic profession.

72
College of Naturopathic Medicine

- The College will pursue the development of residency opportunities for naturopathic graduates as an important component of naturopathic medical training.
- The College will cooperate with other organizations and institutions of higher learning to promote education and research related to natural medicine.
- The College will conduct its affairs and the execution of its program with honor and integrity.
- The College Community will work together to create and maintain a collegial, culturally diverse environment that is mutually supportive for students, staff, and faculty for personal and professional growth.
- The College will provide advisement and assistance for graduates to find suitable positions upon graduation.

Program Objectives

Upon successful completion of this program, students will:

1. Demonstrate a comprehensive understanding of the history, principles and philosophy of Naturopathic Medicine.
2. Apply an understanding of medicine, including naturopathic medicine, in assessing the current state of the healthcare system.
   - First of all, to do no harm.
   - To act in cooperation with the Healing Power of Nature.
   - To address the fundamental causes of disease.
   - To heal the whole person through individualized treatment.
   - To teach the principles of healthy living and preventative medicine.
3. Demonstrate the ability to integrate naturopathic philosophy and principles with biomedical science, diagnostic science and naturopathic medical knowledge to safely and effectively diagnose and treat disease and promote individual and community health and well being.
4. Demonstrate behavior that is ethical, professional and accountable.
5. Demonstrate an understanding of the principles and importance of scientific and medical research, scholarly activity and life long learning.

AANP Principles and Practice

The American Association of Naturopathic Physicians has adopted the following official definition of Naturopathic Medicine, its principles and practice:

Naturopathic medicine is a distinct system of primary healthcare — an art, science, philosophy and practice of diagnosis, treatment and prevention of illness. Naturopathic medicine is distinguished by the principles upon which its practice is based. The principles are continually reexamined in the light of scientific advances. The techniques of naturopathic medicine include modern and traditional, scientific and empirical methods. The following principles are the foundation of naturopathic medical practice:

The Healing Power of Nature (Vis Medica-trix Naturae): Naturopathic medicine recognizes an inherent self-healing process in the person which is ordered and intelligent. Naturopathic physicians act to identify and remove obstacles to healing and recovery, and to facilitate and augment this inherent self-healing process.

Identify and Treat the Causes (Tolle Causam): The naturopathic physician seeks to identify and remove the underlying causes of illness, rather than to merely eliminate or suppress symptoms.

First Do No Harm (Primum Non Nocere): Naturopathic physicians follow three guidelines to avoid harming a patient:
- Utilize methods and medicinal substances which minimize the risk of harmful side effects, using the least force necessary to diagnose and treat;
- Avoid when possible the harmful suppression of symptoms;
- Acknowledge, respect and work with the individual's self-healing process.

Doctor As Teacher (Docere): Naturopathic physicians educate their patients and encourage self-responsibility for health. They also recognize and employ the therapeutic potential of the doctor-patient relationship.

Treat the Whole Person: Naturopathic physicians treat each patient by taking into account individual physical, mental, emotional, genetic, environmental, social, and other factors. Since total health also includes spiritual health, naturopathic physicians encourage individuals to pursue their personal spiritual development.

Prevention: Naturopathic physicians emphasize the prevention of disease — assessing risk factors, heredity and susceptibility to disease and making appropriate interventions in partnership with their patients to prevent illness. Naturopathic medicine is committed to the creation of a healthy world in which humanity may thrive.

PRACTICE

Naturopathic Methods: Naturopathic medicine is defined by its principles. Methods and modalities are selected and applied based upon these principles in relationship to the individual needs of each patient. Diagnostic and therapeutic methods are selected from various sources and systems, and will continue to evolve with the progress of knowledge.

Naturopathic Practice: Naturopathic practice includes the following diagnostic and therapeutic modalities: nutritional medicine; botanical medicine; naturopathic physical medicine including naturopathic manipulative therapy; public health measures and hygiene; counseling; minor surgery; homeopathy; acupuncture; naturopathic obstetrics (natural childbirth); and appropriate methods of laboratory and clinical diagnosis (the actual scope of practice varies by state or other jurisdiction).

Curriculum

The curriculum is designed to prepare graduates of the program to be competent, caring, well-trained physicians offering comprehensive care using traditional and modern methods and modalities in accordance with the principles of Naturopathic Medicine. The first year of the program is devoted to biomedical sciences and naturopathic philosophy. The second year of training is focused on clinical sciences and the beginning of coursework in therapeutic modalities. The second two years introduce courses in naturopathic case management.
College of Naturopathic Medicine
related to organ systems in addition to further study of the therapeutic modalities.
Clinical training begins after the completion
of the first two years of study. It provides
the practical, hands-on integration of didactic learning with patient treatment. Students
care for patients under the supervision and
direction of naturopathic physicians as well
as other licensed physicians. The clinical
training in the UB Health Center and offsite
community clinics in the surrounding area
begins in Semester V and continues through
Semester VIII, and includes required time
in the summer clinic between the third and
fourth academic years. To be eligible for clinical education training and credit, students
must be in good academic standing, successfully complete required courses in Semesters
I through IV, successfully complete the clinic
entrance exam and have CPR certification.
The course of study consists of four academic years and the required summer recess
clinical program. There are two 18-week semesters per academic year.

Semester Based Curriculum
YEAR 1_____________________________________
SEMESTER I
NUMBER

COURSE

NBS 511
NBS 512
NBS 513
NBS 514
NBS 515
NPP 511
NPP 512
NBM 511
NRS 511
		

Anatomy I		
Histology		
Embryology		
Biochemistry I		
Physiology I		
Mind-Body Medicine
Philosophy of Nat. Medicine
Botanical Pharmacy
Research Methods and
Statistics		

Total				

LECT LAB SEM. CR.

4
3 126 5.5
2
2 72 3
1
0 18 1
2
1 54 2.5
3
2 90 4
1 0.5 36 1.25
1
0 18 1
0
2 72 1
1.5

0 27 1.5

17.5

8 459 21.5

SEMESTER II
NUMBER

COURSE

NBM
NBS
NBS
NBS
NBS
NBS
NPM
NPM

Phytopharmacognosy
Anatomy II		
Microbiology 		
Biochem II		
Physiology II		
Neuroscience		
Living Anatomy: Palpation
Hydrotherapy

521
521
522
524
525
526
522
523

LECT LAB SEM. CR.

1
1 36
4
3 126
4
0 72
2
1 54
3
2 90
2
0 36
0 1.5 27
1
1 36

1.5
5.5
4
2.5
4
2
.75
1.5

NPP 521 Philosophy of Naturopathic
		
Med II		
NPS 521 Counseling Skills I		
Total 				

1
1

0 18 1
1 36 1.5

20.5

11 567 23

YEAR 2_____________________________________
SEMESTER III
NUMBER

COURSE

NBM
NCS
NCS
NCS
NCS
NCS
NCS
MCS
NCS
NNT
NOM
NPM

Botanical Medicine I
Pathology I 		
Clinical Diagnosis I
Physical Examination Lab I
Laboratory Diagnosis I
Laboratory Diagnosis Lab I
Public Health/Epidem
Immunology		
Medical Genetics		
Nutrition I		
Oriental Medicine I		
Physiological Therapeutics

611
611
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612L
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612

LECT LAB SEM. CR.

2
0 36 2
2
2 72 3
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0 90 5
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2 36 1
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0 36 2
0 1.5 27 .75
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0 36 2
2
0 36 2
1
0 18 1
2
0 36 2
2
0 36 2
2
0 36 2

SEMESTER IV
NUMBER

COURSE

NBM 621
NCE 621
NCS 621
NCS 622
NCS 622L
		
NCS 623
NCS 623L
		
NHM 621
NNT 621
NOM 621
NPM 621
NPS 621

Botanical Medicine II
Clinic Entry		
Pathology II		
Clinical Diagnosis ll
Physical Examination
Lab II		
Laboratory Diagnosis II
Laboratory Diagnosis
Laboratory II		
Homeopathy I		
Nutrition II		
Oriental Medicine II
Orthopedic Assessment
Psychological Assessment

LECT LAB SEM. CR.

Total				

2
1
3
5

0
0
2
0

36
18
90
90

2
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4
5

0
2

2 36
0 36

1
2

0 1.5 27 .75
2
0 36 2
2
0 36 2
2
0 36 2
1
2 54 2
2
0 36 2
25 7.5 587 28.75

YEAR 3_____________________________________
SEMESTER V
NUMBER

COURSE

NCE
NCS
NCS
NHM
NNP
NNP
NNT
NPM
NPS
NRS

Clinical Education I
Diagnostic Imaging I
Clinical Forum I		
Homeopathy II 		
Gastroenterology		
Gynecology II		
Nutrition III		
Naturo. Manip. Ther. I
Counseling Skills II
Thesis I		

712
711
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LECT LAB SEM. CR.

0
2
0
3
2
2
2
2
1
1

16
0
2
0
0
0
0
4
1
0

250 8
36 2
36 1
54 3
36 2
36 2
36 2
108 4
36 1.5
18 1

Total				

15.5 20 639 25.5

SEMESTER VI
NUMBER

COURSE

NCE
NCS
NCS
NCS
NCS
NHM
NNP
NNP
NNP
NPM
NNT

Clinical Education II
Emergency Procedures
Pharmacology I		
Diagnostic Imaging II
Clinical Forum II		
Homeopathy III		
Pediatrics		
Cardiology		
Gynecology Lab		
Naturo. Manip. Ther. II
Nutrition IV		

722
715
721
722
723
721
721
722
725L
721
721

Total				

LECT LAB SEM. CR.

0
2
2
2
0
3
2
2
0
2
2
17

16
0
0
0
2
0
0
0
1
4
0

250 8
36 2
36 2
36 2
36 1
54 3
36 2
36 2
18 0.5
108 4
36 2

23 684 30.5

YEAR 4_____________________________________
SEMESTER VII
NUMBER

COURSE

LECT LAB SEM. CR.

NCE
NCS
NCS
NNP
NNP
NNP
NNP
NOB
NPP
NRS

Clinic Education III
Pharmacology II		
Environmental Medicine
EENT		
Endocrinology		
Neurology		
Urology/Proctology		
Obstetrics		
Practice Management I
Thesis II		

0
2
1.5
1.5
2
1.5
1.5
2
2
1

20
0
0
0
0
0
0
0
0
0

15

20 630 25

812
811
812
811
812
813
814
811
811
811

Total				

443
36
27
27
36
27
27
36
36
18

10
2
1.5
1.5
2
1.5
1.5
2
2
1

SEMESTER VIII
NUMBER

COURSE

LECT LAB SEM. CR.

NCE 822
NNP 821
NNP 823
NNP 824
NNP 825
NPM 822
		
NPP 821
NPP 822

Clinic Education IV
Geriatrics		
Oncology		
Dermatology		
Minor Surgery		
Therapeutic Exercise/
Sport Med		
Jurisprudence/Ethics
Practice Management II

0
1
1.5
1.5
1

Total				
NUMBER

COURSE

20
0
0
0
1

443
18
27
27
36

10
1
1.5
1.5
1.5

2
1.5
1.5

0 36 2
0 27 1.5
0 27 1.5

10

21 558 20.5

LECT LAB SEM. CR.

Academic (Basic & Clinical)		
Clinical Service		

140.5
0

47 3375 164
72 1386 36

GRAND TOTALS		

140.5 119 4671 200

Elective Courses
Elective courses are offered to allow spe-

74


GRADING SYSTEM

The cumulative quality point ratio (QPR) is determined by dividing the number of semester hours into the number of points earned. Transfer credits are not included in this computation. Clinic Grades are: Satisfactory (S) or Unsatisfactory (U).

Please refer to the Student Handbook for policies regarding grades of “D” and “F”.

Administrative Grades

In addition to the Academic Grades submitted by faculty, the following Administrative Grades are also utilized.

I The grade of Incomplete “I”, is used by the faculty to indicate that a student has not completed all course requirements for approved reasons. These include illness that can be documented and family or other emergencies. A student will have one week from the last day of the term to contact the instructor to arrange to complete all course requirements. Upon completion of the course requirements the faculty member will submit the earned grade. Failure by the student to contact the instructor within one week from the last day of the term, or to complete the required work by the time specified by the course instructor, and no later than one week before the end of the following term, will result in the grade of “I” being converted to a grade of “F”.

Any student with a grade of “F” or “W” will not be eligible to register for courses for which that course is a prerequisite without approval by the course instructor and the Associate Dean for Academic Affairs.

W Withdrawal grades are assigned on the following policy statements:

1. If the student officially withdraws from a course during the official change-of-registration period, that course does not appear on the student’s transcript.

2. If a student officially withdraws from a course after the end of the change-of-registration period, but before the end of the official withdrawal period, a grade of “W” is assigned and that course remains on the student’s transcript. Courses with a grade of “W” do not count toward the QPR and do not count towards “hours attempted.”

3. The names of students who have officially withdrawn from a course and receive the grade of “W” are so listed on the class roster for the balance of the semester.

4. Any exceptions to the above, including late withdrawals, must be approved by the Associate Dean before they become official and are recorded. Poor academic performance does not constitute a valid reason for late withdrawal.

ACADEMIC POLICIES

(See the College Student Handbook for a complete description)

ATTENDANCE REQUIREMENTS

Each student is expected to attend all lectures and laboratories and other activities associated with the total completion of a given course. Certain courses are offered on evenings and weekends.

A detailed description of the attendance policy can be found in the college student handbook.

REQUIREMENTS FOR GRADUATION

In order to be eligible for graduation from the College, candidates must meet the following criteria:

1. Have successfully completed a minimum of four academic years of resident study in an accredited institution granting a first professional degree. The last 3 semesters must have been in residence at the University of Bridgeport, College of
College of Naturopathic Medicine

Naturopathic Medicine.

2. Have successfully completed all requirements of the educational program and have achieved a 2.50 cumulative grade point average.

3. Have been recommended for graduation by the College Faculty and Administration.

4. Have satisfactorily met all financial obligations to the College and Office of Financial Aid.

5. Have exhibited the ethical, professional, behavioral, and personal characteristics necessary for the practice of naturopathic medicine.

6. Students entering the program on or after fall of 2003 must take and pass Part I (Basic Science) of the NPLEX examination.

SATISFACTORY ACADEMIC PROGRESS

A student is considered to be meeting satisfactory academic progress by maintaining a Quality Point Ratio (QPR) of 2.5 or greater with no outstanding grades of “D” or “F”. Good academic standing is achieved when a student is maintaining good grades, has met all financial responsibilities to the College and is not guilty of any breach of the standards governing ethical and clinical conduct.

Academic Probation, Remediation and Dismissal

ACADEMIC PROBATION

Academic probation occurs when the student’s QPR falls below 2.50 or if a student receives a grade of “F” in one or more courses or grades of “D” in two or more courses. A student on academic probation may not be allowed to carry a full academic course load and will not participate in Clinic training.

A student on academic probation may be placed in a program of academic remediation. The student is required to meet with the Associate Dean for Academic Affairs to determine what courses will be taken to satisfy the requirements of remediation.

ACADEMIC DISMISSAL

A student who does not show substantial academic improvement after one semester of remediation, or who is unable to achieve a QPR of 2.50 after two semesters of remediation may be dismissed from the College of Naturopathic Medicine.

Academic dismissal may also occur if a student’s QPR falls below a 2.50 on a second occasion.

Any student not achieving a QPR of at least 1.75 upon completion of the first semester of study may be academically dismissed from the College of Naturopathic Medicine.

Please see the College Student Handbook for a complete description of policies and procedures for probation and dismissal.

NON-ACADEMIC DISMISSAL FROM THE COLLEGE

Academic inadequacies are not the only reason for dismissal from the College. The following is a list of additional causes for dismissal:

1. Failure to meet the generally accepted standards of ethical conduct and clinical practice.

2. Pleading guilty or “no contest,” or being found guilty of any crime involving moral turpitude or being felonious in nature.

3. Repeated violation of public policy, or the demonstration of behavior that created safety hazards and/or disrupts the order of the institution.

4. Failure to meet financial obligations or commitments to the College.

Please see the College Student Handbook for a complete description of policies and procedures for Non-Academic Dismissal.

WITHDRAWAL AND LEAVE OF ABSENCE FROM THE PROGRAM

If a student withdraws or wishes to take a Leave of Absence from the University of Bridgeport College of Naturopathic Medicine and is in good academic and financial standing with the College, he or she is eligible for readmission for up to one year from the date the leave begins. After one year, the student must reapply for admission to the College through the Admissions Office.

A student may request a Medical Leave of Absence for up to one year in length. This requires medical documentation from a physician that states that the student must take time off to recover from illness or injury. Before returning to the program the student must provide similar documentation to the effect that s/he is healthy enough to resume participation in the program. A student may be granted a Medical Leave even if s/he is not in good academic standing. After one year, the student must reapply for admission to the College through the Admissions Office.

If a student withdraws or takes a leave of absence with plans to reenter at a later date, he or she should make this clear at the time of withdrawal whenever possible. A student on either type of Leave of Absence must notify the Associate Dean of Academic Affairs in writing that s/he is intending to return to the program at least one month before the beginning of the semester of anticipated return.

A student who withdraws without a Leave of Absence or when not in good academic standing must reapply for admission to the College in order to be readmitted to the program. One who leaves without officially withdrawing seriously jeopardizes his or her chances of future readmission. If a student fails to register for a semester without taking a Leave of Absence at any time before completion of the naturopathic program, s/he is considered to have withdrawn from the program.

Please note: All requirements for the doctoral degree must be completed within seven years from the first matriculation to graduation. If a student withdraws one or more times from the program, the cumulative absences must not exceed three years.

If a student wishes to withdraw or take a Leave of Absence, he or she must submit a letter to the Associate Dean of Academic Affairs stating the reason for withdrawal. The student must also complete all required paperwork from the Registrar’s and Financial Aid Offices.

READMISSION TO THE PROGRAM

Students returning from a Leave of Absence must contact the Associate Dean for Academic Affairs at least 30 days prior to their return for academic counseling and registration. To be considered for readmission to the program after withdrawal or expired Leave of
College of Naturopathic Medicine

Absence, former students must reapply for admission through the Admissions Office. It is important to do this well in advance of the proposed date of readmission.

**Minimum Requirements for Admission**

The admission requirements for the Doctor of Naturopathic Medicine degree program at the University of Bridgeport are:

All candidates for admission to the naturopathic medical degree program must furnish proof of having acquired a baccalaureate degree, taken in an accredited, degree-granting institution. Successful applicants are expected to have a Grade Point Average (GPA) of 3.0 or greater. This applies to both the overall GPA and the science based prerequisites. Applicants with a GPA below 3.0 may be considered for admission on an individual basis with special attention given to recent performance in science based prerequisite courses.

All candidates must have completed the following specific courses as part of their professional preparation:

- Communication/Language Skills
  - 6 semester hours
- Psychology
  - 3 semester hours
- Social Science
  - 3 semester hours
- Humanities
  - 3 semester hours
- Electives (Social Science/Humanities)
  - 9 semester hours
- General Biology/Anatomy and Physiology (with lab)
  - 6 semester hours
- General Chemistry (with lab)
  - 6 semester hours
- Organic Chemistry (with lab)
  - 6 semester hours
- General Physics (with lab)
  - 3 semester hours
- All biology/anatomy and physiology, chemistry and physics courses must:
  - Be course suitable for students majoring in sciences
  - Consist of a first semester and second semester course in each subject.
  - Be passed with a grade of “C” (2.00 on a 4.00 scale) or better. Cumulative science quality point ratio is expected to be 3.0 or better.
  - Have a related laboratory.
  - Have been taken within the past seven years.

The following courses are strongly recommended for entry into the naturopathic program: Biochemistry, Microbiology, Anatomy, Physiology, Genetics, Statistics, Botany, Developmental Psychology, and Medical Terminology.

**Application Procedures**

Application for admission must include:

1. A properly completed Application for Admission form.
2. Application fee.
3. Three letters of recommendation, one of which is from a health care professional.
4. Background check obtained through a law enforcement agency.

After all required documentation is received, an applicant who fulfills the requirements for admission may be invited to interview for admission to the program. Applicants must understand that possession of minimum entrance requirements does not constitute a guarantee of acceptance.

Application Deadlines and Notification of Acceptance:

Applications for admission may be submitted at any time. Notification of acceptance is mailed by the Director of Admissions.

**Transfer Credit**

The University of Bridgeport College of Naturopathic Medicine may grant transfer credit for courses taken in accredited professional and graduate schools. In doing so, the following requirements must be met:

1. Courses taken must have content equivalent to courses given at UBCNM. If the UBCNM course contains a laboratory, so must the course being considered for transfer.
2. A course being considered for transfer must have credits and hours equivalent to or greater than the same course at UBCNM.
3. Any course to be transferred must have been passed with a grade of “C” or better (2.00 on a 4.00 scale.)
College of Naturopathic Medicine

4. A transfer course must carry credit equal to the UBCNM course for which credit is granted. The original grade earned is not transferred and does not affect the student’s QPR at UBCNM.

5. In order to obtain transfer credit the student must have been granted an honorable withdrawal from the professional or graduate school attended. It is important to note that all transfer students must meet the entry-level prerequisites for first semester students regardless of having been accepted to the institution from which they are transferring.

Students wishing to transfer must provide the Admissions Committee with an official transcript and a catalog from the institution they are transferring. Students must meet the entry-level prerequisites as entering first year students, having been accepted to the institution from which they are transferring.

Students with advanced standing are responsible for determining their eligibility for writing the NPLEX examination or for waiver of Part I of the NPLEX.

Selection of Candidates
The University of Bridgeport College of Naturopathic Medicine is coeducational and does not discriminate against individuals on the basis of race, color, sex, sexual orientation, gender identity, religion, disability, age, genetic information, veteran status, marital status, ancestry, or national or ethnic origin (Title VI, Civil Rights Act 1964).

All eligible finalists are invited for a personal interview before any action is taken upon their application.

Among the qualities typical of most successful candidates for admission, the following are especially important:
1. Superior communication skills, both oral and written.
2. Evidence of strong motivation to become a helping professional and, specifically, a naturopathic doctor.
3. Initiative and honesty as evidenced in the candidate’s transactions within the application process and in all information submitted in support of the application.
4. Academic achievement that compares favorably with that of successful students at the University of Bridgeport College of Naturopathic Medicine.

Cancellation of Admission or Registration
The College reserves the right to cancel the admission or registration of individuals whose attendance at the College, in the opinion of the appropriate administrative officers and Dean, is not mutually beneficial to that person and to the institution.

Individuals who have registered at other educational institutions may not disregard such records and make application on the basis of high school and selected college transcripts.

Applicants who gain admission to the College on the basis of incomplete or fraudulent credentials or misrepresentations in their written application for admission may have their:
- admission and registration cancelled without refund of any fees; and
- total credits rescinded that have been earned following such admissions; and
- future registration at the College prohibited.

Pre-Professional Requirements for Licensure
It is most important that all candidates for admission thoroughly investigate the specific requirements of each state in which they plan to practice. In some cases, pre-professional requirements must be completed prior to entrance into a naturopathic program in order to be qualified to apply for a state licensing examination.

Licensing and Professional Societies
Currently, Doctors of Naturopathic Medicine are licensed in 15 states: Alaska, Arizona, California, Connecticut, Hawaii, Idaho, Kansas, Maine, Minnesota, Montana, New Hampshire, Oregon, Utah, Vermont and Washington. Licensure also exists in Puerto Rico, the District of Columbia and the American Virgin Islands, as well as several Canadian provinces. Graduates of approved naturopathic colleges take a national standardized examination called the Naturopathic Physicians Licensing Examination (NPLEX) to be eligible for licensing in most states.

For specific professional requirements for licensing, candidates should contact the appropriate State or Provincial Board of Naturopathic Examiners or the designated state or provincial licensing agency.

Most states and provinces have a professional naturopathic association. The Ameri-
can Association of Naturopathic Physicians (AANP) is the national professional association for naturopathic medicine in the United States. The national professional association in Canada is the Canadian Association of Naturopathic Doctors (CAND).

Information Subject to Change
The College of Naturopathic Medicine provides the foregoing information for the purpose of providing students, applicants, and the public with information about the educational programs and policies of the College. This information does not constitute a contract. The College reserves the right to make changes in the program, policies, tuition, fees, schedules, and any other content at any time without prior notice.

JOINT DEGREE PROGRAMS
Joint degree programs in association with the College of Naturopathic Medicine have been established to allow students to pursue degrees in other areas while working toward the Doctor of Naturopathic Medicine degree. Certain joint degree programs will require additional semesters to complete the coursework, while others can be completed within the four-year timeframe of achieving the naturopathic degree. The joint degree programs are: ND/MS in Acupuncture; ND/MS in Nutrition.

*These degree programs are also available for students pursuing the Doctor of Chiropractic degree. For more information, please see the respective deans or director.

JOINT ND/MS ACUPUNCTURE
Students who have completed the second semester of naturopathic medical studies in good academic standing, and with no outstanding grades of “D” or “F”, may be considered for recommendation by the Dean of the College of Naturopathic Medicine for entry into the Master’s Program in Acupuncture with advanced standing. Students admitted into the Acupuncture Program will receive credit for completed coursework in anatomy, physiology, pathology, and other basic medical sciences. They will also receive credit for Oriental Medicine and any acupuncture electives taken through the naturopathic program. Generally, naturopathic students receive credit for 47 credits from their course of studies and must complete another 67 credits specifically in acupuncture. Completion of the Acupuncture program is expected to take one extra year after graduation from the naturopathic program. Coursework in the MS/Acupuncture program will cost the student additional fees per semester credit hour.

JOINT ND/MS-ACUPUNCTURE 5-YEAR OUTLINE:

<table>
<thead>
<tr>
<th>SEMESTER THREE</th>
<th>NUMBER</th>
<th>COURSE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>ATD 511</td>
<td>Oriental Philosophy</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>APT 511</td>
<td>Point Location I</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>AMR 511</td>
<td>Tai ji Chuan I</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>APT 512</td>
<td>Meridian Theory</td>
<td>2</td>
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<tbody>
<tr>
<td></td>
<td>ATD 524</td>
<td>Oriental Diagnosis II</td>
<td>2</td>
</tr>
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<td></td>
<td>APT 523</td>
<td>Point Location II</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>AWB 521</td>
<td>Clean Needle Technique</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>AHM 511</td>
<td>OM Pharmacognosy</td>
<td>1</td>
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<tbody>
<tr>
<td></td>
<td>AMR 522</td>
<td>Tai ji Chuan II</td>
<td>1</td>
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<tr>
<td></td>
<td>APT 614</td>
<td>Acupuncture Techniques</td>
<td>3</td>
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<tr>
<td></td>
<td>AHM 612</td>
<td>MMI: Patent Remedies</td>
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<th>SEMESTER SIX</th>
<th>NUMBER</th>
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<th>CREDITS</th>
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<tr>
<td></td>
<td>APT 625</td>
<td>Acupuncture Techniques II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>AHM 613</td>
<td>Oriental Dietetics</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>AMR 613</td>
<td>Qi Gong I</td>
<td>1</td>
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<tr>
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<tr>
<th>SEMESTER SEVEN</th>
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<th>COURSE</th>
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<tbody>
<tr>
<td></td>
<td>AMR 624</td>
<td>Qi Gong II</td>
<td>1</td>
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<tr>
<td></td>
<td>AMR 715</td>
<td>Oriental Massage I</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>APT 621</td>
<td>Auricular Acupuncture</td>
<td>2</td>
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<tr>
<th>SEMESTER EIGHT</th>
<th>NUMBER</th>
<th>COURSE</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td></td>
<td>ABM 521</td>
<td>Oriental Bot Med I</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>ATD 711</td>
<td>East-West Path I</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>AWB 621</td>
<td>Ethics</td>
<td>1</td>
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</tbody>
</table>

SUMMER SESSION – AFTER ND GRAD.
ACS 631 Clinic Internship I | 8

FALL – AFTER ND GRADUATION
ABM 612 Oriental Bot Med II | 2
AMR 726 Oriental Massage II | 2
ACS 711 Preceptorship I | 2
ACS 712 Clinic Internship II | 8

SPRING – AFTER ND GRADUATION
ATD 715 Oriental Internal Medicine | 2
ACS 723 Clinic Internship III | 8
ACS 722 Preceptorship II | 2

Total from Oriental Med Dept:
67 Credits/1,260 hours
+ Oriental Med I (from ND program)
71 Credits/1,404 hours
Total: 630 Clinical/774 Didactic
In Oriental Medicine
846 hrs. transferred from ND

JOINT ND/MS NUTRITION
Students who have completed the fifth semester of naturopathic studies with a 3.0 G.P.A. (QPR), and no outstanding grades of “D” or “F”, may be considered for recommendation by the Dean of the College of Naturopathic Medicine for entry into the Master’s program at an advanced level. They will enter the third semester of the Nutrition Program. They will be required to complete a total of 13 semester hours of nutrition courses (560F-560M) and receive 3 credits from the Botanical Medicine courses taken in the Naturopathic Program. Required courses can be completed within the four years of study toward the naturopathic degree. Coursework in the Nutrition program will cost the student additional fees per semester credit hour. For further details contact the University of Bridgeport Nutrition Institute.

Students in the naturopathic medical degree program will be granted transfer credits for the following nutrition courses:
## Required Nutrition Courses to complete the MS in Nutrition for Naturopathic students:

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>COURSE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>560A</td>
<td>Pathophysiologic Basis of Metabolic Diseases</td>
<td>4</td>
</tr>
<tr>
<td>560B</td>
<td>Biochemistry of Nutrition</td>
<td>4</td>
</tr>
<tr>
<td>560C</td>
<td>Vitamins and Minerals</td>
<td>4</td>
</tr>
<tr>
<td>560D</td>
<td>Clinical Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>560E*</td>
<td>Assessment of Nutritional Status</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Nutrition Credits Granted: 18

*Course is waived. Botanical Medicine taken in the ND Program will replace 560E.
Fones School of Dental Hygiene

Dean: Marcia Lorentzen  
Health Sciences Center  
60 Lafayette Street  
Telephone: (203) 576-4138  
Fax: (203) 576-4220  
E-mail: marcia@bridgeport.edu

Director of Clinical Education: Laura Greco  
Health Sciences Center  
Telephone: (203) 576-4838  
E-mail: marcia@bridgeport.edu

Online Coordinator: Wendy Garcia  
Health Sciences Center  
Telephone: (203) 576-4141  
E-mail: wendyg@bridgeport.edu

Faculty: Cianciola, Garcia, Greco, Kennedy, Lorentzen, Minihan-Anderson, Paulis, Risom, Stramoski, Williams, Zayan

Office of Distance Education  
126 Park Avenue, Bridgeport, CT 06604  
Telephone: 1 (800) 470-7307  
E-mail: ubonline@bridgeport.edu  
Website: www.bridgeport.edu/academics/undergraduate/dentalbs/options

Degree Programs  
Dental Hygiene (A.S., B.S., B.S. Degree Completion, M.S.D.H.)

Description  
The Fones School of Dental Hygiene, established in 1949 at the University of Bridgeport, was named for Dr. Alfred Civilion Fones, the dentist who was instrumental in creating the profession of dental hygiene in 1913. Accredited since the American Dental Association publication of September, 1953, the Fones program is in full accord with the principles established by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Council on Post-Secondary Accreditation and the United States Department of Education. The graduate is eligible for National, Regional, and State examinations in each of the fifty United States, and students earning the Associate's degree may apply their credits towards a Bachelor's degree.

Accreditation  
The A.S. and B.S. degree programs in Dental Hygiene are both licensed and accredited by the State of Connecticut Department of Higher Education and the New England Association of Schools and Colleges.

Qualifications for Admissions  
The following physical qualifications are required for participation in the Associate degree program at the UB Fones School of Dental Hygiene. These qualifications are essential for the preparation of AS Degree in Dental Hygiene. Students at the School must be able to perform at a high level of competency in all phases of classroom, clinic, and laboratory activities as they will ultimately use the knowledge attained as dental hygienists.

Applications for admittance to the A.S. and B.S. degree programs are received on individual merit. Applicants who show potential for the dental hygiene program, but do not meet criteria may be offered entrance into pre-dental hygiene.

The applicant student must process:

1. Critical thinking ability sufficient for judgment during clinical activities.
2. Communication abilities for effective interaction verbally and in written form with patients and other members of the health care team.
3. Coordination and use of both upper and lower limbs as required for, among other skills, the performance of dental hygiene clinical procedures and emergency skills such as cardiopulmonary resuscitation.
4. Manual dexterity necessary for performance in the various clinical, dental laboratory, and basic science laboratories without posing a threat to her/himself patients, or her/his fellow students' safety and well-being.
5. Hearing and visual abilities, appropriately assisted, acute enough to allow the individual recordation of patient histories, to provide routine safety instructions, and perform stethoscopic and other auscultatory examinations, and to read all forms of diagnostic imaging so that she/he can adequately interpret normal, abnormal, and pathologic changes.
6. Freedom from communicable diseases sufficient for rendering safe and effective dental hygiene care.
7. Ability to obtain a dental hygiene license as some states deny licenses for certain prior felony convictions.

Applicants with disabilities will neither be summarily denied admission, nor will higher scholastic requirements be demanded of them. All persons to be eligible for acceptance to the School must be capable of demonstrating upon request their ability to perform classroom, laboratory, and clinical assignments, including microscopic work, x-ray interpretation and techniques, or the equivalent, pass written, oral, and practical examinations and meet all of the requirements of the School as they evolve.

It is the responsibility of the applicant/student to assess compliance with these requirements. By submitting an application to the University of Bridgeport, Fones School of Dental Hygiene, the applicant is confirming their ability to meet qualifications for entrance into the Fones School of Dental Hygiene program.

General Criteria for the A.S. and the B.S. Degree in Dental Hygiene  
The two year basic core curriculum of the Fones School combines courses from the College of Arts and Sciences and the Fones School of Dental Hygiene to provide a broad educational preparation. In addition to basic and dental science theory, the program provides education in preventive service and dental health education.

During the second year, the students receive clinical education at the Fones Dental Health Center on campus, and through assignments to the clinical and educational facilities of school dental health programs, hospitals and community agencies. These assignments are directly supervised by Fones faculty. Students are responsible for providing their own transportation to community agencies.

A student who earns a grade of C- or below in a course in the major field, must obtain a written statement from the School Director specifying the procedure necessary to remedy the deficiency and remain in the major.

Enrollment in the second year is contingent on completing all first year requirements and achieving a QPR of 2.0.
Fones School of Dental Hygiene

Education at the baccalaureate level enhances the dental hygienists’ opportunities, abilities, background and values. The professional dental hygiene curriculum is combined with a liberal arts education. Upon satisfactory completion of 120-125 credits in the areas of study specified, the student will be recommended for the degree of Bachelor of Science in Dental Hygiene.

Students in the Bachelor of Science degree (B.S.) may integrate the Bachelor’s courses with the clinical aspect of the Dental Hygiene curriculum or pursue a Baccalaureate degree (B.S.) after completing clinical preparation at the Associate in Science Certificate Level. This Baccalaureate degree completion approach is available to Fones’ students and graduates of a Dental Hygiene program that is accredited by a specialized accrediting agency recognized by the Council on Post Secondary Accreditation and the United States Department of Education.

All courses listed in the major program section of the catalog for the Associate in Science and/or Bachelor of Science degree are required for graduation. The majority of Dental Hygiene courses may be taken during the regular academic year.

Dental Hygiene Bachelor of Science Degree Online Program

The online B.S. in Dental Hygiene from The Fones School of Dental Hygiene at the University of Bridgeport offers an opportunity for dental hygienists to further their education beyond the A.S. degree. Dental hygienists traditionally begin their professional work following completion of the A.S. degree. The University of Bridgeport’s B.S. in Dental Hygiene online degree program makes it possible for dental hygienists to work toward a degree at any time, from anywhere in the world. The program is perfectly suited to adult learners who have the discipline for part-time, self-directed study under the guidance of qualified faculty in their field. The BSDH Online Program is identical to the on-campus degree completion program and is designed to be completed entirely online.

Students who hold an A.S. or certificate in Dental Hygiene from an institution accredited by the American Dental Association Commission on Dental Accreditation are eligible for admission. A maximum of 72 credits from accredited two-year colleges and 90 credits from accredited four-year institutions. The program consists of 120 credit hours which include applicable transfer credits (60-90 credit hours), general education courses (40 credit hours), dental hygiene courses (22 credit hours), and elective courses (12 credit hours). The last 30 credit hours must be completed through the University of Bridgeport. The general education courses include University Core Requirements in English, Math, Fine Arts, Integrated Studies, Humanities, Natural Science, Social Science, and Capstone Seminar.

Students who are graduates of the Fones School of Dental Hygiene, need not re-apply for admission. A re-admittance form, available on the website, needs to be completed and forwarded to the Office of Distance Education.

Students may take 2 online courses per 8-week session, which is equivalent to 12 credits per semester. As a new online student, a one-week New Student Orientation course is offered prior to the start of each 8-week session at no charge. Financial aid is available for qualified students taking at least 6 credits per semester.

Please visit http://www.bridgeport.edu/academics/undergraduate/dentalbs/options for additional information and an Application Form to download. You will be directed to request Official Transcripts from all schools attended – these are required in order to consider your acceptance into the program, as well as to evaluate courses taken previously and apply transfer credits to the course of study for the Bachelor’s Degree in Dental Hygiene.

INSTRUCTIONAL FORMAT

The online B.S. in Dental Hygiene is offered in a format that makes classes available 24 hours and day, 7 days a week. Courses are designed for working professionals and can be completed entirely online, from home or at work. Our online instructors are practicing professionals or UB faculty members — experienced educators who are your partners in a dynamic and interactive educational environment. The online interaction is designed to encourage thoughtful and well-prepared discussions based on both students’ command of the coursework and their personal experiences.

To participate in UB’s distance education program, you must own or have regular access to a computer with an Internet connection and an e-mail account. You should be comfortable with using e-mail, sending and receiving attachments, and Web browsing.

MINIMUM COURSE REQUIREMENTS

- A PC or Macintosh system
- Windows 95/98 or higher, Mac OS 9 or higher
- Word processor, printer, CD-ROM
- Reliable Internet access
- E-mail
- web camera/microphone

ONLINE ORIENTATION

All students participate in an online orientation prior to beginning the program. During the orientation, students are given instructions on how to navigate the Blackboard course management system, strategies for being a successful online student, and access to other University resources, including the Wahlstrom Library’s electronic databases. Successful completion of the orientation is required of all new students in the online program.

PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>COURSE</th>
<th>CREDITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHYG 301</td>
<td>Dental Hygiene Practice</td>
<td>3</td>
</tr>
<tr>
<td>DHYG 302</td>
<td>Instructional Strategies</td>
<td>3</td>
</tr>
<tr>
<td>DHYG 303</td>
<td>Advanced Clinical Concepts</td>
<td>3</td>
</tr>
<tr>
<td>DHYG 304</td>
<td>Dental Hygiene Internship</td>
<td>3-6</td>
</tr>
<tr>
<td>DHYG 305</td>
<td>Dental Hygiene Research I</td>
<td></td>
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<tr>
<td>DHYG 306</td>
<td>Dental Hygiene Research II</td>
<td>4</td>
</tr>
<tr>
<td>DHYG 400</td>
<td>Statistical Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 305</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>HUM</td>
<td>Humanities Core</td>
<td>6</td>
</tr>
<tr>
<td>FA</td>
<td>Fine Arts Core</td>
<td>3</td>
</tr>
<tr>
<td>SOSC</td>
<td>Social Science Core Elective</td>
<td>3</td>
</tr>
<tr>
<td>CAPS C390</td>
<td>Capstone Seminar</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>12</td>
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</tbody>
</table>

For more information, see page 83
Dental Hygiene Master of Science Degree

Purpose and Objectives
The main purpose of the Master's Degree in Dental Hygiene is to prepare registered dental hygienists for leadership roles in the areas of education, administration, public health and dental hygiene practice. This commitment is met within a multidisciplinary framework that inter-relates theory, research, and practical experience. The program seeks to educate its students to develop and conduct research that adds to the body of knowledge that advances the mission of dental hygiene. By providing a high level of professional education, the program will produce graduates with critical thinking and commitment to the service of others. Through academic courses, independent study, research and practical experience, graduate candidates are prepared to meet the present demand for dental hygiene leaders, practitioners, educators, oral health promoters, administrators/managers and researchers.

The objectives of the proposed Master's degree program are to:

- Develop expertise in a specialized area of dental hygiene.
- Expand knowledge and skills to support advanced dental hygiene practice and role development in preventive and therapeutic oral health services.
- Expand knowledge in oral health promotion and education related to a specific functional role in dental hygiene.
- Develop managerial and administrative skills.
- Contribute to the dental hygiene scientific body of knowledge.
- Acquire initial competence in conducting oral health research.
- Further develop and implement leadership strategies for the betterment of oral healthcare.
- Participate in graduate dental hygiene internship experiences in educational settings, rural areas, industry and community outreach sites.
- Build a foundation for future doctoral education.

Admissions Policies
To qualify for admission, the applicant must possess a certificate or associate degree from an accredited dental hygiene program and a baccalaureate degree in dental hygiene or related field. The applicant must have an overall quality point average of at least 3.0 on a 4 point scale in undergraduate education. Dental Hygiene National Board Examination Score, completed recommendation forms from a previous clinical supervisor and dental hygiene program director, two recommendations from academic sources, a statement of career goals, and official transcripts of all college work must also be submitted.

Dental Hygiene Education: This specialization provides a theoretical and practical approach to instructional strategies and their application to dental hygiene education. Emphasis is on higher education, instructional technology, instructional development, implementation and evaluation, and the role and responsibilities of faculty within an accredited, professional program affected by internal and external constituencies.

Dental Public Health: This area of specialization provides an in-depth study of interdisciplinary oral healthcare in diverse community health settings. Emphasis is placed on the leadership roles of the dental hygienist in promoting health through the assessment of community oral health needs and the planning, implementing, and evaluating of population-based health programs.

Each of the two (2) components of the program requires the completion of a Master's Thesis.

Students can complete the program either part-time or full-time, completing 36 credits within one calendar year for a full time matriculated student or up to five years part time.

Curriculum

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>COURSE</th>
<th>CREDITS</th>
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</thead>
<tbody>
<tr>
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<td><strong>CORE REQUIREMENTS</strong></td>
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<tr>
<td>DHFG 400</td>
<td>Statistical Reasoning</td>
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<tr>
<td>DHFG 500</td>
<td>Leadership in Dental Hygiene</td>
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<tr>
<td>DHFG 501</td>
<td>Grant and Contract Writing</td>
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<tr>
<td>DHFG 502</td>
<td>Evidence Based Research</td>
<td>3</td>
</tr>
<tr>
<td>DHFG 507</td>
<td>Dental Health Services Administration</td>
<td>3</td>
</tr>
<tr>
<td>DHFG 510</td>
<td>Foundations of Health Care Management</td>
<td>3</td>
</tr>
<tr>
<td>DHFG 516</td>
<td>Concentrated Practicum</td>
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</tr>
<tr>
<td>DHFG 520</td>
<td>Master's Thesis</td>
<td>4</td>
</tr>
</tbody>
</table>

And one of the following specializations:

**DENTAL HYGIENE EDUCATION**

| DHFG 503 | Clinical and Didactic Educational Concepts | 3       |
| DHFG 504 | Clinical / Laboratory Teaching             | 3       |
| DHFG 505 | Didactic Student Teaching                  | 3       |
| DHFG 508 | Curriculum Development and Management       | 3       |

**DENTAL PUBLIC HEALTH**

| DHFG 509 | Dental Public Health                        | 3       |
| DHFG 511 | Epidemiology                                | 3       |
| DHFG 513 | Seminar in Public Health Issues             | 3       |
| NUTR 560H | Developmental Nutrition                  |         |

**SUGGESTED CURRICULUM SEQUENCE**

**FIRST YEAR**

**Summer:**

| DHFG 500 | Leadership                                   |         |
| DHFG 507 | Dental Health Services Administration        |         |

**Fall:**

| DHFG 502 | Evidence-based Research                      |         |
| DHFG 510 | Foundations of Healthcare Management         |         |

**Spring:**

| DHFG 400 | Statistical Reasoning                        |         |
| DHFG 508 | Curriculum Development and Management (Education Track) |         |
| DHFG 509 | Dental Public Health (Public Health Track)   |         |

**SECOND YEAR**

**Summer:**

| DHFG 516 | Concentrated Practicum                       |         |
| DHFG 503 | Clinical and Didactic Educational Concepts (Education Track) |         |
| DHFG 511 | Epidemiology (Public Health Track)           |         |
Fones School of Dental Hygiene

Fall:
- DHYG 504 Clinical and Laboratory Student Teaching (Education Track)
- DHYG 505 Didactic Student Teaching (Education Track)
- DHYG 513 Seminar in Public Health Issues (Public Health Track)
- NUTR 560H Developmental Nutrition (Public Health Track)

Spring:
- DHYG 501 Grant and Contract Writing
- DHYG 520 Master’s Thesis Preparation

After completing the two years of course work the Master’s Degree Candidate will continuously register for DHYG 521 Thesis Extension (1 credit) until the thesis has been successfully written and defended. Upon successful defense the masters student will then apply for graduation.

FOR MORE INFORMATION
Office of Admissions
Leanne Proctor
Director of Graduate Admissions
Telephone: (203) 576-4108
Email: lproctor@bridgeport.edu

FOR MORE INFORMATION
Office of Distance Education
126 Park Avenue, Bridgeport, CT 06604
Phone: 1 (800) 470-7307
Email: ubonline@bridgeport.edu
Website: www.bridgeport.edu/academics/undergraduate/dentalbs/options
Nutrition Institute

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E-mail: ksiclare@bridgeport.edu

Program Coordinator: Terri Roma
Eleanor Dana Hall, Room 113B
Telephone: (203) 576-4667
E-mail: terrir@bridgeport.edu

Faculty: Bocchino, Carroll, Erickson, Fleming, Gerber, Grazia, Jegtvig, Kendler, Lord, Marks, Miller, Mirvis, Moss, Perrotto, Reed, Robinson, Saladino, Thompson, Yahia.

Degree Program
Human Nutrition (M.S.)

Mission Statement
The mission of the human nutrition program is to provide a sound biochemical and physiological study of nutrition utilizing critical thinking which will allow students to understand the complex interrelationships between nutrition and health. The program further aims to explore the role of nutrition as a preventative, adjunctive, and alternative strategy for the prevention and amelioration of specific disorders to include the use of evidence-based nutritional approaches. The program aims to provide this comprehensive study to individuals with busy schedules who would otherwise not be able to complete a graduate program without interrupting their work schedules. The program is accessible to these individuals through classes which are held Saturday and Sunday, from 9:00 a.m. to 5:00 p.m., one weekend each month for eighteen months; or through a distance learning format in which the program is offered online, concurrent with the weekend program.

In support of the mission of the Nutrition Institute, the curriculum and educational experiences within the Nutrition program are designed to:

1. Provide a foundation in basic and clinical nutrition that supports the entry of graduates into clinical practice or doctoral nutrition programs.
2. Encourage original and critical thinking among its students through self-expression in classroom settings and through their research.
3. Encourage the maintenance of an awareness of current trends in nutrition through available peer reviewed research via our digital library resources.
4. Promote scientific interchange among students around the world through local and national meetings and through the online program.
5. Provide an opportunity for doctors and other healthcare providers to expand their practice through skills and knowledge gained from graduate studies in nutrition.

Accreditation
The Human Nutrition Program is licensed and accredited by the Connecticut Board of Governors for Higher Education and the Commission on Institutions of Higher Education, New England Association of Schools and Colleges, Inc.

Learning Outcomes
Upon successful completion of this program, students will:

1. Be proficient in performing the full range of clinical laboratory tests in areas such as hematology, clinical chemistry, immunohematology, microbiology, serology/immunology, coagulation, molecular, and other emerging diagnostics.
2. Be able to participate in the development and evaluation of test systems and interpretive algorithms, hold diverse
3. Develop responsibilities in areas of analysis and clinical decision-making, regulatory compliance with applicable regulations, education, and quality assurance/performance improvement whatever laboratory testing is researched, developed or performed.
4. Possess basic knowledge, skills, and relevant experiences in consultative interactions with members of the healthcare team, external relations, customer service and patient education; financial, operations, marketing, and human resource management; information management, and; research design/practice sufficient to evaluate published studies as an informed consumer.

ADMISSIONS REQUIREMENTS
Applicants should have a baccalaureate degree from an accredited college or university with an above average academic record and course work in human anatomy and physiology (6 credits minimum) and introductory biochemistry (4 credits minimum), and basic nutrition (2 credit minimum). This coursework must be from an accredited college or university. If an applicant has completed a minimum of 8 credits of organic chemistry with laboratory, the biochemistry pre-requisite requirement may be waived at the discretion of the program director. Please note that transfer credit for the core pre-requisite courses listed above that have been taken longer than 10 years ago will only be accepted at the discretion of the program director. Acceptance will be determined by academic performance history and demonstration of application of course-specific content through continued professional or academic experience. Core pre-requisite classes taken longer than ten years previous to application will not automatically be transferable. The baccalaureate requirement may be waived for certain licensed health practitioners holding doctoral degrees from accredited professional programs. The deadline for an applicant to have a completed folder for guaranteed admissions consideration is:

November 15th for January admission
July 15th for September admission

A complete folder consists of a completed application, official transcripts from all colleges and universities attended, 2 letters of recommendation, and a detailed personal statement addressing why you are seeking this degree.
Accelerated Entry into the Master’s Degree Program
MDs, DCS, DOs, NDs, DDSs, etc. may qualify for advanced standing for several courses in the masters programs at the discretion of the program director following review of medical school transcripts. Advanced standing students will begin the program in either fall, spring or summer dependent upon their first required course.

Registration Requirements
Campus students are required to register with the Nutrition Institute on or before the first day of classes. Distance Learning students can register for courses through the distance learning website.

Degree Requirements
Degree candidates must complete the courses listed in the 31 credit curriculum with a minimum grade point average of 3.0 (B average). All students are required to pass a comprehensive examination at the completion of all coursework in order to graduate. All degree requirements are to be completed within a five year period from start date of the program. A research project (thesis) is an elective option.

Pre-Requisite Courses for Human Nutrition Program
Undergraduate course work is required in human anatomy and physiology (6 credits minimum), introductory biochemistry (4 credits minimum), and basic nutrition (2 credit minimum). The University offers the prerequisites, Anatomy and Physiology (6 cr, Nutr121) Introduction to Biochemistry (4 cr, Nutr122), and Basic Nutrition, (2 cr, Nutr 123) twice annually both on-campus and online, commencing in May and September. A minimum grade of B is required in each prerequisite course in order to receive credit for entry into the Master’s degree program.

Basic Nutrition Requirement
Students who have not taken course work in basic nutrition must take Basic Nutrition, NUTR 123, which is offered annually, in January and May, both on-campus and on-line. A minimum grade of B is required.

Joint Programs
Joint programs with the UB Colleges of Chiropractic and Naturopathic Medicine have been established to allow students to pursue the M.S. degree in Human Nutrition while working on the D.C. or N.D. degree. Students who have completed the fifth semester of chiropractic or naturopathic studies, with a 3.0 GPA or above, may be recommended by their respective deans for entry into the Master’s program at an advanced level.

Joint DC/MS Program
Students from the UB College of Chiropractic will enter the second semester of the Nutrition Program. They will be required to complete a total of 20 semester hours of required nutrition courses (560C, E, F, H, J, and M).

Joint ND/MS Program
Students from the UB College of Naturopathic Medicine will enter the third semester of the Nutrition Program. They will be required to complete a total of 13 semester hours of required nutrition courses 13 semester hours of required nutrition courses (560E, H, J, and M).

Pre-requisite Human Nutrition Curriculum
NUTR 121 Anatomy and Physiology 6
NUTR 122 Introduction to Organic and Biochemistry 4
NUTR 123 Nutrition Seminar 2

Master of Science Curriculum
NUTR 560A Pathophysiologic Basis of Metabolic Disease 4
NUTR 560B Biochemistry of Nutrition 4
NUTR 560C Vitamins and Minerals 4
NUTR 560D Clinical Biochemistry and Advanced Assessment 3
NUTR 560E Nutrition Assessment 3
NUTR 560F Nutritional Therapeutics 4
NUTR 560H Developmental Nutrition 3
NUTR 560J Research in Nutrition Project 3
(NUTR 560 required for on-campus students only)
NUTR 560M Evidence Based Nutrition 3

Elective Courses
NUTR 560L Nutrition and Exercise 3
NUTR 560P Botanical Medicine 3
NUTR 560R Nutrition and Culture 3

One elective is required for all online program students. NUTR 560J may be selected to meet this requirement.

Attendance Campus Weekend Format
Each class period represents 20% of a four credit course or 25% of a three-credit course. Class attendance and participation are indispensable parts of the educational process that are required throughout the program. Since classes only meet 4 or 5 times, depending on whether the course is 3 or 4 credits, it is imperative that students attend class. In the event of absence due to illness or family emergency, please notify the Assistant Director and the instructor immediately. If more than one class is missed during the semester for a 3 or 4 credit course you will receive a failing grade for the class and will have to repeat it. This includes absences for illness. Makeup weekly examinations due to absence WILL NOT will be permitted without an approved legitimate excuse and will result in a grade of zero for that exam.

Attendance Online Format
Online courses start and end on specific dates. Late entry into courses is not permitted. Students are expected to participate in a course multiple times per week. Assignments and exams are due on specific dates. Late assignment submissions will result in grade penalties. Makeup exams are subject to the same approval criteria as for the campus weekend format. Lack of participation in a class for a week or more will subject the student to being dropped from the class unless approved by the instructor and Assistant Director.

Make-Up Policies Weekend Campus and Online
Make-up examinations and assignments will not be permitted without a legitimate excuse or prior approval from the instructor and Assistant Director and will result in a grade of zero. An acceptable excuse for prolonged illness, or family emergency, entailing a stu-
student to a make-up examination, requires a legitimate detailed doctor’s note (with diagnosis) by a U.S. licensed physician or official documentation of family emergency, which must be submitted to the Assistant Director and approved. Please note that only one make-up examination is allowed per course regardless of instructor approval or reason. Missed exams must be taken before the next scheduled examination and may be modified and made more difficult by the instructor. Make-ups will not be granted for reasons of personal convenience, such as traveling, weddings and vacations.

Withdrawal from a Course
Withdrawal from a course should be made after consultation with the course instructor and the Assistant Director. A request to withdraw from a course must be made in writing. Only an official withdrawal will result in a grade of W, instead of F, for the course and prorated refund of tuition based on published UB policy. A student who stops attending a course without withdrawing will earn a grade of “F” for the course and will be ineligible for tuition refund.

Evaluation and Grading
The GPA is determined based on the following scale.

- A 4.00
- A- 3.67
- B+ 3.33
- B 3.00
- B- 2.67
- C+ 2.33
- C 2.00
- C- 1.67
- D+ 1.33
- D 1.00
- I Incomplete
- W Withdrawal
- R Research in progress.

Any course with a grade of C- or a numerical grade of 73 or less must be repeated to earn graduate credit. Other courses may be repeated if the student needs to raise the GPA. When a course is repeated, only the second grade will used to calculate the GPA. Tuition must be paid again for all classes that are required to be re-taken (no exceptions). Evaluation and grading are the responsibility and province of the instructor. All students in a course will be graded consistently or equivalently. Students may be penalized for late or missed work. Questions regarding grades should be addressed to the course instructor.

Grade Disputes
A disputed grade may be appealed in writing as follows:

First Appeal: Directly to the instructor within 30 days of receipt of grade

Second Appeal: to Assistant Director of Nutrition Institute

Third Appeal: to Director of Nutrition Institute/Vice Provost of Health Sciences

Final Appeal: to the Provost

Good Academic Standing
A student must maintain a program GPA of 3.0 or above and adhere to all program attendance and makeup policies. Students are also required to follow the student code of conduct as specified in the University's student handbook.

Academic Probation
Academic Probation occurs when the student’s GPA falls below a 3.0 or if the student receives a grade of C-, D or F in any course. Students will be notified in writing of their academic probation status. Remediation to probation requires the student to bring their program GPA up to 3.0 or better in the semester subsequent to being placed on academic probation.

Separation from Program
Students who fail to remediate their academic probation and who do not bring their GPA up to 3.0 in the subsequent term/semester will be deemed eligible for separation from the program. Students who receive a second grade of D or F in any course will be separated from the program.

Leave of Absence from Program
A leave of absence may be applied for via either the Registrar or the University’s student counseling service. Even if leave of absence is approved, program completion is required within 5 years of original start date of the masters’ program.

Readmission to Program
Students returning from a leave of absence or withdrawal of one year or more must contact the Nutrition Institute at least 30 days prior to their return to classes for academic counseling and registration. They will be advised of eligibility following review by the Assistant Director.

Students who have been separated from the program are ineligible for readmission at any time.
Physician Assistant Institute

**Director:** Daniel Cervonka
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Fax: (203) 576-2402
E-mail: cervonka@bridgeport.edu

**Associate Director and Director for Academic Affairs:** Martha Petersen
Eleanor Dana Hall
Telephone: (203) 576-4853
E-mail: mpeterse@bridgeport.edu

**Director of Clinical Education:** Mark Taafel
Eleanor Dana Hall
Telephone: (203) 576-2398
E-mail: mtaafel@bridgeport.edu

**Administrative Coordinator:** Tanial Lowe
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E-mail: tlowe@bridgeport.edu

**Secretary to the Institute:** Christine Curley
Eleanor Dana Hall
Telephone: (203) 576-2400
E-mail: ccurley@bridgeport.edu

**Director of Admissions:** Leanne Proctor
Telephone: (203) 576-4348
E-mail: lproctor@bridgeport.edu

Faculty: D. Cervonka, M. Petersen, M. Taafel, D. Solimini, S. Kunkel

The University of Bridgeport Physician Assistant Institute is committed to the development of highly qualified physician assistants who will serve as tomorrow’s leaders in the delivery of patient centered health care, educational and professional service. An understanding of the importance of integrated medicine and an appreciation of global health issues will be woven into all phases our curriculum.

**Degree**
Master of Science: Physician Assistant

**Accreditation**
The University of Bridgeport Physician Assistant Institute received provisional accreditation from the Accreditation Review Committee for Physician Assistant Education. All students graduating from a provisionally accredited program are eligible to sit for the national certification examination.

Provisional Accreditation is an accreditation status granted by ARC-PA for a limited, defined period of time to a new PA program that has demonstrated its preparedness to initiate a program in accordance with the Accreditation Standards for Physician Assistant Education.

Provisional Accreditation does not ensure any subsequent accreditation status. The program will be reevaluated in 2013 for full accreditation status.

**Mission Statement**
The mission of the University of Bridgeport Physician Assistant Institute is to develop clinicians with: dedication to patients; commitment to life-long education; respect for the profession; a global perspective on health care; volunteerism as a professional core value and an integrative approach to practice for the benefit of all patients. This mission to educate the physician assistant is reflected in our motto: Adiuvare, Mederi, Communiter; TO HELP, TO HEAL, TOGETHER.

**Program Objectives**
In the design of the curriculum and clinical experiences it is the goal of the Physician Assistant Institute:

1. To develop self motivated and high quality graduates committed to self discovery and self assessment through the application and evaluation of clinical practice obtained through critical evaluation of the medical literature.

2. To develop highly competent Physician Assistants evidenced by the ability to transfer knowledge from the classroom and clerkship experience to graduate clinical performance through:
   - Successfully passing the National Certifying examination
   - Acquisition and application of the basic and clinical sciences
   - Understanding the diversity amongst patients, ideas, perceptions of care, and culture while respecting the values associated with their ethnicity, sexual orientation and background.
   - Developing an appreciation for patient preferences and the diversity of the treatments and healers they seek.
   - The ability to implement effective communication skills to colleagues, patients and families they encounter to improve patient care and outcome.

To develop a solid professional value system, committed to life-long learning, professional development and advocacy for the profession.

The University of Bridgeport Physician Assistant Institute is provisionally accredited by the Accreditation Review Commission on Education for the Physician Assistant. Provisional Accreditation is an accreditation status given to a new physician assistant program for a limited, defined period of time to a new PA program. The program has demonstrated its preparedness to initiate a program in accordance with the Accreditation Standards for Physician Assistant Education. Provisional Accreditation does not ensure any subsequent accreditation status. The program will be reevaluated in 2013 for full accreditation status.

The University of Bridgeport Physician Assistant Institute is committed to the development of highly qualified physician assistants who will serve as tomorrow’s leaders in the delivery of patient centered health care, educational and professional service. An understanding of the importance of integrated medicine and an appreciation of global health issues will be woven into all phases our curriculum.

The mission of the University of Bridgeport Physician Assistant Institute is to develop clinicians with: dedication to patients; commitment to life-long education; respect for the profession; a global perspective on health care; volunteerism as a professional core value and an integrative approach to practice for the benefit of all patients. This mission to educate the physician assistant is reflected in our motto: Adiuvare, Mederi, Communiter; TO HELP, TO HEAL, TOGETHER.

The curriculum is comprised of a rigorous 28 month Master of Science Program. The goals and objectives of our program are guided by the criteria set forth in the Standards and Guidelines for an Accredited Educational Program for the Physician Assistant as established by the Accreditation Review Commission on education for the Physician Assistant (ARC-PA). The first four terms are made up of primarily classroom instruction. The intensity of our didactic curriculum is matched by the rigor of the clinical phase of the program and the unique relationship that we have with the St. Vincent's Medical Center and many community medical practices. The didactic phase of our curriculum provides a comprehensive background in the basic and clinical sciences which includes courses in human anatomy and physiology, microbiology, genetics, pharmacology, history taking and physical examination, clinical medicine, procedural skills, medical ethics, global medicine, integrative medicine and patient education and counseling. Course content is presented through traditional lecture, blended instruction, case based and hands on skills labs. The curriculum is overseen by primary faculty and may include University of Bridgeport basic science and health professional faculty, practicing physician assistants, physicians and providers who have the expertise in their respective specialty. The clinical year exposes the student to the areas of family practice, internal medicine, pediatrics, obstetrics and gynecology, emergency medicine, general surgery and psychiatry. The student is also given the opportunity to choose two electives in an area of interest. The didactic and clinical phases of curriculum are designed to enable the student to acquire proficiency in the competencies of the physician assistant.

**Curriculum**
The physician assistant curriculum is comprised of a rigorous 28 month Master of Science Program. The goals and objectives of our program are guided by the criteria set forth in the Standards and Guidelines for an Accredited Educational Program for the Physician Assistant as established by the Accreditation Review Commission on education for the Physician Assistant (ARC-PA). The first four terms are made up of primarily classroom instruction. The intensity of our didactic curriculum is matched by the rigor of the clinical phase of the program and the unique relationship that we have with the St. Vincent’s Medical Center and many community medical practices. The didactic phase of our curriculum provides a comprehensive background in the basic and clinical sciences which includes courses in human anatomy and physiology, microbiology, genetics, pharmacology, history taking and physical examination, clinical medicine, procedural skills, medical ethics, global medicine, integrative medicine and patient education and counseling. Course content is presented through traditional lecture, blended instruction, case based and hands on skills labs. The curriculum is overseen by primary faculty and may include University of Bridgeport basic science and health professional faculty, practicing physician assistants, physicians and providers who have the expertise in their respective specialty. The clinical year exposes the student to the areas of family practice, internal medicine, pediatrics, obstetrics and gynecology, emergency medicine, general surgery and psychiatry. The student is also given the opportunity to choose two electives in an area of interest. The didactic and clinical phases of curriculum are designed to enable the student to acquire proficiency in the competencies of the physician assistant.

**Degree**
Master of Science: Physician Assistant

**Accreditation**
The University of Bridgeport Physician Assistant Institute received provisional accreditation from the Accreditation Review Committee for Physician Assistant Education. All students graduating from a provisionally accredited program are eligible to sit for the national certification examination.

Provisional Accreditation is an accreditation status granted by ARC-PA for a limited, defined period of time to a new PA program that has demonstrated its preparedness to initiate a program in accordance with the Accreditation Standards for Physician Assistant Education.

Provisional Accreditation does not ensure any subsequent accreditation status. The program will be reevaluated in 2013 for full accreditation status.

The University of Bridgeport Physician Assistant Institute is provisionally accredited by the Accreditation Review Commission on Education for the Physician Assistant. Provisional Accreditation is an accreditation status given to a new physician assistant program for a limited, defined period of time to a new PA program. The program has demonstrated its preparedness to initiate a program in accordance with the Accreditation Standards for Physician Assistant Education. Provisional Accreditation does not ensure any subsequent accreditation status. The program will be reevaluated in 2013 for full accreditation status.
It is the intention of the University of Bridgeport, Faculty of Health Science and the Physician Assistant Institute to endeavor to communicate these goals through our teaching, role modeling and clinical practice.

**Competencies for the Physician Assistant Profession**

**Preamble**

In 2003, the National Commission on Certification of Physician Assistants (NCCPA) initiated an effort to define PA competencies in response to similar efforts being conducted within other health care professions and growing demand for accountability and assessment in clinical practice. The following year, representatives from three other national PA organizations, each bringing a unique perspective and valuable insights, joined NCCPA in that effort. Those organizations were the Accreditation Review Commission for Education of the Physician Assistant (ARC-PA), the body that accredits PA educational programs; the Association of Physician Assistant Programs (APAP), the membership association for PA educators and program directors; and the American Academy of Physician Assistants (AAPA), the only national membership association representing all PAs.

The resultant document, Competencies for the Physician Assistant Profession, is a foundation from which each of those four organizations, other physician assistant organizations and individual physician assistants themselves can chart a course for advancing the competencies of the PA profession.

**Introduction**

The purpose of this document is to communicate to the PA profession and the public a set of competencies that all physician assistants regardless of specialty or setting are expected to acquire and maintain throughout their careers. This document serves as a map for the individual PA, the physician-PA team and organizations that are committed to promoting the development and maintenance of these professional competencies among physician assistants.

The clinical role of PAs includes primary and specialty care in medical and surgical practice settings. Professional competencies for physician assistants include the effective and appropriate application of medical knowledge, interpersonal and communication skills, patient care, professionalism, practice-based learning and improvement, systems-based practice, as well as an unwavering commitment to continual learning, professional growth and the physician-PA team, for the benefit of patients and the larger community being served. These competencies demonstrated within the scope of practice, whether medical or surgical, for each individual physician assistant as that scope is defined by the supervising physician and appropriate to the practice setting.

In 1999, the Accreditation Council for Graduate Medical Education (ACGME) endorsed a list of general competencies for medical residents. NCCPA’s Eligibility Committee, with substantial input from representatives of AAPA, APAP and ARC-PA, has modified the ACGME’s list for physician assistant practice, drawing from several other resources, including the work of Drs. Epstein and Hundert; research conducted by AAPA’s EVP/CEO, Dr. Steve Crane; and NCCPA’s own examination content blueprint.

The PA profession defines the specific knowledge, skills, and attitudes required and provides educational experiences as needed in order for physician assistants to acquire and demonstrate these competencies.

**MEDICAL KNOWLEDGE**

Medical knowledge includes an understanding of pathophysiology, patient presentation, differential diagnosis, patient management, surgical principles, health promotion and disease prevention. Physician assistants must demonstrate core knowledge about established and evolving biomedical and clinical sciences and the application of this knowledge to patient care in their area of practice. In addition, physician assistants are expected to demonstrate an investigatory and analytic thinking approach to clinical situations. Physician assistants are expected to:

- understand etiologies, risk factors, underlying pathologic process, and epidemiology for medical conditions
- identify signs and symptoms of medical conditions
- select and interpret appropriate diagnostic or lab studies
- manage general medical and surgical conditions to include understanding the indications, contraindications, side effects, interactions and adverse reactions of pharmalogic agents and other relevant treatment modalities
- identify the appropriate site of care for presenting conditions, including cases and those requiring referral or admission
- identify appropriate interventions for prevention of conditions
- identify the appropriate methods to detect conditions in an asymptomatic individual
- differentiate between the normal and the abnormal in anatomic, physiological, laboratory findings and other diagnostic data
- appropriately use history and physical findings and diagnostic studies to formulate a differential diagnosis
- provide appropriate care to patients with chronic conditions

**INTERPERSONAL & COMMUNICATION SKILLS**

Interpersonal and communication skills encompass verbal, nonverbal and written exchange of information. Physician assistants must demonstrate interpersonal and communication skills that result in effective information exchange with patients, their patients’ families, physicians, professional associates, and the health care system. Physician assistants are expected to:

- create and sustain a therapeutic and ethically sound relationship with patients
- use effective listening, nonverbal, explanatory, questioning, and writing skills to elicit and provide information
- appropriately adapt communication style and messages to the context of the individual patient interaction
- work effectively with physicians and other health care professionals as a member or leader of a health care team or other professional group
- apply an understanding of human behavior
- demonstrate emotional resilience and stability, adaptability, flexibility and tolerance of ambiguity and anxiety
- accurately and adequately document and record information regarding the care process for medical, legal, quality and financial purposes
Physician Assistant Institute

PATIENT CARE
Patient care includes age-appropriate assessment, evaluation and management. Physician assistants must demonstrate care that is effective, patient-centered, timely, efficient and equitable for the treatment of health problems and the promotion of wellness. Physician assistants are expected to:

- work effectively with physicians and other health care professionals to provide patient-centered care
- demonstrate caring and respectful behaviors when interacting with patients and their families
- gather essential and accurate information about their patients
- make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
- develop and carry out patient management plans
- counsel and educate patients and their families
- competently perform medical and surgical procedures considered essential in the area of practice
- provide health care services and education aimed at preventing health problems or maintaining health

PROFESSIONALISM
Professionalism is the expression of positive values and ideals as care is delivered. Foremost, it involves prioritizing the interests of those being served above one’s own. Physician assistants must know their professional and personal limitations. Professionalism also requires that PAs practice without impairment from substance abuse, cognitive deficiency or mental illness. Physician assistants must demonstrate a high level of responsibility, ethical practice, sensitivity to a diverse patient population and adherence to legal and regulatory requirements. Physician assistants are expected to demonstrate:

- understanding of legal and regulatory requirements, as well as the appropriate role of the physician assistant
- professional relationships with physician supervisors and other health care providers
- respect, compassion, and integrity

- responsiveness to the needs of patients and society
- accountability to patients, society, and the profession
- commitment to excellence and on-going professional development
- commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
- sensitivity and responsiveness to patients’ culture, age, gender, and disabilities
- self-reflection, critical curiosity and initiative

PRACTICE-BASED LEARNING AND IMPROVEMENT
Practice-based learning and improvement includes the processes through which clinicians engage in critical analysis of their own practice experience, medical literature and other information resources for the purpose of self-improvement. Physician assistants must be able to assess, evaluate and improve their patient care practices. Physician assistants are expected to:

- analyze practice experience and perform practice-based improvement activities using a systematic methodology in concert with other members of the health care delivery team
- locate, appraise, and integrate evidence from scientific studies related to their patients’ health problems
- obtain and apply information about their own population of patients and the larger population from which their patients are drawn
- apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness
- apply information technology to manage information, access on-line medical information, and support their own education
- facilitate the learning of students and/or other health care professionals
- recognize and appropriately address gender, cultural, cognitive, emotional and other biases; gaps in medical knowledge; and physical limitations in themselves and others

SYSTEMS-BASED PRACTICE
Systems-based practice encompasses the societal, organizational and economic environments in which health care is delivered. Physician assistants must demonstrate an awareness of and responsiveness to the larger system of health care to provide patient care that is of optimal value. PAs should work to improve the larger health care system of which their practices are a part. Physician assistants are expected to:

- use information technology to support patient care decisions and patient education
- effectively interact with different types of medical practice and delivery systems
- understand the funding sources and payment systems that provide coverage for patient care
- practice cost-effective health care and resource allocation that does not compromise quality of care
- advocate for quality patient care and assist patients in dealing with system complexities
- partner with supervising physicians, health care managers and other health care providers to assess, coordinate, and improve the delivery of health care and patient outcomes
- accept responsibility for promoting a safe environment for patient care and recognizing and correcting systems-based factors that negatively impact patient care
- apply medical information and clinical data systems to provide more effective, efficient patient care
- use the systems responsible for the appropriate payment of services

Semester Based Curriculum

TERM I

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<tr>
<th>NUMBER</th>
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<td>Physiology/Biochemistry I</td>
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<tr>
<td>MSPA 531</td>
<td>Introduction to Clinical Lab and Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>MSPA 556</td>
<td>Patient Education and Counseling</td>
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<tr>
<td>MSPA 551</td>
<td>History and Physical Exam I with Lab</td>
<td>3</td>
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<td>MSPA 505</td>
<td>Information Literacy</td>
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<td>MSPA 541</td>
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TERM II

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<tr>
<td>MSPA 512</td>
<td>Anatomy II with Lab</td>
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**Physician Assistant Institute**

**MSPA 522**  Physiology/Biochemistry II  
**MSPA 552**  History and Physical Exam II with Lab  
**MSPA 571**  Clinical Pharmacology I  
**MSPA 611**  Clinical Medicine I with Lab  
**MSPA 632**  Integrative Medicine and Practice I  
**MSPA 642**  Medical Seminar  

*CORE SUPERVISED CLINICAL CLERKSHIPS*

All students are required to complete all of the seven core supervised clinical clerkships. The clinical clerkship sequence will be individually assigned to students by the Director of Clinical Education.

**Emergency Medicine** - The Emergency Medicine clerkship gives the physician assistant student direct involvement and experience in a hospital Emergency Department setting. This will provide the student with practical clinical experience in the diagnosis, evaluation, and management of a wide range of emergent medical, orthopedic, traumatic, and surgical conditions. Students will participate in the care of pediatric and adult patients in all triage acuity classifications. This experience consists of a six week supervised clinical experience in an affiliated hospital emergency department designed to further develop the concepts of diagnosis and management acquired during the pre-clinical course work and to develop decision-making and cognitive skills related to patient care in an emergency room. This course will also provide the student a chance to develop additional clinical psychomotor skills by performing routine basic procedures in a supervised setting. By the completion of the rotation, the student will have gained an appreciation for the delivery of emergency medical care as well as an understanding of the role of the PA in the Emergency Department setting.

**Family Medicine** - This six week clinical clerkship is designed to expose the student to a variety of common ambulatory care situations. Settings vary, but experiences are centered around primary care, general medicine, and family practice. Students are responsible for eliciting chief complaints, gathering pertinent historical data, and performing relevant physical examinations. Students are also expected to develop problem lists, diagnostic impressions and therapeutic plans. These are to be presented to the preceptor in an organized, thoughtful manner. Students are expected to attend conferences on primary care problems when offered and participate in other assigned activities.

**Internal Medicine** - This 6 week clerkship is designed to provide an opportunity for the student to build on previous didactic experience and begin to develop competence in clinical medicine. The student is exposed to patients with a wide group of acute and chronic medical conditions. This clerkship will emphasize skills in gathering historical data, examination of patients, and provide the opportunity to perform a variety of diagnostic and therapeutic procedures. Students will interpret laboratory, EKG, and a variety of radiology studies. Students will formulate treatment plans, participate in discharge planning and patient education.

**Obstetrics and Gynecology** - This six week clerkship is designed to provide the student with exposure to common prenatal and gynecological problems. Hospital and clinic settings offer the student a wide range of outpatient and/ or inpatient experience. The student will become confident with the routine gynecological evaluation and patient education. The student may have the opportunity to participate in labor and delivery. Emphasis is placed on data gathering, differential diagnosis, patient management, maintenance of medical records, performance of diagnostic and therapeutic skills, follow up care and the provision of health education and counseling.

**Pediatrics** - This six week clerkship is designed to provide the student with exposure to common pediatric problems. Emphasis is placed on assessment and management of normal and abnormal growth and development, as well as acute and chronic disease states. The student will develop skills in obtaining historical information and examining the pediatric patient. While most of the experience will occur in the office setting, the student will have the opportunity to be involved on the pediatric inpatient setting also.

**Psychiatry/Behavioral Medicine** - This six week clerkship provides students experience in working with patients who have psychiatric, behavioral or substance abuse problems. Emphasis is placed on the recognition and management of these problems. The student will learn how to do a mental status exam and medically assess the patient to screen for non psychiatric causes of the patient's clinical presentation. The student will be involved in treating patients with psychiatric as well as co-occurring disorders with alcohol, benzodiazepine or opiate dependence.

**Surgery** - This is a six week clerkship on
GRADING
The Physician Assistant Institute letter grade system for courses is as follows:

Grade Quality Points
A  4.00
B+ 3.50
B  3.00
C+ 2.50
C  2.00
D  1.00 — Considered Failing
F  0.00
P/F Courses in this grading category are not calculated in the GPA
I  For Incomplete coursework
W  Withdrawal from Course

Clerkship grades will use the same scale as the didactic courses.

Administrative Grades
I  The grade of Incomplete “I”, is used by the faculty to indicate that a student has not completed all course requirements. A student will have one week from the last day of the term to meet with the faculty and complete all course requirements. Upon completion of the course requirements the faculty will submit the earned grade. Failure by the student to meet with the faculty and complete the requirements in one week from the last day of the term will result in the grade of “I” being converted to a grade of “F.” Any student with a grade of “F” or “W” will be required to register and retake that course in it’s entirety when the course is regularly scheduled. Any student with a grade of “F” or “W” will not be eligible to register for courses for which that course is a prerequisite.

W  Withdrawal grades are assigned based on the following policy statements:
1. If the student officially withdraws from a course during the official change-of-registration period, that course does not appear on the student’s transcript.
2. If a student officially withdraws from a course after the end of the change-of-registration period, but before the end of the official withdrawal period, a grade of “W” is assigned and that course remains on the student’s transcript. Courses with a grade of “W” do not count toward the QPR and do not count toward “hours attempted.”
3. The names of students who have officially withdrawn from a course and receive the grade of “W” are so listed on the class roster for the balance of the semester.
4. Any exceptions to the above, including late withdrawals, must be approved by the Director and the Vice Provost for Health Sciences before they become official and are recorded. Poor academic performance does not constitute a valid reason for late withdrawal.

Since courses in the Physician Assistant Program are sequential a withdrawal would prohibit the student from continuing.

Academic policies
Academic policies used to manage and direct the academic program are:
1. Attendance Requirements
2. Requirements for Graduation
3. Good Academic Standing
4. Academic Warning, Probation and Dismissal
5. Dismissal from the College (Non-Academic)
6. Withdrawal from the Program
7. Readmission to the Program

DIDACTIC APPEALS PROCESS
A student may appeal a grade, first to the instructor and then to the Director of Academic Affairs and finally the Director. If after appeal to the Director, a student remains unsatisfied, then an appeal may be presented to the Progress and Promotions committee. In this latter instance, the appeal must be based on substantive academic grounds.

Clinical Clerkship Appeals Process: A student may appeal a grade, first to the Director of Clinical Education and finally the Director. If after appeal to the Director, a student remains unsatisfied, then an appeal may be presented to the Progress and Promotions committee. In this latter instance, the appeal must be based on substantive academic grounds.

ATTENDANCE REQUIREMENTS
In the Physician Assistant Program, it is expected that all students will assume responsibility for meeting all academic and clinical obligations with punctuality. Student attendance is expected in all classes and represents a component of professionalism. Students remain responsible for all of the work in the courses in which they are registered.

Students must arrive at all educational and clinical sessions with the necessary lab instruments, texts, attire, and other materials as designated by the instructor, or may otherwise be excluded from participation in the activity. Students not properly prepared for competencies will not be evaluated. Make up competencies for lack of preparation will not be offered.

Acceptance into the Physician Assistant Institute at the University of Bridgeport requires a full-time commitment. It is an intense and rigorous program that is demanding. The program strongly discourages students from holding an outside job during the didactic and clinical years.

Academic Progress
STUDENT STATUS IN GOOD STANDING
To maintain full graduate status, the student must achieve a minimum GPA of 3.00 (based on 4.00) in his or her graduate study. Students whose GPA drops below a
3.000 while in the program will be placed on academic probation.

SATISFACTORY ACADEMIC PROGRESS

Students enrolled in the Physician Assistant Institute Master of Science degree program are in good academic standing and are making satisfactory academic progress; if they have successfully achieved the following criteria upon completion of their most recent semester of course work:

1. Did not receive a grade of “F or D” in any course, and
2. Maintain a cumulative grade point average of 3.0 or better.

A student who has not achieved the above criteria is not making satisfactory academic progress will be evaluated by the Director and the Progress and Promotion committee and will be required to follow the criteria as outlined in the catalog regarding Academic Probation and Dismissal.

PROGRESS AND PROMOTIONS

Each student will be presented by the faculty to the progress and promotions committee. The committee meets toward the end of the didactic period and once again prior to graduation. The committee is charged with the responsibility to assure that students are maintaining progress. If a student is not progressing as expected the committee may make recommendations for remediation or dismissal.

ACADEMIC ADVISING

Students will be assigned an academic advisor upon admission to the program. Students will meet with their advisor at least once per term to discuss progress and any problems they may be experiencing.

REMEDITION

Student progress will be monitored with enough frequency to ensure that deficiencies in students’ knowledge, skills and professionalism are identified in a timely fashion. Once identified, students with deficiencies will be required to enter the program’s remediation process. Students will meet with course directors and their faculty advisors to identify the nature and underlying causes of the problems. Opportunities for remediation will be identified and the program will work with students to their fullest ability. Remedial actions may include referral for tutoring, time management, study skills enhancement, test taking strategies, and/or personal counseling. Faculty advisors will meet regularly with students for documentation and follow-up. For further details please refer to the full policy in Appendix A of the Physician Assistant Institute student handbook.

ACADEMIC PROBATION

Graduate students must have a 3.000 cumulative GPA to be eligible to graduate. Graduate students whose cumulative GPA falls below a 3.00 will be placed on academic probation and will receive written notification of this status. At this point it is the student’s responsibility to meet with his or her advisor. In order to be removed from academic probation, the student will need to achieve a cumulative GPA of 3.00 within his or her next term of study. Failure to do so may subject the student to immediate dismissal from the program at the discretion of the Program Director.

PROGRAM WITHDRAWAL

Any student wishing to withdraw from the PA program must submit this in writing to the Program Director detailing the reason for withdrawal and expected plans if any, to return. A student who withdraws in “good standing” academically, will be allowed to reapply to the program after an interview with the program administration without going through the full admissions process. An exit interview with the Program Director will be required. A student in this category will be required to interview once again with program administration before readmission is approved.

Students who are withdrawing due to issues of an academic nature will be required to exit interview with Program Director and the Director of Academic Affairs to delineate a plan, detailing requirements for readmission. A student in this category will be required to interview once again with program administration before readmission is approved.

DISMISSAL

At any time a student can be dismissed from the program for academic or professional behavioral reasons. Any student in jeopardy of dismissal from the program will be notified in writing and have the option to respond. If necessary, an AD HOC Progress and Promotions committee will be convened and the issue presented. All recommendations of the committee will be presented to the Program Director for final action.

DISMISSAL FROM THE COLLEGE

Academic inadequacies are not the only reasons for dismissal from the College. The following is a list of additional causes for dismissal:

1. Failure to meet the generally accepted standards of ethical conduct and clinical practice. Dismissal of this nature is subject to review by a committee of peers, faculty and administration.
2. Pleading guilty or “nolo contendere,” or being found guilty of any crime involving moral turpitude or being felonious in nature.
3. Repeated violation of public policy, or the demonstration of behavior that creates safety hazards and/or disrupts the order of the institution. Dismissal of this nature is subject to review by a committee of peers, faculty and administration.
4. Failure to meet financial obligations or commitments to the College.

GRADUATION REQUIREMENTS

Candidates for the degree of Master of Science from the Division of Health Sciences must, in addition to completing all course and other degree requirements, have a minimum GPA of 3.00 and receive a C or higher in all courses. Each student must successfully complete the summative evaluation prior to graduation. Each student must complete and submit the graduate research requirement. No student will be graduated who has not completed the above outlines requirements and resolved all financial obligations with the University.
Admissions Requirements

While scores from the Graduate Records Examination (GRE) are not required, interested candidates must possess at a minimum:

- A baccalaureate degree from an a regionally accredited U.S. Internationally recognized institution
- A cumulative GPA of 3.00 Preferred (4.00 scale)
- A science GPA of 3.00 Preferred (4.00 scale)
- Evidence of at least 500 hours of health focused internship, volunteer experience, or prior employment in healthcare

REQUIRED COURSEWORK

- 1 semester of Biology with lab (credits must be in mammalian or human biology)
- 2 semesters of Anatomy and Physiology with lab
- 2 semesters of Chemistry with lab
- 1 semester of Statistics or equivalent
- 1 semester of Psychology
- 1 semester of English (writing preferred)

RECOMMENDED COURSEWORK

- 1 semester of Microbiology with lab
- 1 semester of Genetics with lab
- 1 semester of Biochemistry with lab

All prerequisites must be completed at a regionally accredited institution or appropriately recognized institution for international applicants to the Institute. Coursework presented for consideration must have been completed within the past 10 years prior to application.

- Preference for interview is given to applicants with both a cumulative GPA of 3.0 and a science GPA of a 3.0.
- All incoming students are required to undergo a criminal background investigation prior to entering the program. Any incoming student who does not pass a criminal background investigation will be withdrawn from the class and only refunded tuition and fees paid for the first term less the cost of the background investigation.
- All incoming students must comply with the University’s Technical Standards requirements.

The Physician Assistant Program does not accept transfer credits, applications for challenge examinations or credits for prior experiential learning. Admission to the program is highly competitive. Applications are reviewed relative to undergraduate cumulative and science GPA, patient care experience, completion of personal statement and letters of reference. Personal interviews, required for admission, are offered to the most qualified individuals. Meeting the minimal requirements for admission does not guarantee an interview or admission.

Application Procedures

DOMESTIC APPLICANTS

Domestic applicants must include:

1. A properly completed application for admission through CASPA
2. All official transcripts from any college attended
3. Statement of Purpose (500–750 words) addressing your desire for medicine as a career and your perception of your role as a physician assistant.
4. Three letters of recommendation of which one should be from:
   a) A Physician, Physician Assistant, Nurse Practitioner or Clinical Supervisor.
   b) A supervisor speaking to your required healthcare experience.
   c) General letter of recommendation attesting to character.
5. Supplemental documentation sent to the University as required at the time of the CASPA application

A completed application and supporting documents must be sent to the Office of Admissions by the deadline. Applications are reviewed as they become complete.

INTERNATIONAL APPLICANTS

International applicants must complete CASPA application. Applicants who have engaged in study in foreign countries must submit official evaluated transcripts by a recognized credential evaluation organization, such as World Education Services (WES). Fees charged by such an agency are the responsibility of the student.

All non-native English language speakers must demonstrate English language competency at a level appropriate for advanced scientific study. At a minimum, proficiency can be demonstrated in one of the ways listed below:

1. Minimum score of 80 from the internet based Test of English as a Foreign Language (TOEFL) taken within the past two years. Information on the TOEFL/TSE can be obtained from www.ets.org.
2. Receipt of a grade of “B” or better in one semester of English writing course at an accredited U.S. college or university.
3. Successful completion of intensive English Language study at the UB’s English Language Institute if necessary.

Technical Standards

University of Bridgeport
Physician Assistant Institute
Technical Standards

Completion of a degree at the University of Bridgeport signifies the graduate is prepared for practice in their prospective field by meeting the technical standard requirements. Technical standards, as distinguished from academic standards, refer to the physical, cognitive, and behavioral abilities required for satisfactory completion of curriculum. The essential required abilities include motor, sensory, communicative, intellectual, behavioral and social criteria. These standards are required by ARC-PA (A3.07) and are common to all programs. All candidates must possess the necessary intellectual ability and skills in observation, communication, motor, and behavior to enter and successfully complete the program. (Adopted from: The Report of the Special Advisory Panel, on Technical Standards for Medical School Admissions, AAMC 1979; Key Foundations for Developing Educationally Effective and Legally Sound Access
and Diversity Policies AAMC Professional Development Conference for Medical School Admissions Officers June 22, 2007.)

**Observation**
- Candidates must be able to observe visual presentations in the classroom and laboratory and at the patient bedside.
- Candidates must be able to observe patients closely and at a distance to observe the patient’s condition and complete a patient exam.
- Candidates must be able to immediately comprehend and respond to auditory instructions or requests.

**Communication**
- Candidate must be able to speak, hear and observe patients to obtain pertinent information.
- Candidates must be able to communicate in a clear and effective manner with patients and their families both orally and in writing, using appropriate grammar, spelling, and vocabulary.
- Candidates must possess the skills of sensitivity and confidentiality in patient communication. They must abide by the HIPAA policy.
- Candidates must be able to communicate with the health care team effectively and efficiently.

**Motor Skills**
- Candidates must be able to elicit information on patient exam by palpation, auscultation, and percussion as well as carry out diagnostic maneuvers.
- Candidates must be able to examine and treat patients with coordination of muscular movements, equilibrium, and sensation.
- Candidates must be able to manipulate equipment and instruments for basic laboratory tests and procedures such as airway management, suturing, needle placement & IV, stethoscope & ophthalmoscope, tongue blades, gynecologic speculum and scalpel.
- Candidates must be able to transport themselves from room to room and location to location in an efficient manner to see patients.
- Candidates must have the physical stamina to complete both the didactic and clinical portions of the training program which includes sitting, standing, and moving from classroom to laboratory to hospital.

**Intellectual Ability**
- Candidates must possess problem solving ability, a skill demanded of physician assistants.
- Candidates must be able to collect, measure, organize, prioritize, analyze and assimilate data in a limited time frame. Information presented in lecture must be successfully applied in the clinical setting by the candidate.
- Candidates must be able to interpret x-rays and EKG readings.
- Candidates must be able to communicate in a clear and effective manner with patients and their families both orally and in writing, using appropriate grammar, spelling, and vocabulary.

**Behavior**
- Candidates must be able to use their intellectual ability and exercise good judgment in completing their responsibilities for the diagnosis and treatment of patients.
- Candidates must have the capacity to respond to emergencies in a calm and reasoned manner.
- Candidates must be able to develop rapport with patients and their families and their colleagues.
- Candidates must be able to handle the physical, mental and emotional stress while functioning effectively.
- Candidates must demonstrate compassion, motivation, integrity, flexibility and a consciousness of social values.
- Candidates must be able to interact with a diverse population.
- Candidates must be able to accept criticism and modify behavior and practice as needed.
- Candidates must work cooperatively preserving relationships with other members of the health care team.
- Candidates must understand and apply ethical standards in practice.
- Candidates must demonstrate emotional stability at a level necessary to deliver sound patient care in all settings and to interact with interdisciplinary health care teams.

**Selection of Candidates**
The University of Bridgeport Physician Assistant Institute is coeducational and does not discriminate against any applicant on the basis of gender, race, religious orientation, sexual orientation or national origin. (Title VI, Civil Rights Act 1964)

All eligible finalists are invited for a personal interview before any action is taken upon their application. Among the qualities typical of most successful candidates for admission, the following are especially important:

1. Superior communication skills, both oral and written.
2. Evidence of strong motivation to become a Physician Assistant.
3. Initiative and honesty as evidenced in the candidates’ transactions within the application process and in all information submitted in support of the application.
4. Academic achievement and motivation toward the curriculum offered at the Institute.

**NOTIFICATION OF ACCEPTANCE**
Applicants will be notified in writing of the decision of the Admissions Committee within the admissions cycle.
School of Continuing and Professional Studies

Dean: Michael Giampaoli
Wahlstrom Library, Garden Level
126 Park Avenue
Telephone: (203) 576-4168
Fax: (203) 576-4537
E-mail: scpsinfo@bridgeport.edu
Website: www.bridgeport.edu/scps

The School of Continuing and Professional Studies (SCPS) serves the public by facilitating access to the University’s knowledge and resources through credit and noncredit courses and alternative methods of teaching and learning, and by aiding adult lifelong learners and organizations to become more competitive, improve their earning power, and enrich their lives.

THE IDEAL DEGREE COMPLETION PROGRAM

Associate Dean and Director of Advising: Yvrose Romulus
Director of Admissions: Mary Jane Dubner
Director of Faculty: Rich Laria
Wahlstrom Library, Garden Level
Telephone: (203) 576-4800
E-mail: idealinfo@bridgeport.edu

The Innovative Degree Excellence in Accelerated Learning (IDEAL) program was an early pioneer in accelerated degree-completion programs for adult learners, beginning in 1988 and expanding into three locations throughout the state; Bridgeport, Stamford and Waterbury.

The IDEAL Program gives adults age 23 or over the opportunity to complete a bachelor’s degree at a convenient time and place. Courses are mostly offered in five- and eight-week terms – one meeting per week – nine sessions per year in various formats; evening, weekend and online. All faculty who teach in the IDEAL program hold graduate degrees in their teaching discipline and possess relevant and current professional experience. They deliver quality instruction to the adult learner utilizing one’s knowledge and experience by fostering innovation in the classroom and a valuable learning environment that will enhance the students’ career.

Programs of Study

The degree completion program offers degrees in:

- A.A. in Business Administration
- A.A. in General Studies
- B.S. in Business Administration
- B.S. in General Studies Business concentration
- B.S. in General Studies Social Science concentration
- B.S. in General Studies Online Social Science concentration
- B.S. in Human Services
- B.S. in Human Services & Psychology (Double Major)
- B.S. in Psychology
- Certificate in Criminal Justice
- Certificate in Gerontology
- Certificate in Human Resource Management

OFFICE OF DISTANCE EDUCATION

Director: Kris Bickell
Wahlstrom Library, Garden Level
Telephone: (203) 576-4851
E-mail: ubonline@bridgeport.edu
Website: www.bridgeport.edu/online

The University of Bridgeport’s distance learning program offers students from around the world an opportunity to continue their education anytime from anyplace. Students can access their online classes 24 hours a day, 7 days a week, from the convenience of their home or office. At the core of the online courses is the individual guidance provided by the instructors and the interactive environment that allows a greater degree of class discussion and participation. Offering classes online since 1997, UB Online continues to provide students with the flexibility and convenience of learning from a distance, along with the same high quality of instruction that UB offers on the traditional campus.

Programs of Study

The following programs are offered through distance learning:

- B.S. in Dental Hygiene
- M.S. in Dental Hygiene
- B.S. in General Studies
- M.S. in Human Nutrition
- M.S. in Technology Management
- M.S. in Computer Science
- Certificate in Criminal Justice
- Certificate in Human Resource Management

STAMFORD CENTER

Director: Maureen Maloney
5 Riverbend Drive
Stamford, CT 06907
Telephone: (203) 358-0700
Fax: (203) 967-3735
E-mail: ubstamford@bridgeport.edu
Website: www.bridgeport.edu/stamford

The Stamford Campus is located in the Springdale section of Stamford in the Riverbend Center, a corporate park with plenty of secure parking, near the Springdale Metrorailway station, I-95, and Merritt Parkway. The facility includes wireless technology-enhanced classrooms, SmartBoard technology, networked computer lab, faculty and administrative offices, student resource room and free, convenient parking.

Programs of Study at the Stamford Center

UNDERGRADUATE

(Ideal Degree Completion Program):

- B.S. in Business Administration
- B.S. in General Studies
  (concentration in Business or Social Sciences)
- B.S. in Human Services

GRADUATE:

- MBA & Executive MBA (Evening and Weekend)
- M.S. in Counseling/Human Resource Development (Weekend)
- M.S. in Education (part-time Evening and Weekend)
- M.S. in Education Intern Program
- Teaching Certification (Elementary, Middle and Secondary)
- Sixth Year Education Program (General, Reading, and Administration)

WATERBURY CENTER

Director: Karen Ringwood
84 Progress Lane
Waterbury, CT 06705
Tel: (203) 573-8501
Fax: (203) 573-8576
E-mail: ubwaterbury@bridgeport.edu
Website: www.bridgeport.edu/waterbury

The University of Bridgeport’s Waterbury Campus

- B.S. in General Studies
- B.S. in Psychology
- B.S. in Human Services
- B.S. in General Studies Online Social Sciences Concentration
- B.S. in Dental Hygiene
- Certificate in Criminal Justice
- Certificate in Gerontology
- Certificate in Human Resource Management

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Campus is conveniently located off Interstate 84 from exit 25A on the Waterbury/Cheshire border and offers undergraduate, graduate, and post-graduate programs. The facility includes wireless technology-enhanced classrooms, SmartBoard Technology, networked computer lab, faculty and administrative offices, student resource room and free, convenient parking.

Programs of Study at the Waterbury Center

UNDERGRADUATE
(IDEAL Degree Completion Program):
• B.S. in General Studies (concentrations in Business or Social Sciences)
• B.S. in Human Services
• B.S. in Psychology

GRADUATE:
• M.S. in Education (part-time Evening and Weekend)
• M.S. in Education Intern Program
• Sixth Year Education Program (General, Reading, and Administration)
English Language Institute (ELI)

Director: Meg Cooney
English Language Institute
Carlson Hall
303 University Avenue
Telephone: (203) 576-4860
Fax: (203) 576-4861
E-mail: esl@bridgeport.edu

Senior Instructors:
Karen Howling and Steven Rashba
Carlson Hall
Telephone: (203) 576-4860
E-mail: esl@bridgeport.edu
Website: http://www.bridgeport.edu/eli

General Information
The English Language Institute of the University of Bridgeport offers an intensive program of English as a Second Language. ELI also organizes off-campus trips and on-campus activities designed to introduce international students to the United States, its language and its people.

ELI classes are offered year round, Monday through Friday. Full-time students attend class in the mornings and afternoons. Part-time students can choose to attend mornings or afternoons. For full-time students, a typical day consists of 5 hours of instruction, including classroom instruction in grammar, composition, reading, listening, and speaking, and assigned work in the university’s state-of-the-art language laboratory. ELI provides highly individualized instruction. Classes are limited to 15 students per teacher.

ELI students receive a University of Bridgeport student I.D. card and are entitled to use facilities on the campus of the University of Bridgeport, such as the Wahlstrom Library, Centers for Academic Computing, Email/Internet access, and the Wheeler Recreation Center, to name but a few.

Admission
ELI students must have a strong personal commitment to learning the English language. Courses in English as a Second Language are offered year-round at all levels from low-intermediate through advanced. ELI application forms and additional program information may be obtained at the above address or may be printed out directly from the ELI Internet address shown above.

Applicants must be at least 17 years old. Applications are accepted at any time of the year, and new students may begin class throughout the year. ELI issues an official letter of admission to the program and an I-20 form promptly upon receiving a completed ELI application. After receiving the I-20 issued by ELI, the prospective student may apply for an F-1 student visa at an American embassy or consulate prior to coming to the United States.

Why Students Enroll at ELI
Many students wish to enrich their knowledge of the English language while on leave from a school or a job in their home country. Most of these students return to their home country after a stay at ELI of from 7 weeks to a full year or more.

Many ELI students plan to apply for admission to a degree program at the University of Bridgeport. They improve their knowledge of English to meet the English language requirement for university admission. These students usually obtain “conditional acceptance” to a degree program and will receive full acceptance when they satisfy the University’s English language requirement for admission. It should be noted that successful completion of ELI’s advanced level satisfies the English language requirement for admission to the University of Bridgeport. ELI graduates are not required to take the TOEFL.

The Curriculum
The curriculum of ELI focuses on improving skills in speaking, listening comprehension, writing, and reading. At all levels of the curriculum, ELI instructors seek to help students improve their language skills through active use of the language both in and out of the classroom.

New students complete a placement test upon arrival and are placed in the appropriate level of English. Successful completion of the session allows the student to move up to the next level.

Student who are placed in the lower levels concentrate on basic grammar, speaking, listening, and reading skills, and practice paragraph writing. As students progress through the levels, they continue to improve their speaking and listening skills while taking on more challenging tasks in reading and writing. At all levels, reading novels and watching videos specially designed for ESL students provide the basis for rich classroom discussions to improve listening and speaking skills and prepare for American style classroom interaction.

In the advanced levels, students strive to achieve competence in language-dependent tasks similar to those that are required of native speakers of English in both academic and career-related activities. These include reading for content; note-taking from spoken and written materials; speaking skills needed to relate information, to persuade, to negotiate, and to inquire; and skills needed in essay and report writing, as well as in effective correspondence.

Graduates of ELI receive a “Certificate of Completion” which certifies that they have met the English language requirement for admission to the University of Bridgeport. Grades reports are issued upon request.

Schedule of Charges
Please see insert for current academic year for tuition, fees, and other expense.

ELI students should plan on spending about $200 per 8-week session to cover required books and miscellaneous personal expenses such as recreational travel, local transportation, books, laundry, clothing, etc.

Application Forms and Additional Information
Prospective students may obtain application forms, credit card charge forms, insurance information, etc. at ELI’s Internet site, by email, or by calling or faxing ELI.
Ernest C. Trefz Center for Venture Management and Entrepreneurial Studies

*The Ernest C. Trefz Center for Venture Management and Entrepreneurial Studies (CVM)* builds upon the entrepreneurial spirit of its principle supporter to encourage the development and retention of small businesses in the region. The Center provides opportunities for potential entrepreneurs and small business persons to get expert help with their ventures and for faculty and students to participate in entrepreneurial experiences.

**Components of the Center for Venture Management Include:**

- The Business Development Institute helps potential entrepreneurs and small business persons get help in start-up, business organization, finance, marketing, staffing and management; and assists in evaluating technology and development planning.

- The Bridgeport Foreign Trade Institute sponsors monthly international business seminars and conferences; develops networks of international business firms; provides consultation services to those individuals and organizations who attempt to enter international business; and assists local governments in promoting local businesses and products made in the State of Connecticut to foreign markets and investors.

- The Urban Management Institute studies socioeconomic issues in the region and recommends appropriate policy initiatives.

- The Special Projects Unit promotes activities especially targeted for small business people in the region through conferences, seminars and special events. Typical events include: “The Entrepreneurship Conference,” “The National Innovation Workshop,” “Technology Transfer and Licensing,” “The Banking Forum,” and Minority Workshops on “How To Succeed In Small Business.”

- The SCORE (Service Corps of Retired Executives), Bridgeport Chapter, is housed in the Trefz Center on the University campus. SCORE offers opportunities to students for internships in business consultation.
Pre-Professional Programs

The University of Bridgeport is committed to providing the appropriate education and guidance to those students for whom the baccalaureate degree is a stepping-stone to the completion of a professional degree in the health sciences or law. To this end the University has established a Pre-Law and a Pre-Health advisory program.

Pre-Law Studies

Advisor: William Greenspan
Mandeville Hall
230 Park Avenue
Telephone: (203) 576-4378
Fax: (203) 576-4388
E-mail: profweg@bridgeport.edu

While no single curricular path is the ideal preparation for law school, a broadly based undergraduate program that includes training in analytical reasoning and writing will serve you well. Law schools want students who can think, read, and write and who have some understanding of the forces that have shaped human experience. You can acquire these attributes in any number of college courses, whether in the humanities, the social sciences, or the natural sciences.

English language and literature courses are virtually indispensable. At the same time, every law student should be aware of the institutional processes of government through which much of the law is made and applied. You can gain this awareness through study in political science. Because the law is inseparable from our historic experience, you should have some acquaintance with American history. The fact that many legal subjects are intimately concerned with economic relations among individuals, and with the structure and development of business enterprises, makes a knowledge of macro and microeconomics valuable. Statistics, accounting, and computer science are other courses that will help you to understand special legal subjects and the practice of law.

Accredited law schools require that applicants take the Law School Admission Test (LSAT). In the admissions process, law schools are primarily interested in the student’s LSAT score, the student’s GPA, and the intensity and depth of the student’s undergraduate program, showing the student’s capacity to perform well at an academically rigorous level.

For more information on pre-law studies, check out the Law School Admission Counsel at www.lsac.org.

Pre-Health Professional Studies

Advisor to Pre-Health: Spiros Katsifis
Charles Dana Hall
169 University Avenue
Telephone: (203) 576-4265
Fax: (203) 576-4262
E-mail: skatsif@bridgeport.edu

Advisor to Pre-Health for General Studies Majors: Edward Geist
Charles Dana Hall
Telephone: (203) 576-4956
Fax: (203) 576-4051
E-mail: edgeist@bridgeport.edu

The major categories of Pre-Health Professional Studies are:

- Pre-Chiropractic
- Pre-Naturopathic
- Pre-Dental
- Pre-Veterinary
- Pre-Medical

Virtually all of the professional schools in these fields have the same minimum entrance requirements:

1. Completion of 90 credit hours of college work or completion of a bachelor's degree,
2. Completion of laboratory science courses in the following subjects:
   - Biology – 8 credit hours
   - General Chemistry – 8 credit hours
   - Organic Chemistry – 8 credit hours
   - General Physics – 8 credit hours
3. Completion of a liberal arts core that includes English composition, psychology, communications, humanities, social sciences, and the fine arts.

Depending on the health profession and school some variation in these requirements does occur.

The highest percentage of students admitted to health professional graduate schools major in biology with chemistry the second most common major. However, students majoring in any discipline, e.g. history, music, or psychology, are also viable candidates provided they satisfy the pre-requisites of the professional school to which they seek admission.

The University of Bridgeport’s Biology Major offers a B.A. or B.S. degree that provides a rigorous scientific and technical program for the pre-health professional student. See the Biology major for additional details.

The University of Bridgeport’s Bachelor of Science in General Studies (B.S.) degree program provides the student with the opportunity to create a program, in consultation with their advisor, that may fit the individual student’s particular needs.

The University offers a pre-Chiropractic program in the Biology major and the General Studies major. These programs are offered with the cooperation of the University of Bridgeport College of Chiropractic. In both programs the student may elect a 90-Credit Basic Option, Combined Baccalaureate/Doctor of Chiropractic Option, or Complete Baccalaureate followed by Doctor of Chiropractic Option. See the description of the pre-chiropractic program elsewhere in the catalog.

A pre-Naturopathic program is also offered in cooperation with the University of Bridgeport’s College of Naturopathic Medicine. In this program a student must complete the bachelor’s degree before entering the College of Naturopathic Medicine. See the description of this program elsewhere in the catalog.

It should be noted that pre-health professional study in any of the above areas provides an excellent foundation for other careers in the health sciences, including osteopathy, podiatry, physical therapy, optometry, and pharmacy.
Pre-Professional Programs for Chiropractic

The University of Bridgeport offers a pre-professional program for students preparing for Chiropractic College, the Pre-Chiropractic Program for undergraduate students. This program fulfills the prerequisites for all Chiropractic colleges in the United States and Canada, including the University of Bridgeport College of Chiropractic.

Pre-Chiropractic Programs

Three undergraduate options of pre-chiropractic are offered in the Biology and General Studies majors: 90-Credit Basic Option, Combined Baccalaureate/Doctor of Chiropractic Option, and Complete Baccalaureate Followed by Doctor of Chiropractic Option. In both majors the student earns a bachelor's degree which provides requirements for entrance into Chiropractic school.

The University of Bridgeport’s Biology major offers both the B.S. and B.A. degrees. The major provides a rigorous scientific and technical program for the pre-Chiropractic student. The program is described in the section on Biology degrees.

The University of Bridgeport’s Bachelor of Science in General Studies (B.S.) degree program provides the student with the opportunity to create a program in consultation with their advisor, that may fit the individual student’s particular needs. This program is described elsewhere in the catalog under the General Studies major.

Both of these majors fulfill the University of Bridgeport’s College of Chiropractic’s minimum entrance requirements, which are:

1. Completion of 90 semester hours of undergraduate course work with a minimum grade point average of 2.50 on a 4.00 scale. In addition to this the cumulative grade point average must be competitive with other applicants vying for seats in the College of Chiropractic.

2. Completion of the following specific courses as part of their professional preparation:
   - Communication/Language Skills 6 semester hours
   - Psychology 3 semester hours
   - Social Science 3 semester hours
   - Humanities 3 semester hours
   - Electives (Social Science/Humanities) 9 semester hours
   - Biology 8 semester hours
   - General Chemistry 8 semester hours
   - Organic Chemistry 8 semester hours
   - General Physics 8 semester hours

3. All biology, chemistry, and physics courses must:
   - be suitable for students majoring in the sciences,
   - consist of a first semester and second semester course in each subject
   - be passed with a grade of “C” (2.00 on a 4.00 scale) or better with a cumulative science quality point ratio of 2.25 or better,
   - have a related laboratory.

90-CREDIT BASIC OPTION

Students electing this option complete 90 credits of course work, which includes fulfilling the Chiropractic admission requirements listed above. The student applies to and, if accepted, pursues the D.C. degree in Chiropractic college, but does not earn a bachelor’s degree.

COMBINED BACCALAUREATE / DOCTOR OF CHIROPRACTIC OPTION

The University of Bridgeport School of Arts and Sciences and College of Chiropractic offer a seven year coordinated program leading to a combined Baccalaureate and Doctor of Chiropractic degree. Students enrolled in this option complete three years (at least 90 credits) of undergraduate coursework, including all required core courses in the University of Bridgeport curriculum. Students who successfully complete their first three years at the University of Bridgeport, and who comply with the requirements for admission to the University of Bridgeport College of Chiropractic described above may be granted admission into the College of Chiropractic.

Upon acceptance and entrance into the College of Chiropractic, the student may transfer up to 30 semester hours of basic science coursework in the College of Chiropractic to their undergraduate record to be applied towards completion of the B.S. or B.A. degree in Biology. A student must have a 2.50 grade point average in the College of Chiropractic and earn a grade of “C” or better in any course to be transferred. Courses which may be transferred for undergraduate credit are:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN 511</td>
<td>Histology</td>
<td>4</td>
</tr>
<tr>
<td>AN 512</td>
<td>Functional Anatomy &amp; Biomechanics I: Spine</td>
<td>5</td>
</tr>
<tr>
<td>BC 511</td>
<td>Biochemistry, Metabolism &amp; Nutrition</td>
<td>4</td>
</tr>
<tr>
<td>AN 513</td>
<td>General Anatomy I: Viscera</td>
<td>4.5</td>
</tr>
<tr>
<td>AN 514</td>
<td>Embryology I</td>
<td>1</td>
</tr>
<tr>
<td>PH 521</td>
<td>Physiology I</td>
<td>3</td>
</tr>
<tr>
<td>NS 521</td>
<td>Neuroscience I</td>
<td>3</td>
</tr>
<tr>
<td>AN 525</td>
<td>General Anatomy II: Head &amp; Neck</td>
<td>4.5</td>
</tr>
<tr>
<td>AN 526</td>
<td>Functional Anatomy &amp; Biomechanics II: Extremities</td>
<td>5</td>
</tr>
<tr>
<td>AN 527</td>
<td>Embryology II</td>
<td>1</td>
</tr>
<tr>
<td>NS 612</td>
<td>Neuroscience II</td>
<td>5</td>
</tr>
<tr>
<td>PH 612</td>
<td>Physiology II</td>
<td>5</td>
</tr>
<tr>
<td>MB 621</td>
<td>Microbiology</td>
<td>5</td>
</tr>
</tbody>
</table>

Upon satisfactory completion of all requirements for the baccalaureate degree, including the needed basic science appropriate Chiropractic courses, the School of Arts and Sciences will award the degree. Requirements for the B.A. or B.S. degree in Biology are listed under Biology. Requirements for the Bachelor of Science in General Studies degree are listed under General Studies.

The student must work closely with the undergraduate advisor to insure all required courses for the baccalaureate degree as well as prerequisites for Chiropractic College are fulfilled. This is especially important in earning the first 90 credits towards the degree before entering Chiropractic College.

To be accepted for the Doctor of Chiropractic degree program, the student must:

- maintain a minimum grade point average of 2.50 with a minimum grade of “C” in all undergraduate courses required by the University of Bridgeport College of Chiropractic;**
Pre-Professional Programs for Chiropractic

- schedule a meeting with the Director of Admissions of the University of Bridgeport College of Chiropractic immediately upon matriculation at the University of Bridgeport, indicating intent to continue into the Doctor of Chiropractic program upon completion of prerequisite undergraduate study. Pre-chiropractic advise-ment will be coordinated with the student’s undergraduate advisor;

- submit an application for admission to the Director of Admissions of the University of Bridgeport College of Chiropractic prior to registering for the fifth semester of pre-chiropractic study at the University of Bridgeport;

- successfully complete a personal inter-view with members of the Admissions Committee of the University of Bridgeport College of Chiropractic during the final semester of pre-chiropractic study.

** Students in this program who complete the requirements for admission into the College of Chiropractic with a grade point average of 3.00 or higher and a grade of “B” or better in each of the science prerequisites will be granted preferred status for admission into the University of Bridgeport College of Chiropractic for the entry date of their choice.

**COMPLETE BACCALAUREATE FOLLOWED BY DOCTOR OF CHIROPRACTIC OPTION**

Under this option, the student completes the baccalaureate degree, making sure all entrance requirements for Chiropractic College are satisfied. The student then, if accepted, enters Chiropractic College.

Prospective students with questions about any of the above programs and options may contact:

Spiros Katsifis, Ph.D.  
Chair of Biology  
Charles Dana Hall  
Telephone: (203) 576-4265  
E-mail: skatsif@bridgeport.edu

Edward Geist, Ph.D.  
Advisor to Pre-Chiropractic  
General Studies Major  
Charles Dana Hall  
Telephone: (203) 576-4956  
E-mail: edwgeist@bridgeport.edu
Pre-Professional Programs for Naturopathic Medicine

Pre-Naturopathic Programs
Undergraduate options of pre-naturopathy are offered in the Biology and Bachelor of Science in General Studies majors. In both of these programs the student earns a bachelor’s degree which provides requirements for entrance into the College of Naturopathic Medicine and additional skills that will assist the students in their studies once there.

The University of Bridgeport’s Biology major offers both the B.S. and B.A. degrees. The major provides a rigorous scientific and technical program for the pre-naturopathic student. The program is described in the section on Biology degrees.

The University of Bridgeport’s Bachelor of Science in General Studies degree program provides the student with the opportunity to create a program in consultation with their advisor, that may fit the individual student’s particular needs.

Both of these majors fulfill the University of Bridgeport’s College of Naturopathic Medicine’s minimum entrance requirements which are:

1. Completion of a baccalaureate degree, taken in an accredited degree-granting institution, with a minimum quality point ratio of 2.50 on a 4.00 scale.

2. Completion of the following specific courses as part of their professional preparation:
   - Communication/Language Skills
     6 semester hours
   - Psychology
     3 semester hours
   - Social Science
     3 semester hours
   - Humanities
     3 semester hours
   - Electives (Social Science/Humanities)
     9 semester hours
   - General Biology/Zoology/Anatomy & Physiology (with lab)
     8 semester hours
   - General Chemistry (with lab)
     8 semester hours
   - Organic Chemistry (with lab)
     8 semester hours
   - General Physics (with lab)
     8 semester hours

3. All biology/zoology/anatomy & physiology, chemistry, and physics courses must:
   - be suitable for students majoring in the sciences,
   - consist of a first semester and second semester course in each subject
   - be passed with a grade of “C” (2.00 on a 4.00 scale) or better with a cumulative quality point ratio of 2.50 or better,
   - have a related laboratory, and
   - have been taken within the past seven years.

Prospective students with questions about any of the above programs and options may contact:
Leanne Proctor
Director of Admissions
College of Naturopathic Medicine
Telephone: (203) 576-4108
E-mail: lproctor@bridgeport.edu
GRADUATE STUDIES DIVISION
PROGRAMS

The Graduate Studies Division is responsible for the management and administration of graduate and professional programs, graduate concentration areas, certificates and dual graduate degree programs at the University of Bridgeport.

The following graduate programs in the Schools of Engineering, Business and Education are the current programs that participate in the activities of the Graduate Studies Division.

1. M.S. (Biomedical Engineering)
2. M.S. (Computer Science)
3. M.S. (Computer Engineering)
4. M.S. (Counseling)
5. M.S. (Electrical Engineering)
6. M.S. (Global Development and Peace)
7. M.S. (Mechanical Engineering)
8. M.S. (Technology Management)
9. M.B.A. (Masters of Business Administration)
10. M.S. (Masters of Science in Instructional Technology)
11. M.S. (Computer Engineering)
12. Ph.D. (Computer Science and Engineering)

Candidates for Dual Graduate Degree Programs are typically required to complete a total of 48 credit hours to satisfy the requirements of two masters degrees. Some Dual Graduate Degrees require a different number of credit hours.

The following pages contain the detailed description of all the Dual Graduate Degree programs as well as the graduate certificate programs/major/concentration areas within the graduate curriculum.
Graduate Interdisciplinary Studies

Graduate Degree Concentrations and Professional Graduate Certificates

The following concentration areas can be incorporated into the graduate programs offered by the Schools of Engineering, Business, Education, and Arts & Sciences or some of the dual graduate degree programs. Matriculated and non-matriculated students can elect to obtain graduate certificates in any of the concentration areas by satisfying the requirements of the respective areas. Certificates can be earned without being a student in a degree program.

1. Accounting

REQUIRED
• GSB 508/ACCT 502 Financial Reporting and Analysis

CHOOSE ANY THREE FROM THE FOLLOWING:
• GSB 508/ACCT 501 Managerial Accounting
• GSB 501/ACCT 501 Intermediate Accounting
• GSB 502/ACCT 510 International Accounting
• GSB 504/ACCT 520 Auditing
• GSB 505/ACCT 530 Fundamentals of Personal Taxation
• GSB 509/ACCT 531 Fundamentals of Business Entity Taxation
• GSB 506/ACCT 511 Advanced Financial Accounting
• Any other course that is approved by the MBA program director

2. Advanced Applications and Systems Programming

CHOOSE ANY THREE FROM THE FOLLOWING:
• CPSC 410 Java Programming
• CPSC 411 Advanced Object-Oriented Program with Java
• CPSC 435 Unix System Programming
• CPSC 440 Windows Programming
• CPSC 545 Component Based Software Design
• CPSC 555 Web-based Application Development
• Any other course that is approved by the Department of Computer Science & Engineering

3. Biomedical Engineering

CHOOSE ANY THREE FROM THE FOLLOWING:
• ELEG 510 Medical Electronics and Electrical Safety
• ELEG 546 Biomedical Signal Processing
• ELEG 410 Biosensors
• ELEG 413 Bioinformatics
• Any other course that is approved by the Department of Electrical Engineering or Computer Science & Engineering


REQUIRED
• TCMG 535/AGMT 541 Foundations of Bio Tech Sciences & Management

CHOOSE ANY TWO FROM THE FOLLOWING:
• ELEG 446 Biomedical and Biometric Signal Processing
• ELEG 510 Medical Electronics and Electrical Safety
• ELEG 443 Applied Digital Signal Processing
• ELEG 481 Analog Electronics Lab
• MEEG 440 Ergonomics

5. CAD/CAM

CHOOSE ANY THREE FROM THE FOLLOWING:
• MEEG 421 Computer Aided Engineering/Design
• MEEG 422 Advanced CAE/CAD Projects
• MEEG 423 CAM & NC Machining
• Any other course that is approved by the Department of Mechanical Engineering

6. China/India Trade

REQUIRED
• MGMT 552 Foundation of Doing Business in China
- or -
• MGMT 551 Foundation of Doing Business in India

CHOOSE ANY THREE FROM THE FOLLOWING:
• GSB 511/FIN 500 International Trade and Finance
• GSB 524/FIN 525 International Financial Management
• GSB 541/MKTG 550 Global Market Management
• TCMG 508/MGMT 551 Product Management, Innovation and Commercialization
• Any other course that is approved by the MBA program director or Technology Management department

7. Computer and Information Security

REQUIRED
• CPSC 561/CPEG 561 Network Security

ELECTIVES: CHOOSE TWO FROM FOLLOWING
• CPSC 504 Artificial Intelligence
• ELEG 446 Biomedical and Biometric Signal Processing
• ELEG 453 Pattern Recognition
• Any other course that is approved by the Department of Computer Science

8. Computer Communications and Networking

REQUIRED
• CPEG 471 Data and Computer Communication
• CPEG 472 Computer Networks

ELECTIVES: CHOOSE ONE FROM THE FOLLOWING
• CPEG 473 Local Area Networks
• CPSC 561/CPEG 561 Network Security
• Any other course that is approved by the Department of Computer Science & Engineering


REQUIRED:
• TCMG 510/AGMT 536 Foundations of Corporate, Government and Information Security & Continuity Management

CHOOSE ANY TWO FROM THE FOLLOWING:
• TCMG 535/GSB 538/AGMT 533 Information Technology Strategy and Governance
• GSB 553/ITIS 550 Information Technology Security
• Any other course that is approved by the Technology Management department or MBA program director

10. E-Commerce

REQUIRED (MBA ONLY)
• GSB 552/ITIS 530 Internet Applications and Opportunities

CHOOSE ANY THREE FROM THE FOLLOWING:
• CPSC 555 Web-Based Application Development
• TCMG 535/GSB 538/AGMT 533 Information Technology Strategy and Governance
• GSB 548/MKTG 530 e-Marketing
• GSB 552/ITIS 530 Internet Applications and Opportunities (non-MBA)
• GSB 553/ITIS 550 Information Technology Security
• CPSC 410 Java Programming
• CPSC 411 Advanced Object-Oriented Programming w/ Java
• CPSC 440 Windows Programming
• CPSC 545 Component Based Software Design
• Any other course that is approved by the department of Computer Science and Engineering

11. Entrepreneurship

REQUIRED
• GSB 531/AGMT 531 Small Business and Entrepreneurship

CHOOSE ANY THREE FROM THE FOLLOWING:
• MEEG 490 Intellectual Property and Technology/ GSB 560/AGMT 580 Business and Society: Intellectual Property and Anti-Trust Law
• TCMG 508/GSB 549/MKTG 551 Product Management,
### 12. Environmental and Energy Management
**REQUIRED**
- TCMG 560/MGMT 560 Foundations of Environmental and Energy Management

**CHOOSE ANY TWO FROM THE FOLLOWING:**
- TCMG 561/MGMT 561 Economic, Regulatory, Political, Cultural and Social Issues in Environmental and Energy Management
- Any other course that is approved by the Mechanical Engineering or Technology Management departments or MBA program director

### 13. Fashion Merchandising
**CHOOSE ANY THREE FROM THE FOLLOWING:**
- GSB 542/MKTG 560 Mass Merchandising and Retailing
- GSB 544/MKTG 561 Fashion and Retail Buying
- GSB 545/MKTG 562 Advanced Textiles and Product Development
- Any other course that is approved by the Mechanical Engineering or Technology Management departments or MBA program director

### 14. Finance
**REQUIRED**
- GSB 511/FIN 500 International Trade and Finance

**CHOOSE ANY THREE FROM THE FOLLOWING:**
- GSB 520/FIN 505 Ad. Financial Management & Policy
- GSB 521/FIN 521 Fin. Management of Fin. Institutions
- GSB 522/FIN 541 Investment Analysis
- GSB 523/FIN 542 Financial Futures, Options and Swaps
- GSB 524/FIN 525 International Financial Management
- GSB 527/FIN 540 Financial Analysis and Modeling Methodology
- GSB 528/FIN 543 Technical Analysis & Trading
- Any other course that is approved by the MBA program director

### 15. Global Business
**REQUIRED**
- GSB 562/MGMT 598 Advanced Intellectual Property Management

**ELECTIVE 1: CHOOSE ANY ONE FROM THE FOLLOWING**
- GSB 511/FIN 500 International Trade and Finance
- GSB 524/FIN 525 International Financial Management
- GSB 528/FIN 543 Technical Analysis and Trading

**ELECTIVE 2: CHOOSE ANY ONE FROM THE FOLLOWING**
- TCMG 505/GSB 537/MGMT 532 Global Program and Project Management
- TCMG 533/GSB 538/MGMT 533 Information Technology Strategy and Governance
- TCMG 534/MKTG 534 Strategic Sourcing and Vendor Management
- TCMG 523/GSB 580/MGMT 523 Leadership, Teams and Managing Change

**ELECTIVE 3: CHOOSE ANY ONE FROM THE FOLLOWING**
- GSB 541/MKTG 550 Global Market Management
- GSB 543/MKTG 543 Problems in Market Research
- GSB 549/MKTG 530 e-Marketing
- TCMG 508/GSB 549/MKTG 551 Product Management, Innovation and Commercialization
- Any other course that is approved by Technology Management or MBA program director

### 16. Global Marketing
**REQUIRED**
- GSB 543/MKTG 545 Problems in Market Research

**CHOOSE ANY THREE FROM THE FOLLOWING:**
- GSB 540/MKTG 540 Buyer Analysis
- GSB 541/MKTG 550 Global Market Management
- GSB 542/MKTG 560 Mass Merchandising and Retailing
- GSB 548/MKTG 530 e-Marketing
- TCMG 508/GSB 549/MKTG 551 Product Management, Innovation and Commercialization
- GSB 546/MKTG 552 Services Marketing
- Any other course that is approved by the Technology Management or MBA program director

### 17. Global Program and Project Management
**REQUIRED**
- TCMG 505/GSB 537 Global Program and Project Management

**CHOOSE ANY TWO FROM THE FOLLOWING**
- TCMG 508/GSB 549/MKTG 551 Product Management, Innovation and Commercialization
- TCMG 533/GSB 538/MGMT 533 Information Technology Strategy and Governance
- Any other course approved by Technology Management or MBA program director

### 18. Health Care Management & Administration
**REQUIRED**
- MGMT 570 Foundations of Health Care Management and Administration

**CHOOSE ANY TWO FROM THE FOLLOWING:**
- GSB 533/MGMT 511 Human Resource Management
- ITIS 521 Healthcare Management and Administrative Technologies & Systems
- TCMG 523/GSB 580/MGMT 523 Leadership, Teams and Managing Change
- TCMG 484/GSB 535/MGMT 533 Finance and Accounting for Non-Financial Managers
- Any other course that is approved by the Technology Management department or MBA program director

### 19. Human Resources Management
**REQUIRED**
- GSB 533/MGMT 511 Human Resource Management

**CHOOSE ANY TWO FROM THE FOLLOWING:**
- GSB 534/MKTG 512 Organizational Development
- GSB 530/MGMT 530 Foundations of Management and Organization
- GOUN 525 Skills for Human Resource Professional
- Any other course that is approved by the MBA program director and the School of Education and Human Resources

### 20. Information Technology Management
**REQUIRED**
- GSB 554/ITIS 520 Information Systems Requirements, Analysis, Design and Deployment

**CHOOSE ANY THREE FROM THE FOLLOWING:**
- TCMG 533/GSB 538/MKTG 533 Information Technology Strategy and Governance
- GSB 553/ITIS 550 Information Technology Security
- GSB 555/ITIS 551 Enterprise Architecture and Knowledge Management
- GSB 557/ITIS 552 IT Infrastructure and Service Management and Delivery
- GSB 559/ITIS 553 Enterprise Information Systems
- Any other course that is approved by the MBA program director

### 21. Intellectual Property Management
**REQUIRED**
- MEEG 490/GSB 560/MGMT 580 Business and Society: Intellectual Property and Anti-Trust Law
Graduate Studies Division

CHOOSE ANY TWO FROM THE FOLLOWING:
- TCMG 512/GBS 562/MGMT 598 Advanced Intellectual Property Management
- TCMG 508/GBS 540/MKTG 551 Product Management, Innovation and Commercialization
- TCMG 500 Marketing, Entrepreneurship and Innovation for Management (core course for TM)
- Any other course that is approved by the Department of Technology Management.

22. Management and Operations

REQUIRED:
- GS B 530/MGMT 530 Foundations of Management and Organizations

CHOOSE ANY THREE FROM THE FOLLOWING:
- GS B 510/MGMT 550 Managerial Economics
- GS B 532/MGMT 540 Advanced Business Process and Operations Management
- GS B 533/MGMT 511 Human Resource Management
- GS B 534/MGMT 512 Organization Development
- GS B 556/MGMT 522 Conflict and Negotiation
- TCMG 505/GBS 557/MGMT 551 Global Program and Project Management
- TCMG 534/MGMT 534 Strategic Sourcing and Vendor Management
- TCMG 523/GBS 580/MGMT 523 Leadership, Teams and Managing Change
- Any other course that is approved by the MBA program director

23. Manufacturing Management

CHOOSE ANY THREE FROM THE FOLLOWING:
- MEE G 572 Manufacturing Technology and Techniques
- MEE G 573 Supply Chain Management
- MEE G 574 Principle of Logistics and Material Management
- MEE G 575 Manufacturing Strategy and Lean Manufacturing
- TCMG 534/MGMT 534 Strategic Sourcing and Vendor Management
- Any other course that is approved by the Department of Mechanical Engineering


REQUIRED:
- CPEG 410 Introduction to Computer Architecture

ELECTIVE 1: CHOOSE ONE FROM FOLLOWING
- CPEG 447 Logic Synthesis Using FPGA
- CPEG 448 Introduction to VLSI Design

25. Modern Data Base Systems

REQUIRED:
- CPSC 450 Data Base Design
- CPSC 551 Advanced Data Base

ELECTIVES: CHOOSE ONE FROM FOLLOWING
- CPSC 410 Java Programming
- CPSC 411 Advanced Object-Oriented Program with Java
- CPSC 440 Windows Programming
- CPSC 555 Web-Based Application Development
- Any other course that is approved by the Department of Computer Science & Engineering


REQUIRED:
- TCMG 508/GBS 549/MKTG 551 Product Management, Innovation and Commercialization

CHOOSE 2 FROM FOLLOWING:
- MEE G 490 Intellectual Property and Technology/GBS 560/MGMT 580 Business and Society: Intellectual Property and Anti-Trust Law
- GS B 541/MKTG 550 Global Market Management
- TCMG 534/MGMT 534 Strategic Sourcing and Vendor Management
- GS B 540/MKTG 540 Buyer Analysis

27. Robotics and Automation

REQUIRED:
- CPEG 460 Introduction to Robotics
- CPEG 570 Advanced Robotics

ELECTIVES: CHOOSE ONE FROM FOLLOWING
- CPSC 504 Artificial Intelligence
- CPSC 580 Introduction to Neural Networks
- CPSC 540 Image Processing
- CPEG 584 Machine Perception
- CPEG 585 Computer Vision
- ELEG 460 Controls
- Any other course that is approved by the Department of Computer Science & Engineering

28. Service Management and Engineering

REQUIRED:
- TCMG 571/MGMT 571 Foundations of Service Management and Engineering

CHOOSE ANY TWO FROM THE FOLLOWING:
- MKMT 552 Service Marketing
- TCMG 533/GBS 558/MGMT 553 IT Strategy and Governance
- GS B 557/ITIS 552 IT Infrastructure and Service Management and Delivery
- GS B 546/MKTG 552 Services Marketing
- Any other course approved by Technology Management or MBA program director

29. Signal and Image Processing

REQUIRED:
- ELEG 443 Applied Digital Signal Processing
- CPEG 540 Image Processing

ELECTIVES: CHOOSE ONE FROM FOLLOWING
- CPEG 584 Machine Perception
- CPEG 585 Computer Vision
- CPSC 580 Introduction to Neural Networks
- CPSC/ELEG 453 Pattern Recognition
- ELEG 453 Pattern Recognition
- ELEG 457 Speech Coding
- ELEG 454 Speech Signal Processing
- ELEG 459 Audio Processing Lab
- ELEG 460 Controls
- ELEG 461 Controls Lab
- CPSC/ELEG 543 DSP Lab
- ELEG 546 Biometric and Biomedical Signals
- CPEG 585 Computer Vision
- Any other course that is approved by the Department of Computer Science & Engineering or the Department of Electrical Engineering

30. Software Engineering

REQUIRED:
- CPEG 489 Software Engineering

ELECTIVES: CHOOSE TWO FROM FOLLOWING
- CPSC 440 Windows Programming
- CPSC 545 Component Based Software Design
- CPSC 555 Web-based Application Development
- Any other course that is approved by the Department of Computer Science & Engineering
31. Strategic Sourcing and Vendor Management

**REQUIRED:**
- TCMG 534/AGMT 534 Strategic Sourcing and Vendor Management.

**CHOOSE ANY TWO FROM THE FOLLOWING:**
- MEEG 573 Supply Chain Management
- GSB 511/FIN 500 International Trade and Finance
- TCMG 505/GSB 537/AGMT 532 Global Program and Project Management
- MGMT 552 Foundation of Doing Business in China
- MGMT 551 Foundation of Doing Business in India
- Any other course approved by Technology Management or MBA program director

32. Supply Chain and Service Management

**REQUIRED:**
- MEEG 573 Supply Chain Management

**CHOOSE FROM ANY TWO COURSES:**
- MEEG 574 Principle of Logistics and Material Management
- GSB 511/FIN 500 International Trade and Finance
- GSB 540/MKTG 540 Buyer Analysis
- TCMG 534/AGMT 534 Strategic Sourcing and Vendor Management
- GSB 559/ITIS 553 Enterprise Information Systems
- Any other course that is approved by the Department of Mechanical Engineering, Technology Management or MBA program director

33. Very Large Scale Integration (VLSI)

**CHOOSE ANY THREE FROM THE FOLLOWING:**
- ELEG 404 CMOS-VLSI
- ELEG 417 Modern Electronics
- CPEG/ELEG 446 MEMS (Micro-Electro-Mechanical Systems)
- ELEG 447 Semiconductors
- CPEG 447 FPGA (Field Programmable Gate Array)
- CPEG 448 VLSI (Digital)
- CPEG/ELEG 458 Analog VLSI
- ELEG 482 Analog and Digital IC Design
- CPEG/ELEG 548 Low Power VLSI
- CPEG/ELEG 549 VLSI Testing
- ELEG 550 VLSI Digital System
- ELEG 448 Microelectronic Fabrication
- Any other course that is approved by the Department of Computer Science & Engineering or the Department of Electrical Engineering

34. Wireless and Mobile Communications

**CHOOSE ANY THREE FROM THE FOLLOWING:**
- CPEG 481 Mobile Communications
- CPEG 471 Data and Computer Communications
- Any other course that is approved by the Department of Computer Science & Engineering or the Department of Electrical Engineering.
Undergraduate Degree Programs
Accounting Bachelor of Science Degree

**Program Director:** William Greenspan
Mandeville Hall, Room 309
Telephone: (203) 576-4378
Fax: (203) 576-4388
E-mail: profweg@bridgeport.edu

**Faculty Contact:** David Kohn
Mandeville Hall, Room 202
Telephone: (203) 576-4371
Fax: (203) 576-4388
E-mail: dkohn9021@bridgeport.edu

**Curriculum and Program Requirements**

The accounting curriculum provides an opportunity for students with varied interests to obtain a broad-based understanding of the role of accounting in the measurement and communication of financial and economic data. A number of interdisciplinary courses have been designed for those students wishing a maximum overview of multinational issues in accounting and taxation as well as for those students who intend to pursue more advanced studies in accounting. Accounting students who expect to take the Certified Public Accountant professional examinations should select elective courses with the approval of and in consultation with the Chair of the Accounting Department.

A student is admitted to the School of Business, through an evaluation of the high school transcript, class rank, and SAT scores, based on the determination that the student has demonstrated potential in analytical reasoning, comprehension and expression in words and creative power in thinking. Students transferring from undergraduate majors of other colleges should have a minimum quality point ratio of 2.5.

Management 350, Business Policy and Strategy, is the Capstone Course of this degree program. The final examination of this course shall constitute, therefore, an outcome assessment of what the student has learned in the program. This examination, normally an extensive and comprehensive case study, will be graded by several faculty members representing different and relevant disciplines.

**Learning Outcomes**

**LEARNING OBJECTIVES**

Students 1) acquire the knowledge necessary for an understanding of business data; 2) develop the technical skills necessary to measure, analyze, and interpret economic data; 3) learn how to effectively communicate economic data; and 4) acquire the accounting foundation that enables them to pursue advanced study required for the successful completion of the CPA exam.

**ASSESSMENT**

Students are evaluated with exams, homework assignments and oral presentations. Students will be evaluated and benchmarked with a standardized accounting test. This will ensure their preparation for graduate study towards the CPA exam. Students’ accounting knowledge and skills also will be tested with a program specific exam when they begin and finish their accounting program.

**Summary of Requirements**

**CREDITS**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Requirements</td>
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<tr>
<td>Accounting Program Requirements</td>
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<td>Accounting Electives</td>
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<td>Free Electives</td>
<td>12</td>
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<td><strong>Total</strong></td>
<td><strong>120</strong></td>
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**PROGRAM REQUIREMENTS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ACCT 101</td>
<td>Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 102</td>
<td>Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 103</td>
<td>Managerial/Cost Accounting</td>
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</tr>
<tr>
<td>ACCT 210</td>
<td>Financial Accounting Systems</td>
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<tr>
<td>ACCT 300</td>
<td>Intermediate Accounting I</td>
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<tr>
<td>ACCT 311</td>
<td>Fundamentals of Taxation</td>
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<tr>
<td>CAIS 191</td>
<td>Computer Concepts</td>
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<tr>
<td>CAIS 101</td>
<td>Statistics</td>
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<tr>
<td>CAIS 102</td>
<td>Applied Statistics</td>
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<tr>
<td>CAIS 201</td>
<td>Introduction to CAIS</td>
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<tr>
<td>FIN 309</td>
<td>Managerial Finance</td>
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<tr>
<td>FIN 321</td>
<td>Investment Principles</td>
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<tr>
<td>FIN 380</td>
<td>Multinational Finance</td>
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<tr>
<td>LAW 251</td>
<td>Business Law I</td>
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<tr>
<td>MGMT 301</td>
<td>Operations Management</td>
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<tr>
<td>MGMT 302</td>
<td>Multicultural Management</td>
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</tr>
<tr>
<td>MGMT 350</td>
<td>Business Policy and Strategy</td>
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<tr>
<td>MKTG 305</td>
<td>Principles of Marketing</td>
<td>3</td>
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<td>MKTG 342</td>
<td>Multinational Marketing</td>
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<tr>
<td>BUAD 382</td>
<td>Senior Project/Internship</td>
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</table>

Plus six semester hours of Accounting electives selected two courses from:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>ACCT 301</td>
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<tr>
<td>ACCT 302</td>
<td>Advanced Accounting</td>
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<td>ACCT 327</td>
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<tr>
<td>ACCT 335</td>
<td>Auditing</td>
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</table>

**FREE ELECTIVES**

May be selected from any University courses with the permission of the advisor.
## Accounting Bachelor of Science Degree

### GENERAL EDUCATION REQUIREMENTS

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ENGL C101</td>
<td>Composition and Rhetoric</td>
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<tr>
<td>FYS 101</td>
<td>First Year Seminar</td>
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<td>MATH C105</td>
<td>Intermediate Algebra</td>
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<td>SCI</td>
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<td>HUM</td>
<td>Humanities Core</td>
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<tr>
<td>ECON 201</td>
<td>Principles of Economics - Macro</td>
<td>3</td>
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<tr>
<td>ECON 202</td>
<td>Principles of Economics - Micro</td>
<td>3</td>
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<tr>
<td>ENGL 202</td>
<td>Advanced Composition (for Business)</td>
<td>3</td>
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<tr>
<td>FA</td>
<td>Fine Arts Core</td>
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<tr>
<td>CAPS C390</td>
<td>Capstone Seminar</td>
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<td>SOSC</td>
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Total Semester Hours: 120

### SIXTH SEMESTER

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<td>FIN 380</td>
<td>Multinational Finance</td>
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<tr>
<td>MKTG 342</td>
<td>Multinational Marketing</td>
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<tr>
<td>MGMT 302</td>
<td>Multicultural Management</td>
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### SEVENTH SEMESTER

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<td>FIN 321</td>
<td>Investment Principles</td>
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<td>ACCT 311</td>
<td>Fundamentals of Taxation</td>
<td>3</td>
</tr>
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<td>BUAD 382</td>
<td>Senior Project/Internship</td>
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<tr>
<td>Free Elective</td>
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<td>3</td>
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<td>SOSC</td>
<td>Social Science Core</td>
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### EIGHTH SEMESTER

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<td>MGMT 350</td>
<td>Business Policy and Strategy</td>
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<td>CAPS C390</td>
<td>Capstone Seminar</td>
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<td>Free Electives</td>
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<td>9</td>
</tr>
</tbody>
</table>

Total Semester Hours: 120
**Biology Bachelor of Arts / Bachelor of Science Degree**

**Chair:** Spiros Katsifis  
Dana Hall, Room 210  
Telephone: (203) 576-4265  
Fax: (203) 576-4262  
E-mail: skatsif@bridgeport.edu

**Curriculum and Program Requirements**

The Biology Department offers a Bachelor of Arts and a Bachelor of Science degree in Biology. Students are introduced in laboratory training to Molecular Biology, Microbiology, Ecology, Immunology, Toxicology, Analytical Techniques and Tissue Culture. Both degrees prepare students to pursue a traditional graduate biology degree or to successfully enter a graduate school in Biomedical Science, Biotechnology or Allied Health and Health Professions. Biology graduates can enter the work force in government, the pharmaceutical or chemical industry, EPA, FDA, NIH or other research institutions. Students upon successful completion of two semesters in the general biology program may apply to pursue a specific option in biology such as:

**BIOMEDICAL SCIENCE / BIOTECHNOLOGY**

Students interested in pursuing a career in Biomedical Science or Biotechnology follow the basic biology curriculum. For their elective courses they should choose from the following: Microbiology (BIOL 320), Human Anatomy and Physiology (BIOL 113, 114), Comparative Anatomy (BIOL 210), Biochemistry (CHEM. 365), Immunology (BIOL 441), Toxicology (BIOL 444), Histology (BIOL 303), Embryology (BIOL 328), and Biostatistics (BIOL 203B). Students should participate in a summer research program for practical experience in their field of study. A research project is required.

**ENVIRONMENTAL BIOLOGY**

Students who choose an option in Environmental Biology should take elective courses such as Environmental Health (BIOL 418), Marine Biology (BIOL 380), Microbiology (BIOL 320), Toxicology (BIOL 444), Environmental Geology (GEOL 205), Marine ecology (BIOL 430), Biostatistics (BIOL 203B) and fieldwork. Participation in a summer study program is recommended.

**MARINE BIOLOGY**

A marine biology option in the Biology major takes advantage of the University’s location on Long Island Sound and proximity to several marine research laboratories and teaching institutions. Students electing the marine biology option follow the basic biology curriculum. Elective courses should include marine related courses: e.g. marine ecology, invertebrate zoology, environmental health, microbiology, microbial ecology, fieldwork, and analytical chemistry. Students are strongly encouraged to participate in summer internships and directed research.

**ECOLOGY/EVOLUTION**

Students interested in a career in Ecology/Evolution should include courses such as Marine Ecology (BIOL 430), Comparative Anatomy (BIOL 210), Biostatistics (BIOL 203B) and fieldwork. Students should use their independent research course to complete a project for participation at a National Meeting.

**TOXICOLOGY**

The Biology Program offers a concentration in General Toxicology/Forensic Toxicology. Interested students should follow the basic biology curriculum and their elective courses should be selected from the following: General Toxicology (BIOL 444), Physical Chemistry (CHEM 319 or 320), Biochemistry (CHEM 365), Instrumental Analysis (CHEM 361), Immunology (BIOL 441), Microbiology (BIOL 320), Environmental Health (BIOL 418) and Biostatistics (BIOL 203B). Students are advised to participate in a summer research program related to their field. A research project is required.

**PRE-HEALTH PROFESSIONAL OPTIONS**

The Biology Major offers pre-health professional options in Pre-Medicine, Pre-Dentistry, Pre-Veterinary, Pre-Pharmacy, Pre-Chiropractic, Pre-Naturopathic, Pre-Osteopathic, Pre-Occupational Therapy, Pre-Physician Assistance and Pre-Physical Therapy and Pre-Nutrition.

**BIOLOGY MINOR**

Students wishing to obtain a minor in Biology must take Biology 101, 102, 211, 223, and one additional Biology course of at least 3 credits at the 200 level or higher.

**Learning Outcomes**

By completing the Biology program, students will:

1. have critical tools to exercise responsibility and stewardship of the biosphere by assuming positions of leadership in our global society.
2. have mastered the fundamental principles of cell/molecular /organism biology.
3. have training necessary to apply biological, biomedical and biotechnological principles and techniques to human health and well-being from a holistic/wellness perspective.
4. have awareness and appreciation of interdisciplinary interactions among other disciplines in the natural sciences, mathematics and cognate fields.
5. have awareness to appreciate the beauty, complexity and fragility of our biosphere, and the intricate dynamics of balancing systems within the biosphere.
6. have critical tools to exercise responsibility and stewardship of the biosphere by assuming positions of leadership in our global society.
**BIOLOGY, BACHELOR OF ARTS**

The Bachelor of Arts degree in Biology is for students who are seeking a broad liberal arts program. It is designed to allow students to obtain a minor that may be appropriate for their career aspirations.

The Biology Major in cooperation with the School of Education offers a 5-year combined Bachelor of Arts in Biology/Master of Science in Education program for students interested in pursuing a teaching career. Students interested in this program should contact the Chair of Biology.

### Summary of Requirements

**PROGRAM REQUIREMENTS**

<table>
<thead>
<tr>
<th>Course</th>
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**GENERAL EDUCATION REQUIREMENTS**

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**Electives**

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**Total Semester Hours** 120

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**Suggested Program**

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**Junior Year and Senior Year**

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**Total Semester Hours** 120

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**BIOLOGY, BACHELOR OF SCIENCE**

The Bachelor of Science in Biology is for students who wish to pursue a career that requires further study at the graduate or professional level. Students interested in scientific research or one of the health professions should follow the B.S. degree program.

### Summary of Requirements

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**Total Semester Hours** 120

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**GENERAL EDUCATION REQUIREMENTS**

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**Total Semester Hours** 120

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1. Spanish is strongly recommended for pre-health professional students.
2. Biology and cognate courses at the 200 level or higher.
3. Pre-Health professional students must take Psych 103, General Psychology, as one of the electives.
Suggested Program

FRESHMAN YEAR

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SOPHOMORE YEAR

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JUNIOR YEAR AND SENIOR YEAR

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59

Total Semester Hours 120

1. Biology and cognate courses at the 200 level or higher.

2. Pre-Health professional students are strongly recommended to take Psych 103, General Psychology, and Spanish as electives.
Business Administration  Associate in Arts Degree

Program Director: William Greenspan
Mandeville Hall, Room 309
(203) 576-4378
Fax: (203) 576-4388
E-mail: profweg@bridgeport.edu

Faculty Contact: Art McAdams
Mandeville Hall, Room 217B
Telephone: (203) 576-4648
E-mail: amcadams@bridgeport.edu

Curriculum and Program Requirements

The Associate in Arts in Business Administration provides options for students who want only two years of college study and students who are not certain about their degree objectives.

This degree program requires that all freshman and sophomore core business courses and business prerequisites, as well as University core requirements, be completed with an average grade of “C” or better.

Two-year business study at the University of Bridgeport provides many advantages not usually available to community college or two-year college students.

All the resources of the university are available to two-year students. This includes planning/placement services and all of the social, sports and extracurricular activities of the campus.

Students receive all the guidance and advising of a small, private two-year college, while completing their studies in the environment of a major university.

Learning Outcomes

LEARNING OBJECTIVES

Students 1) acquire basic general business knowledge; 2) develop practical technical skills necessary for initially pursuing a junior level entry position; 3) learn how to communicate with others in their organization; and 4) understand the role of business in the larger society.

ASSESSMENT

Students will be evaluated with a program specific exam related to the basic business courses at the beginning and end of their two-years of undergraduate study. Students are evaluated by course level exams, assignments, projects and oral presentations.

Summary of Requirements

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GENERAL EDUCATION REQUIREMENTS

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Total Semester Hours 60

Suggested Program

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THIRD SEMESTER

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FOURTH SEMESTER

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Total Semester Hours 60
Business Administration Bachelor of Science Degree

Program Director: William Greenspan
Mandeville Hall, Room 309
Telephone: (203) 576-4578
Fax: (203) 576-4388
E-mail: profweg@bridgeport.edu

Curriculum and Program Requirements

The Business Administration major provides the maximum flexibility in course selection for a student to fulfill both personal and professional goals. Upon completion of University and College core requirements the student may pursue a myriad of unique combinations of study to satisfy either a general or specific purpose. This includes combining study from two or three of the major disciplines of study within the college including those disciplines not listed in this catalog such as Economics and Management Information Systems, and combinations with other colleges at the University. In all cases the student’s study program must be approved by the student’s faculty advisor.

Students interested in adding a Teacher Certification to a program in Business Administration can do so. A brief description of the teacher certification requirements appears elsewhere in this catalog under the School of Education section.

The Bachelor of Science degree in Business Administration permits a student, upon completion of the core business requirements and prerequisites applicable to all business degrees, to create a unique combination of courses in business or other academic disciplines.

All business courses listed under other majors as well as courses in other academic disciplines such as political economy, psychology or sociology, may be chosen as elements of this major.

Learning Outcomes

LEARNING OBJECTIVES

Students 1) acquire basic general business knowledge; 2) integrate knowledge across the business disciplines; 3) learn how to communicate with others in their organization; and 4) acquire in-depth knowledge and skills related to a particular discipline and career path.

ASSESSMENT

Students will be evaluated with a program specific exam related to the basic business courses at the beginning and end of their undergraduate study. Students are evaluated by course level exams, assignments, projects and oral presentations.

Summary of Requirements

| CREDITS |
|-----------------|---|
| General Education Requirements  | 42 |
| Business Administration Program Requirements  | 51 |
| Business Administration Electives  | 12 |
| Free Electives  | 15 |
| **Total**  | **120** |

**PROGRAM REQUIREMENTS**

| CREDITS |
|-----------------|---|
| ACCT 101 Principles of Accounting I  | 3 |
| ACCT 102 Principles of Accounting II  | 3 |
| ACCT 103 Managerial/Cost Accounting  | 3 |
| CAIS 191 Computer Concepts  | 3 |
| LAW 251 Business Law I  | 3 |
| CAIS 101 Statistics  | 3 |
| CAIS 102 Applied Statistics  | 3 |
| FIN 309 Managerial Finance  | 3 |
| MGMT 301 Operations Management  | 3 |
| CAIS 201 Introduction to CAIS  | 3 |
| MKTG 342 Principles of Marketing  | 3 |
| MKTG 305 Principles of Marketing  | 3 |
| FIN 321 Investment Principles  | 3 |
| FIN 380 Multinational Finance  | 3 |
| MGMT 302 Multiculture Management  | 3 |
| MGMT 342 Multinational Marketing  | 3 |
| MKTG 350 Business Policy and Strategy  | 3 |
| BUAD 382 Senior Project/Internship  | 3 |
| Business Electives*  | 12 |
| Free Electives  | 15 |
| **Total**  | **78** |

*The 12 credits (4 courses) of business electives may be selected from Accounting, Economics, Finance, International Business, Management and Industrial Relations, Information Systems, and Marketing.

Free electives (15 credits) may be selected from any University courses with the permission of the advisor.

Specific course requirements are described under each major description or course description section of this catalog.

**GENERAL EDUCATION REQUIREMENTS**

| CREDITS |
|-----------------|---|
| ENGL C101 Composition and Rhetoric  | 3 |
| ENGL C102 Principles of Accounting I  | 3 |
| MATH C105 Intermediate Algebra  | 3 |
| SCI Natural Sciences Core  | 6 |
| HUM Humanities Core  | 6 |
| ECON 201 Principles of Economics - Macro  | 3 |
| ECON 202 Principles of Economics - Micro  | 3 |
| ENGL 202 Advanced Composition (for Business)  | 3 |
| FA Fine Arts Core  | 3 |
| SOSC C390 Capstone Seminar  | 3 |
| SOSC Social Sciences Core  | 6 |
| **Total**  | **42** |

**Total Semester Hours** 120

**Suggested Program**

**FIRST SEMESTER**

| CREDITS |
|-----------------|---|
| ACCT 101 Principles of Accounting I  | 3 |
| ENGL C101 Composition & Rhetoric  | 3 |
| MATH C105 Intermediate Algebra  | 3 |
| FYS 101 First Year Seminar  | 3 |
| CAIS 191 Computer Concepts  | 3 |
| **Total**  | **12** |

**SECOND SEMESTER**

| CREDITS |
|-----------------|---|
| ACCT 102 Principles of Accounting II  | 3 |
| ENGL 202 Advanced Composition (for Business)  | 3 |
| CAIS 101 Statistics  | 3 |
| SSCI Natural Sciences Core  | 3 |
| **Total**  | **12** |

**THIRD SEMESTER**

| CREDITS |
|-----------------|---|
| ECON 201 Principles of Economics - Macro  | 3 |
| CAIS 102 Applied Statistics  | 3 |
| SSCI Social Science Core  | 3 |
| FA Fine Arts Core  | 3 |
| ACCT 103 Managerial Accounting  | 3 |
| **Total**  | **12** |

**FOURTH SEMESTER**

| CREDITS |
|-----------------|---|
| ECON 202 Principles of Economics - Micro  | 3 |
| CAIS 201 Introduction to CAIS  | 3 |
| LAW 251 Business Law I  | 3 |
| SCI Natural Science Core  | 3 |
| SSCI Social Science Core  | 3 |
| **Total**  | **12** |

**FIFTH SEMESTER**

| CREDITS |
|-----------------|---|
| FIN 309 Managerial Finance  | 3 |
| MKTG 305 Principles of Marketing  | 3 |
| MGMT 301 Operations Management  | 3 |
| HUM Humanities Core  | 3 |
| **Total**  | **12** |
### Business Administration Bachelor of Science Degree

**SIXTH SEMESTER**
- FIN 380 Multinational Finance 3
- MKTG 342 Multinational Marketing 3
- MGMT 302 Multiculture Management 3
- HUM Humanities Core 3
- Free Elective 3

**SEVENTH SEMESTER**
- FIN 321 Investment Principles 3
- BUAD 382 Senior Project/Internship 3
- Major Electives 6
- Free Elective 3

**EIGHTH SEMESTER**
- MGMT 350 Business Policy and Strategy 3
- CAPS C390 Capstone Seminar 3
- Major Electives 6
- Free Elective 3

**Total Semester Hours** 120
Computer Engineering Bachelor of Science Degree

Chair: Ausif Mahmood
Engineering Technology Building
Telephone: (203) 576-4145
Fax: (203) 576-4765
E-mail: mahmood@bridgeport.edu

Curriculum and Program Requirements

The ever increasing use of the computer in today’s world offers expanding opportunities in this field of specialization. This program provides a bridge between the disciplines of electrical engineering and computer science. Graduates can enter such fields as chip design, software engineering, robotics, and a variety of computer-controlled applications. This requires the development of the engineering approach through the understanding of engineering mathematics, digital and analog electronics and control, as well as computer languages, computing theory and computer architecture. Design and problem solving form the heart of the discipline and a variety of computer aided design (CAD) tools are utilized to facilitate learning and implementation.

The graduate from this program will obtain the basic education in the first three years. The final year is utilized to explore specific areas of interest. One can choose a software oriented program including such areas as artificial intelligence, knowledge based systems and software design or a hardware oriented program pointing toward computer or integrated circuit design, robotics and networking.

The engineering approach and knowledge of computer structure are the attributes that make it unique. This program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. A total of 132 semester hours are required for graduation.

Program Objectives

Our Computer Engineering Graduates will:

- Be proficient in defining and solving engineering problems.
- Achieve expertise at developing engineering systems.
- Be effective communicators and team players.
- Appreciate diversity of opinion, understand ethical issues and demonstrate a commitment towards profession.
- Be prepared for lifelong careers and professional growth.

Learning Outcomes

Our Computer Engineering Students will:

1. Demonstrate comprehension of math, science, and basic computer engineering topics.
2. Comprehend the design of computer architectures; and integrated systems having major hardware and software components.
3. Exhibit problem solving skills.
4. Have the ability to use techniques, skills, and modern engineering tools necessary for engineering practice.
5. Work effectively on teams.
6. Demonstrate the ability to identify and apply concepts of engineering economics and project planning.
7. Demonstrate knowledge of contemporary global and societal issues and their relationship to professional ethics and engineering solutions.
8. Demonstrate the ability to plan and conduct laboratory experiments and interpret and report the results.
9. Exercise strong oral and written communication skills including those needed for technical writing.
10. Have an awareness of the need for and demonstrate the ability to keep learning throughout life along with an appreciation of diversity in the world and in intellectual areas.

Summary of Requirements

<table>
<thead>
<tr>
<th>ENGINEERING CORE REQUIREMENTS</th>
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<tbody>
<tr>
<td>CHEM 103 General Chemistry I</td>
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</tr>
<tr>
<td>CPEG 210 Digital System Design I</td>
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</tr>
<tr>
<td>CPEG 286 Microprocessor System Design</td>
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<tr>
<td>CPSC 101/101a Introduction to Computing I</td>
<td>4</td>
</tr>
<tr>
<td>CPSC 233/235 Electrical Engineering I w/lab</td>
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<tr>
<td>ENGR 111 Introduction to Engineering I</td>
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<td>ENGR 300 Econ. and Management of Engr Project</td>
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<tr>
<td>MATH 215 Calculus III</td>
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<tr>
<td>MATH 301 Differential Equations</td>
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<tr>
<td>MATH 323 Probability and Statistics</td>
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<tr>
<td>MEEG 223 Materials Science for Engineers</td>
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<table>
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<tr>
<th>PROGRAM REQUIREMENTS</th>
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<tbody>
<tr>
<td>CPEG 312 Computer Organization</td>
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<tr>
<td>CPEG 315 Digital Systems Design II w/lab</td>
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<tr>
<td>CPEG 387 Embedded System Design</td>
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<tr>
<td>CPEG 408 Operating Systems</td>
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<tr>
<td>CPEG 447/448 Logic Synthesis/LSI Design</td>
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<td>CPEG 449 A, B CPEG Senior Design Project</td>
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<tr>
<td>CPEG 489 Software Engineering</td>
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<tr>
<td>CPSC 102/102a Introduction to Computing II (Data Structures and Algorithms)</td>
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<tr>
<td>CPSC 227 Discrete Structures</td>
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<tr>
<td>ELEG 234/236 Network Analysis II w/Lab</td>
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<td>ELEG 348 Electronics I</td>
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<tr>
<td>ELEG 360 Controls</td>
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<td>ELEG 443 Applied Digital Signal Processing</td>
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<td>ENGL 204 Technical Writing for CPEG</td>
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<tr>
<td>MATH 214/314 Linear Algebra/numerical Analysis</td>
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<td>MEEG 223 Materials Science for Engineers</td>
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<thead>
<tr>
<th>TOTAL SEMESTER HOUR</th>
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Suggested Program

FIrST SEMESTER

| ENGL C101 Composition & Rhetoric | 3 |
| MATH 110 Calculus I | 4 |
| MATH 112 Calculus II | 4 |
| PHYS 111/112 Principles of Physics I, II | 8 |
| HUM Humanities Core | 6 |
| SOSC Social Sciences Core | 3 |
| INTST C101B Computer Ethics | 3 |
| CAPS C390 Capstone Seminar | 3 |

SECOND SEMESTER

| INTST C101B Computer Ethics | 3 |
| MATH 112 Calculus II | 4 |
| CPSC 102/102a Intro. to Computing II (Data Structures & Algorithms) | 4 |
| CPSC 227 Discrete Structures | 3 |
| PHYS 111 Principles of Physics I | 4 |

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## Computer Engineering Bachelor of Science Degree

### THIRD SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>MATH 215</td>
<td>Calculus III</td>
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<tr>
<td>ELEG 233/235</td>
<td>Electrical Engineering I w/lab</td>
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<tr>
<td>CPEG 210</td>
<td>Digital System Design I</td>
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<tr>
<td>HUM</td>
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<tr>
<td>CHEM 103</td>
<td>General Chemistry I</td>
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### FOURTH SEMESTER

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<td>MEEG 223</td>
<td>Material Science for Engineers</td>
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<tr>
<td>ELEG 234/236</td>
<td>Network Analysis II w/Lab</td>
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<td>HUM</td>
<td>Humanities Core</td>
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<td>CPEG 286</td>
<td>Microprocessor System Design</td>
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### FIFTH SEMESTER

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<td>MATH 323</td>
<td>Probability and Statistics</td>
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<td>ELEG 360</td>
<td>Controls</td>
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<td>SOSC</td>
<td>Social Sciences Core</td>
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<td>CPEG 315</td>
<td>Digital Design II w/lab</td>
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<td>CPEG 387</td>
<td>Embedded System Design</td>
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### SIXTH SEMESTER

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<td>CPEG 312</td>
<td>Computer Organization</td>
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<tr>
<td>MATH 214/314</td>
<td>Linear Algebra/Numerical Analysis</td>
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<tr>
<td>ELEG 548</td>
<td>Electronics I</td>
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<tr>
<td>FA</td>
<td>Fine Arts Core</td>
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<td>Social Science Core</td>
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### SEVENTH SEMESTER

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<thead>
<tr>
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<td>CPEG 449A</td>
<td>CPEG Senior Design Project</td>
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<td>ELEG 443</td>
<td>Applied Digital Signal Processing</td>
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<td>CPEG 409</td>
<td>Software Engineering</td>
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<tr>
<td>CPEG 447/448</td>
<td>Technical Electives/Logic Synthesis/VI Design</td>
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### EIGHTH SEMESTER

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<td>CPEG 449B</td>
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<td>CAPS 490</td>
<td>Capstone Seminar</td>
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<td>CPEG 408</td>
<td>Operating Systems</td>
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<td>Technical Electives</td>
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<tr>
<td>Free Elective</td>
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</table>

*Technical Elective—This elective must be chosen from CPEG 410, CPEG 460, CPEG 471 or CPEG 473
Learning Outcomes
Our Computer Science Students will:
1. Demonstrate comprehension of math, science, and basic computer science topics.
2. Have the ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems.
3. Exhibit problem solving skills.
4. Have the ability to use techniques, skills, and modern software tools necessary for professional practice.
5. Work effectively in teams.
6. Demonstrate the ability to identify and apply concepts of engineering economics and project planning.
7. Demonstrate knowledge of contemporary global and societal issues and their relationship to professional ethics and engineering solutions.
8. Demonstrate the ability to plan and conduct laboratory experiments and interpret and report the results.
9. Exercise strong oral and written communication skills including those needed for technical writing.
10. Have an awareness of the need for and demonstrate the ability to keep learning throughout life along with an appreciation of diversity in the world and in intellectual areas.

Summary of Requirements

Mathematics Requirements

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<tr>
<th>Course</th>
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<tr>
<td>MATH 110/112</td>
<td>Calculus I &amp; II</td>
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<td>MATH 215</td>
<td>Calculus III</td>
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<td>MATH 323</td>
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<td>CPSC 340</td>
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Total Semester Hours 69

General Education Requirements

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<td>ENGL C101</td>
<td>Composition &amp; Rhetoric I</td>
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<td>FA</td>
<td>Fine Arts Core</td>
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<tr>
<td>PHHS 111, 112</td>
<td>Principles of Physics I, II</td>
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<tr>
<td>INTST C101B</td>
<td>Computer Ethics</td>
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<td>ENGL 204</td>
<td>Technical Writing for Computer Science</td>
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<td>CAPS C390</td>
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<td>Humanities Electives (2)</td>
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Total Semester Hours 31

Core Requirements

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<td>Introduction to Computer II (Data Structures)</td>
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<td>CPSC 201</td>
<td>Advanced Data &amp; File Structures</td>
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<td>CPSC 203</td>
<td>2nd Programming Language</td>
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<td>CPSC 286</td>
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<td>CPSC 300</td>
<td>Economics &amp; Management of Computing Projects</td>
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<td>CPSC 301</td>
<td>Programming Languages</td>
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<td>CPSC 329</td>
<td>Fundamentals of Algorithms</td>
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<td>CPSC 311</td>
<td>Computer Architecture</td>
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<td>CPSC 450</td>
<td>Database Design</td>
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<td>Data and Computer Communications</td>
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Total Semester Hours 69

Suggested Program

First Semester

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<td>PHHS 111</td>
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Second Semester

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<tr>
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<td>Introduction to Computing II (Data Structures)</td>
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<tr>
<td>INTST C101B</td>
<td>Computer Ethics</td>
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</table>
## Computer Science Bachelor of Science Degree

### THIRD SEMESTER
- **CPSC 227** Discrete Structures 3
- **MATH 215** Calculus III 4
- PHYS/CHEM/BIOL 4
- **HUM** Humanities Core 3
- **CPSC 201** Advanced Data & File Structures 3

### FOURTH SEMESTER
- **MATH** Math Elective(214/314/340) 3
- **CPSC 203** 2nd Language 3
- **ENGL 204** Technical Writing For Computer Science I 3
- **FA** Fine Arts Core 3
- **HUM** Humanities Core 3
- **CPEG 210** Digital System Design I 3

### FIFTH SEMESTER
- **CPSC 300** Economics & Management of Computing Projects 3
- **MATH 323** Probability and Statistics 3
- **CPSC 301** Programming Languages 3
- **SOSC** Social Science Core 3
- **CPSC 329** Fundamentals of Algorithms 3
- **CPEG 286** Microprocessor System Design 3

### SIXTH SEMESTER
- **CPEG 408** Operating Systems 3
- **CPSC** Humanities Elective I 3
- **CPEG** Elective I 3
- **SOSC** Social Science Core 3
- **CPSC 311** Computer Architecture 3
- **Technical Elective I** 3

### SEVENTH SEMESTER
- **CPSC 450** Database Design 3
- **CPEG 489** Software Engineering 3
- **CPEG 471** Data and Computer Communications 3
- **CPSC Elective II** 3
- **Technical Elective II** 3
- **CPSC 449A** Senior Design Project 1

### EIGHTH SEMESTER
- **CAPS C390** Capstone Seminar 3
- **Free Elective** 3
- **CPSC Elective III** 3
- **Humanities Elective II** 3
- **CPSC 449B** Senior Design Project 3

**Total Semester Hours** 130
Criminal Justice and Human Security
Bachelor of Arts Degree

Chair: William Lay
Carlson Hall, 2nd Floor
Telephone: (203) 576-4966
Fax: (203) 576-4967
E-mail: wlay@bridgeport.edu

Curriculum and Program Requirements
The College of Public and International Affairs’ B.A. in Criminal Justice and Human Security degree allows students interested in pursuing a career in criminal justice to develop expertise in the international dimensions of public safety. Students in the degree may choose from one of three areas of concentration:

- Human Security
- Comparative Justice
- Criminology

The degree requires two years of college-level study of a foreign language or demonstrated working competency in a foreign language. In addition to Spanish and French, students have the option of choosing from Arabic, Chinese, Japanese, Korean and Russian.

Interested students also have the option of earning a Masters degree in Business Administration or in Global Development and Peace by completing a fifth year of study beyond the normal years.

UB Criminal Justice track students are also encouraged to take courses in Martial Arts.

Internships with law enforcement agencies are also available.

Program Objectives
The B.A. in Criminal Justice & Human Security has the following objectives:

1. To introduce the essential elements of criminal justice and provide the academic preparation needed for careers related to criminal justice, crime prevention, and law enforcement in an increasingly global society.
2. To introduce the concept of Human Security, its emergence and implication, and to explore its impact on domestic and international security.
3. To develop a cadre of security professional who demonstrate the language skills and intercultural understanding required for effective law enforcement in today’s globalized society.
4. To develop an integrated Criminal Justice and Human Security program that draws upon existing programs in sociology, political economy, martial arts studies, mass communication, and world religions.
5. To prepare students for admission to graduate study in Criminal Justice and Homeland Security programs and for careers in domestic and international security.
6. To prepare students with the analytical and research skills necessary for a career or further education in the fields of Criminal Justice and Human Security.

Learning Outcomes
The B.A. in Criminal Justice & Human Security have the following learning outcomes:

1. Students will demonstrate the progressive acquisition of the oral, written critical thinking skills needed to succeed in graduate level study as well as the required skills for careers in domestic and international security.
2. Students will be able to identify the essential elements of criminal justice.
3. Students will be able to articulate the importance of Human Security and explore its impact on domestic and international security.
4. Students will demonstrate the language skills and intercultural understanding required for effective law enforcement in today’s globalized society. Students will be able to describe the role played by religious, ideological, and cultural views; ethnic and tribal identities; and economic status in rationalizing criminal behavior.
5. Students will demonstrate an understanding of the role played in criminal behavior by socioeconomic inequities and societal injustice, resulting from domestic and non-domestic events.
6. Students will be able to comment on the role played by non-state actors in areas such as the identification of norms, the acceptability of violence and terrorism in promoting policy changes and in preventing crime.

* Note for all College of Public and International Affairs majors, a portfolio is collected to track progress in programmatic outcomes.

The Criminal Justice and Human Security program requires 39 semester credit hours including 18 credit hours in the program core, 15 credit hours in one of the concentrations, and an additional 6 credit hours in a diversity requirement (one course from each of the other two concentrations). The program will require students to show modern language competency in Arabic, Chinese, Korean, Japanese, Russian, French or Spanish through the intermediate level (four semesters). Students are required to complete 120 credit hours to graduate.

Summary of Requirements

Program Core Courses (required)

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>CJHS/SOC 118</td>
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<tr>
<td>CJHS 218</td>
<td>Human Security*</td>
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<tr>
<td>SOC 315</td>
<td>Criminology</td>
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<tr>
<td>SOCC 300</td>
<td>Research Methods</td>
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<tr>
<td>CJHS 395</td>
<td>Senior Thesis*</td>
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</tr>
<tr>
<td>CJHS 398</td>
<td>Internship*</td>
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</table>

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Criminal Justice and Human Security
Bachelor of Arts Degree

Human Security Concentration

REQUIREMENTS

- PSCI 207 World Politics 3
- CJHS/PSCI 215 International Human Rights 3
- PSCI 371 Terrorism 3
- SOC 355 Globalization 3
- WREL 375 Religion and Genocide 3
- CJHS 350 Legal Advocacy 3

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Comparative Justice Concentration

REQUIREMENTS

- PSCI 101 American Government 3
- PSCI 233 Intro to US Legal System 3
- CJHS 343 Constitutional Law 3
- CJHS 372 Transnational Crime 3

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Criminology Concentration

REQUIREMENTS

- SOC 270 Sociology of Deviance 3
- SOC 310 Race, Class and Gender 3
- SOC 311 Juvenile Delinquency 3
- SOC 355 Globalization 3
- CJHS 271 Law Enforcement and Society 3
- CJHS 312 Victimology 3

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Internships can be arranged through the Chair of Criminal Justice and Human Security or through the Office of the Dean of the College of Public and International Affairs.
Dental Hygiene Associate in Science Degree

Dean: Marcia Lorentzen
Health Sciences Center, Room 411
Telephone: (203) 576-4138
Fax: (203) 576-4220
E-mail: marcia@bridgeport.edu

Curriculum and Program Requirements

As licensed professional oral health clinicians and educators, dental hygienists practice as members of the dental team, using knowledge of biomedical, dental, clinical, and social sciences to assist individuals and groups in achieving and maintaining optimum oral health. The hygienist provides preventive services, preliminary examinations, radiographs, sealants, non-surgical periodontal therapy, fluoride treatments, local anesthesia and patient education. As a specialist, the dental hygienist is an integral co-therapist in helping consumers prevent oral disease, arrest existing periodontal (gum) disease, and maintain oral health.

The two-year curriculum of the Fones School combines courses from the College of Undergraduate and Graduate Studies and the Fones School of Dental Hygiene to provide a broad educational preparation. In addition to basic and dental science theory, the program provides education in service and dental health education.

Dental Hygiene clinic uniforms, instruments and supplies are issued through the Fones School. These items are distributed throughout the clinical phase of the curriculum, the costs of which are included within the Dental Hygiene special fees.

During the second year, the students receive clinical education, not only at the Fones Dental Health Center on campus, but also through assignments at clinical and educational facilities of school dental health programs, hospitals and community agencies. These assignments are directly supervised by Fones faculty. Students are responsible for providing their own transportation to community agencies.

All courses listed in the dental hygiene curriculum program for the Associate and/or Bachelor of Science degree are required for graduation. The Dental Hygiene student must earn a grade of “C” in all major courses. A student that earns a grade of C- or below in a course in the major field, must obtain a written statement from the School Dean specifying the course necessary to remedy the deficiency and remain in the major.

Enrollment in the second year is contingent on completing all first year requirements and achieving a cumulative QPR of 2.0.

Qualifications and procedures required of applicants to the Fones School are the same as those described in the chapter on Admissions. Dental Hygiene clinical courses begin in the fall term and the Associate’s degree curriculum is open only to full-time Dental Hygiene students. Clinical students are required to submit a physical, dental, visual acuity report and current cardiopulmonary resuscitation/recognition certification on an annual basis. Student must also submit evidence of Hepatitis B vaccine series seroconversion and PPD tuberculin test.

“Dental professionals may be at risk for exposure to numerous workplace hazards. These hazards include but are not limited to the spectrum of bloodborne pathogens, pharmaceuticals and other chemical agents, human factors, ergonomic hazards, noise, vibration, and workplace violence.” www.osha.gov/SLTC/dentistry/index.html

It is the responsibility of Fones School of Dental Hygiene to be compliant with institutional policy and applicable regulations of local, state, and federal agencies including, but not limited to radiation hygiene and protection, ionizing radiation, hazardous materials, and bloodborne and infectious diseases. The Fones School documents guidelines consistent with Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens Standards and the Centers for Disease Control and Prevention (CDC) in the Clinical Policies and Procedures Manual and continuously monitors compliance in order to minimize risk to safety, health, and well-being of all students, faculty, staff, and clients.

Learning Outcomes

Students will develop 1) responsibility of health promotion and disease prevention with in the profession and the community; 2) the skills and knowledge necessary to provide comprehensive care to patients/clients; and 3) a commitment to lifelong learning and professional growth and development.

Summary of Requirements

<table>
<thead>
<tr>
<th>PROGRAM REQUIREMENTS</th>
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<tbody>
<tr>
<td>DHYG 123  Oral Anatomy and Embryology 4</td>
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<tr>
<td>DHYG 124  Dental Radiology 3</td>
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<tr>
<td>DHYG 127  Pharmacology for the Dental Hygienist 2</td>
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<td>DHYG 129  Clinical Practice I 4</td>
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<td>DHYG 130  Clinical Practice II 4</td>
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<td>DHYG 140  Introduction to Periodontology 1</td>
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<td>DHYG 227  Clinical Practice III 5</td>
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<td>DHYG 228  Clinical Practice IV 5</td>
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<td>DHYG 230  Local Anesthesia 1</td>
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<td>DHYG 232  Dental Public Health 4</td>
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<td>DHYG 233  Oral and General Histo-Pathology 3</td>
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<td>DHYG 241  Periodontology 2</td>
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<td>DHYG 250  Dental Materials 3</td>
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<td>DNMTR 204  Nutritional Biochemistry 3</td>
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<tr>
<td>BIOL 106  Elementary Microbiology 4</td>
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<td>BIOL 113-114  Anatomy and Physiology I/II 8</td>
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<td>ENGL C101  Composition &amp; Rhetoric 3</td>
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<td>FYS 101  First Year Seminar 3</td>
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<td>MATH C105  Intermediate Algebra 3</td>
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<td>SOSC  101  Social Sciences Core 3</td>
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<tr>
<td>SOC  101  Principles of Sociology 3</td>
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| Total Semester Hours 71 |

Suggested Program

FIRST SEMESTER

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<td>BIOL 113  Anatomy and Physiology I 4</td>
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<td>FYS 101  First Year Seminar 3</td>
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SECOND SEMESTER

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<td>ENGL C101  Composition &amp; Rhetoric 3</td>
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</table>
Dental Hygiene  Associate in Science Degree

**THIRD SEMESTER**
- DHYG 227 Clinical Practice III  5
- DHYG 230 Local Anesthesia  1
- DHYG 233 Oral and General Histo-Pathology  3
- DHYG 241 Periodontology  2
- DHYG 250 Dental Materials  3
- DNUTR 204 Nutritional Biochemistry  3

**FOURTH SEMESTER**
- DHYG 228 Clinical Practice IV  5
- DHYG 232 Dental Public Health  4
- SOC 101 Sociology  3
- MATH C105 Intermediate Algebra  3
- SOSC Social Sciences Core  3

Total Semester Hours  71

**EMPLOYMENT OPPORTUNITIES**
Upon completion of the dental hygiene curriculum, graduates are qualified to take the Dental Hygiene National Board Examination and licensure exams in every state, the District of Columbia, Puerto Rico, Canada and abroad. Graduates are eligible for positions in private dental offices, public health programs, school health programs, dental hygiene education and research. In addition, the dental hygiene program provides instruction in advanced procedures to broaden capabilities for clinical practice.

**FONES DENTAL HEALTH CLINIC SERVICES**
Preventive and therapeutic oral health services are provided by students in the dental health clinic. Services for the public include oral prophylaxis, x-rays, non-surgical treatment of periodontal (gum) disease, fluoride treatments, sealants and patient education in the care of the mouth. Individuals desiring information should inquire about the availability of services with the dental hygiene clinic receptionist at (203) 576-4137.
Dental Hygiene Bachelor of Science Degree

Dean: Marcia Lorentzen
Health Sciences Center, Room 413
Telephone: (203) 576-4138
Fax: (203) 576-4220
E-mail: marcia@bridgeport.edu

Curriculum and Program Requirements

Students in the Bachelor of Science Degree (B.S.) may integrate bachelor's courses with the clinical aspect of the Dental Hygiene curriculum or pursue a baccalaureate degree (B.S.) after completing clinical preparation at the Associate of Science/Certificate Level. This baccalaureate degree completion approach is available to Fones' students as well as graduates of other Dental Hygiene programs accredited by the American Dental Association Commission on Dental Accreditation.

Education at the baccalaureate level enhances the dental hygienist's opportunities, abilities, background and values. The professional dental hygiene curriculum is combined with a liberal arts education, and is designed to foster student growth, promote development of critical and ethical judgment, and encourage life-long learning. Upon satisfactory completion of semester hours in the areas of study specified, the student will be recommended for the degree of Bachelor of Science in Dental Hygiene.

General Education Track

This program option has been developed for those students who have semester hours beyond the Associate's degree and are interested in a broad general education. Students have the opportunity to shape their own curriculum to meet personal career goals. The outcome of this planning process is an individualized program that enables the dental hygienist to gain desired knowledge and skills and directly transfer this expertise to a professional work setting. Students may identify a minor in such areas as human services, marketing and biology to name a few.

Learning Outcomes

Students will develop 1) Responsibility of health promotion and disease prevention within the profession and the community. 2) The skills and knowledge necessary to provide comprehensive care to patients/clients. 3) A commitment to lifelong learning and professional growth and development.

Summary of Requirements

PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
<th>HOURS</th>
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<td>DHYG  301</td>
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TOTAL HOURS: 66

GENERAL EDUCATION REQUIREMENTS

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<td>MKTG  305</td>
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<td>HUSU  201</td>
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TOTAL HOURS: 45

ELECTIVES _____________________________________ 9

Total Semester Hours __________________________ 120

Suggested Program

FIRST SEMESTER

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SECOND SEMESTER

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THIRD SEMESTER

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FOURTH SEMESTER

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FIFTH SEMESTER

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SIXTH SEMESTER

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SUMMER

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<td>CAPS  C390</td>
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SEVENTH SEMESTER

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EIGHTH SEMESTER

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Total Semester Hours __________________________ 120
Dental Hygiene Bachelor of Science Degree Online Program

Curriculum and Program Requirements

The online B.S. in Dental Hygiene from The Fones School of Dental Hygiene at the University of Bridgeport offers an opportunity for dental hygienists to further their education beyond the A.S. degree. Dental hygienists traditionally begin their professional work following completion of the A.S. degree. The University of Bridgeport’s B.S. in Dental Hygiene online degree program makes it possible for dental hygienists to work toward a degree at any time, from anywhere in the world. The program is perfectly suited to adult learners who have the discipline for part-time, self-directed study under the guidance of qualified faculty in their field. The BSDH Online Program is identical to the on-campus degree completion program and is designed to be completed entirely online.

Students who hold an A.S. or certificate in Dental Hygiene from an institution accredited by the American Dental Association Commission on Dental Accreditation are eligible for admission. A maximum of 72 credits from accredited two-year colleges and 90 credits from accredited four-year institutions may be transferred. The program consists of 120 credit hours which include applicable transfer credits (60-90 credit hours), general education courses (40 credit hours), dental hygiene courses (22 credit hours), and elective courses (9 credit hours). The last 30 credit hours must be completed through the University of Bridgeport. The general education courses include University Core Requirements in English, Math, Fine Arts, Integrated Studies, Humanities, Natural Science, Social Science, and Capstone Seminar.

Students may take 2 online courses per 8-week session, which is equivalent to 12 credits per semester. As a new online student, a one-week New Student Orientation course is offered prior to the start of each 8-week session at no charge. Financial aid is available for qualified students taking at least 6 credits per semester.

Please visit www.bridgeport.edu/academics/undergraduate/dentalbs/options for additional information and an Application Form to download. You will be directed to request Official Transcripts from all schools attended – these are required in order to consider your acceptance into the program, as well as to evaluate courses taken previously and apply transfer credits to the course of study for the Bachelor’s Degree in Dental Hygiene.

INSTRUCTIONAL FORMAT

The online B.S. in Dental Hygiene is offered in a format that makes classes available 24 hours and day, 7 days a week. Courses are designed for working professionals and can be completed entirely online, from home or at work. Our online instructors are practicing professionals or UB faculty members – experienced educators who are your partners in a dynamic and interactive educational environment. The online interaction is designed to encourage thoughtful and well-prepared discussions based on both students’ command of the coursework and their personal experiences.

To participate in UB’s distance education program, you must own or have regular access to a computer with an Internet connection and an e-mail account. You should be comfortable with using e-mail, sending and receiving attachments, and Web browsing.

MINIMUM COURSE REQUIREMENTS

- A PC or Macintosh system
- PC with Windows Vista or higher, Mac OSx10, 5.2 or higher
- Word processor, printer, CD-ROM
- Reliable Internet access
- E-mail
- Web camera and microphone

ONLINE ORIENTATION

All students participate in an online orientation prior to beginning the program. During the orientation, students are given instructions on how to navigate the Blackboard course management system, strategies for being a successful online student, and access to other University resources, including the Wahlstrom Library’s electronic databases. Successful completion of the orientation is required of all new students in the online program.
Fashion Merchandising Associate in Arts Degree

Chair: Patricia Rigia
Mandeville Hall, Room 23
Telephone: (203) 576-4098
Fax: (203) 576-4099
E-mail: rigia@bridgeport.edu

Curriculum and Program Requirements

Fashion Merchandising offers a two-year Associate's degree program in Fashion Merchandising and Retailing for individuals interested in pursuing careers within the diversified fashion field. The programs of study are arranged so that the student, after earning an Associate in Arts degree, may go on to complete the Bachelor of Science degree requirements with full credit for all earned semester hours. Refer to the Fashion Merchandising and Retailing four-year program in this Catalog.

In addition to formal class work, the student is required to participate in a supervised industry internship program with approved retail organizations that include many prestigious New York City stores. Other important aspects of the program are: fashion show productions; resident buying office workshops; field trips to the New York market, trade shows, museums, manufacturers, and textile plants at a nominal cost to student. On-campus seminars are led by outstanding industry personnel.

All students must fulfill a supervised industry internship program by Thanksgiving and Christmas of their sophomore fall semester. The retail organization within which they will work is selected by the faculty of the Fashion Merchandising and Retailing Program. A student must have earned a 2.5 QPR to obtain junior status in the Program.

The degree will not be granted to students who receive less than “C” in Retailing 280. The degree will not be granted to students receiving more than one “D” in any Fashion Merchandising and Retailing course.

COOPERATIVE EDUCATION PROGRAM

Fashion Merchandising also offers a program combined with a full-time cooperative education program open to those interested in pursuing careers within the diversified retailing and fashion fields. Co-op students graduate in approximately two and one-half years with one year of professional experience. For further information refer to the Fashion Merchandising and Retailing Cooperative Education brochure.

Learning Outcomes

LEARNING OBJECTIVES

Students 1) acquire the basic technical skills necessary for work in the fashion merchandising field; 2) understand basic principles of fashion merchandising; 3) learn how to effectively communicate with others in their organization; and 4) understand the trends in the current fashion merchandising business.

ASSESSMENT

Students will be evaluated with a standardized exam at the end of their two-year program and with projects in their courses.

Summary of Requirements

PROGRAM REQUIREMENTS

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<tr>
<th>COURSE</th>
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<td>FM 101</td>
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<td>FM 108</td>
<td>Product Knowledge, Fashion Accessories</td>
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<td>FM 270</td>
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<tr>
<td>RETL 102</td>
<td>Merchandising Math</td>
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<td>RETL 180</td>
<td>Seminar in Professional Development</td>
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<td>RETL 201</td>
<td>Retail Adver. &amp; Fashion Promotion</td>
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<td>RETL 203</td>
<td>Fashion &amp; Retail Buying</td>
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<tr>
<td>RETL 205</td>
<td>Textiles I</td>
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<td>RETL 206</td>
<td>Textiles II</td>
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<td>RETL 207</td>
<td>Strategy of Selling</td>
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<td>RETL 213</td>
<td>Retail Hum. Resource Management</td>
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GENERAL EDUCATION REQUIREMENTS

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<td>MCOM 110</td>
<td>Intro to Communication</td>
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Total Semester Hours 61

Suggested Program

FIRST SEMESTER

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SECOND SEMESTER

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THIRD SEMESTER

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<td>Strategies of Selling</td>
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FOURTH SEMESTER

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Total Semester Hours 61
Fashion Merchandising Bachelor of Science Degree

Chair: Patricia Riga
Mandeville Hall, Room 23
Telephone: (203) 576-4098
Fax: (203) 576-4099
E-mail: righ@bridgeport.edu

Curriculum and Program Requirements
The Bachelor of Science degree is required by an increasing number of organizations for eligibility to participate in their executive training programs. This curriculum is designed so that the student may declare a minor (usually 18 semester hours) in suggested related studies such as textile design, advertising, art, international business, marketing, business administration, management, or fashion design.

All students must fulfill a supervised industry internship between Thanksgiving and Christmas of their sophomore fall semester. The retail organization in which they will intern is selected by the faculty of the Fashion Merchandising and Retailing Program. A student must have earned a 2.5 QPR to obtain junior status in the Program.

In addition to formal class work, the student is required to participate in a supervised industry internship program with approved retail organizations that include many prestigious New York City stores. Other important aspects of the program are: fashion show productions; resident buying office workshops; field trips to the New York market, trade shows, museums, and manufacturers, at a nominal cost to student. On-campus seminars are led by accomplished individuals drawn from the industry.

The degree will not be granted to students who receive less than “C” in Retailing 280. The degree will not be granted to students receiving more than one “D” in any Fashion Merchandising or Retailing course.

Cooperative Education Program
Fashion Merchandising also offers a program combined with a full-time cooperative education program for those interested in pursuing a career within the diversified retailing and fashion fields. For further information refer to the Fashion Merchandising and Retailing Cooperative Education brochure.

Study Abroad Semester
The Fashion Merchandising and Retailing Department is affiliated with several Study Abroad Programs. Students may attend the London College of Fashion, the University of Florence, Italy or programs offered through Global Learning Semesters. This off-campus semester enables B.S. degree students to participate in a couture study week in Paris plus retail experiences in other countries. Students who wish to participate in this affiliated Study Abroad Program are advised to make application in their sophomore year for the Fall or Spring semester of their junior or senior year. Electives for the B.S. degree are satisfied by all study abroad program semester hours with approval of the Department. Students with prior co-op experience who participate in the Spring semester abroad may opt for a Summer co-op experience in Europe.

Minor Option
Students enrolled in other majors at the University of Bridgeport may declare a minor status if they complete a minimum of 18 semester hours in the following areas: 3 to 9 semester hours may be elected from the following: Retailing 101, 108, 201, 305; 6 to 9 semester hours from the following: Retailing 102, 207, 213; 3 semester hours from the following: Retailing 300, 308, or 313.

Transfer Students
The Fashion Merchandising and Retailing B.S. degree program easily accommodates transfer students. No courses below a “C” grade are transferable. Transfer Articulation Agreements are in effect with Dean College (MA), Bay Path College (MA), Nassau Community College (NY), Dutchess (NY) and Westchester Community College, Middlesex Community College (CT), Fisher College (MA), Holyoke Community College (MA), Orange County Community College (NY) and County College of Morris (NJ).

Learning Outcomes
LEARNING OBJECTIVES:
Students 1) acquire the technical skills necessary for work in the fashion merchandising field; 2) acquire knowledge of fashion merchandising principles; 3) learn how to effectively communicate with others within and outside of their organization; and 4) develop real world knowledge and understanding of the current fashion world.

ASSESSMENT:
Student will be evaluated with a standardized exam related to fashion merchandising at the end of their undergraduate studies. Students will also be evaluated with projects in their final courses.

Summary of Requirements

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## Fashion Merchandising Bachelor of Science Degree

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<tr>
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<tbody>
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<td>RETL 206</td>
<td>Textiles II</td>
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<tr>
<td>RETL 207</td>
<td>Strategies of Selling</td>
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<td>RETL 213</td>
<td>Retail Human Resource Management</td>
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<td>RETL 280</td>
<td>Industry Internship</td>
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<td>RETL 300</td>
<td>Mass Merchandising/Marketing</td>
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<td>Fashion &amp; Retail Buying II</td>
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<td>RETL 307</td>
<td>Surface Design</td>
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<td>RETL 308</td>
<td>Advanced Textiles/Product Development</td>
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<td>RETL 313</td>
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<td>MKTG 305</td>
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### Suggested Program

**FIRST SEMESTER**
- ENGL C101 Composition & Rhetoric 3
- FYS 101 First Year Seminar 3
- ADSN 103 Visual Organization I 3
- FM 101 Fashion Fundamentals 3
- Elective 3

**SECOND SEMESTER**
- FM 108 Product Knowledge-Fashion Accessories 3
- RETL 102 Merchandising Mathematics 3
- RETL 205 Textiles I 3
- CAIS 191 Computer Concepts 3
- MATH C105 Intermediate Algebra 3

**THIRD SEMESTER**
- RETL 180 Seminar in Professional Development 3
- RETL 206 Textiles II 3
- RETL 207 Strategies of Selling 3
- RETL 213 Retail Human Resource Management 3
- RETL 280 Industry Internship 3

**FOURTH SEMESTER**
- FM 270 Fashion Show 1
- RETL 201 Retail Advertising and Fashion Promotion 3
- RETL 203 Fashion & Retail Buying I 3
- HUM Humanities Core 3
- MCOM 111 Intro Communication 3
- or MCOM 110 Public Speaking 3
- ECON 201 Economics Core 3

**FIFTH SEMESTER**
- FA Fine Arts Core 3
- SOSC Social Sciences Core 3
- RETL 300 Mass Merchandising/Marketing 3
- MKTG 305 Principles of Marketing 3
- HUM Humanities Core 3

**SIXTH SEMESTER**
- SCI Natural Sciences Core 3
- ACCT 101 Financial Accounting 3
- RETL 313 Retail Management II 3
- RETL 313 Retail Management II 3
- FM 305 Home Furnishings 3

**SEVENTH SEMESTER**
- SCI Natural Sciences Core 3
- ADSN 103 Visual Organization I 3
- RETL 330 International Fashion/Marketing 3
- Elective (Core) 3
- RETL 304 Fashion & Retail Buying II 3

**EIGHTH SEMESTER**
- CAPS C390 Capstone Seminar 3
- RETL 308 Advanced Textiles 3
- FM 303 History of Costume 3
- Electives 6

### Program Options

**SPECIALTY IN TEXTILES**
- ADSN 103 Visual Organization 3
- RETL 205 Textiles I 3
- RETL 206 Textiles II 3
- RETL 307 Surface Design I 3
- RETL 308 Advanced Textiles/Product Dev. 3

**SPECIALTY IN DESIGN**
- ADSN 105 Drawing 3
- FM 303 History of Costume 3
- RETL 205 Textiles I 3
- RETL 206 Textiles II 3
- RETL 307 Surface Design I 3

**SPECIALTY IN MARKETING**
- MKTG 305 Principles of Marketing 3
- LAW 251 Business Law I 3
- 300-level Marketing courses 3
- 300-level Marketing courses 3
- 300-level Marketing courses 3
- 300-level Marketing courses 3

**Total Semester Hours** 121
Finance  Bachelor of Science Degree

Summary of Requirements

CREDITS
General Education Requirements 42
Finance Program Requirements 51
Finance Concentration Electives 12
Free Electives 15

GENERAL EDUCATION REQUIREMENTS
ENGL C101  Composition & Rhetoric 3
FYS 101  First Year Seminar 3
MATH C105  Intermediate Algebra 3
SCI  Natural Sciences Core 6
HUM  Humanities Core 6
ECON 201  Principles of Economics - Macro 3
ECON 202  Principles of Economics - Micro 3
ENGL 202  Advanced Composition 3
FA  Fine Arts Core 3
CAPS 390  Capstone Seminar 3
SOSC  Social Sciences Core 6

PROGRAM REQUIREMENTS
ACCT 101  Principles of Accounting I 3
ACCT 102  Principles of Accounting II 3
ACCT 103  Managerial/Cost Accounting 3
CAIS 191  Computer Concepts 3
LAW 251  Business Law I 3
CAIS 101  Statistics 3
CAIS 102  Applied Statistics 3
FIN 309  Managerial Finance 3
MGT 301  Operations Management 3
CAIS 201  Introduction to CAIS 3
MKTG 305  Principles of Marketing 3
FIN 321  Investment Principles 3
FIN 380  Multinational Finance 3
MGMT 302  Multicuflure Management 3
MKTG 342  Multinational Marketing 3
MGMT 350  Business Policy and Strategy 3
BUAD 382  Senior Project/Internship 3

FINANCE ELECTIVES
ECON 311  Managerial Economics 3
ECON 375  International Business Economics 3
ECON 376  Business Forecasting 3
FIN 345  Management of Financial Institutions 3
FIN 365  Advanced Financial Management 3
FIN 366  Cases in Finance 3

FREE ELECTIVES 15
Total Semester Hours 120

Suggested Program

FIRST SEMESTER
ACCT 101  Principles of Accounting I 3
ENGL C101  Composition & Rhetoric 3
MATH C105  Intermediate Algebra 3
ENGL 101  First Year Seminar 3
CAIS 191  Computer Concepts 3

SECOND SEMESTER
ACCT 101  Principles of Accounting II 3
ENGL 202  Advanced Composition (for Business) 3
CAIS 101  Statistics 3
SCI  Natural Science Core 3
Free Elective 3

THIRD SEMESTER
ECON 201  Principles of Economics - Macro 3
CAIS 102  Applied Statistics 3
SOSC  Social Science Core 3
FA  Fine Arts Core 3
ACCT 103  Managerial/Cost Accounting 3
Free Elective 3

FOURTH SEMESTER
ECON 202  Principles of Economics - Micro 3
CAIS 201  Introduction to CAIS 3
LAW 251  Business Law I 3
SCI  Natural Science Core 3
SOSC  Social Science Core 3

FIFTH SEMESTER
FIN 309  Managerial Finance 3
MKTG 305  Principles of Marketing 3
MGMT 301  Operations Management 3
HUM  Humanities Core 3
Free Elective 3

SIXTH SEMESTER
FIN 380  Multinational Finance 3
MKTG 342  Multinational Marketing 3
MGMT 302  Multicuflure Management 3
HUM  Humanities Core 3
Free Elective 3

SEVENTH SEMESTER
FIN 321  Investment Principles 3
BUAD 382  Senior Project/Internship 3
Free Elective 6

EIGHTH SEMESTER
MGMT 350  Business Policy and Strategy 3
CAPS C390  Capstone Seminar 3
Free Elective 3

Total Semester Hours 120
Curriculum and Program Requirements

The student enrolled in the Associate in Arts in General Studies program may plan a completely individual program leading to the Associate in Arts degree. There are no specific requirements for the Associate in Arts degree in General Studies except a total of 60 semester hours, a 2.0 minimum QPR, and the following course and elective requirements: English C101, Math C105, First Year Seminar, 2 additional University core courses, and 2 electives from the Humanities, Sciences, or Social Sciences.

Learning Outcomes

By completing the program in General Studies, students will: 1) be able to communicate effectively in writing so that one may advance professionally and apply to graduate programs; 2) be able to comprehend, analyze, and interpret texts in a variety of disciplines; 3) be able to present orally one’s own thoughts and plans; 4) be able to recognize a problem and devise a plan of action to solve it; 5) be able to show mastery of several disciplines within an academic area of concentration; and 6) demonstrate an ethical mind-set and exercise professional responsibility in a global context.
General Studies  Associate in Science Degree

Advisor: Edward Geist
Charles Dana Hall
Telephone: (203) 576-4956
Fax: (203) 576-4051
E-mail: edwgeist@bridgeport.edu

Curriculum and Program Requirements

The student enrolled in the Associate in Science in General Studies program may plan a completely individual program leading to the Associate in Science degree. There are no specific requirements for the Associate in Sciences degree in General Studies except a total of 60 semester hours, a 2.0 minimum Q.P.R, and the following specific course and elective requirements: English C101, Math C105, First Year Seminar, 2 additional University Core courses, and 2 electives from the Humanities, Sciences, or Social Sciences. In addition, a minimum of 24 semester hours in Mathematics and Science is required.

Learning Outcomes

By completing the program in General Studies, students will: 1) be able to communicate effectively in writing so that one may advance professionally and apply to graduate programs; 2) be able to comprehend, analyze, and interpret texts in a variety of disciplines; 3) be able to present orally one's own thoughts and plans; 4) be able to recognize a problem and devise a plan of action to solve it; 5) be able to show mastery of several disciplines within an academic area of concentration; and 6) demonstrate an ethical mind-set and exercise professional responsibility in a global context.

Summary of Requirements

**PROGRAM REQUIREMENTS**
Math and Science Electives 24
Elective Semester Hours 15
______ 39

**GENERAL EDUCATION REQUIREMENTS**
ENGL C101 Composition & Rhetoric 3
MATH C105 Intermediate Algebra 3
FYS 101 First Year Seminar 3
Core Electives 6
Liberal Arts Electives 6
______ 21

Total Semester Hours 60

Suggested Program

**FIRST SEMESTER**
ENGL C101 Composition & Rhetoric 3
MATH C105 Intermediate Algebra 3
FYS 101 First Year Seminar 3
Elective 3

**SECOND SEMESTER**
Core Elective 3
Math/Science Elective 3
Math/Science Elective 3
Math/Science Elective 3
Elective 3

**THIRD SEMESTER**
Core Elective 3
Math/Science Elective 3
Math/Science Elective 3
Liberal Arts Elective 3
Elective 3

**FOURTH SEMESTER**
Math/Science Elective 3
Math/Science Elective 3
Liberal Arts Elective 3
Electives 6

Total Semester Hours 60
Curriculum and Program Requirements

The Bachelor of Science degree in General Studies is for the student who wishes great flexibility in pursuing college work as well as for the student with well defined goals. The candidate for the B.S. Program will "custom-make" his or her course of study, which may include interdisciplinary work that does not fit well into conventional degree programs. Planning and revision of the programs will be done with a faculty advisor. Many graduates holding this degree have been accepted for advanced work by other institutions. However, since graduate school admissions policies vary greatly depending upon the program and institution, students contemplating graduate study should inform themselves of such requirements.

Degree Requirements

1. A minimum of 120 hours with minimum cumulative quality point ratio of 2.00.

2. The student must have an area of concentration with a minimum of 30 semester hours (no maximum), in one of the following areas: Business Studies; Humanities; Natural Science/Mathematics; Science, Engineering, or Computer Related Fields; and Social Sciences. Students may also elect a second area of concentration. A grade of "C" or above is required in all courses used to fulfill this requirement. No more than four 100 level courses can be counted in an area of concentration.

3. At least half of the semester hours to be counted in the area of concentration must be completed at the University of Bridgeport.

4. Students may not take core courses or courses counting in an area of concentration or a minor on a pass/fail basis. The University policy on pass/fail courses limits this option to a maximum of six courses (two courses per semester) during a student's academic career, for free electives only.

5. General Studies majors may include one or more minors in their programs. Courses used to fulfill requirements for a minor may not be counted in an area of concentration.

Learning Outcomes

By completing the program in General Studies, students will: 1) be able to communicate effectively in writing so that one may advance professionally and apply to graduate programs; 2) be able to comprehend, analyze, and interpret texts in a variety of disciplines; 3) be able to present orally one's own thoughts and plans; 4) be able to recognize a problem and devise a plan of action to solve it; 5) be able to show mastery of several disciplines within an academic area of concentration; and 6) demonstrate an ethical mind-set and exercise professional responsibility in a global context.

Summary of Requirements

Approved Area of Concentration for the B.S. within Divisions. A minimum of 30 semester hours is required in one of the following categories (see item 2 under degree requirements):

Business Studies
- All Accounting
- All Business Law
- All Computer Applications and Information Systems
- All Economics
- All Finance
- All International Business
- All Marketing

Humanities
- All Art History
- All Art of the Cinema and History of the Cinema
- All History
- All Literature and Linguistics*
- Music Appreciation (Music 121 OR 122) and all History of Music
- All Philosophy
- All Religion
- All Theatre History (includes Theatre Arts 103)
*Writing and composition courses in English and conversation, composition, and introductory courses in languages (101-104) MAY NOT be used to meet requirements in this category

Natural Sciences/Mathematics
- Biology
- Chemistry
- Geology
- Mathematics (exception: Math 200)
- Physics (including Astronomy)
- Science

Science, Engineering, or Computer Related Field
- All Computer Engineering
- All Computer Sciences
- All Chemistry
- All Electrical Engineering
- All Management Engineering
- All Mathematics (except Math 200)
- All Mechanical Engineering
- All Physics

Social Sciences
- All Economics
- All History
- All Political Science
- All Psychology
- All Religion
- All Sociology

General Education Requirements

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<td>SOSC</td>
<td>Social Sciences Core</td>
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<tr>
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<td>Liberal Arts Requirements</td>
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</table>

Total Semester Hours 120

134
Graphic Design Bachelor of Fine Arts Degree

Chair: Emily Larned
Arnold Bernhard Center, Room 704
Telephone: (203) 576-4316
Fax: (203) 576-4042
Email: elarned@bridgeport.edu

Curriculum and Program Requirements

The four year Graphic Design curriculum consists of an integrated, interdisciplinary sequence that is designed (i) to stimulate creativity by encouraging imagination and conceptualization, (ii) to strengthen communication by instilling ways of thinking, analyzing and responding to problems and (iii) to provide the essential technical and technological skills as well as the general knowledge to enable students to work effectively in any branch of Design.

Design majors begin their studies with foundation courses in two- and three-dimensional design, drawing, digital photography, and computer applications, as well as background courses in arts and design history. Beginning in the foundation year, students learn to analyze each other’s ideas, and are trained to present their own to maximum effect.

Students are introduced to the theory and practice of mass communication and advertising, and are encouraged to undertake further study in the cultural and social background of modern times. The program’s emphasis is placed on the four-course Design Studio sequence, which acquaints students with ever more sophisticated technologies while applying the design processes to real-world community projects, creating a meaningful portfolio. Internships, cooperative work arrangements, and special projects are available to qualified students.

Learning Outcomes

1. Demonstrate ability to identify, analyze, and solve design problems. Assessment: Portfolio projects and project research.

2. Demonstrate mastery of design tools, techniques, and concepts in design. Assessment: Projects and portfolios that evidence craftsmanship and adherence to project parameters.

3. Demonstrate an understanding of the aesthetics of form development, and of the history and current state of design. Assessment: Projects, papers, and presentations for art and design history courses; in studio courses, projects that appropriately reference historical precedents.

4. Demonstrate proficiency in selection and use of relevant technologies in design. Abilities to use available technical and industrial processes to produce a design product, and to design and implement such a process. Assessment: Project and portfolio materials planned to be feasibly reproducible by industrial means rather than by one-off or by hand.

5. Demonstrate an understanding of the cultural and societal connections linking design trends and processes as well as a knowledge of business practices and of the market place. Assessment: Projects and portfolio solutions that are culturally- and audience-appropriate for the problem as posed by the business and market briefs for the project.

Summary of Requirements

PROGRAM REQUIREMENTS

ART & DESIGN FOUNDATION COURSES
ADSN 103 2-D Design Principles 3
ADSN 105 Drawing Fundamentals I 3
ADSN 106 Drawing Fundamentals II 3
ADSN 108 3-D Design Principles 3
ADSN 117 Survey of Art History I 3
ADSN 118 Survey Art History II 3
ADSN 119 Intro to Computer Applications I 3
ADSN 120 Intro to Computer Applications II 3
ADSN 225 Web Applications 3
ADSN 231 Photography I 3

Total Semester Hours Required 30

MAJOR REQUIREMENTS

Courses from this list are applied to the major:

GDSN 203 Typography 3
GDSN 304 Business Practices 3
GDSN 212 Intro to Visual Semiotics 3
GDSN 255 Studio I 3
GDSN 256 Studio II 3
GDSN 305 Studio III 3
GDSN 306 Studio IV 3
GDSN 355 Studio V: Thesis/Portfolio I 3
GDSN 356 Studio VI: Thesis/Portfolio II 3
ADSN 377 History of Modern Design 3
ADSN 379 History of Graphic Design 3

Total Semester Hours Required

DESIGN ELECTIVES
ADSN 209/210 Painting I/II 3
ADSN 230 Video I 3
ADSN 357A Maya 3
GDSN 203B Type Design 3
GDSN 204 Calligraphy & Letterforms 3
GDSN 425 Design Service 3
GDSN 398/399 Internship/Ind Study 2-6
ILLUS 305/306 Illustration Studio I/II 3

Total Semester Hours Required 21

GENERAL EDUCATION REQUIREMENTS
ENGL C101 Composition & Rhetoric 3
MATH C105 Intermediate Algebra 3
HUM Humanities Core 6
SOC SOCIOLOGY Core 6
SCI Natural Sciences Core 6
FYS 101 First Year Seminar 3
CAPS C90 Capstone Seminar 3

Total Semester Hours Required 30

GENERAL EDUCATION ELECTIVES
MCOM 111 Intro Mass Communication 3
MCOM 220 Intro to Advertising 3
MCOM 339 PR and Advertising Campaigns 3
Liberal Arts Electives 3

Total Semester Hours Required 12

Total Semester Hours Required 126

Concentration in New Digital Media

(consult advisor for more information)
MCOM 111 Intro to Mass Communication 3
MCOM 242 Intro to New Media 3
MCOM 218 Media Aesthetics 3
MCOM 262 Writing for Interactive Media 3
MCOM 272 Creating Digital Video (Intro to time-Based Media) 3
ENGL 332 New Styles/Storytelling 3
MCOM 342 Digital Project Management 3
MCOM 344 Creating Advertising for Media 3
MCOM 352 Advanced Web Publishing 3
MCOM 372 Advanced Digital Video Creation 3

Total Semester Hours Required 30
## Graphic Design Bachelor of Fine Arts Degree

### Suggested Program

#### FIRST SEMESTER
- **FYS 101**  First Year Seminar  3
- **ADSN 117**  Survey of Art History I  3
- **ADSN 103**  2-D Design Principles  3
- **ADSN 105**  Drawing I  3
- **ADSN 119**  Intro to Computer Applications I  3

#### SECOND SEMESTER
- **ENGL C101**  Composition & Rhetoric  3
- **MATH C105**  Intermediate Algebra  3
- **ADSN 118**  Survey of Art History II  3
- **ADSN 120**  Intro to Computer Applications II  3
- **ADSN 106**  Drawing II  3
- **ADSN 108**  3-D Design Principles  3

#### THIRD SEMESTER
- **SOSC**  Social Sciences Core  3
- **HUM**  Humanities Core  3
- **GDSN 204**  Calligraphy & Letterforms  3
- **ILLUS**  Illustration I  3
- **GDSN 255**  Studio I  3
- **MCOM 111**  Introduction to Mass Communications  3

#### FOURTH SEMESTER
- **SOSC**  Social Sciences Core  3
- **ADSN 379**  History of Graphic Design  3
- **ADSN 231**  Photography  3
- **GDSN 256**  Studio II  3
- **ADSN 203**  Typography  3

#### FIFTH SEMESTER
- **SCI**  Natural Sciences Core  3
- **ADSN 377**  History of Modern Design  3
- **ADSN 225**  Intro to Web Applications  3
- **ADSN 230**  Video I  3
- **GDSN 305**  Studio III  3

#### SIXTH SEMESTER
- **SCI**  Natural Sciences Core  3
- **MCOM 220**  Introduction to Advertising  3
- **HUM**  Humanities Core  3
- **GDSN 306**  Studio IV  3
- **GDSN 212**  Intro to Visual Semiotics  3
- **Electives**  3

#### SEVENTH SEMESTER
- **CAPS C390**  Capstone Seminar (Core)  3
- **GDSN 355**  Studio V: Thesis/Portfolio I  3
- **MCOM 339**  PR and Advertising Campaigns  3
- **ADSN 399**  Independent Study  3
- **Electives**  3

#### EIGHTH SEMESTER
- **ADSN 304**  Business Practices  3
- **GDSN 356**  Studio VI: Thesis/Portfolio II  3
- **ADSN 398**  Internship/Practicum  3
- **Electives**  6

**Total Semester Hours**  128
Health Science Bachelor of Science Degree

Chair: Angela Santiago, Interim
Charles Dana Hall, Room 154
Telephone: (203) 576-4328
Fax: (203) 576-4262
Email: santiago@bridgeport.edu

Curriculum and Program Requirements

The B.S. in Health Sciences program prepares students for application to professional programs in the health sciences. Such programs range from medical school and physician assistant programs, to programs in chiropractic and naturopathic medicine, as well as nutrition, acupuncture, and pharmacy. Many of these career options can be pursued in the University’s professional programs.

The program offers concentrations in community health, environmental health, exercise and fitness, and nutrition for students who desire to enter these fields at the entry level.

The program affords this range of options primarily through a liberal arts orientation toward these professions. Thus, all students take a foundation of common courses in biology, chemistry, physics, and mathematics, as well as special general education courses such as biological psychology and healthcare ethics.

A primary conviction of the program is that one of the most pressing challenges of the twenty-first century is to provide adequate healthcare to the growing and aging population. Whether students prepare for professional school application and admission, or entry level opportunities, all are encouraged to develop a philosophy of care consistent with the University’s mission.

Admissions Requirements

A student is admitted to the majors in Arts and Sciences after an evaluation of the high school transcript, counselor recommendations, and SAT/ACT scores and has demonstrated potential in analytical reasoning, comprehension, verbal expression and intellectual growth.... Students who perform well in the Biology and Mathematics programs [thus also Health Sciences] are generally found to have met the following criteria:

1. SAT scores of 530 verbal and 560 math, or composite ACT score of 22.
2. Grade point average of B (2.5) or better.
3. Rank in the top half of the high school graduating class.
4. Four years of mathematics; two lab sciences and an additional science unit in high school.

At the discretion of the Admissions Committee, students who meet two of these standards can be admitted into the major.

Learning Outcomes

The program has established the following learning outcomes:

As a result of completing the B.S. in Health Sciences, graduates will:

- Understand fundamental biological, chemical, and physical properties underlying all life systems.
- Be aware of professional and ethical issues that are pertinent to careers in the health sciences;
- Be aware of necessary precautions when acting in laboratory contexts.
- Be able to conduct experiments and make inferences based upon them.
- Be prepared to apply to professional schools in health sciences or will have selected a concentration and mastered its distinctive content.
- Exercise and fitness students will understand anatomy and physiology, principles of kinesiology, understand the relationship between exercise and wellness maintenance, and be skilled at developing appropriate exercise routines for varied clientele.
- Nutrition students will understand principles of human nutrition and its relationship to health and wellness maintenance.

GENERAL EDUCATION REQUIREMENTS

The following General Education courses are required of all Health Science concentrations:

- ENGL 101 English Composition 3
- FYS 101 First Year Seminar 3
- PHIL 110 Healthcare Ethics 3
- HUM 110 Humanities Core 3
- PSYC 380 Biological Psychology 3
- SOSC 390 Social Science Core 3
- FA 201 Fine Arts Core 3
- MATH 203/203B Statistics/Biostatistics 4
- CPS 390 Case Study 3
- BIOL 101 General Organismal Biology I w/lab 4

Total Semester Hours Required 32

PRE-PROFESSIONAL COURSES

The following pre-professional courses are required of all concentrations:

- HSCI 101 Seminar in Health Care Professionals 1
- HSCI 201 Medical Terminology 1

Total Semester Hours Required 2

CONCENTRATION-SPECIFIC GENERAL EDUCATION REQUIREMENTS

In addition to the requirements above, each concentration requires additional General Education courses:

EXERCISE AND FITNESS CONCENTRATION

- MATH 105 Intermediate Algebra 3
- BIOL 102 General Cell-Molecular Biology II w/Lab 4
- PHYS 201 General Physics I w/Lab 4

Total Semester Hours Required 11

NUTRITION CONCENTRATION

- MATH 109 PreCalculus 4
- BIOL 102 General Cell-Molecular Biology II w/Lab 4
- CHEM 113 Intro to General Chemistry w/Lab 4
- CHEM 114 Intro to Biochemistry w/Lab 4

Total Semester Hours Required 16

Total Semester Hours Required (depending on concentration selected) 48-61

Concentration Requirements & Suggested Programs

Each concentration requires specific additional courses.

The Pre-professional advisement sequence requires completion of General Education courses for any of the concentrations above (48-61 hrs.), the two-credit pre-professional courses (Health Sciences 101 and 211), and any 30 additional hrs. in the health sciences, selected in consultation with an advisor.
Students interested in entering medicine and healthcare are encouraged to use free electives to study Spanish.

### EXERCISE AND FITNESS CONCENTRATION

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<tr>
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<th>Credits</th>
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<td>HSCI 301</td>
<td>Intro to Exercise Science</td>
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<td>HSCI 321</td>
<td>Exercise Physiology</td>
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<td>HSCI 331</td>
<td>Kinesiology</td>
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<td>HSCI 351</td>
<td>Strength and Conditioning Program Development</td>
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<td>HSCI 351</td>
<td>Fitness &amp; Wellness</td>
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<tr>
<td>NUTR 107</td>
<td>Basic Human Nutrition</td>
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<tr>
<td>HSCI 471</td>
<td>Exercise Nutrition</td>
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<td>PSYC 355</td>
<td>Sports Psychology</td>
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<td>HSCI 401</td>
<td>Health Sciences Information Literature</td>
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<td>HSCI 361</td>
<td>Fitness Assessment</td>
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<td>HSCI 380</td>
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<td>Exercise and Fitness Concentration</td>
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<td>Free Electives</td>
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### SUGGESTED PROGRAM – EXERCISE AND FITNESS CONCENTRATION

#### FRESHMAN YEAR

**FALL SEMESTER**

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<td>NUTR 107</td>
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<td>BIOL 113</td>
<td>Human Anatomy &amp; Physiology I</td>
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<td>HSCI 101</td>
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**SPRING SEMESTER**

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<td>BIOL 114</td>
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#### JUNIOR YEAR

**FALL SEMESTER**

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<td>HSCI 321</td>
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**SPRING SEMESTER**

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<td>Strength and Conditioning</td>
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#### SENIOR YEAR

**FALL SEMESTER**

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<tr>
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<td>HSCI 401</td>
<td>Health Sciences Information Literature</td>
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<tr>
<td>HSCI 380</td>
<td>Internship</td>
<td>3</td>
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<tr>
<td>CAPS 390</td>
<td>Capstone Senior Seminar</td>
<td>3</td>
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**SPRING SEMESTER**

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<td>HSCI 471</td>
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**SOPHOMORE YEAR**

**FALL SEMESTER**

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<td>Biostatistics Lab</td>
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<td>HUM/SOSC</td>
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<tr>
<td>HSCI 201</td>
<td>Medical Terminology</td>
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**SPRING SEMESTER**

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# Health Sciences Bachelor of Science Degree

## Nutrition Concentration

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<tbody>
<tr>
<td>ACCT 101</td>
<td>Principles of Accounting (recommended)</td>
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<tr>
<td>BIOL 106</td>
<td>Microbiology</td>
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<td>NUTR 205</td>
<td>Fundamentals of Nutrition</td>
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<tr>
<td>HSCI 320</td>
<td>Food Sanitation</td>
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<tr>
<td>HSCI 365</td>
<td>Epidemiology for Health Science Professionals</td>
<td>3</td>
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<tr>
<td>HSCI 345</td>
<td>Comparative Diet Strategies</td>
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<td>HSCI 351</td>
<td>Fitness &amp; Wellness</td>
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<tr>
<td>HSCI 370</td>
<td>Clinical Herbology and Botany</td>
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<tr>
<td>HSCI 401</td>
<td>Health Sciences</td>
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<tr>
<td>HSCI 420</td>
<td>Food Service Management</td>
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<td>HSCI 460</td>
<td>or NUTR 560C</td>
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- Nutrition Concentration: 33
- Free Electives: 39
- Total: 120

## Suggested Program – Nutrition Concentration

### Freshman Year

#### Fall Semester

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<thead>
<tr>
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<td>English Composition</td>
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<td>FYS 101</td>
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<tr>
<td>HSCI 101</td>
<td>Seminar in Health Care Professions</td>
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<tr>
<td>ACCT 101</td>
<td>Principles of Accounting I</td>
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- Total Semester Hours Required: 15
  - * HUSV 101, Intro to Counseling is recommended

#### Spring Semester

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<tbody>
<tr>
<td>MATH 109</td>
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<td>PHIL 110</td>
<td>Healthcare Ethics</td>
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<tr>
<td>BIOL 106</td>
<td>Elementary Microbiology</td>
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</tr>
<tr>
<td>CHEM 113</td>
<td>Intro to Chemistry</td>
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- Total Semester Hours Required: 15

### Sophomore Year

#### Fall Semester

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<tr>
<td>BIOL 101</td>
<td>Organismal Biology I</td>
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<td>NUTR 205</td>
<td>Fundamentals of Nutrition</td>
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<tr>
<td>HUM/SOSC</td>
<td>Humanities/Social Science Core</td>
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<tr>
<td>HSCI 201</td>
<td>Medical Terminology</td>
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<tr>
<td></td>
<td>Elective*</td>
<td>4</td>
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- Total Semester Hours Required: 15
  - * BIOL 113, Anatomy & Physiology I is recommended

#### Spring Semester

<table>
<thead>
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<td>BIOL 102</td>
<td>Cell Molecular Biology II</td>
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<td>CHEM 114</td>
<td>Intro to Biochemistry</td>
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<tr>
<td>FA</td>
<td>Fine Arts Core</td>
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<tr>
<td></td>
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- Total Semester Hours Required: 15

### Junior Year

#### Fall Semester

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<tr>
<td>HSCI 320</td>
<td>Food Sanitation</td>
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<td>HSCI 345</td>
<td>Comparative Diet Strategies</td>
<td>3</td>
</tr>
<tr>
<td>MATH 203</td>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 203B</td>
<td>Biostatistics Lab</td>
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<tr>
<td></td>
<td>Elective</td>
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- Total Semester Hours Required: 15

#### Spring Semester

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>PHYS 380</td>
<td>Biological Psychology</td>
<td>3</td>
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<tr>
<td>HSCI 351</td>
<td>Fitness &amp; Wellness</td>
<td>3</td>
</tr>
<tr>
<td>HUM/SOSC</td>
<td>Humanities/Social Science Core</td>
<td>3</td>
</tr>
<tr>
<td>HSCI 370</td>
<td>Clinical Herbology and Botany</td>
<td>3</td>
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<tr>
<td></td>
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- Total Semester Hours Required: 15

### Senior Year

#### Fall Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HSCI 365</td>
<td>Epidemiology for Health Science Professionals</td>
<td>3</td>
</tr>
<tr>
<td>HSCI 401</td>
<td>Health Sciences</td>
<td>3</td>
</tr>
<tr>
<td>HSCI 420</td>
<td>Food Service Management</td>
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<tr>
<td></td>
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- Total Semester Hours Required: 15

#### Spring Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CAPS 390</td>
<td>Capstone Senior Seminar</td>
<td>3</td>
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<tr>
<td>HSCI 460</td>
<td>Vitamins and Minerals</td>
<td>3</td>
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<tr>
<td></td>
<td>Electives</td>
<td>9</td>
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</tbody>
</table>

- Total Semester Hours Required: 15
Human Services Bachelor of Science Degree

Coordinator: Donna Phillips
Carlson Hall
Telephone: (203) 576-4171
Fax: (203) 576-4171
E-mail: dphil@bridgeport.edu

Curriculum and Program Requirements

The Human Services Program is designed to provide the academic and practical experience necessary to enter the field of human services upon completion of the degree. The combination of academic theoretical coursework and its application through supervised field work experience provides students with the breadth of preparation necessary for employment in a wide range of human service agencies and community organizations. Students have the opportunity to enhance their programs with minors in such fields as Education, Business and Social Sciences. Stimulating courses are taught by experienced faculty who are current practitioners as well as active researchers.

Learning Outcomes

By completing the B.S. in Human Services, students will: 1) be knowledgeable of the history and systems of the Human Services field; 2) be skillful at program assessment, planning, and development; 3) be able to find, use, manage, and protect information effectively; 4) be effective at oral and written communication; 5) be adept at program administration and leadership; 6) be committed to ethical practices; and 7) be respectful of client values and attitudes.

Summary of Requirements

PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HUSV 110</td>
<td>Alcohol and other Drugs in Society</td>
<td>3</td>
</tr>
<tr>
<td>HUSV 201</td>
<td>Introduction to Counseling</td>
<td>3</td>
</tr>
<tr>
<td>HUSV 203</td>
<td>Introduction to Human Services</td>
<td>3</td>
</tr>
<tr>
<td>HUSV 205</td>
<td>Couns Mths for Spec Populations</td>
<td>3</td>
</tr>
<tr>
<td>HUSV 305</td>
<td>Group Interaction</td>
<td>3</td>
</tr>
<tr>
<td>or HUSV 304</td>
<td>Peer Counseling</td>
<td>3</td>
</tr>
<tr>
<td>HUSV 301</td>
<td>Crisis Management</td>
<td>3</td>
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<tr>
<td>HUSV 350</td>
<td>Human Services Seminar</td>
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<table>
<thead>
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<th>Course</th>
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<tbody>
<tr>
<td>GER 101</td>
<td>Introduction to Gerontology</td>
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</tr>
<tr>
<td>MGMT 302</td>
<td>Multicultural Management</td>
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<tr>
<td>MGMT 305</td>
<td>Personnel Management</td>
<td>3</td>
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<tr>
<td>EDUC 201</td>
<td>Human Growth &amp; Development</td>
<td>3</td>
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<tr>
<td>PHIL 203</td>
<td>Ethics</td>
<td>3</td>
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<tr>
<td>or HUSV 299</td>
<td>Moral Development</td>
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<tr>
<td>HUSV 227</td>
<td>Practicum</td>
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<tr>
<td>NUTR 205</td>
<td>Fundamentals of Nutrition</td>
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<tr>
<td>MCOM 110</td>
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PLUS ANY FIFTEEN SEMESTER HOURS OF HUMAN SERVICES, PSYCHOLOGY OR RELATED FIELD | 51 |

FREE ELECTIVES | 15 |

GENERAL EDUCATION REQUIREMENTS

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<th>Title</th>
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<td>Fine Arts Core</td>
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<tr>
<td>MATH C105</td>
<td>Intermediate Algebra</td>
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LIBERAL ARTS ELECTIVES | 7 |

TOTAL GENERAL EDUCATION REQUIREMENTS | 40 |

Total Semester Hours | 120 |

Suggested Program

FIRST SEMESTER

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<td>Alcohol and Other Drugs in Society</td>
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<td>HUSV 201</td>
<td>Introduction to Counseling</td>
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<td>MATH C105</td>
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SECOND SEMESTER

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<td>PHIL 203</td>
<td>Ethics</td>
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<td>HUSV 205</td>
<td>Counseling Special Populations</td>
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THIRD SEMESTER

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<td>Human Growth and Development</td>
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<td>HUSV 277</td>
<td>Practicum</td>
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<td>Humanities Core</td>
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FOURTH SEMESTER

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<td>Social Sciences Core</td>
<td>3</td>
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<tr>
<td>HUSV 110</td>
<td>Alcohol and Drugs in Society</td>
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<td>HUSV 333</td>
<td>Social Welfare Policy</td>
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FIFTH SEMESTER

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SIXTH SEMESTER

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<td>Group Interaction</td>
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<td>HUSV 301</td>
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SEVENTH SEMESTER

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<td>Internship</td>
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<td>HUSV 304</td>
<td>Peer Counseling</td>
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EIGHTH SEMESTER

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<td>HUSV/GERO</td>
<td>Electives</td>
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<tr>
<td>Free Electives</td>
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</tbody>
</table>

Total Semester Hours | 120 |
## Industrial Design Bachelor of Science Degree

*Chair:* Richard Wilfred Yelle  
Arnold Bernhard Center, Room 810  
Telephone: (203) 576-4222  
Fax: (203) 576-4042  
E-mail: ryelle@bridgeport.edu

### Curriculum and Program Requirements

In our technological world, the creative industrial designer leads the way in the design of products that are user friendly, safe, energy efficient and enjoyable to use. The designer’s concern is with the sensory aspects of products, bringing together all facets of product development including aesthetics, ergonomics, materials, manufacturability, and environmental considerations. Professional designers often work in interdisciplinary teams on consumer products; business products; and scientific and medical instruments.

The Industrial Design program begins with the basics of two- and three-dimensional design, Art and Design history, computer aided design, drawing, model making, as well as courses in the sciences and general education.

Students will research, design and develop assigned product concepts in the studio and computer laboratories. Build product models in a well equipped Model Lab and present and document their creative and unique solutions. They will study support subjects like ergonomics, materials and manufacturing, sustainability and marketing. All students will develop a strong portfolio that will prepare them to enter the design profession. The Industrial Design program offers the student a broad based design education with opportunities to specialize within many traditional areas of product exhibit and transportation design. Students will have opportunities to work on competitions and collaborative projects often with industrial sponsorship, and will be encouraged to work in summer internships.

### Learning Outcomes

1. Demonstrate ability to identify, analyze, and solve design problems. Assessment: Portfolio projects and project research.

2. Demonstrate mastery of design tools, techniques, and concepts in design. Assessment: Projects and portfolios that evidence craftsmanship and adherence to project parameters.

3. Demonstrate an understanding of the aesthetics of form development, and of the history and current state of design. Assessment: Projects, papers, and presentations for art and design history courses; in studio courses, projects that appropriately reference historical precedents.

4. Demonstrate proficiency in selection and use of relevant technologies in design. Abilities to use available technical and industrial processes to produce a design product, and to design and implement such a process. Assessment: Project and portfolio materials planned to be feasibly reproducible by industrial means rather than by one-off or by hand.

5. Demonstrate an understanding of the cultural and societal connections linking design trends and processes as well as a knowledge of business practices and of the market place. Assessment: Projects and portfolio solutions that are culturally- and audience-appropriate for the problem as posed by the business and market briefs for the project.

### Summary of Requirements

#### PROGRAM REQUIREMENTS

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<thead>
<tr>
<th>DESIGN FOUNDATION COURSES</th>
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<tr>
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#### MAJOR REQUIREMENTS

| IDDSN 215 | Materials and Manufacturing I | 3 |
| IDDSN 216 | Materials and Manufacturing II | 3 |
| IDDSN 218S & W | SolidWorks CAD I & II | 4 |
| IDDSN 218C | Solid Works CAD III | 2 |
| IDDSN 255 | Industrial Design Studio I | 3 |
| IDDSN 256 | Industrial Design Studio II | 3 |
| IDDSN 305 | Industrial Design Studio III | 3 |
| IDDSN 306 | Industrial Design Studio IV | 3 |
| IDDSN 355 | Industrial Design Studio V | 3 |
| IDDSN 356 | Industrial Design Studio VI | 3 |
| IDDSN 357 | Alias / Maya CAD | 6 |
| IDDSN 398 | Internship | 3 |
| IDDSN 399 | Special Projects | 3 |
|            | Design Electives | 9 |

#### GENERAL EDUCATION REQUIREMENTS

| ENGL C101 Composition & Rhetoric | 3 |
| MATH C105 Intermediate Algebra | 3 |
| SCI Natural Science Core | 6 |
| SCI Social Sciences Core | 6 |
| SCI Humanities Core | 6 |
| ADSN 117 Survey of Art History I | 3 |
| ADSN 118 Survey of Art History II | 3 |
| CAPS C390 Capstone Seminar | 3 |
|            | Liberal Arts Electives | 4 |

#### Total Semester Hours 127

### Suggested Program

#### FIRST SEMESTER

| FYS 101 First Year Seminar | 3 |
| ADSN 103 2D Design | 3 |
| ADSN 105 Drawing I | 3 |
| ADSN 117 History Survey of Art I | 3 |
| ADSN 119A Intro to Computer Applications I | 3 |

#### SECOND SEMESTER

| ADSN 108 3-D Design | 3 |
| ADSN 110 Drawing / Drafting | 3 |
| ADSN 118 History Survey of Art II | 3 |
| ADSN 119B Intro to Computer Applications II | 3 |
| MATH C105 Intermediate Algebra | 3 |
| ENGL C101 Composition & Rhetoric | 3 |
## Industrial Design Bachelor of Science Degree

### THIRD SEMESTER
- **SOSC** Social Science Core 3
- **IDDSN 205** Drawing III 3
- **IDDSN 215** Material & Manufacturing I 3
- **IDDSN 218S** Solidworks CAD 2
- **IDDSN 255** Industrial Design Studio I 3
- **SCI** Natural Science Core 3

### FOURTH SEMESTER
- **SCI** Natural Science Core 3
- **SOSC** Social Science Core 3
- **IDDSN 206** Drawing IV 3
- **IDDSN 216** Materials & Manufacturing II 3
- **IDDSN 218W** Solidworks CAD II 2
- **IDDSN 256** Industrial Design Studio II 3

### FIFTH SEMESTER
- **ADSN 377** History of Modern Design 3
- **HUM** Humanities Core 3
- **IDDSN 218C** SolidWorks CAD III 2
- **IDDSN 305** Industrial Design Studio III 3
- **IDDSN 312** Furniture Design 3
- **Design Elective** 3

### SIXTH SEMESTER
- **HUM** Humanities Core 3
- **IDDSN 231** Digital Photography 3
- **IDDSN 306** Industrial Design Studio IV 3
- **IDDSN 311** Display & Exhibit Design 3
- **Liberal Arts Electives** 4

### SEVENTH SEMESTER
- **ADSN 357A** Alias / Maya CAD 3
- **ADSN 233** Motion Graphics 3
- **IDDSN 355** Industrial Design Studio V 3
- **IDDSN 399** Special Projects 3
- **Design History Elective** 3

### EIGHTH SEMESTER
- **CAPS C390** Capstone Seminar 3
- **IDDSN 356** Industrial Design Studio VI 3
- **IDDSN 357B** Alias / Maya CAD 3
- **IDDSN 398** Internship 3

### TOTAL SEMESTER HOURS 127
**Interior Design**  
*Bachelor of Science Degree*

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### Chair: John Kandalaat  
Arnold Bernhard Center, Room 509  
Telephone: (203) 576-4221  
Fax: (203)-576-4042  
E-mail: jkandala@bridgeport.edu

### Curriculum and Program Requirements

The Interior Design program prepares students to the functional, technical and aesthetic aspects of the interior environment.

The Professional Interior Designer is qualified to identify, research and solve problems pertaining to the function and aesthetic quality of the interior environment. The designer must have knowledge of construction materials, their applications and methods of installation. Interior designers must design the space in accordance with federal, state and local building codes to meet safety, health, and accessibility requirements. Interior designers both plan the space and furnish the interiors of private homes, public buildings and commercial establishments such as offices, retail, restaurants, hospitals, hotels and theaters. They may plan additions, renovations and be involved in historic preservation. With a client’s needs and budget in mind, they develop space-planning solutions; prepare working drawings, millwork, architectural details and specifications for interior construction, furnishing and finishes. Designers use computers to generate plans and construction documents, in addition to 3D modeling views.

At UB several interior projects assignments are done in collaboration with noted interior/architectural firms, to give students a grasp of real projects and receive additional inputs from professionals in the field. In addition, this relationship helps establish connections for internships.

**ITDSN 398 (Internship) can be taken as an elective in addition to the required coursework.**

As an Interior Design major, you can specialize in several areas:  
- Residential Design (new and existing)  
- Contract Design such as: Retail, Hospitality, Corporate Offices, Health care, Institutional

### Learning Outcomes

1. Demonstrate ability to identify, analyze, and solve design problems. Assessment: Portfolio projects and project research.
2. Demonstrate mastery of design tools, techniques, and concepts in design. Assessment: Projects and portfolios that evidence craftsmanship and adherence to project parameters.
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### Summary of Requirements

#### PROGRAM REQUIREMENTS

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**MAJOR REQUIREMENTS**

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**GENERAL EDUCATION REQUIREMENTS**

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**Total Semester Hours**  
127

### Suggested Program

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#### SECOND SEMESTER

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# Interior Design Bachelor of Science Degree

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**Total Semester Hours** | **127**
International Business Bachelor of Science Degree

Curriculum and Program Requirements

The Bachelor of Science in International Business prepares students for assuming a managerial position in any American or foreign multinational firm, developing one’s own business abroad, or working for international governments and agencies.

Since this major attracts many students from abroad, it provides students with an opportunity to develop multicultural awareness and international contacts. This major is recommended for those students who expect to travel abroad or live in foreign environments. Students in this major are required to achieve proficiency in at least one foreign language before completion of the degree.

Learning Outcomes

LEARNING OBJECTIVES

Students 1) understand the economic, cultural, legal and political issues associated with international business; 2) acquire the broad discipline knowledge that are basic to international business enterprises; 3) develop cultural sensitivity and effective communication skills that enable them to communicate with others from diverse backgrounds; and 4) acquire the skills necessary to pursue entry level positions in an American or foreign multinational firm, develop one’s own business abroad, or work for international governments and agencies.

ASSESSMENT

Students’ international business knowledge and skills will be tested when they begin and finish the International Business program with a program specific exam. Alumni will be asked to complete follow-up questionnaires regarding their careers in international business.

Summary of Requirements

CREDITS

General Education Requirements 42
International Business Program Requirements 51
International Business Electives 12
Free Electives 15

GENERAL EDUCATION REQUIREMENTS

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INTERNATIONAL BUSINESS ELECTIVES

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FREE ELECTIVES 15
Total Semester Hours 120

Suggested Program

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THIRD SEMESTER

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FOURTH SEMESTER

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FIFTH SEMESTER

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SIXTH SEMESTER

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SEVENTH SEMESTER

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EIGHTH SEMESTER

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<td>CAPS C390</td>
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Free Electives 15
Total Semester Hours 120
International Political Economy and Diplomacy  

**Chair:** Dave Benjamin  
Carlson Hall, Room 208  
Telephone: (203) 576-4452  
Fax: (203) 576-4967  
E-mail: dbenjamin@bridgeport.edu

**Curriculum and Program Requirements**

The major in International Political Economy and Diplomacy provides students with a comprehensive understanding of the global political economy as well as the analytical skills to evaluate change and direction. Political economy describes the nexus between politics and economics, and international political economy studies the arena where international politics and international economics meet. The subject matter of International Political Economy is the study of the international economic system and how it produces, distributes, and uses wealth. The study of the international political system focuses a set of institutions and rules by which social and economic interactions are governed. It represents an investigation of the political basis of economic action and the economic basis of political action. An important additional consideration is the role of international law in developing universal principles and norms in the conduct of international relations, and governing of relations between states and their citizens. Because diplomatic negotiations form the basis of new international law, and because diplomacy operates within the framework of extant international law, the study of diplomacy is an important component in the study of international political economy.

**Learning Outcomes**

The B.A. in International Political Economy & Diplomacy has the following learning outcomes: 1) students will demonstrate an ability to explain and compare different political and economic systems; 2) students will be able to reflect on the role of culture, history and religion in international political economy; 3) students will be able to explain the role of diplomacy and conflict resolution in international relations; 4) Students will demonstrate a basic working knowledge of a world language other than one’s mother tongue; 5) students will demonstrate the ability to use critical thinking in their evaluation of issues and problems in international political economy; and 6) students will demonstrate practical skills in helping resolve global disputes through diplomacy and conflict resolution.

*Note that for all College of Public and International Affairs majors, a portfolio is collected to track progress in programmatic outcomes.*

**Summary of Requirements**

**Program Requirements**

**PROGRAM REQUIREMENTS**

- **SOSC 207** World Regional Geography 3  
- **WREL 101** Intro to World Religions 3  
- **SOC 251** Cultural Anthropology 3  
- **PSCI 105** Intro to Political Science and Political Science Research Methods 3  
- **ECON 201** or **IPED 201** Economics and Development 3  
- **ECON 202** Micro Economics 3  
- **IPED 202** or **IPED 206** Pol. Econ. of North/South Relations 3  
- **PSCI 312** Diplomacy & Foreign Policy 3  

**TWO OF THE FOLLOWING**

- **PSCI 101** American Government 3  
- **or IPED 345** Political Economy of EU 3  
- **or IPED 329** Political Economy of China 3  
- **IPED/PSCI 321** Political Economy of East Asia 3  
- **IPED 340** Political Economy of Latin America 3  
- **WREL 374** Religion and Politics in the Middle East 3  

**TWO OF THE FOLLOWING**

- **PSCI 204** Government and Politics Abroad 3  
- **PSCI 203** U.S. Foreign Policy 3  
- **PSCI 305** International Relations 3  
- **or PSCI 207** World Politics 3  
- **or PSCI 209** Intro to International Law 3  
- **or IPED 206** Pol. Econ. of North/South Relations 3  

**or PSCI 209** Intro to United Nations Studies 3  
**SOSC 207** World Regional Geography 3  
**PSCI 323** Classics in Political Theory 3  
**or PSCI 324** Recent Political Theory 3  

**ASIA-PACIFIC STUDIES**

- **IPED/PSCI 321** Political Economy of East Asia 3  

**PLUS ANY FOUR OF THE FOLLOWING COURSES:**

- **IPED 329** Political Economy of China 3  
- **PSCI 203** U.S. Foreign Policy 3  
- **WREL 229** Confucianism and Daoism 3  
- **WREL 102** Introduction to East Asian Religions 3  
- **WREL 205** Buddhism 3  

**PEACE AND DEVELOPMENT STUDIES**

- **IPED 391** Sustainable Development 3  

**PLUS ANY FOUR OF THE FOLLOWING COURSES:**

- **IPED 392** Geopolitics of Oil 3  
- **IPED/PSCI 321** Political Economy of East Asia 3  
- **WREL 275** Religion, Conflict and Mediation 3  
- **WREL 278** Religion, Peace, and War 3  
- **WREL 305** Comparative Religious Ethics 3  
- **WREL 374** Religion and Politics in the Middle East 3  

**AMERICAS STUDIES**

- **PSCI 101** American Government 3  

**PLUS ANY FOUR OF THE FOLLOWING COURSES:**

- **GLDP 411** Issues in Economic Development 3  
- **PSCI 203** U.S. Foreign Policy 3  
- **MCOM 290** Multicultural Communication 3  
- **IPED 340** Political Economy of Latin America 3  
- **IPED 392** Geopolitics of Oil 3  
- **IPED 390** Multinational Corporations in IPE 3  

**MIDDLE EAST STUDIES**

- **WREL 374** Religion and Politics in the Middle East 3  

**PLUS ANY FOUR OF THE FOLLOWING COURSES:**

- **PSCI 203** U.S. Foreign Policy 3  
- **IPED 392** Geopolitics of Oil 3  
- **WREL 103** Introduction to Religions of Middle Eastern Origin 3  
- **WREL 209** Islam 3  
- **WREL 275** Religion, Conflict and Mediation 3  
- **MCOM 290** Intercultural Communication 3  

**FOREIGN LANGUAGE REQUIREMENT**

All IPED majors must demonstrate a working knowledge of at least one world language besides English or complete through the 104 level of one of the following languages currently offered at the University: Chinese, Korean, Japanese, French, or Spanish.

**THESIS AND INTERNSHIP GUIDELINES**

A senior thesis is voluntary but strongly encouraged. Depending on the scope of the project, a thesis may account for 3 to 6 credit hours. While not required, students are encouraged to write on a subject related to their field of con-
International Political Economy and Diplomacy  Bachelor of Arts

centration, should they have elected one. In addition, one semester of internship is also strongly encouraged. Internship may account for 3 to 6 credit hours.

GENERAL EDUCATION REQUIREMENTS

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<tr>
<th>Course</th>
<th>Title</th>
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<tr>
<td>FA</td>
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TOTAL 120

Suggested Program

FIRST SEMESTER

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SECOND SEMESTER

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THIRD SEMESTER

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SIXTH SEMESTER

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SEVENTH SEMESTER

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EIGHTH SEMESTER

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<td>Free Electives</td>
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*Students who do not meet the modern language requirement for the B.A. degree must use 3-12 semester hours free electives, depending on their level of competency, to satisfy this requirement.
Literature and Civilization Bachelor of Arts Degree

Program Head: Edward Geist
Charles Dana Hall
Telephone: (203) 576-4956
Fax: (203) 576-4051
E-mail: edwgeist@bridgeport.edu

Curriculum and Program Requirements

The Literature and Civilization major, with its emphasis on the connections between the humanities as well as on their individual aspects, on abstract ideas as well as specific skills, on the global as well as the local context, ensures that students have the resources which will enable them to pursue successfully careers and leadership roles in their communities. The major provides students with the skills, knowledge, and insights which accrue from the study of history, literature, and philosophy. The degree requires 42 hours in the Humanities, 40 hours of General Education, 12 hours of Language study, and 32 hours of Electives.

In Group I students are introduced to the disciplines that make up the humanities by taking a combination of required and elective courses in fine arts, history, literature, and philosophy. The degree requires 42 hours in the Humanities, 40 hours of General Education, 12 hours of Language study, and 32 hours of Electives. In the senior year, Humanities majors take a two-semester sequence (Group II) applying the interrelationships of the humanistic disciplines, first in the Senior Seminar and then in the supervised research and writing of the Senior Thesis in the student’s area of Concentration.

The Literature and Civilization major allows for four areas of Concentration (Group III): (A) Creative Writing, (B) English, (C) History, and (D) Philosophy. Each Concentration requires 15 hours, a combination of specific courses and electives in the area of study.

The Literature and Civilization major must take 12 hours of Language study. The remaining hours may be used to earn a Minor, to take additional courses in the Humanities or the Concentration, or to satisfy a curiosity about some of the many other areas of study offered by the University.

Learning Outcomes

By completing the Literature and Civilization program, students will: 1) be able to read critically and analyze traditional literary genres, historical texts, and philosophical texts; 2) be able to develop and communicate their ideas clearly in writing; 3) be able to identify and evaluate appropriate research sources, incorporating the sources into documented academic writing, and formulate their own arguments based in part on those sources; 4) gain a competency in the content, theories and methods of a particular discipline in the humanities that will manifest itself in their written work; 5) be able to demonstrate an understanding of the interconnectedness of literary, historical, and philosophical developments that influence the current global culture; 6) develop an appreciation for the humanities as a source of practical wisdom, aesthetic pleasure, and knowledge of the diversity of human experience; and 7) develop a grounded sense of ethical responsibility in an increasingly interconnected world.

Summary of Requirements

MAJOR PROGRAM REQUIREMENTS

GROUP I: BASIC COURSES

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<th>Course</th>
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<td>ENGL 305</td>
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<td>HIST 101 or 102</td>
<td>World Civilization</td>
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<tr>
<td>PHIL 205</td>
<td>Western Philosophy</td>
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<tr>
<td>PHIL 216</td>
<td>Philosophy Elective</td>
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<tr>
<td>ADSN 117 or 118*</td>
<td>Survey of Art History, Music in the Liberal Arts, or Introduction to Drama</td>
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*Students take one of these courses to satisfy the program’s Fine Arts requirement

GROUP II: PROGRAM COURSES

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<td>HUM 395</td>
<td>Senior Thesis</td>
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GROUP III: AREAS OF CONCENTRATION

CREATIVE WRITING

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<td>ENGL 201</td>
<td>Introduction to Creative Writing</td>
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<td>ENGL 205</td>
<td>Poetry Writing</td>
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<tr>
<td>ENGL 218</td>
<td>Autobiographical Writing</td>
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<td>ENGL 308</td>
<td>Advanced Creative Writing</td>
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ENGLISH

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HISTORY

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<td>HIST 233</td>
<td>The Roots of Modern Culture</td>
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15

PHILOSOPHY

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<td>Philosophy of World Religions</td>
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15

GENERAL EDUCATION REQUIREMENTS

CORE (33)

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<td>ENGL 101</td>
<td>Composition &amp; Rhetoric</td>
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<td>MATH 105 or Demonstrated Math Competency</td>
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<td>FYS 101</td>
<td>First Year Seminar</td>
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<td>Fine Arts Core</td>
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40

FOREIGN LANGUAGE

Students must demonstrate proficiency in a modern language other than English at the 104 level.

ELECTIVES AND/OR MINOR 26-38
### Suggested Program

#### FIRST SEMESTER
- **ENGL C101** Composition & Rhetoric 3
- **MATH C105** Intermediate Algebra 3
- **FYS 101** First Year Seminar 3
- **SCI** Natural Sciences Core 3
- Electives 3

#### SECOND SEMESTER
- **FA** Fine Arts Core 3
- **SCI** Natural Sciences Core 3
- **HIST 101** World History (Group I) 3
  - Concentration Elective 1 (Group III) 3
  - Elective 3

#### THIRD SEMESTER
- **LANG 101** 3
- **HUM** Humanities Core 3
- **SOSC** Social Sciences Core 3
  - Concentration Require 1 (Group III) 3
  - Elective 3

#### FOURTH SEMESTER
- **LANG 102** 3
- **HUM** Humanities Core 3
- **SOSC** Social Sciences Core 3
- **PHIL 205** Western Philosophy (Group I) 3
  - Elective 3

#### FIFTH SEMESTER
- **LANG 103** 3
- **ADSN 117** Survey of Art History I 3
- **MUSC 122** Music in the literal Arts, or
  - **THA 103** Introduction to Drama
  - Philosophy Elective (Group I) 3
  - Concentration Elective 2 (Group III) 3
  - Elective 3

#### SIXTH SEMESTER
- **LANG 104** 3
  - Concentration Require. 2 (Group III) 3
- **ENGL 305** Shakespeare (Group I) 3
- Electives 6

#### SEVENTH SEMESTER
- **HUM 300** Senior Seminar (Group II) 3
- **CAPS C390** Capstone Seminar 3
  - History Elective (Group I) 3
  - Electives 6

#### EIGHTH SEMESTER
- **HUM 395** Senior Thesis (Group II) 3
  - Concentration Elective 3 (Group III) 3
  - English Elective (Group I) 3
  - Electives 6

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**Total Semester Hours** 120
Management and Industrial Relations  Bachelor of Science Degree

Program Director: William Greenspan
Mandeville Hall, Room 309
Telephone: (203) 576-4578
Fax: (203) 576-4388
Email: profweg@bridgeport.edu
Faculty Contact: Arthur McAdams
Mandeville Hall, Room 217B
Telephone: (203) 576-4648
Email: amcadams@bridgeport.edu

Curriculum and Program Requirements

The Management and Industrial Relations major prepares graduates to enter the workplace as supervisors, operations managers, human resources technicians and start-up entrepreneurs. The program prepares students to take advantage of opportunities in the global job market. Research, special projects and independent study permit each student to fit the major to their personal interests, values and aspirations. Operational issues as well as broad management policy concerns are emphasized, assuring relevance of studies to a student’s starting position and readiness for growth in any organization, domestic or global.

The program offers flexibility in the selection of electives to fulfill the major requirements. After completion of required courses, the student may elect courses in small business and entrepreneurship, advanced operations management, human resource skills and programs, labor law and conflict management, to complete the major.

Students following an entrepreneurial studies track, for instance, would take courses in small business, advanced operations management, and labor law; and complete an independent study focused on preparation of a comprehensive business plan for a prospective business start-up.

Students should consult with the designated undergraduate advisor to plan the selection and sequencing of courses to satisfy the major requirements.

Learning Outcomes

LEARNING OBJECTIVES

Students will: 1) learn how to work effectively with people in an organization; 2) learn the management principles necessary to pursue entry level positions; 3) learn how to effectively communicate; and 4) develop an understanding of organizational processes.

ASSESSMENT

Students will be evaluated and benchmarked with a standardized management specific test. Students’ management knowledge and skills will be tested when they begin and finish their Management program with a program specific exam.

Summary of Requirements

CREDITS

General Education Requirements 42
Management and Industrial Relations Program Requirements 51
Management and Industrial Relations Electives 12
Free Electives 15

GENERAL EDUCATION REQUIREMENTS

ENGL C101 Composition & Rhetoric 3
FYS 101 First Year Seminar 3
MATH C105 Intermediate Algebra 3
SCI Natural Sciences Core 6
HUM Humanities Core 6
ECON 201 Principles of Economics - Macro 3
ECON 202 Principles of Economics - Micro 3
ENGL 202 Advanced Composition (for Business) 3
FA Fine Arts Core 3
CAIS 201 Introduction to CAIS 3

PROGRAM REQUIREMENTS

ACCT 101 Principles of Accounting I 3
ACCT 102 Principles of Accounting II 3
ACCT 103 Managerial/Cost Accounting 3
CAIS 191 Computer Concepts 3
LAW 251 Business Law I 3
CAIS 101 Statistics 3
CAIS 102 Applied Statistics 3
FIN 309 Managerial Finance 3
MGMT 301 Operations Management 3
CAIS 201 Introduction to CAIS 3
MKTG 305 Principles of Marketing 3
FIN 321 Investment Principles 3
FIN 380 Multinational Finance 3
MGMT 302 Multiculture Management 3
MKTG 342 Multinational Marketing 3

MANAGEMENT ELECTIVES

MGMT 300 Interners and Group Beh. in Org. 3
MGMT 305 Human Resource Issues in Management 3
MGMT 311 Hum. Res. Mgmt Programs and Skills 3
MGMT 320 Entrepreneur and Small Bus. Mgmt 3
MGMT 340 Conflict and Negotiation 3
MGMT 342 Labor Law and Arbitration 3
MGMT 330 Leadership Lessons from the Movies 3

Select four courses 12

FREE ELECTIVES 15

Total Semester Hours 120

Suggested Program

FIRST SEMESTER

ACCT 101 Principles of Accounting I 3
ENGL C101 Composition & Rhetoric 3
MATH C105 Intermediate Algebra 3
FYS 101 First Year Seminar 3
CAIS 191 Computer Concepts 3

SECOND SEMESTER

ACCT 102 Principles of Accounting II 3
ENGL 202 Advanced Composition 3
CAIS 101 Statistics 3
SCI Natural Sciences Core 3
FA Fine Arts Core 3

THIRD SEMESTER

ECON 201 Principles of Economics - Macro 3
CAIS 102 Applied Statistics 3
SOSC Social Science Core 3
FA Fine Arts Core 3
ACCT 103 Managerial/Cost Accounting 3

FOURTH SEMESTER

ECON 202 Principles of Economics - Micro 3
CAIS 201 Introduction to CAIS 3
LAW 251 Business Law I 3
SCI Natural Science Core 3
SOSC Social Science Core 3

FIFTH SEMESTER

FIN 309 Managerial Finance 3
MKTG 305 Principles of Marketing 3
MGMT 301 Operations Management 3
HUM Humanities Core 3
FA Free Elective 3
Management and Industrial Relations  Bachelor of Science Degree

**SIXTH SEMESTER**

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<td>MGMT 302</td>
<td>Multiculture Management</td>
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**SEVENTH SEMESTER**

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**EIGHTH SEMESTER**

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**Total Semester Hours**  120
Marketing Bachelor of Science Degree

Program Director: William Greenspan
Mandeville Hall, Room 309
Telephone: (203) 576-4378
Fax: (203) 576-4888
E-mail: profweg@bridgeport.edu

Curriculum and Program Requirements
In order to prepare for the varied demands of a career in marketing, the Marketing major courses follow an interdisciplinary approach, stressing fundamentals of behavioral analysis, decision-making, research, and the application of managerial techniques to marketing problems.

Learning Outcomes
LEARNING OBJECTIVES
Students 1) learn to create a marketing mix to market products, services and ideas to customers; 2) acquire the knowledge to develop marketing strategy; 3) learn how to effectively communicate marketing information to their various constituencies; and 4) develop an understanding of human behavior related to marketing activity.

ASSESSMENT
Students will be evaluated and benchmarked with a standardized marketing test. Students’ marketing knowledge and skills will be tested when they begin and finish the Marketing program with a program specific exam.

Summary of Requirements

Credits
General Education Requirements 42
Marketing Program Requirements 54
Marketing Electives 9
Free Electives 15
Total Semester Hours 120

General Education Requirements

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<tr>
<td>ECON 201</td>
<td>Principles of Economics - Macro</td>
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<td>ECON 202</td>
<td>Principles of Economics - Micro</td>
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Total 42

Program Requirements

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Total 54

Marketing Electives

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<td>Management of Promotion</td>
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<td>MKTG 310</td>
<td>Service Marketing</td>
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<td>MKTG 325</td>
<td>Sales Management</td>
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<tr>
<td>MGMT 320</td>
<td>Entrepreneurship and Small Business</td>
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Select three courses 9

Free Electives

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Total 15

Total Semester Hours 120

Suggested Program

First Semester

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Second Semester

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Third Semester

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Fourth Semester

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Fifth Semester

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Sixth Semester

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Seventh Semester

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Total Semester Hours 120

Eighth Semester

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Total Semester Hours 120
**Martial Arts Studies Bachelor of Arts Degree**

**Program Head:** Mark Setton  
**Telephone:** (203) 576-4965  
**Fax:** (203) 576-4967  
**Email:** msetton@bridgeport.edu  
**Martial Arts Institute Director and Program Co-Chair:** Yongbom Kim  
**Telephone:** (203) 576-4966  
**E-mail:** ybkim@bridgeport.edu

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**Curriculum and Program Requirements**

The University of Bridgeport’s Martial Arts Studies program is the first degree-granting Martial Arts Studies program in the United States. A challenging program with a Liberal Arts focus, it provides a theoretical and practical understanding of the Martial Arts of East Asia which have a history of 5000 years. Students may choose from practical foci in Taekwondo, Taiji, or Karate. The program is designed to explore questions such as the role of East Asian philosophy in the Martial Arts and the psychosocial effects of the practice of the Martial Arts. Through the relationships with their teachers and their peers, the student is meant to experience a growing sense of community and shared responsibility.

The program, offered through the University’s College of Public and International Affairs, examines four dimensions of the Martial Arts, including: 1) the historical and philosophical roots of the Martial Arts; 2) the languages and cultures of the societies in which the Martial Arts originated and developed; 3) in-depth study of at least one of the Martial Arts; 4) the psychosocial dimensions of the Martial Arts with a special focus on the impact that the Martial Arts have upon the human personality and upon interpersonal relations.

Students in the program may choose one of several career tracks: A Criminal Justice track; a Health Science track; or a Business track.

**Learning Outcomes**

Martial Arts Studies students will: 1) demonstrate critical thinking skills; 2) demonstrate basic math and science skills; 3) demonstrate strong written and oral communication skills; 4) demonstrate competency in the history, theory and practice of at least one of the Martial Arts and a good working knowledge of at least one other; 5) demonstrate a grasp of the various Martial Arts’ notion of “self cultivation” and be able to relate it to their own personal growth; 6) demonstrate the practical leadership skills and intercultural literacy needed to assume entry level leadership positions in business, government, and in civil society; 7) develop appreciation of diversity in the world and in intellectual areas such as but not limited to the humanities and the social sciences; and 8) show the desire and ability to pursue learning throughout life.

*Note that for all College of Public and International Affairs majors, a portfolio is collected to track progress in programmatic outcomes. In martial arts practica, there is regular testing and monitoring of competencies as students go through each level of a martial art.*

**Summary of Requirements**

| Foundation Practica | Choose from one of the following practica:  
|---------------------|--------------------------------------------  
| Taekwondo Practicum 1-8 or Taiji Practicum 1-8 |  

**FREE ELECTIVES**

**CONCENTRATIONS**

(Students may choose from one of the following concentrations):

**CONCENTRATION IN BUSINESS:**

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<tr>
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<td>Micro Economics</td>
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<td>Principles of Marketing</td>
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**HEALTH SCIENCE TRACK:**

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<td>or NUTR 107</td>
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**CRIMINAL JUSTICE TRACK:**

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**GENERAL EDUCATION REQUIREMENTS**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
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<td>MATH C105</td>
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<td>SOSC 101</td>
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<td>FN C101</td>
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<td>FYS 101</td>
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<tr>
<td>SCI C101</td>
<td>Natural Science Core</td>
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<td>CAPS C390</td>
<td>Capstone Seminar</td>
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<tr>
<td>LDB C105</td>
<td>Liberal Arts Electives</td>
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</table>

**Total Semester Hours**

**120**

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Entering students with experience in Taekwondo, Taiji will be tested and placed in a class, which corresponds to their level of proficiency in the martial arts that they chose. Students with no experience in Taekwondo would start in level 1 and normally would graduate after four years having completed levels 1 through 8. Students entering into Taekwondo who already hold a Black Belt could advance as high as level 16 by the completion of their studies.

Similar to Taekwondo, as explained in the footnote above, students will be ranked and placed in appropriate level if they enter the program with advanced experience in Taiji.

Free electives also can be used to complete a minor/track or a concentration.
### Suggested Program

#### FIRST SEMESTER
- **ENGL C101** Composition & Rhetoric 3
- **MATH C105** Intermediate Algebra 3
- **CHN, JPN, KORN** 101
- **WREL 205** Buddhism 3
- **MARTS 110** Taekwondo 1
  or **MARTS 121** Taiji Practicum 1
- **FYS 101** First Year Seminar 3

#### SECOND SEMESTER
- **MARTS 111** Taekwondo 2
  or **MARTS 122** Taiji Practicum 2
- **CHN, JPN, KORN** 102
- **WREL 216** Daoism 3
- **MARTS 212** The History of Martial Arts 3
- **SCI** Natural Science Core 3
  or **Free Elective / Minor / Concentration** 3

#### THIRD SEMESTER
- **HUM** Humanities Core 3
- **PSYC 103** Introduction to Psychology 3
- **CHN, JPN, KORN** 103
- **MARTS 112** Taekwondo 3
- **MARTS 213** Martial Arts & East Asian Thought 3
  or **Free Elective / Minor / Concentration** 3

#### FOURTH SEMESTER
- **SOSC** Social Sciences Core 3
- **SCI** Natural Science Core 3
- **CHN, JPN, KORN** 104
- **MARTS 114** Taekwondo 4
  or **MARTS 124** Taiji Practicum 4
- **MARTS 312** Image & Reality in the Martial Arts 3
  or **Free Elective/Minor/Concentration** 3

#### FIFTH SEMESTER
- **FA** Fine Arts Core 3
- **PSYC 216** Psychological Aspect of Martial Arts 3
- **MARTS 241** Taekwondo 5
  or **MARTS 251** Taiji Practicum 5
- **MARTS 278** Survey of the Martial Arts 3
- **MARTS 311** Communications & Martial Arts 3
  or **Free Elective/Minor/Concentration** 3

#### SIXTH SEMESTER
- **MARTS 242** Taekwondo 6
  or **MARTS 252** Taiji Practicum 6
- **PSCI 321** Political Economy of East Asia 3
- **MARTS 234** Issues in Taiji
  or **MARTS 235** Liberal Arts Elective 3
  or **Free Elective/Minor/Concentration** 3

#### SEVENTH SEMESTER
- **CAPS 390** Capstone Seminar 3
- **HUM** Humanities Core 3
- **MARTS 243** Taekwondo 7
  or **MARTS 253** Taiji Practicum 7
  or **Free Elective / Minor / Concentration** 3

#### EIGHTH SEMESTER
- **MARTS 244** Taekwondo 8
  or **MARTS 244** Taiji Practicum 8
- **MARTS 395** Senior Thesis / Presentation 3
- **MARTS 398** Internship 3
  or **Free Elective / Minor / Concentration** 6

**Total Semester Hours** 120

*Students who do not meet the modern language requirement for the B.A. degree must use 3-12 semester hours free electives, depending on their level of competency, to satisfy this requirement.*
Mass Communication Bachelor of Arts Degree

Chair: Yanmin Yu
Telephone: (203) 576-4157
Fax: (203) 576-4967
E-mail: yanmar@bridgeport.edu

Curriculum and Program Requirements

The Bachelor of Arts degree is awarded in Mass Communication, with concentrations in Advertising, International Communication, Fashion Business communication, Journalism, Public Relations, and Sports Communications. The Mass Communication Program offers students an interdisciplinary foundation in the basic theory and skills necessary to become media practitioners and more informed media consumers. Students have the opportunity for internships and independent projects that allow them to have real world experience in the mass media professions. Graduates of this program have gone on to a variety of careers in the media field, including those in advertising, corporate communication, public relations, journalism, and broadcasting. Recent graduates have also gone onto top graduate program in Journalism and Mass Communication.

In addition to the 12-hour core and 12-hour concentration, students are also required to complete an additional 12-hour elective coursework in Mass Communication for a total of 36 hours. Students are required to successfully pass courses in Mass Communication with a grade of C or better. Semester hours earned for a grade below C in an elective Mass Communication course (including those no longer offered), not raised to a C or better, will be added beyond the 120 otherwise needed for graduation.

Internships, Cooperative Education

Students are strongly encouraged to obtain working experience in the Mass Communication field through either the cooperative education program or the internship program. To participate in either co-op or internship, students must meet the following requirements:

a. be of junior standing
b. have completed at least 18 hours of coursework in mass communication
c. have at least a 2.5 QPA in mass communication with no grade below a C-minus
d. be a student in good academic standing at the university

Students may apply three (3) semester hours of co-op internship or independent study to the thirty-six (36) hours required in the mass communication major. Additional hours of co-op, internship or independent study credit may be applied to general elective credits required for graduation.

Depth Study

Students are encouraged to obtain a minor of 18-24 semester hours in another department, or a concentration of 15 semester hours of related courses outside Mass Communication. Minor and concentrations should be chosen in consultation with an advisor.

Learning Outcomes

Students of the B.A. in Mass Communication Program will: 1) demonstrate effective speaking and listening skills for communication in personal, public, and media areas; 2) demonstrate effective writing skills for communication in personal, public, and media areas; 3) demonstrate the ability to observe events, gather information, write news reports and news releases, report on events, and edit other people’s writings; 4) demonstrate the ability to understand the media critically and recognize how media shape and are shaped by politics, society, culture, economics, and daily lives; 5) demonstrate the ability to recognize the power of persuasion and ethical responsibilities of communicators in communication at all levels; 6) demonstrate an understanding of the roles of communication in fostering interaction and interdependence across gender, race, and culture; 7) demonstrate the ability to apply communication theories to analyze contemporary problems; 8) demonstrate an understanding of the history, development, and practice of the print media, electronic media, and the new media.

* Note that for all College of Public and International Affairs majors, a portfolio is collected to track progress in programmatic outcomes.

Summary of Requirements

PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Semester Hours</th>
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<tr>
<td>MCOM 110 Public Communication</td>
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<tr>
<td>MCOM 111 Introduction to Mass Communication</td>
<td>3</td>
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<tr>
<td>MCOM 211 Communication Theory</td>
<td>3</td>
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<tr>
<td>MCOM 395 Senior Seminar in Mass Communication</td>
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<td>CONCENTRATIONS</td>
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<td>ADVERTISING</td>
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<td>MCOM 220 Introduction to Advertising</td>
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<tr>
<td>MCOM 323 Advertising Copywriting</td>
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<tr>
<td>MCOM 330 Advertising Media Planning</td>
<td>3</td>
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<tr>
<td>MCOM 339 Advertising and PR Campaigns</td>
<td>3</td>
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<tr>
<td>MCOM 201 Persuasive Communication</td>
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<tr>
<td>MCOM 270 Public Relations</td>
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<td>MCOM 357 Portfolio Project</td>
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<td>INTERNATIONAL COMMUNICATION</td>
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<td>(Plus any four of the following courses)</td>
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<td>MCOM 284 Business and Professional Communication</td>
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<td>SOC 231 Cultural Anthropology</td>
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<td>PSCI 206 Pol. Eco. of North/South Relations</td>
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<td>PSCI 204 Government and Politics Abroad</td>
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<td>PSCI 305 International Relations</td>
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<tr>
<td>or PSCI 207 World Politics</td>
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<td>or PSCI 312 Diplomacy &amp; Foreign Policy</td>
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<tr>
<td>or PSCI 209 Intro to United Nations Studies</td>
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<tr>
<td>WREL 275 Religion, Conflict and Mediation</td>
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<td>WREL 305 Comparative Religious Ethics</td>
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</table>
### Mass Communication Bachelor of Arts Degree

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<tr>
<td>WREL 374</td>
<td>Religion and Politics in the Middle East</td>
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<td>WREL 348</td>
<td>Religion and Society</td>
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<tr>
<td>WREL 288</td>
<td>Internet Religion</td>
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<tr>
<td>WREL 305</td>
<td>Comparative Religious Ethics</td>
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<tr>
<td>WREL 348</td>
<td>Religion and Society</td>
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**FASHION JOURNALISM**

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<td>MCOM 247</td>
<td>Fashion Journalism</td>
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<tr>
<td>FM 101</td>
<td>Fashion Fundamentals</td>
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<tr>
<td>MCOM 392</td>
<td>Fashion Journalism Internship</td>
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Take TWO courses from the following:

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<td>MCOM 240</td>
<td>News Reporting &amp; Writing</td>
<td>3</td>
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<tr>
<td>MCOM 284</td>
<td>Business and Prof Communication</td>
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<tr>
<td>MCOM 341</td>
<td>Magazine and Feature Writing</td>
<td>3</td>
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<tr>
<td>MCOM 345</td>
<td>Newspaper Editing &amp; Production</td>
<td>3</td>
</tr>
<tr>
<td>MCOM 390</td>
<td>Media Law and Ethics</td>
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**JOURNALISM**

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<tr>
<td>MCOM 341</td>
<td>Magazine and Feature Writing</td>
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<tr>
<td>MCOM 345</td>
<td>Newspaper Editing &amp; Production</td>
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<tr>
<td>MCOM 360</td>
<td>Broadcast Journalism</td>
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**PUBLIC RELATIONS**

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Take FOUR courses from the following:

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<td>MCOM 201</td>
<td>Persuasive Communication</td>
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<td>MCOM 346</td>
<td>Media Management</td>
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<td>MCOM 384</td>
<td>Organizational Communication</td>
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<td>MCOM 339</td>
<td>Advertising and PR Campaigns</td>
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<td>MCOM 370</td>
<td>Publicity Methods</td>
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**SPORTS JOURNALISM**

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<td>MCOM 251</td>
<td>Sports Journalism</td>
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<td>MCOM 398</td>
<td>Sports Journalism Internship</td>
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Take THREE courses from the following:

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<tr>
<td>MCOM 255</td>
<td>Sports Business and Marketing</td>
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<td>MCOM 341</td>
<td>Magazine and Feature Writing</td>
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<tr>
<td>MCOM 354</td>
<td>Media, Sports, &amp; Society</td>
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<td>PSYC 355</td>
<td>Sports Psychology</td>
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**MASS COMMUNICATION ELECTIVES**

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**FREE ELECTIVES**

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**FOREIGN LANGUAGE**

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**GENERAL EDUCATION REQUIREMENTS**

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**TOTAL SEMESTER HOURS**

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### Suggested Program (Advertising)

**FIRST SEMESTER**

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<td>MCOM 110</td>
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**SECOND SEMESTER**

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<td>or MATH C108</td>
<td>Ideas of Mathematics</td>
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<td>HUM</td>
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<td>MCOM 111</td>
<td>Introduction to Mass Communication</td>
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**THIRD SEMESTER**

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**FOURTH SEMESTER**

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<td>MCOM 323</td>
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<td>or MCOM 370</td>
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**Fifth SEMESTER**

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**SIXTH SEMESTER**

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**SEVENTH SEMESTER**

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<td>Liberal Arts Elective</td>
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**EIGHTH SEMESTER**

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<thead>
<tr>
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<tr>
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<td>Capstone Seminar</td>
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**Total Semester Hours**

<table>
<thead>
<tr>
<th>Credits</th>
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<tbody>
<tr>
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</table>

*Students who do not meet the modern language requirement for the B.A. degree must use 3-12 semester hours free electives, depending on their level of competency, to satisfy this requirement.*
Mathematics Bachelor of Arts Degree

Chair:
Charles Dana Hall, Room 151
Telephone: (203) 576-4268
Fax: (203) 576-4051
E-mail:

Curriculum and Program Requirements

Mathematics programs at the University of Bridgeport are designed to prepare the student for graduate work in applied mathematics and allied areas, industrial employment and government employment as well as for careers in actuarial science and the quantitative areas of the biological and social sciences.

Bachelor of Arts requires a total of 36 semester hours in mathematics and at least nine additional semester hours from mathematics or related area courses numbered 300 or above. All degree programs in Mathematics require Computer Science 101 and 102.

Students may take additional mathematics electives; those who intend to go to graduate school are advised to obtain competence in foreign language, and to elect one or more of those 400 level mathematics courses which are open to undergraduates and described in the graduate catalog. A total of 120 semester hours is required for graduation.

For any of these major or minor degrees, the student is expected to work out a meaningful program with his/her advisor.

The following year-by-year course displays are to be regarded as illustrative of a typical program leading to a Bachelor’s degree in mathematics with a total of 120 semester hours required for graduation.

Learning Outcomes

Students with a B.A. in Mathematics will 1) have learned fundamental knowledge of Mathematics and be prepared to pursue graduate study or to work as professional mathematicians; 2) have well-developed quantitative and analytical skills; 3) be able to use skills in mathematical reasoning and critical thinking to understand and analyze phenomena of nature, modern science and society; 4) be able to make inferences from data and to communicate, prove and justify their findings; 5) be prepared for various qualifying examinations such as the GRE and PRAXIS II.

Summary of Requirements

Program Requirements

<table>
<thead>
<tr>
<th>PROGRAM REQUIREMENTS</th>
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<tbody>
<tr>
<td>MATH 110 Calculus and Analytic Geometry I or MATH 111 Acceler. Calculus &amp; Analytic Geo.</td>
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<tr>
<td>MATH 112 Calculus and Analytic Geometry II</td>
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<tr>
<td>MATH 214 Linear Algebra</td>
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<tr>
<td>MATH 215 Calculus and Analytic Geometry III</td>
</tr>
<tr>
<td>MATH 227 Discrete Structures</td>
</tr>
<tr>
<td>MATH 301 Differential Equations</td>
</tr>
<tr>
<td>MATH 314 Numerical Methods</td>
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<tr>
<td>MATH 323 Probability and Statistics I</td>
</tr>
<tr>
<td>Mathematics Electives*</td>
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<tr>
<td>CPSC 101 Introduction to Computing I</td>
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<tr>
<td>CPSC 102 Introduction to Computing II</td>
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General Education Requirements

<table>
<thead>
<tr>
<th>GENERAL EDUCATION REQUIREMENTS</th>
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<tbody>
<tr>
<td>MCOM 110 Public Communication</td>
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<tr>
<td>FYS 101 First Year Studies</td>
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<td>ENGL C101 Composition &amp; Rhetoric</td>
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<tr>
<td>PHYS 111/112 Principles I &amp; II</td>
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<td>HUM Humanities Core</td>
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<td>FA Fine Arts Core</td>
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<tr>
<td>SOSC Social Sciences Core</td>
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<tr>
<td>CAPS C390 Capstone Seminar</td>
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Foreign Language

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Free Electives

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<th>FREE ELECTIVES</th>
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Total Semester Hours

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<th>Total Semester Hours</th>
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<tr>
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*Mathematics and cognate courses at the 200 level or higher.

Suggested Program

FIRST YEAR

<table>
<thead>
<tr>
<th>PROGRAM</th>
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<tbody>
<tr>
<td>ENGL C101 Composition &amp; Rhetoric</td>
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<td>MATH 111 Calculus I</td>
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<td>CPSC 101 Introduction to Computing I</td>
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<td>HUM Humanities Core</td>
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<tr>
<td>MATH 112 Calculus II</td>
</tr>
<tr>
<td>PHYS 111 Principles of Physics I</td>
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<tr>
<td>CPSC 102 Introduction to Computing II</td>
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<tr>
<td>Foreign Language</td>
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SECOND YEAR

<table>
<thead>
<tr>
<th>PROGRAM</th>
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<tbody>
<tr>
<td>MATH Linear Algebra</td>
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<tr>
<td>MATH Calculus III</td>
</tr>
<tr>
<td>PHYS 112 Principles of Physics II</td>
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<tr>
<td>FA Fine Arts Core</td>
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<tr>
<td>Foreign Language</td>
</tr>
<tr>
<td>MATH 301 Diff. Equations</td>
</tr>
<tr>
<td>MATH 323 Probability &amp; Statistics I</td>
</tr>
<tr>
<td>SOSC Social Sciences Core</td>
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<td>HUM Humanities Core</td>
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THIRD YEAR

<table>
<thead>
<tr>
<th>PROGRAM</th>
</tr>
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<tbody>
<tr>
<td>MATH 314 Numerical Methods</td>
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<tr>
<td>Math Electives</td>
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<tr>
<td>MATH 227 Discrete Math</td>
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<tr>
<td>SOSC Social Sciences Core</td>
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<tr>
<td>MATH 391 Modern Algebra</td>
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<td>Foreign Language</td>
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FOURTH YEAR

<table>
<thead>
<tr>
<th>PROGRAM</th>
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<tbody>
<tr>
<td>HUM Humanities Elective</td>
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<tr>
<td>Math Electives</td>
</tr>
<tr>
<td>MATH 399 Topic in Math</td>
</tr>
<tr>
<td>Free Electives</td>
</tr>
<tr>
<td>Caps C390 Capstone Seminar</td>
</tr>
<tr>
<td>________________</td>
</tr>
<tr>
<td>TOTAL:</td>
</tr>
</tbody>
</table>
Mathematics Bachelor of Science Degree

Chair:
Dana Hall, Room 151
Telephone: (203) 576-4268
Fax: (203) 576-4051
E-mail:

Curriculum and Program Requirements

Bachelor of Science in Mathematics at the University of Bridgeport is, primarily, a program in applied mathematics. It provides the student with the fundamentals of the major areas of mathematics, with special emphasis on those branches of mathematics that are important in applications. The program provides the necessary background for students who wish to apply mathematics in the natural sciences, as well as for a career in business. Employment opportunities for applied mathematicians exist in industries, medical technology, and financial institutions.

Choices for a degree program with a major in mathematics are the Bachelor of Science in Mathematics with emphasis in natural sciences, computer science, or actuarial mathematics.

Bachelor of Science requires a total of 40 semester hours in mathematics. Students may take additional mathematics electives; those who intend to go to graduate school are advised to obtain competence in a foreign language. A total of 120 semester hours is required for graduation.

The Bachelor of Science with emphasis in computer science must include a minimum of 18 hours in computer science not including MATH/CPSC 227. The Bachelor of Science with emphasis in natural sciences must include a minimum of 19 hours of Physics, not including Physics 103, 201, or 202. The Bachelor of Science with emphasis in social sciences must include a minimum of 18 hours in social science.

Mathematics Minor

Students wishing to obtain a minor in mathematics must take Math 110, Math 112, Math 215 and at least 2 courses at the 200 level or higher.

For any of these major or minor degrees, the student is expected to work out a meaningful program with his/her advisor.

The following year-by-year course displays are to be regarded as illustrative of a typical program leading to a Bachelor’s degree in mathematics with a total of 120 semester hours required for graduation.

Learning Outcomes

Students with a B.A. in Mathematics will 1) have learned fundamental knowledge of Mathematics and be prepared to pursue graduate study or to work as professional mathematicians; 2) have well-developed quantitative and analytical skills; 3) be able to use skills in mathematical reasoning and critical thinking to understand and analyze phenomena of nature, modern science and society; 4) be able to make inferences from data and to communicate, prove and justify their findings; 5) be prepared for various qualifying examinations such as the GRE and PRAXIS II.

Summary of Requirements

PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MATH 110</td>
<td>Calculus &amp; Analytic Geometry I</td>
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<tr>
<td>or MATH 111</td>
<td>Accelerated Calculus &amp; Analytic Geo.</td>
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<tr>
<td>MATH 112</td>
<td>Calculus &amp; Analytic Geometry II</td>
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</tr>
<tr>
<td>MATH 214</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 215</td>
<td>Calculus and Analytic Geometry III</td>
<td>4</td>
</tr>
<tr>
<td>MATH 227</td>
<td>Discrete Structures</td>
<td>3</td>
</tr>
<tr>
<td>MATH 301</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>MATH 314</td>
<td>Numerical Methods</td>
<td>3</td>
</tr>
<tr>
<td>MATH 323</td>
<td>Probability and Statistics I</td>
<td>3</td>
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<tr>
<td>*Mathematic Electives</td>
<td>12</td>
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<tr>
<td>CPSC 101</td>
<td>Introduction to Computing I</td>
<td>4</td>
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<tr>
<td>CPSC 102</td>
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ELECTIVES IN CONCENTRATION

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<tr>
<td>FYS 101</td>
<td>First Year Studies</td>
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<td>FA</td>
<td>Fine Arts Core</td>
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<tr>
<td>SOSC</td>
<td>Social Sciences Core</td>
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<td>CAPS C390</td>
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<td>Liberal Arts Electives</td>
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Total Semester Hours 120

FIRST YEAR

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<tr>
<td>MATH 110</td>
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<td>MATH 111</td>
<td>Calculus II</td>
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<td>MATH 214</td>
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<td>MATH 215</td>
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<td>MATH 323</td>
<td>Probability and Statistics I</td>
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<tr>
<td>CPSC 101</td>
<td>Introduction to Computing I</td>
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<td>CPSC 102</td>
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SECOND YEAR

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<tr>
<td>FA</td>
<td>Fine Arts Core</td>
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<tr>
<td>MATH 301</td>
<td>Diff. Equations</td>
<td>3</td>
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<tr>
<td>MATH 323</td>
<td>Probability &amp; Statistics I</td>
<td>3</td>
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<tr>
<td>SOSC</td>
<td>Social Sciences Core</td>
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<tr>
<td>HUM</td>
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THIRD YEAR

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MATH 314</td>
<td>Numerical Methods</td>
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<td>MATH 227</td>
<td>Discrete Math</td>
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<td>MATH 401</td>
<td>Advanced Anal. I</td>
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<td>MATH 402</td>
<td>Advanced Anal. II</td>
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<td>MATH 391</td>
<td>Modern Algebra</td>
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FOURTH YEAR

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<th>Course Title</th>
<th>Hours</th>
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<tbody>
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<td>Topic (Interdisciplinary Studies in Applied Math)</td>
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<tr>
<td>MATH 424</td>
<td>Mathematical Statistics II</td>
<td>3</td>
</tr>
<tr>
<td>CAPS C390</td>
<td>Capstone Seminar</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Semester Hours 120
Medical Laboratory Science Bachelor of Science Degree

Learning Outcomes
Upon successful completion of this program, students will:
1. Be proficient in performing the full range of clinical laboratory tests in areas such as hematology, clinical chemistry, immunohematology, microbiology, serology/immunology, coagulation, molecular, and other emerging diagnostics.
2. Be able to participate in the development and evaluation of test systems and interpretive algorithms, hold diverse.
3. Responsibilities in areas of analysis and clinical decision-making, regulatory compliance with applicable regulations, education, and quality assurance/performance improvement wherever laboratory testing is researched, developed or performed.
4. Possess basic knowledge, skills, and relevant experiences in consultative interactions with members of the healthcare team, external relations, customer service and patient education; financial, operations, marketing, and human resource management; information management, and; research design/practice sufficient to evaluate published studies as an informed consumer.
5. Be proficient in maintaining necessary operations for the general functions of the clinical laboratory, including specimen collection.

Entrance Requirements and Advising
Incoming Freshman who have met the following criteria: (a) SAT scores of 530 verbal and 520 math, and 480 writing or composite ACT score of 22; (b) Grade point average of B (3.0) or better; (c) Three years of mathematics and two lab sciences in high school can declare a MT major at any time during the first two years of study.

The formal Medical Laboratory Science curriculum encompasses the last two years of study. All prospective MT majors, including transfer students will be evaluated prior to the fall semester of the junior year to determine whether all the necessary pre-requisites have been met or are in progress. To continue into the junior year of the program all MT majors must complete a minimum 61 semester hours including all UB general education requirements, except Capstone, and all science foundation courses. Students must maintain a minimum GPA of 2.50. MT majors are required to maintain a grade of C or better in all science foundation courses. Applications from transferring sophomores will be accepted for the Fall 2011 or later. Applications from transferring juniors will be accepted for the Fall 2012 or later. Application from transferring seniors will not be accepted, however exceptions may be made for students transferring from NAACLS accredited 3+1 university-based programs on a case by case basis for the Fall 2013 or later.

TOEFL scores
Paper-based: 550
Computer-based: 213
Internet-based: 80
We also accept the IELTS (International English Language Testing System) and require an Overall band score of 6.5 and no part score lower than 6.0

Program Requirements and Features
Completion of the Medical Laboratory Science degree requires 28 weeks of supervised clinical work in a hospital laboratory, provided by our clinical affiliates.

Since the curriculum includes laboratory work done under professional supervision, the degree candidate not only must satisfy the customary expectations of academic work but also must meet the high-quality standards demanded of a professional medical technologist. Students must maintain a minimum GPA of 2.50. MT students are required to maintain a grade of C or better in all required courses. MT students must pass a comprehensive pre-clinical examination prior to pursuing their clinical rotations.

Individual professional liability insurance is required of each student and can be purchased through American Society for Clinical Laboratory Science (ASCLS).

Criminal background checks are required before clinical rotations. A background check that is not “clear” may preclude rotations at some hospitals and prevents em-
employment at most healthcare facilities.

As a closure requirement for graduation, students must pass a comprehensive department examination covering all aspects of clinical laboratory science. However, issuing of the degree is not contingent on passing any type of external certification or licensure examination.

**Pre-Physician Assistant and Health Professional Options**

The Medical Laboratory Science Major meets all pre-requisites for UB’s Physician Assistant program, including 500 hours of clinical experience. Successful graduates of the Medical Laboratory Science program are also highly competitive for other medical, health, and research oriented graduate programs.

**Medical Laboratory Science MINOR option**

Biology majors wishing to obtain a minor in Medical Laboratory Science must take BIOL 102, BIOL 301, BIOL 320, BIOL 441, BIOL 443 CHEM 360, CHEM 380, and at least two 300 level MLS courses. Students interested in this program should contact the Medical Laboratory Science Program Director. A minor in Medical Laboratory Science will not lead to eligibility for certification as a Medical Laboratory Scientist.

Medical Laboratory Certificate: A categorical certificate option for people already possessing a BS degree and meeting the necessary pre-requisites is available and requires a customized plan of study, please see the program director for further information and a consultation.

**Summary of Requirements**

**PROGRAM REQUIREMENTS**

**Medical Laboratory Science Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>MLSC 411</td>
<td>Immunology</td>
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<tr>
<td>MLSC 352</td>
<td>Medical Bacteriology</td>
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<tr>
<td>CHEM 380</td>
<td>Physiological Chemistry</td>
</tr>
<tr>
<td>MLSC 314</td>
<td>Intro to Immunohematology</td>
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<tr>
<td>MLSC 310</td>
<td>Intro to Hematology/Hemostasis</td>
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<tr>
<td>BIOL 443</td>
<td>Molecular Biology</td>
</tr>
<tr>
<td>MLSC 311</td>
<td>Intro to Clinical Chemistry</td>
</tr>
<tr>
<td>MLSC 317</td>
<td>Mycology/Parasite/Virology</td>
</tr>
<tr>
<td>MLSC 301</td>
<td>Phlebotomy/Safety</td>
</tr>
<tr>
<td>MLSC 410</td>
<td>Advanced Hematology</td>
</tr>
<tr>
<td>MLSC 411</td>
<td>Advanced Clinical Hematology</td>
</tr>
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<td>MLSC 414</td>
<td>Advanced Immunohematology</td>
</tr>
<tr>
<td>MLSC 320</td>
<td>Preclinical Seminar</td>
</tr>
<tr>
<td>MLSC 321</td>
<td>Clinical Seminar I/Education</td>
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<td>MLSC 322</td>
<td>Clinical Seminar II Mgmt</td>
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<tr>
<td>MLSC 380</td>
<td>Phlebotomy Internship</td>
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<tr>
<td>MLSC 431</td>
<td>Clinical Correlations (Clinical)</td>
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<tr>
<td>MLSC 421</td>
<td>Clinical Chem Lab Rotation</td>
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<td>MLSC 424</td>
<td>Clinical Immunohematology</td>
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<td>MLSC 420</td>
<td>Clinical Hematology Lab Rotation</td>
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<td>MLSC 422</td>
<td>Clinical Micro Lab Rotation</td>
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<td>CHEM 360</td>
<td>Biochemistry</td>
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<td>CHEM 380</td>
<td>Physiologic Chemistry</td>
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<td>BIOL 320</td>
<td>Microbiology</td>
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<tr>
<td>BIOS 201</td>
<td>General Physics 1*</td>
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<tr>
<td>BIOL 307</td>
<td>Genetics*</td>
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**Science Foundation Courses**

<table>
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<tr>
<th>Course</th>
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<tr>
<td>BIOL 102</td>
<td>General Biology II</td>
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<tr>
<td>BIOL 211</td>
<td>General Physiology</td>
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<tr>
<td>CHEM 205</td>
<td>Organic Chemistry I</td>
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<tr>
<td>MATH 203/203B</td>
<td>Biostatistics</td>
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<tr>
<td>CHEM 206</td>
<td>Organic Chemistry II</td>
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<td>CHEM 302</td>
<td>Analytical Methods</td>
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<td>Biochemistry</td>
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<td>BIOL 320</td>
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<td>BIOS 201</td>
<td>General Physics 1*</td>
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<tr>
<td>BIOL 307</td>
<td>Genetics*</td>
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**Recommended courses.**

**GENERAL EDUCATION REQUIREMENTS**

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**Total Semester Hours**: 121-128

**Suggested Program**

**FRESHMAN YEAR**

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**Spring Semester**

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**SOPHOMORE YEAR**

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**JUNIOR YEAR**

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**SENIOR YEAR (CLINICALS)**

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<td>MLSC 422</td>
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**Total Semester Hours**: 129
Music Arts Bachelor of Music Degree

Program Head: Jeffrey Johnson
Bernhard Center, Room 310
Telephone: (203) 576-4407
Fax: (203) 576-4052
E-mail: jjohnson@bridgeport.edu

Curriculum and Program Requirements

The Music Program offers four distinct four-year programs leading to the Bachelor of Music degree, Music Education, Performance, Jazz Studies and Music Business. Bachelor of Music candidates must complete all academic core courses, music foundation courses, and the specific requirements of their concentration before graduating.

Music Education

The Music Education concentration of the Bachelor of Music degree is designed to prepare students to become effective music teachers, and to enter a master’s degree program in music education. The University’s School of Education offers a master’s degree (M.S.Ed.)/Certification Program. Contact the School of Education at (203) 576-4194 for more information.

Music Performance

The Music Performance concentration of the Bachelor of Music degree is designed to refine and develop skills essential to professional musicians. Extensive chamber music experience in both large and small ensembles and private study on major instrument are central to this concentration. Students will: 1) develop a strong foundation in the theory and history of music; 2) select a musical concentration—performance, education, or music business—and develop foundational skills in this area; 3) further develop skills in voice or on a musical instrument; 4) possess sufficient musical acumen to make creative contributions to musical performances and fusion ensembles; 5) further their ability to work in, learn from, and teach groups composed of learners from diverse backgrounds and with multiple skill levels; and 6) be able to bring musical knowledge into dialogue with motifs learned through the general education component of the undergraduate curriculum.

Learning Outcomes

By completing B.M. in Music program, students will: 1) develop a strong foundation in the theory and history of music; 2) select a musical concentration—performance, education, or music business—and develop foundational skills in this area; 3) further develop skills in voice or on a musical instrument; 4) possess sufficient musical acumen to make creative contributions to musical performances and fusion ensembles; 5) further their ability to work in, learn from, and teach groups composed of learners from diverse backgrounds and with multiple skill levels; and 6) be able to bring musical knowledge into dialogue with motifs learned through the general education component of the undergraduate curriculum.

Jazz Studies

The Jazz Studies concentration of the Bachelor of Music degree is designed to refine and develop skills essential to professional jazz musicians. Ensemble experience and private study on major instrument and courses in improvisation and jazz arranging are provided. Junior and Senior Recitals on major instrument are required.

Music Business

A highly demanding combination of intensive musical studies and business courses. Acceptance is conferred by joint decision of the Music Program and the Business School. Students with strong musical skills and above average SAT scores with a strong record of academic achievement are encouraged to apply.

Juries

During the final examination period of each semester, music majors must take an examination in their major applied area before a music faculty jury.

Sophomore Review

At the end of the fourth semester each music major must pass the sophomore review, which consists of a comprehensive critique of academic and applied work completed to date.

Summary of Requirements

Requirements for All Concentrations

Music Education Concentration

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<tr>
<th>Course</th>
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INDIVIDUAL CONCENTRATION REQUIREMENTS

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<td>MUSC 207</td>
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Liberal Arts Electives 7

FA   Fine Arts Core 3
SCI  Natural Sciences Core 6
SOSC   Social Sciences 6
HUM   Humanities Core 6
MATH  Intermediate Algebra 3
EMG  Composition & Rhetoric 3
Music Arts Bachelor of Music Degree

and one of the following:

MUSC 241 Choral Practicum 0
MUSC 242 Instrumental Practicum 0
MUSC 395 Senior Recital 0

PERFORMANCE CONCENTRATION
MUSC 100 Applied Major 16
MUSC 414 Business of Music 2
MUSC 427 MIDI Performance 3
MUSC 295 Junior Recital 0
MUSC 395 Senior Recital 0

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JAZZ STUDIES CONCENTRATION
MUSC 100 Applied Major 16
MUSC 414 Business of Music 2
MUSC 427 MIDI Performance 3
MUSC 304A Jazz Arranging I 3
MUSC 304B Jazz Arranging II 3
MUSC 208A Jazz Improvisation & Repertoire I 3
MUSC 208B Jazz Improvisation & Repertoire II 3
MUSC 295 Junior Recital 0
MUSC 395 Senior Recital 0
Large Ensembles 10
Small Ensembles 8

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MUSIC BUSINESS CONCENTRATION
MUSC 100 Applied Major 16
MUSC 398 Internship 6
MUSC 414 Business of Music 2

(In consultation with an Academic Advisor, students choose nine non-music courses from this list)

MCOM 220* Introduction to Advertising 3
MCOM 370 Publicity Methods 3
MCOM 384 Organizational Communications 3
ACCT 101* Financial Accounting 3
ACCT 331 Managerial Accounting 3
ECON 201 Princ Economics-Macro 3
ECON 202 Princ. Economic-Micro 3
MS 115 Probability for Business 3
MS 120 Statistical Decision Making 3
LAW 251 Business Law I 3
MKTG 305* Principles of Marketing 3
MGMT 302 Multicultural Management 3
MGMT320* Entrepreneurship and Small Bus Mgmt 3
MIS 191* Structural Appl Programming 3
FIN 309 Financial Management 3

*Recommended

MUSIC EDUCATION CONCENTRATION

Suggested Program

FRESHMAN YEAR

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SOPHOMORE YEAR

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JUNIOR YEAR

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Total Semester Hours 126

MUSIC PERFORMANCE CONCENTRATION

Suggested Program

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JUNIOR YEAR

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SENIOR YEAR

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Total Semester Hours 126
# JAZZ STUDIES CONCENTRATION

## Suggested Program

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### Senior Year

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**Total Semester Hours**: 126

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# MUSIC BUSINESS CONCENTRATION

## Suggested Program

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### Sophomore Year

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### Junior Year

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### Senior Year

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**Total Semester Hours**: 126
Psychology Bachelor of Science Degree

Chair: Tracey Ryan
Carlson Hall
Telephone: (203) 576-4175
Fax: (203) 576-4200
E-mail: tryan@bridgeport.edu

Curriculum and Program Requirements

The Bachelor of Science degree in Psychology prepares students for work that requires liberal arts training as well as psychological knowledge and skills. The major provides students with a detailed awareness of the field of psychology, including its historical background, paradigms, methods, research findings, and applications. The major addresses the general areas of developmental, personality, social, cognitive, and abnormal psychology. It fosters the development of verbal, quantitative, analytical, and technological skills that are useful for work in psychology and related fields.

The major requires twelve psychology courses (36 semester hours), including Introduction to Psychology (103), Child Psychology (201), Personality Psychology (303), Abnormal Psychology (304), Social Psychology (305), Cognitive Psychology (307), and six other elective psychology courses. A total of 120 credits are required for graduation. Students wishing to obtain a minor in Psychology must take Introduction to Psychology and any five additional psychology courses (18 semester hours).

Learning Outcomes

By completing the B.S. in Psychology program, students will: 1) have learned the pre-history and the history of Psychology including the evolution of its main issues, topic areas, methods and applications; 2) know the major perspectives in Psychology including Psychoanalysis, Behaviorism, Humanistic Psychology and Cognitive Behavioral Neuroscience; 3) understand the lifespan approach to human biological, cognitive and psychosocial development; 4) be able to provide examples of the major forms of psychological research including such correlation methods as naturalistic observation, surveys, case studies and archival research, and the main features and techniques of psychological experimentation; 5) understand basic data organization, presentation and analysis including both inferential and descriptive statistics; 6) understand characteristics of psychological research including the limitations of correlation research, experimental biases, placebo effects and ethical issues regarding human subjects; 7) be able to critically evaluate the psychological research presented in the popular press; 8) be able to relate key psychological concepts and theories to their own personal lives; 8) understand how key psychological concepts and theories are applied in clinical, medical, educational, human services and corporate settings; and 9) understand connections between Psychology and such other disciplines as Philosophy, Biology, Sociology, Religion, and Human Services.

Summary of Requirements

MAJOR REQUIREMENTS

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<tr>
<th>Course</th>
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<td>PSYC 303</td>
<td>Personality Psychology</td>
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<td>PSYC 304</td>
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<td>PSYC 305</td>
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FREE ELECTIVES

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GENERAL EDUCATION REQUIREMENTS

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<td>SOSC</td>
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Total Semester Hours 120

Suggested Program

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SECOND SEMESTER

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SIXTH SEMESTER

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SEVENTH SEMESTER

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EIGHTH SEMESTER

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Total Semester Hours 120
Students in the B.A. in Social Sciences will (i) possess a broad, liberal arts foundation and an understanding of how developments in social and intellectual history shape and affect human values and institutions; (ii) demonstrate an understanding of basic social science methods; (iii) demonstrate that they are conversant (i.e., possess a basic grasp) in the disciplines subsumed under the “social science” rubric at the University of Bridgeport, i.e., political science, economics, international studies, and sociology; (iv) demonstrate a more advanced “working knowledge” of at least one social science discipline; (v) demonstrate they possess the cognitive competencies and study skills to succeed in advanced/graduate studies in any of the social sciences or in law or business; (vi) demonstrate that they have the competencies needed to function competently in an entry-level social science-related career; and (vii) demonstrate competency in written and oral communication.

* Note that for all College of Public and International Affairs majors, a portfolio is collected to track progress in programmatic outcomes.

### Summary of Requirements

#### PROGRAM REQUIREMENTS

**GROUP I**

<table>
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**GROUP II**

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**MINOR/CONCENTRATION IN THE SOCIAL SCIENCES:**

**MINOR IN SOCIOLOGY**

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<tr>
<td>SOSC 101 Introduction to Sociology</td>
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<td>or SOSC 102 Social Problems</td>
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<td>SOC 204 Marriage and Family</td>
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<td>SOSC 300 Research Methods</td>
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**MINOR IN CRIMINAL JUSTICE**

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<td>SOC 315 Criminology</td>
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<td>PSCI 233 Introduction to the American Legal System</td>
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<td>or SOC 311 Juvenile Delinquency</td>
<td>3</td>
</tr>
<tr>
<td>or SOC 270 Sociology of Deviance</td>
<td>3</td>
</tr>
<tr>
<td>HUSV 315 Substance Abuse and Chemical Dependency</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 333 The Terror Network</td>
<td>3</td>
</tr>
<tr>
<td>SOC 398 Internship in Criminal Justice</td>
<td>3</td>
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<tr>
<td><strong>Total Major Semester Hours:</strong></td>
<td><strong>18</strong></td>
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**MINOR IN POLITICAL SCIENCE**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PSCI 101 American Government</td>
<td>3</td>
</tr>
<tr>
<td>or PSCI105 Intro to Political Science and Political Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 204 Government and Politics Abroad</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 207 World Politics</td>
<td>3</td>
</tr>
<tr>
<td>IPED 206 Political Economy of North South Relations</td>
<td>3</td>
</tr>
<tr>
<td>or PSCI 209 Introduction to United Nations Studies</td>
<td>3</td>
</tr>
<tr>
<td>SOSC 207 World Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 323 Classics in Political Theory</td>
<td>3</td>
</tr>
<tr>
<td>or PSCI 324 Recent Political Theory</td>
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<tr>
<td><strong>Total Major Semester Hours:</strong></td>
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**CONCENTRATION IN PRE-LAW**

<table>
<thead>
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<tbody>
<tr>
<td>PSCI 101 American Government</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 223 Introduction to the American Legal System</td>
<td>3</td>
</tr>
<tr>
<td>SOC 315 Criminology</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 204 Government and Politics Abroad</td>
<td>3</td>
</tr>
<tr>
<td>or SOC 251 Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 398 Law Internship</td>
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<td><strong>Total Major Semester Hours:</strong></td>
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**CONCENTRATION IN HISTORY**

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<tbody>
<tr>
<td>HIST 207 American History I</td>
<td>3</td>
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<tr>
<td>or HIST 208 American History II</td>
<td>3</td>
</tr>
<tr>
<td>HIST 233 Roots of Modern Culture</td>
<td>3</td>
</tr>
<tr>
<td>History Electives</td>
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<td><strong>Total Major Semester Hours:</strong></td>
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**CONCENTRATION IN INTERNATIONAL STUDIES**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>PSCI 209 UN Studies</td>
<td>3</td>
</tr>
<tr>
<td>PSCI 207 World Politics</td>
<td>3</td>
</tr>
<tr>
<td>SOSC 207 World Regional Geography</td>
<td>3</td>
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<tr>
<td>PHIL 216 World Religions</td>
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**CONCENTRATION IN PSYCHOLOGY**

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<tr>
<th>Course</th>
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<tr>
<td>PSYC 201 Human Growth &amp; Development I</td>
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<tr>
<td>or PSYC 202 Human Growth &amp; Development II</td>
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**FREE ELECTIVES**

<table>
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<tr>
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**FOREIGN LANGUAGE**

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<tr>
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**General Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL C101</td>
<td>Composition &amp; Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>MATH C105</td>
<td>Intermediate Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or MATH C108</td>
<td>Ideas of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>HUM</td>
<td>Humanities Core</td>
<td>6</td>
</tr>
<tr>
<td>SCI</td>
<td>Natural Sciences Core</td>
<td>6</td>
</tr>
<tr>
<td>SOSC</td>
<td>Social Sciences Core</td>
<td>6</td>
</tr>
<tr>
<td>FA</td>
<td>Fine Arts Core</td>
<td>3</td>
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<tr>
<td>INTST</td>
<td>Integrated Studies Core</td>
<td>3</td>
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<tr>
<td>CAPS C390</td>
<td>Capstone Seminar</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Liberal Arts Electives</td>
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</table>

Total Semester Hours: 120

**Suggested Program**

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL C101</td>
<td>Composition &amp; Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>HUM</td>
<td>Humanities Core</td>
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<tr>
<td>MATH C105</td>
<td>Intermediate Algebra</td>
<td>3</td>
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<tr>
<td></td>
<td>History (Group I)</td>
<td>3</td>
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**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>HUM</td>
<td>Humanities Core</td>
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<tr>
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<td>Foreign Language 101</td>
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<tr>
<td>FA</td>
<td>Fine Arts Core</td>
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<tr>
<td></td>
<td>Political Science (Group I)</td>
<td>3</td>
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**Third Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOSC</td>
<td>Social Sciences Core</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Foreign Language 103</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Sociology (Group I)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Economics (Group I)</td>
<td>3</td>
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<tr>
<td></td>
<td>Political Science (Group I)</td>
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**Fourth Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>SOSC</td>
<td>Social Sciences Core</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Foreign Language 104</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Economics (Group I)</td>
<td>3</td>
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<tr>
<td></td>
<td>History (Group I)</td>
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<tr>
<td></td>
<td>Elective</td>
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**Fifth Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>SCI</td>
<td>Natural Sciences Core</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Sociology (Group I)</td>
<td>3</td>
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<tr>
<td></td>
<td>Psychology (Group I)</td>
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<tr>
<td></td>
<td>Concentration 1, or Elective</td>
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<tr>
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<td>Liberal Arts Elective</td>
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**Sixth Semester**

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>SCI</td>
<td>Natural Sciences Core</td>
<td>3</td>
</tr>
<tr>
<td>SOSC 300</td>
<td>Seminar in Methods</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Concentration 2 &amp; 3, or Electives</td>
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<tr>
<td></td>
<td>Liberal Arts Elective</td>
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**Seventh Semester**

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>INTST C101B</td>
<td>Integrated Studies</td>
<td>3</td>
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<tr>
<td>SOSC 395</td>
<td>Thesis</td>
<td>3</td>
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<tr>
<td></td>
<td>Concentration 4, or Elective</td>
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</tr>
<tr>
<td></td>
<td>Free Elective</td>
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<td>Liberal Arts Elective</td>
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**Eighth Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CAPS C390</td>
<td>Capstone Seminar</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Free Electives</td>
<td>12</td>
</tr>
</tbody>
</table>

Total Semester Hours: 120

*Students who do not meet the modern language requirement for the B.A. degree must use 3-12 semester hours free electives, depending on their level of competency, to satisfy this requirement.*
World Religions Bachelor of Arts Degree

Director: Stephen Healey
Carlson Hall, Room 208
Telephone: (203) 576-4212
Fax: (203) 576-4967
E-mail: healy@bridgeport.edu

Curriculum and Program Requirements

The major in World Religions prepares students to interpret the influence of religion in the various spheres of cultural life and in light of prevailing political climates. In particular, we study the role of religious values in fomenting conflict and promoting peace; in preparing for a life of service; and in giving depth and direction to culture.

Required courses from a common foundation prepare students to apply their knowledge in one of three concentrations. In the foundations sequence, students are acquainted with the belief systems of the world’s major religions. This aspect of study involves learning religious studies methods, cultivating the capacity for critical analysis, developing cultural sensitivity, and securing ability to communicate within an array of cultural idioms. In the concentrations sequence, students focus their learning on current problems and practically-oriented solutions. Three defined concentrations are possible: (1) Religion, Conflict Analysis, and Mediation; (2) Religion and Community Service; and (3) Religion and Contemporary Culture. With the consultation of an advisor, a self-planned option is also possible.

In concentration 1, students learn how to analyze conflicts and train to serve as arbitrators or facilitators of dialogue. In concentration 2, students learn how religious studies sensibilities can inform organizations dedicated to service. In concentration 3, students focus on the connections between religion and contemporary culture (media, literature, the internet, and politics, for example). Each concentration can be dynamically adjusted to particular interests and learning needs in the self-planned concentration.

Integrative in nature, this study draws upon other disciplines. Students in World Religions are encouraged to take courses in political science, history, literature, economics, sociology, and mass communication. Our students prepare to serve in non-governmental organizations, to seek professional degrees to further lives of service, and to enroll successfully in graduate schools of the highest caliber. Since the program is personally and intellectually demanding, its admissions policy is selective.

Learning Outcomes

Students in the B.A. in World Religions will:
1) demonstrate a broad mastery of the liberal arts, including cross-disciplinary and interdisciplinary skills of interpretation, critical thinking skills, and oral and written communication skills; 2) demonstrate their understanding of key social institutions (and an understanding of their impact upon the development of world religions); 3) demonstrate a critical, non-prejudicial understanding of how the world’s religions differently impact social, political, and economic development; 4) demonstrate mastery of religious studies methods; 5) demonstrate a high-level of competency in the history, beliefs, evolution, and practice of one religion; competency in one other religion; general knowledge of all major religions: 6) demonstrate development of tolerance, respect for diversity and respect for the great religious traditions, and commitment to seek the common good of human welfare; and 7) demonstrate the ability to undertake independent work and produce research at a high quality for undergraduates.

*Note that for all College of Public and International Affairs majors, a portfolio is collected to track progress in programmatic outcomes.

Summary of Requirements

MAJOR PROGRAM REQUIREMENTS

I. FOUNDATIONS (21-24 HOURS)

A. INTRODUCTIONS

WREL 102 Introduction to Eastern Religions**
WREL 103 Introduction to Western Religions**

**(with the Chair’s permission students may take a higher level course in lieu of either WREL 102 or WREL 103)

B. PROGRAM COURSES

Four 200-level “Program” courses

Courses may be selected from

WREL 204 Hinduism
WREL 205 Buddhism
WREL 207 Judaism
WREL 208 Early Christianity
WREL 209 Islam
WREL 215 Unification Philosophy
WREL 229 Confucianism and Taoism

II. CONCENTRATIONS (12 HOURS):

In addition to the common foundation, students complete their major studies by taking twelve semester credit hours in one of the following concentrations.

CONCENTRATION ONE:

Religion, Conflict Analysis, and Mediation

WREL 275 Religion, Conflict and Mediation
WREL 278 Religion, Peace, and War
WREL 305 Comparative Religious Ethics
WREL 374 Religion and Politics in the Middle East
MCOM 280 Intercultural Communication

CONCENTRATION TWO:

Religion and Community Service

WREL 275 Religion, Conflict and Mediation
WREL 305 Comparative Religious Ethics
WREL 348 Religion and Society
MCOM 280 Intercultural Communication

CONCENTRATION THREE:

Religion and Culture

WREL 221 Religion and Fiction
WREL 254 Religion and Science
WREL 288 Internet Religion
WREL 305 Comparative Religious Ethics
WREL 348 Religion and Society

Major Requirements 33-36 hrs

Five Electives* 44-47 hrs

GENERAL EDUCATION REQUIREMENTS

ENGL C101 Composition and Rhetoric 3
MATH C105 Intermediate Algebra 3
FYS 101 First Year Seminar 3
HUM Humanities Core 6
SOSC Social Sciences Core 6
SCI Natural Sciences Core 6
FA Fine Arts Core 3
CAPS 390 Capstone Seminar 3
Liberal Arts Electives 7
# Suggested Program

## FIRST SEMESTER
- **ENGL C101** Composition and Rhetoric 3
- **MATH C105** College Algebra 3
- **FYS 101** First Year Seminar 3
- **WREL 102** Intro. to Western Religions 3
  - Elective 3

## SECOND SEMESTER
- **SCI** Natural Sciences Core 3
- **FA** Fine Arts Core 3
- **HIST 101** World History 3
- **WREL 102** Intro. to Asian Religions 3
- **WREL** Concentration Course 3

## THIRD SEMESTER
- **LANG 101** Language Requirement 101 3
- **HUM** Humanities Core 3
- **SOSC** Social Science Core 3
- **WREL** 200-level Program Course 3
  - Elective 3

## FOURTH SEMESTER
- **LANG 102** Language Requirement 102 3
- **SOSC** Social Science Core 3
- **MCOM 280** Intercultural Communication 3
- **WREL** 200-level Program Course 3
- **WREL** Concentration Course 3

## FIFTH SEMESTER
- **LANG 103** Language Requirement 103 3
- **HUM** Humanities Core 3
- **WREL** 200-level Program Course 3
- **WREL** Concentration Course 3
  - Elective 3

## SIXTH SEMESTER
- **LANG 104** Language Requirement 104 3
- **SCI** Natural Sciences Core 3
- **WREL** 200-level Program Course 3
- **WREL** Concentration Course 3
  - Elective 3

## SEVENTH SEMESTER
- **CAPS C390** Capstone Seminar 3
- **WREL** Concentration Course 3
- **PSCI 209** U.N. Studies 3
- **WREL 395** Thesis 3

## EIGHTH SEMESTER
- **WREL** Concentration Course 3
- **Liberal Arts Electives** 4
- **SOSC 207** World Regional Geography 3
  - Elective 3
  - Elective 2

**Total Semester Hours** 120

*Students who do not meet the modern language requirement for the B.A. degree must use 3-12 semester hours free electives, depending on their level of competency, to satisfy this requirement.*
Master of Science degree in Biomedical Engineering (BME) is intended to prepare individuals with a strong scientific and technical background for entry into Biomedical Engineering field at an advanced level and for further study leading to doctorate. Admission to the interdisciplinary BME program requires an undergraduate background that includes elementary coursework in biomedical engineering, biotechnology, biology, clinical science, pharmaceutical science and also includes any branch of science and engineering that permeates through the Fundamentals and advanced courses in engineering and the life sciences. The program offers innovative educational strategy that integrates biological sciences and engineering, and applies engineering tools, methods and practices to solve problems in biology and medicine. Graduates of our programs are expected to be highly-skilled biomedical engineers, and scientists who understand the ethical, social and economic implications of their work. The following fundamental course work has been identified to benefit the students most if they have them in their undergraduate degrees.

- Biomedical Engineering and Engineering
- Tissue Engineering
- Bioelectronics
- Tissue Culture
- Physiology

Applicants with superior academic credentials but lacking the required background can be admitted subject to their taking the necessary preparatory courses. Applicants are expected to have an average B or better in their undergraduate course work. Department offers the unique opportunity to its graduate students the education and research on how to integrate several engineering discipline principles in biomedical engineering.

The Department also offers, as an integral part of the Biomedical Engineering Masters Degree, the opportunity to specialize in several concentration areas.

Learning Outcomes

Consistent with the university’s vision, and with the missions of the School of Engineering and the Biomedical Engineering Program, the educational objectives for the Master of Science in Biomedical Engineering program were established as follows:

- Graduates of the BME program will have a sound integrated knowledge of science and engineering fundamentals with respect to the biomedical issues.
- Graduates will be proficient in the use of modern techniques, tools, procedures, and information sources which are useful in the definition and solution of problems in biomedical engineering.
- Graduates will have the ability to apply their scientific knowledge and engineering tools and techniques to design useful and economically feasible novel materials, devices, systems and processes which address problems relevant to the fields of biomedical engineering.
- Graduates will have the breadth and depth of knowledge, and a commitment to continued learning, necessary to understand the economic, social, ethical, and aesthetic aspects of their profession and their work, and to effectively communicate the results of their work.

### Course Requirements

**REQUIRED COURSES**

A. A total of 34 semester hours is required. The core curriculum consists of 16 credits and includes:

- BMEG 565 Biomedical Materials and Engineering (3 credits)
- BMEG 412 Bioelectronics (3 credits)
- BMEG 580 Tissue Engineering (3 credits)
- BMEG 620 Team based research (6 credits)
- ENGR 400 Seminar (1 credit)

B. The remaining 18 credits are elective courses.

The elective courses may be chosen from the list of BME concentration areas or chosen in consultation with the graduate advisor. The course descriptions are in the Graduate Studies Division section of the Catalog.

C. A team based research project of 6 credits is compulsory and the course number for that is BMEG 620 as mentioned under core courses

**CORE COURSES**

- BMEG 410 Biosensors
- BMEG 412 Introduction to Bioelectronics
- BMEG 440 Ergonomic Factors in Design
- BMEG 451 Introduction to BioMEMS
- BMEG 452 Biomedical Imaging
- BMEG 503 Biometrics
- BMEG 506 Transport Phenomena in Biological Systems
- BMEG 507 Algorithm in Bioinformatics
- BMEG 508 Biomechanics
- BMEG 511 Design and development of Biomedical Instrument
- BMEG 520 Physiology
- BMEG 530 Instrumentation and Laboratory Experience
- BMEG 531 Robotics in Bioengineering
- BMEG 533 Communication Engineering in Biomedical Systems
- BMEG 534 Electrochemistry in Biological Systems
- BMEG 540 Advanced Cellular and Molecular Biology
- BMEG 541 Foundations of Biotechnology and Bio-entrepreneurship
- BMEG 546 Biosignal Processing
- BMEG 560 Advanced Tissue Engineering
- BMEG 569 Advanced Biomedical Materials and Engineering
- BMEG 571 Ethical Issues in Biomedical Research

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**Director:** Prabir K. Patra  
Engineering Technology Building  
Telephone (203) 576-4165  
Fax: (203) 576-4750  
Email: ppatra@bridgeport.edu

**Learning Outcomes**

1. Computer communication and networking in biomedical engineering
2. Birobotics and automation
3. Biomedical Materials and Engineering
4. Bioelectronics
5. Biotechnology
6. Biomedical signal and Image Processing
7. Wireless and mobile communication pertaining to Biomedical Engineering
8. Bioinformatics
9. Tissue Engineering

In addition the department also offers the opportunity to acquire dual graduate degree with electrical engineering (dual MS degree in BME/ELEG). Candidates for the dual Masters Degree programs are typically required to complete a total of 49 credit hours to satisfy the requirement of two Masters Degrees. This implies 15 credit hours in addition to the 34 credits required for the MS degree in Biomedical Engineering.
**Business Administration Master of Business Administration Degree**

**Program Director:** Arthur McAdams  
Mandeville Hall, Room 105  
Telephone: (203) 576-4363  
Fax: (203) 576-4888  
Email: mba@bridgeport.edu

The Master of Business Administration (M.B.A.) is a valuable education for managers and executives, or those aspiring to become managers in any field of endeavor, whether in a business, technical, medical or other enterprise. Although students with work experience will find maximum benefit from the M.B.A., no previous work experience is required. The curriculum is designed to recognize and accommodate substantial diversity in preparation and experience as well as the different goals and career expectations of students.

Students with a recent four-year bachelor’s degree and strong academic record from an accredited business college may be able to complete the M.B.A. with as few as 30 credits of advanced study – all courses successfully completed earn three credits. Students with undergraduate preparation in a non-business field may be required to complete up to an additional 24 credits of core business courses as a foundation for the advanced courses. The M.B.A. program is 54 credits consisting of 24 core credit hours and 30 advanced credit hours.

**School of Business Mission**

The School of Business advances the practice of business through the education of students and the scholarly and professional contributions of the Faculty. Through high quality innovative teaching, the School enhances critical thinking in its students, provides discipline knowledge through theoretical and applied learning and develops skills that are necessary for success in business. Students drawn from local, regional and international communities learn in a supportive environment that facilitates understanding of business in a dynamic global environment.

**Program Characteristics**

The graduate program in business administration provides early to mid-career professionals with broad-based knowledge necessary for effective leadership in domestic and global markets. The program provides a strong foundation in accounting, economics, finance, marketing, management information systems, business statistics, management, business research, law and ethics upon which students can build a concentration in a focused area of business. Graduates are equipped with a high-level understanding of the inter-relationship of different business processes and the interaction of the business entity in the competitive environment.

The program is based on principles which apply to the global business environment of which the domestic market is a key element. With students from many countries in attendance, the University of Bridgeport provides a global education from the first day of class.

**Curriculum: Core, Major, and Capstone**

There are three central components of the Curriculum. First you will develop the Core Knowledge and Skills. These eight courses may be waived if you have a sufficient undergraduate business background. Second you will choose a Major in which you will immerse yourself to develop the specialized knowledge and skills needed for a specific career. Third you will engage in Capstone experiences in courses that enable you to further integrate your business knowledge and apply your business skills.

**The Core Courses: Acquiring the Foundation for Success**

The M.B.A. program provides breadth of knowledge and skills across the business disciplines through its core curriculum which consists of 24 (eight courses) of the 54 credits required for the degree. Core courses may be waived if a student has recently completed similar courses with high marks and successfully completing a challenge examination, allowing the completion of the M.B.A. with 30 credits (10 courses).

The study of economics, accounting, marketing, finance, management, business law and ethics, statistics, and information technology enables students to understand the major types of business activities and is the foundation for the M.B.A. concentration. To complete the foundation for the concentration and capstone courses a Business Research course is required.

**Learning Outcomes**

**LEARNING OBJECTIVES**

The first overall learning objective for the graduate programs in the School of Business is for students to understand and apply concepts and skills across the basic business disciplines that enable them to be successful in a dynamic global environment. The second objective is for students to develop the competencies that facilitate student success in business.

**ASSESSMENT**

The understanding of knowledge and skills is evaluated with exams and the application of theories to applied situations presented in cases and projects. Students and the program as a whole will be evaluated and benchmarked with the use of standardized program tests across the basic business disciplines. Student knowledge and skills will be tested at the beginning and end of their MBA studies with program specific tests. These exams will enable the School to evaluate the value added by the overall program as well as within specific programs. Students will work in teams on various projects and cases across their business courses. Students will be evaluated by other students and by their professors regarding multiple competencies and will receive cumulative evaluations across courses.

**Choosing a Major**

Because many careers require specialized and in-depth knowledge and skills in specific business areas, the program provides students with the opportunity to complete 18 credits (six courses) of in-depth study in an area of their choice. Students may choose from twelve concentrations.

- Accounting
- Finance
- General Business
- Global Financial Services
- International Business
- Management
- Marketing
- Specialized Business
### The Capstone Experience

The Capstone experience provides the final integration of student learning across the business disciplines and application of concepts learned to practical and competitive situations. The three integration and application Capstone courses include a business Strategy course, a computerized Business Simulation and Planning course and an Internship or applied Thesis course.

The Strategy course integrates the knowledge and skills from previous coursework and provides additional training in strategic thinking and business planning. The computerized Business Simulation course provides the context to run a simulated business and to compete against other student teams.

The Internship course is intended for students with less than two-years of managerial experience. As an alternative to the Internship and for students who have two years or more of managerial experience, an applied Thesis course is offered in which a student may pursue a topic related to their current business or to a business they would like to pursue.

### Curriculum and Program Requirements

**SUMMARY OF REQUIREMENTS (CREDITS)**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Courses (May Be Waived)</td>
<td>24</td>
</tr>
<tr>
<td>Required Course</td>
<td>3</td>
</tr>
<tr>
<td>Major Courses</td>
<td>18</td>
</tr>
<tr>
<td>Capstone Requirements</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54</strong></td>
</tr>
</tbody>
</table>

**M.B.A. Core, Required and Capstone Requirements**

**CORE REQUIREMENTS (CREDITS)**

Advanced study in business administration requires that students have a working knowledge of the concepts and applications of accounting, economics, quantitative analysis, management and information systems. Each of the study areas help to develop skills for analysis, decision making and communication:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 600 Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ECON 600 Economics</td>
<td>3</td>
</tr>
<tr>
<td>ITKM 600 Information Systems and Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

**STAT 600 Statistics and Quantitative Analysis**

Also required is a solid comprehension of the concepts, processes and institutions for financing and managing the organization and creating and marketing goods and services. The tools of analysis found in these courses broaden student knowledge and ability for management decision-making:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 600 Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 600 Leadership and Management</td>
<td>3</td>
</tr>
<tr>
<td>BLAW 600 Legal Environment of Business and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>MKT 600 Marketing</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

**WAIVERS**

Students whose recent coursework includes grades of “B” or higher in similar courses may waive any or all of the core courses by successfully completing challenge examination(s) not later than the end of their first semester of study. If all core courses are waived a student can complete the M.B.A. program with 30 credits.

**REQUIRED COURSE (CREDITS)**

In addition to the courses needed to satisfy core requirements, students are required to complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKTG 610 Business Research</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3</strong></td>
</tr>
</tbody>
</table>

**CAPSTONE REQUIREMENTS (CREDITS)**

These courses are taken toward or at the end of a student’s program of study.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUCP 797 Integration and Application - Strategy</td>
<td>3</td>
</tr>
<tr>
<td>(formerly MGMT 597 and MGMT 797)</td>
<td></td>
</tr>
<tr>
<td>BUCP 781 Integration and Application - Business Simulation and Planning</td>
<td>3</td>
</tr>
<tr>
<td>(formerly MGMT 581 and MGMT 781)</td>
<td></td>
</tr>
<tr>
<td><strong>And</strong></td>
<td></td>
</tr>
<tr>
<td>BUCP 798 Integration and Application - Thesis</td>
<td>3</td>
</tr>
<tr>
<td>(formerly MGMT 598 and MGMT 798)</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>BUCP 799 Integration and Application - Internship</td>
<td>3</td>
</tr>
<tr>
<td>(formerly MGMT 599 and MGMT 799)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

In addition, students may take up to two, 1-credit internship courses to provide additional work experience specific to their course of study. Internships are integrally related to a student’s course of study as they provide the opportunity to apply concepts and skills gained in their MBA courses and to learn additional business concepts and skills.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUCP 797 Integration and Application - Internship</td>
<td>1</td>
</tr>
<tr>
<td>(formerly MGMT 599 and MGMT 799)</td>
<td></td>
</tr>
</tbody>
</table>

**M.B.A. Majors**

An M.B.A. student may select from 12 majors to meet his/her career goals.

Each major provides a specialized set of courses described in detail below.

- Accounting
- Finance
- General Business
- Global Financial Services
- International Business
- Management
- Marketing
- Specialized Business

*All majors with the exception of Global Financial Services (see below) require the student to complete 18 credits of required and elective course(s).*

### Program Credit Requirements

Credit requirements without waivers: 54 Credits

Credit requirements with all core courses waived: 30 Credits

### Course Policy and Scheduling

Normally, courses are taken in the following sequence: core and required courses, required concentration courses, elective concentration courses, and capstone courses. Please note that all courses are three credit courses unless otherwise designated. Prerequisites are specified in the course descriptions (see section: Graduate Course of Study).

### Sample Program

#### FLEXIBILITY

Schedules are flexible and depend on the number of courses taken in a semester. A student can take as many as five courses in a semester and as few as one course. The M.B.A. program must be completed within five years of initial enrollment.
Business Administration Master of Business Administration Degree

SEQUENCING OF COURSES

Generally, core courses are taken before the major courses. Major courses are taken with the final core courses or after the core courses are completed and usually before the capstone courses. Capstone courses are usually completed at the end of the program.

Example of Schedule with 3 Courses in Each Semester

First Semester
- ACCT 600 Financial Accounting 3
- ECON 600 Economics 3
- STAT 600 Statistics and Quantitative Analysis 3

Second Semester
- FIN 600 Financial Management 3
- BLAW 600 Legal Environment of Business and Ethics 3
- MKTG 610 Business Research 3

Third Semester
- MKT 600 Marketing 3
- ITKM 600 Information Systems and Technology 3
- MGMT 600 Leadership and Management 3

Fourth Semester
- Major Requirement 3
- Major Requirement or Elective 3
- Major Requirement or Elective 3

Fifth Semester
- Major Requirement or Elective 3
- Major Requirement or Elective 3
- Major Elective 3

Sixth Semester
- BUCP 797 Integration and Application 3
  – Strategy
- BUCP 781 Integration and Application 3
  – Business Simulation and Planning

And
- BUCP 799 Integration and Application 3
  or – Thesis (3 credits) or
- BUCP 798 Integration and Application – Internship 3
  or
  Upper Level Elective approved by Program Director or Dean (3)

M.B.A. Admissions Requirements

ADMISSION TO THE SCHOOL OF BUSINESS

The M.B.A. is designed to provide students with the knowledge and skills necessary to achieve high levels of achievement in their chosen career, community, and the greater society. Toward this end, a variety of criteria are used to assist faculty in determining the ability of applicants to succeed in the M.B.A. program.

All applicants should submit to the Office of Graduate Admissions:
1. An application to the M.B.A. program (www.bridgeport.edu)
2. Transcripts of all previous colleges attended
3. Graduate Management Admissions Test (GMAT) score
4. A personal statement of purpose in enrolling in the program
5. Copy of Resume
6. Two letters of Reference

WHERE TO APPLY

Send all application materials to:
Office of Graduate Admissions
126 Park Avenue
University of Bridgeport
Bridgeport, CT 06604

Or submit online at: www.bridgeport.edu.

APPLICATION DEADLINES

Applications and supporting documentation should normally be submitted at least two months before the desired starting date and for part-time students at least one month.

STUDENTS WITH A THREE-YEAR UNDERGRADUATE DEGREE

A number of countries award a bachelor’s degree with only three years of study. A student with a 3-year undergraduate degree will be required to take additional coursework. The combination of courses will be determined by the M.B.A. advisor (Assistant Dean). Each student’s background will be matched with courses that will prepare them for their studies in the business graduate programs.

GRADUATE MANAGEMENT ADMISSIONS TEST (GMAT)

The Graduate Management Admissions Test is designed to measure aptitude for graduate study in business administration. The Test measures verbal, mathematical, and analytical writing skills. The GMAT is not a test for knowledge in specific business subjects. The test is given on a regular basis in the United States and at many international locations. For more information and/or to register for the test, visit the following website: http://www.mba.com/mba/thegmat.

TEST OF ENGLISH AS A FOREIGN LANGUAGE (TOEFL)

Applicants whose native language is other than English must submit scores from the Test of English as a Foreign Language. Additional accepted standardized English language exam scores are listed at www.bridgeport.edu/admissions/international/ applying/requirements/englishlang.aspx.

Accepted student scoring less than 550 (PBT)/79 (IBT) will be re-tested upon arrival at the University and may be required to complete a portion of the University of Bridgeport Intensive English Language Program. For more information and/or to register for the test, visit the following website: http://www.ets.org/bin/getprogram.cgi?test=toefl.

Grading, Academic Standards, and Graduation Requirements

GRADING

Passing grades for graduate study range from “A” to “C”. Any work earning a grade below “C” will be assigned the grade of “F”. Incomplete work – grade of “I” – must be completed within one calendar year of the completion of the course or will be changed to “F”. A student receiving the grade of “F” should attempt to repeat immediately the course in which the grade was received.

In computing the CGPA the grade from the first repeat of a course replaces the original grade. Grades from transfer or waiver credit and from non-M.B.A. courses taken after the beginning of the program are excluded from CGPA calculations.

ACADEMIC STANDARDS

Students are expected to maintain a minimum Cumulative Grade Point Average (CGPA) of 3.0. A student whose CGPA falls below 3.0 or who earns a grade below “C” in any course will be placed on academic probation. S/he may be separated from the program unless
the minimum CGPA of 3.0 is achieved within the next 9 credit hours or if s/he earns a grade below “C” in any succeeding semester.

**REQUIREMENTS FOR GRADUATION**

To qualify for the award of the degree of Master of Business Administration, a student must fulfill the following minimum requirements:

1. Admitted to candidacy for the degree in the School of Business
2. Satisfactorily complete all academic requirements with a cumulative grade point average of “B” (CGPA = 3.0) or better.
3. File an application for the award of the degree at the Records Office on or before the date published in the University Calendar.
4. Complete all academic requirements within five (5) years from the date of first registration, unless a petition for extension is granted. Extensions are granted only for compelling reasons.

**M.B.A. Accounting Major**

The M.B.A. in Accounting delivers the knowledge and skills necessary to measure, analyze, interpret, and communicate economic data. Students acquire a solid foundation of accounting principles, real-world tools and aptitude in order to succeed and excel in accounting and business careers. As the “language of business” accounting prepares students for a wide variety of careers.

**Accounting Major Learning Outcomes**

**LEARNING OBJECTIVES**

Students learn the knowledge and skills that enable them to measure, analyze, interpret, and communicate economic data. Students acquire the broad based business knowledge that enables them to integrate accounting practices to achieve strategic goals.

**ASSESSMENT**

Students are evaluated with exams and homework assignments. Students will be evaluated and benchmarked with a standardized accounting test. Students’ accounting knowledge and skills will be tested with a program specific exam when they begin and finish their accounting program.

**Accounting Major Requirements**

**REQUIRED COURSES (CREDITS)**

- ACCT 610 Intermediate Accounting 3
- ACCT 620 Managerial and Cost Accounting 3
- ACCT 625 Auditing 3
- ACCT 630 Advanced Financial Accounting 3
- ACCT 633 Personal Taxation 3

**Total** 15

**MAJOR ELECTIVE (CREDITS)**

Select one course from:

- ACCT 702 Business Entity Taxation 3
- ACCT 704 Financial Reporting and Analysis 3
- ACCT 706 International Accounting 3

**Total** 3

**Finance Major Learning Outcomes**

**LEARNING OBJECTIVES**

Students learn financial concepts that provide the basis for careers in finance. Students develop the technical and analytical skills needed to pursue a variety of careers in the finance industry.

**ASSESSMENT**

Financial concepts and technical and analytical skills are evaluated with exams, assignments, papers, cases, and projects. Students will be evaluated and benchmarked with a standardized finance test. Students’ financial knowledge and skills will be tested when they begin and finish the Finance program with a program specific exam.

**Finance Major Requirements**

**REQUIRED COURSES (CREDITS)**

- FIN 610 Intermediate Finance 3
- FIN 620 Investment Analysis 3
- FIN 625 Financial Derivatives and Risk Management 3
- FIN 650 Cases in Finance 3

**Total** 12

**MAJOR ELECTIVE (CREDITS)**

Select two courses from:

- FIN 702 Advanced Financial Management and Policy 3
- FIN 721 Management of Financial Institutions 3
- FIN 725 International Financial Management 3
- FIN 730 Financial Analysis and Modeling 3
- ECON 710 Managerial Economics 3

**Total** 6

**M.B.A. Finance Major**

With the M.B.A. in Finance students acquire the knowledge of financial concepts and analytical skills needed for a career in finance. Students are exposed to topics such as financial management, international finance issues, and investments. Cases are analyzed to develop problem solving skills regarding real world problems. Technical skills are emphasized that enable students to utilize the many statistical and modeling approaches to finance.

**Finance Major Learning Outcomes**

**LEARNING OBJECTIVES**

Students will have a broad understanding of business theory and practice; students will be prepared to lead and manage business organizations in a variety of fields.

**ASSESSMENT**

Students and the program as a whole will be evaluated and benchmarked with a standardized test that covers the major business disciplines. In addition, students’ business knowledge and skills will be tested when they begin and finish their General Business program with a program specific exam. Alumni will be asked to complete follow-up questionnaires regarding their business careers.
**General Business Major Requirements**

**REQUIRED COURSES (CREDITS)**
Select one course from each discipline (five courses total).

- **ACCT** Accounting 3
- **FIN** Finance 3
- **ITKM** Information Technology and Knowledge management 3
- **MKTG** Money and Banking 3
- **MGMT** Global Financial Services 3

Total 15

**MAJOR ELECTIVE (CREDITS)**
Select one additional course (three credits) from any business discipline with faculty advisor approval and approval of the Assistant Dean.

**Global Financial Services Major Requirements**

**REQUIRED COURSES (CREDITS)**

- **ACCT 620** Managerial and Cost Accounting 3
- **FIN 625** Financial Derivatives and Risk Management 3
- **FIN 640** Money and Banking 3
- **FIN 644** Global Financial Services 3
- **FIN 650** Cases in Finance 3

Total 15

**MAJOR ELECTIVE (CREDITS)**
Select one or two courses from:

- **FIN 760** Investment Banking 3
- **FIN 762** Insurance 3
- **FIN 764** Commercial Banking 3
- **FIN 760** Real Estate 3
- **FIN 760** Financial Planning 3

Total 3 or 6

*A third elective may be selected as an alternative to MGMT 599 internship if the student has at least two years of management experience.

**M.B.A. International Business Major Requirements**

**REQUIRED COURSES (CREDITS)**

- **FIN 610** International Finance 3
- **FIN 725** International Financial Management 3
- **MKTG 650** Global market management 3

Total 9

**MAJOR ELECTIVE (CREDITS)**
Select three courses from:

- **MGMT 750** Foundations of Doing Business in China 3
- **MGMT 751** Foundations of Doing Business in India 3
- **MGMT 779** International Issues 3
- **ACCT 706** International Accounting 3
- **MKTG 751** Product Management, Innovation and Commercialization 3

Total 9

*A third elective may be selected as an alternative to MGMT 599 internship if the student has at least two years of management experience.

The University of Bridgeport’s location offers accessibility to regional and world headquarters of numerous multinational corporations. The wealth of information available in public libraries, embassies, high commissions and various international organizations makes important contributions to the UB M.B.A. program of study in international business.

**International Business Major Learning Outcomes**

**LEARNING OBJECTIVES**

Students will specifically understand the economic, cultural, legal and political issues associated with international business. Students will be prepared to lead and manage organizations in the global business environment.

**ASSESSMENT**

Students’ international business knowledge and skills will be tested when they begin and finish the International Business program with a program specific exam. Alumni will be asked to complete follow-up questionnaires regarding their careers in international business.

**International Business Major Requirements**

**REQUIRED COURSES (CREDITS)**

- **FIN 610** International Finance 3
- **FIN 725** International Financial Management 3
- **MKTG 650** Global market management 3

Total 9

**MAJOR ELECTIVE (CREDITS)**
Select three courses from:

- **MGMT 750** Foundations of Doing Business in China 3
- **MGMT 751** Foundations of Doing Business in India 3
- **MGMT 779** International Issues 3
- **ACCT 706** International Accounting 3
- **MKTG 751** Product Management, Innovation and Commercialization 3

Total 9
**Business Administration Master of Business Administration Degree**

**M.B.A. Management Major**

The M.B.A. in Management delivers the knowledge and skills that prepare students for leadership and to understand management competencies that are required to plan, build, and run a successful and ethical enterprise. The program enables the manager to build and manage teams to solve business problems. The program also emphasizes employee motivation and the overall management of people and organizational systems.

**Management Major Learning Outcomes**

**LEARNING OBJECTIVES**

Students learn the knowledge and skills that prepare them to plan, build, and run a successful business enterprise. Students also learn how to lead and work effectively with people within an organization.

**ASSESSMENT**

Students will be evaluated and benchmarked with a standardized management specific test. Students’ management knowledge and skills will be tested when they begin and finish their Management program with a program specific exam.

**Management Major Requirements**

**REQUIRED COURSES (CREDITS)**

- MGMT 610 Organizational Behavior 3
- MGMT 611 Human Resources Management 3
- MGMT 632 Global Program and Project management 3
- MGMT 650 Foundations of Business Process and Operations management 3

**Total** 9

**MAJOR ELECTIVE (CREDITS)**

Select two courses from:

- MGMT 652 Small Business and Entrepreneurship 3
- MGMT 712 Organizational Development 3
- MGMT 722 Conflict and Negotiation 3
- MGMT 723 Leadership, Teams and Managing Change 3
- MGMT 734 Strategic Sourcing and Vendor Management 3

**Total** 6

**M.B.A. Marketing Major**

The M.B.A. in Marketing delivers the knowledge and skills that prepare students for marketing careers and specifically the competencies that are required to create, promote, distribute, price and manage products, services and ideas to customers in a satisfying exchange relationship.

**Marketing Major Learning Outcomes**

**LEARNING OBJECTIVES**

Students are prepared for marketing careers and specifically learn the knowledge and skills that are required to create, promote, distribute, price and manage products, services and ideas to customers in a satisfying exchange relationship. Students develop an understanding of human behavior related to marketing activity.

**ASSESSMENT**

Students will be evaluated and benchmarked with a standardized marketing test. Students’ marketing knowledge and skills will be tested when they begin and finish the Marketing program with a program specific exam.

**Marketing Major Requirements**

**REQUIRED COURSES (CREDITS)**

- MKTG 612 Customer Analysis 3
- MKTG 776 Strategy and Advanced Marketing Concepts 3

**Total** 6

**Specialized Business Major Requirements**

**NO REQUIRED COURSES (CREDITS)**

**MAJOR ELECTIVE (CREDITS)**

Select six courses (18 credits) from any business discipline with faculty advisor approval and Assistant Dean approval.

**Specialized Business Major Learning Outcomes**

**LEARNING OBJECTIVES**

Students will learn the knowledge and skills related to the core disciplines. Students will acquire specific knowledge and skills for specific career goals.

**ASSESSMENT**

Students will be evaluated and benchmarked with a standardized test of the general M.B.A. program. Students’ business knowledge and skills will be tested when they begin and finish their Specialized Business Program with an exam specific to their plan of study. Alumni surveys will follow student careers to evaluate the effectiveness of the Specialized Program in advancing their business careers.
Computer Engineering Master of Science Degree

Chair: Ausif Mahmood
Engineering Technology Building
Telephone: (203) 576-4145
Fax: (203)576-4765
Email: mahmood@bridgeport.edu

The Master’s Degree in Computer Engineering is a course of study intended to prepare individuals whose undergraduate background is in computer or electrical engineering for advanced professional work in the field and for further study leading to the doctorate. Emphasis is placed on current state-of-the-art applications including parallel computing, image processing, VLSI design, sensing, robotics, mobile computing, automation and the like. Admission to the program requires an undergraduate degree in engineering, and includes the following fundamental coursework:

- Programming Languages and Techniques
- Data Structures
- Digital Design
- Digital Design Lab
- Computer Organization
- Microprocessors
- Probability and Statistics

Applicants with superior academic credentials but lacking the required background can be admitted subject to their taking the necessary preparatory courses. Applicants are expected to have an average of B or better in their undergraduate coursework.

The Department also offers, as an integral part of the Computer Engineering Masters Degree, the opportunity to specialize in several concentration areas.

Computer Engineering Concentration areas:

1. Advanced Applications and Systems Programming
2. Bio-Medical Engineering
3. CAD/CAM
4. Computer and Information Security
5. Computer Communications and Networking
6. E-Commerce
7. Microelectronics and Computer Architecture
8. Modern Data Base Systems
9. Robotics and Automation
10. Signal and Image Processing
11. Software Engineering
12. Very Large Scale Integration (VLSI)
13. Wireless and Mobile Communications

Please refer to the Graduate Studies Division Catalog pages for course details of the concentration areas.

In addition, the department also offers the opportunity to acquire dual graduate degrees along with the M.S. degree in Computer Engineering. Candidates for these dual Masters degree programs are typically required to complete a total of 48 credit hours to satisfy the requirements of two Masters degrees. This implies 15 credit hours in addition to the 33 hours required for the M.S. degree in Computer Engineering.

Please refer to the Graduate Studies Division catalogue pages for detailed information on Dual Graduate Degree programs.

Furthermore, customized study plans to allow receiving the Computer Engineering M.S. degree while pursuing either the Ph.D. degree in Computer Science and Engineering or the Ed.D. degree in Education are available. Doctoral students in these two programs should consult their respective doctoral advisors to work on their individualized plans. Further details on the dual M.S. in Computer Engineering degree programs are available in the catalog section on the Graduate Studies Division.

Learning Outcomes

Our Computer Engineering Students will:
1. Demonstrate an in depth and comprehensive understanding of Computer Engineering.
2. Have an enhanced ability to learn, on their own, technical details for which they are responsible.
3. Have an enhanced ability to apply the knowledge learned to solve technical problems that arise in research they conduct or supervise.
4. Have an enhanced ability to study an issue, identify and evaluate alternative actions, propose an optimal course of action.
5. Have an enhanced ability to prepare technical point papers, brief their seniors, and defend their conclusions.

Course Requirements

Required courses

A. A total of 33 semester hours is required. The core curriculum consists of 15 credits and includes:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSC 400</td>
<td>Object Oriented Programming Using C++</td>
</tr>
<tr>
<td>CPEG 410</td>
<td>Introduction to Computer Architecture</td>
</tr>
<tr>
<td>CPEG 471</td>
<td>Data and Computer Communication</td>
</tr>
<tr>
<td>CPEG 480</td>
<td>Introduction to VLSI Design</td>
</tr>
<tr>
<td>or CPEG 447</td>
<td>Logic Synthesis Using FPGAs</td>
</tr>
<tr>
<td>ELEG 443</td>
<td>Applied Digital Signal Processing</td>
</tr>
</tbody>
</table>

B. The remaining 18 credits are elective courses.

The elective courses may be chosen from the list of Computer Engineering concentration areas or chosen in consultation with the graduate advisor.

The course requirements of the concentration areas are described in the Graduate Studies Division section of the catalog.

C. Students must do a Masters Project (3 credit hours) or Thesis (6 credit hours) as part of the 18 elective credit hours.

The concentration areas can be applied to satisfy the requirements of dual Masters degree programs of study.

Program Objectives

Our Computer Science Students will:

- Apply foundational scientific concepts and sound engineering principles efficiently and effectively.
- Be well-educated, highly valued, and successful engineers and scientists.
- Significantly contribute to technical interdisciplinary team projects.
- Professionally communicate technical solutions and results.
- Continue to pursue lifelong multidisciplinary learning as professional engineers and scientists.
Computer Science Master of Science Degree

Chair: Ausif Mahmood
Engineering Technology Building
Telephone: (203) 576-4145
Fax: (203) 576-4765
Email: mahmood@bridgeport.edu

The Master’s Degree in Computer Science is intended to prepare individuals with a strong mathematical, scientific, or technical background for entry into the computer science field at an advanced level and for further study leading to the doctorate. Admission to the program requires an undergraduate background that includes elementary physics, calculus sequence, linear algebra, and the following fundamental coursework in computer science:

- Programming Languages and Technique
- Data Structures
- Digital Design
- Discrete Structures
- Computer Organization
- Probability and Statistics

Applicants with superior academic credentials but lacking the required background can be admitted subject to their taking the necessary preparatory courses. Applicants are expected to have an average of B or better in their undergraduate coursework.

The Department also offers, as an integral part of the Computer Science Masters Degree, the opportunity to specialize in several concentration areas.

Computer Science Concentration Areas:

1. Advanced Applications and Systems Programming
2. Bio-Medical Engineering
3. CAD/CAM
4. Computer and Information Security
5. Computer Communications and Networking
6. E-Commerce
7. Microelectronics and Computer Architecture
8. Modern Database Systems
9. Robotics and Automation
10. Signal and Image Processing
11. Software Engineering
12. Very Large Scale Integration (VLSI)
13. Wireless and Mobile Communications

Please refer to the Graduate Studies Division Catalog pages for course details of the concentration areas.

In addition, the department also offers the opportunity to acquire dual graduate degrees along with the M.S. degree in Computer Science. Candidates for these dual Masters degree programs are typically required to complete a total of 48 credit hours to satisfy the requirements of two Masters degrees. This implies 15 credit hours in addition to the 33 hours required for the M.S. degree in Computer Science.

Please refer to the Graduate Studies Division catalogue pages for detailed information on Dual Graduate Degree programs.

Furthermore, customized study plans to allow receiving the Computer Science M.S. degree while pursuing either the Ph.D. degree in Computer Science and Engineering or the Ed.D. degree in Education are available. Doctoral students in these two Masters degree programs should consult their respective doctoral advisors to work on their individualized plans. Further details on the dual M.S. in Computer Science degree programs are available in the catalog section on the Graduate Studies Division.

Course Requirements

A. A TOTAL OF 33 SEMESTER HOURS IS REQUIRED. THE CORE CURRICULUM CONSISTS OF 15 CREDITS AND INCLUDES:

- CPSC 400 Object Oriented Programming
- CPSC 450 Data Base Design
- CPSC 502 Analysis of Algorithms
- CPSC 503 Operating Systems
- CPEG 471 Data and Computer Communication

B. THE REMAINING 18 CREDITS ARE ELECTIVE COURSES.

The elective courses may be chosen from the list of Computer Science concentration areas or chosen in consultation with the graduate advisor.

The course requirements of the concentration areas are described in the Graduate Studies Division section of the catalog.

C. STUDENTS MUST DO A MASTERS PROJECT (3 CREDIT HOURS) OR THESIS (6 CREDIT HOURS) AS PART OF THE 18 ELECTIVE CREDITS HOURS.

Since July 2004, the Department of Computer Science and Engineering has been offering the full M.S. degree program in Computer Science through distance learning. For more information please contact the department or visit: http://www.bridgeport.edu/uh/dlearning/

The concentration areas can be applied to satisfy the requirements of dual Masters degree programs of study.

Program Objectives

Our Computer Science Students will:

- Apply foundational scientific concepts and sound engineering principles efficiently and effectively.
- Be well-educated, highly valued, and successful engineers and scientists.
- Significantly contribute to technical interdisciplinary team projects.
- Professionally communicate technical solutions and results.
- Continue to pursue lifelong multidisciplinary learning as professional engineers and scientists.

Learning Outcomes

Our Computer Engineering Students will:

1. Demonstrate an in depth and comprehensive understanding of Computer Science.
2. Have an enhanced ability to learn, on their own, technical details for which they are responsible.
3. Have an enhanced ability to apply the knowledge learned to solve technical problems that arise in research they conduct or supervise.
4. Have an enhanced ability to study an issue, identify and evaluate alternative actions, propose an optimal course of action.
5. Have an enhanced ability to prepare technical point papers, brief their seniors, and defend their conclusions.
Counseling and Human Resources  
**Master of Science Degree**

**Co-Director:** Cicely Horsham-Brathwaite  
for the Human Services Human Resource Development and College Student Personnel Concentrations  
Carlson Hall 140  
Telephone: (203) 576-4457  
Fax: (203) 576-4219  
chorsham@bridgeport.edu

**Co-Director:** Larry Phillips  
for the Clinical Mental Health Counseling concentration  
Carlson Hall 139  
Telephone: (203) 576-4173  
Fax: (203) 576-4219  
phillips@bridgeport.edu

**Secretary** (information and application materials)  
Kyle Buckley  
Telephone: (203) 576-4175  
Fax: (203) 576-4219  
kbuckley@bridgeport.edu

**Faculty:** L. Phillips, C. Braithwaite

### Admissions

The University has a rolling admissions policy. The concentration directors periodically review applications for acceptance, typically a month before the start of each term. To be fully admitted, applicants must have a bachelor’s degree from an accredited college or university with a minimum GPA of 2.75. Applicants are expected to have at least 9 credits of psychology coursework (graduate or undergraduate) such as Personality Theories, Abnormal Psychology, or Clinical Psychology. They must also complete the supplemental application portfolio which includes personal references, a writing assignment, and an official transcript.

In addition to the general admissions requirements listed above, admission decisions for the Clinical Mental Health Counseling concentration will give careful consideration to indicators of candidate life experience and maturity (e.g., successful work experience in a human service field). A personal interview is also required.

Applicants who hold a bachelor’s degree from an accredited college or university but do not meet one or more of the above criteria may be admitted provisionally. Those without the recommended background in Psychology will be required to take additional psychology-related coursework as part of their degree program. Those admitted on provisional status may be fully admitted once they have completed 12 credits of coursework with a grade point average of 3.0 or higher.

Although students may enter the program in any term, it is advised to begin in the fall. Students who begin in the spring or summer may have limited course options.

### Programs

The Division of Counseling and Human Resources offers a Master of Science degree in Counseling with concentrations in Clinical Mental Health Counseling, Human Resource Development, Human Services, and College Student Personnel. In addition to the master’s degree, a Certificate of Advanced Graduate Study (CAGS) is offered for those who wish to take specialized courses beyond the masters and/or complete licensure requirements. Students who apply to one program and wish to transfer to another must apply to change programs.

Upon entry into a program, students plan an individualized plan of studies with their advisor in which graduate transfer credit of no more than six credits may be included. While students can take courses at their own pace, all of the counseling degree programs require a minimum of two years to complete. There is a set sequence of courses for each concentration and some courses have prerequisites. Courses are offered once a year, typically in the evening or on weekends. In addition, there is a seven-year time limit for completion of all degree requirements.

Typically, students take two or three courses each term. Many students have full or part-time employment. Although it is possible to take all course work in the late afternoon, evening, or on weekends, some additional time during the day may be required to meet course expectations. This is especially true for internship placement.

### Professional Licensure

Students interested in licensure should consult the state in which they wish to practice for specific requirements. The State of Connecticut requires a 42-credit master’s degree plus additional course work totaling 60 credits. Specific areas of coursework are also required. In addition, candidates for licensure must complete supervised clinical experiences and obtain a qualifying score on a standardized examination. Students who wish to pursue licensure typically select the Clinical Mental Health Counseling concentration.

### Certificate of Advanced Graduate Study

For individuals who hold a master’s degree in Counseling or a closely related field but lack one or more of the requirements for licensure as a professional counselor, the Division of Counseling and Human Resources offers a specialized program of study leading to a Certificate of Advanced Graduate Study (CAGS) in Clinical Mental Health Counseling. While the requirements of this program are individualized to the needs and goals of each student, a typical plan of study consists of 12 or more credits.

### Practicum/Internship

A supervised field experience is a key element of all specializations. During field experiences, students have opportunities to apply, under supervision, the theories and skills they have developed in their programs. The Clinical Mental Health Counseling Internship is taken during the final two semesters and students must have successfully completed Counseling 505, 510, 516, 521, 523, 524 and 566. Counseling 525 and 630 should be taken prior to the start of, or during the same academic year as the internship. The Clinical Mental Health Counseling internship consists of a weekly class and a 300 hour per semester clinical experience. Students are placed in an actual clinical setting that is centered on providing services to clients under the mentorship of a licensed mental health professional. Similarly, supervised internship placements in the Human Resource Development (HRD),
Counseling and Human Resources Master of Science Degree

Human Services (HUSV), and College Student Personnel (CSP) programs afford students the opportunity to provide services to clients under the mentorship of highly qualified professionals in the corporate, agency, and higher education fields, respectively.

Learning Outcomes

Students will: 1) learn fundamental skills, concepts, theories, and practices that underlie the work of the counselor as a professional; 2) learn ethical theories and concepts and know how they apply to Counseling situations, practices, and the profession; 3) demonstrate the ability write professionally, drawing upon research scholarship in counseling and counseling-related fields; 4) learn skills and practices to undergo further training through supervised internship experiences; and 5) In their supervised internship experiences, learn skills and practices directly related to their concentrations.

Summary of Requirements

Masters students in the Division of Counseling and Human Resources are required to complete the following core courses:

COUNSELING CORE COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUN 505</td>
<td>Helping Relationships</td>
<td>3-4</td>
</tr>
<tr>
<td>COUN 521</td>
<td>Group Process</td>
<td>3-4</td>
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<tr>
<td>COUN 523</td>
<td>Counseling Theories</td>
<td>3</td>
</tr>
<tr>
<td>COUN 516</td>
<td>Social and Cultural Foundations</td>
<td>3</td>
</tr>
<tr>
<td>COUN 574</td>
<td>Supervised Practicum and/or Internship</td>
<td>3-4</td>
</tr>
<tr>
<td>COUN 500</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>COUN 560</td>
<td>Human Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>COUN 590</td>
<td>Masters Project and/or Capstone</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Total of Credits: 25-31

The remaining coursework for the Master of Science degree will vary according to chosen concentration.

CONCENTRATION IN CLINICAL MENTAL HEALTH COUNSELING

The concentration in Clinical Mental Health Counseling is designed to prepare students for work as mental health counselors and requires advanced coursework in clinical skills, psychopathology, appraisal procedures, addiction, and psychotherapeutic techniques.

CONCENTRATION IN HUMAN RESOURCE DEVELOPMENT (HRD)

The concentration in Human Resource Development is designed for practitioners in corporate settings and requires advanced coursework in management theory, human resource management, and organizational development.

CONCENTRATION IN HUMAN SERVICES (HUSV)

The concentration in Human Services is designed for students who aspire to positions of leadership in human service agencies. In addition to courses that develop clinical skills, it requires coursework in administration and supervision.

CONCENTRATION IN COLLEGE STUDENT PERSONNEL (CSP)

The concentration in College Student Personnel is designed to prepare students for counseling careers in higher education. It requires advanced coursework in career and lifestyle development, organization and administration of higher education, and college student development.
Design Management  Master of Professional Studies Degree

Chair: Alex W. White
Arnold Bernhard Center
Telephone: (203) 576-4036
Fax: (203) 576-4042
alwhite@bridgeport.edu

Design is quickly moving to the center many organizations’ core strategy. Such companies achieve a significant competitive advantage through the implementation of effective design thinking. New demands are being placed on designers, and new skills are needed to fully integrate into the business landscape of the 21st century.

Design Management is more than the study of business and design, it is a fundamental belief within an organization that design can improve productivity, create more innovative products, lower operational costs and create a more sustainable work environment. The field of Design Management encompasses every discipline of design, including graphic and communication, industrial design and engineering; architecture and interior; and fashion and textile design.

The MPS Design Management program at Shintaro Akatsu School of Design (SASD) emphasizes the following five core aspects of design and business:

LEADERSHIP
Design Managers lead teams of designers, which requires a specific set of skills to develop the leadership style that’s right for the individual and the team. Additionally, Design Managers are often asked to champion ideas throughout an organization. Both of these types of leadership skills are emphasized in this program, resulting in graduates with strong leadership skills.

STRATEGY
Design and strategy are deeply connected. Design Managers who graduate from this program will be able to develop concepts that support and promote the core strategy of their organization, and articulate that strategy in a clear and persuasive way.

MARKETING
Understanding the principles of marketing is critical to effective Design Management. Promotion, product design, package design, and the design of the physical plant often all fall under the responsibility of the Design Manager. Upon completing the courses in this program, students will have working knowledge of these issues.

OPERATIONS
Through interactive simulations and case study research, Design Management students gain a deep understanding of the operational procedures within an organization. The courses in this program help students identify, understand, and influence efficient operational practices.

FINANCE
Students will be able to read and comprehend financial statements such as annual reports, cash flow statements, and balance sheets to more effectively integrate design proposals with business functions within their organization.

LEGAL
Design Managers are often faced with the protection of intellectual property. The MPS DM program gives students a working knowledge for dealing with design issues of trademarks, copyrights, and patents. These core skills will give Design Managers who graduate from SASD the tools they need to solve the most pressing design issues of our time, from matters of sustainability to social responsibility and profitability.

Admissions Requirements
Applicants must possess an undergraduate degree in graphic, industrial, interior, or fashion design, architecture or related design or business fields from an accredited college or university with at least a 2.7/4.0 GPA.

Applicants should have a well-rounded education, as gained through general education courses.

Admissions will consider writing, speaking, and analytical skills, as demonstrated through college-level coursework or professional experience, although professional experience is not a prerequisite for admission.

Applicants must submit a personal essay and two letters of recommendation.

An interview is not required, but is recommended.

A portfolio is not required, but is an advantage in the admissions process.

Evidence of internship, volunteer, or prior employment in design management, marketing, business or a studio settings will be viewed favorably.

Please visit Graduate Admissions for detailed information.

http://www.bridgeport.edu/admissions.

International Admissions
http://www.bridgeport.edu/admissions/international/applying/requirements/graduate.aspx

Curriculum

First Semester  
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>DSNMG 400</td>
<td>Collaborative Design Studio I</td>
<td>2</td>
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<tr>
<td>DSNMG 410</td>
<td>Design Management I</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 600</td>
<td>Marketing Concepts (Marketing)</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 600</td>
<td>Leadership &amp; Management (Management)</td>
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Second Semester  
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<td>DSNMG 410</td>
<td>Design Management II</td>
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<tr>
<td>BLAW 600</td>
<td>Legal Environment of Business and Ethics (Law)</td>
<td>3</td>
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<tr>
<td>DSNMG 599</td>
<td>Special Projects</td>
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<tr>
<td>DSNMG 598</td>
<td>Internship or Coop (Elective*)</td>
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Third Semester  
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<td>DSNMG 500</td>
<td>Collaborative Design Studio III</td>
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<td>DSNMG 511</td>
<td>Design Management III</td>
<td>3</td>
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<tr>
<td>ACCT 600</td>
<td>Financial Accounting (Finance)</td>
<td>3</td>
</tr>
<tr>
<td>ITKM 600</td>
<td>Information Systems &amp; Technology</td>
<td>3</td>
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</table>
**Design Management  Master of Professional Studies Degree**

**Fourth Semester**

<table>
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<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>DSNMG 501</td>
<td>Collaborative Design Studio IV</td>
<td>2</td>
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<tr>
<td>DSNMG 511</td>
<td>Thesis/Design Management IV</td>
<td>3</td>
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<tr>
<td>MGMT 652</td>
<td>Small Business &amp; Entrepreneurship (Strategy)</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
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<tr>
<td>DSNMG 580X</td>
<td>New Product Commercialization</td>
<td>3</td>
</tr>
<tr>
<td>DSNMG 598</td>
<td>Internship or Coop (Elective*)</td>
<td>1</td>
</tr>
</tbody>
</table>

*Alternate coursework is an additional graduate-level business course and requires permission of the academic advisor.*
This degree program provides advanced study in education for persons interested in careers broadly related to education, or for persons seeking certification in the State of Connecticut to teach on the elementary, middle or secondary levels.

**Intern Program**

**Intern Director:** Joyce A. Cook  
Carlson Hall, Room 111  
Telephone: (203) 576-4193  
Fax: (203) 576-4200  
Email: joycecc@bridgeport.edu

The School of Education provides an internship option for the following students: (1) those seeking a Master's degree or 6th Year Certificate of Advanced Studies and teacher certification; (2) those already certified and seeking a Master's degree or Sixth Year Certificate of Advanced Studies, or (3) those seeking a Master's degree only for work in nonpublic American schools, schools in another country, or in other educational settings. This internship is designed to integrate field experience with graduate course work. During the internship students earn thirty-three tuition remission credits.

**Master's Degree Program**

Master of Science in Education  
(Connecticut Teacher Certification)

This program provides educators with the opportunities for in-depth study of techniques and materials appropriate to contemporary classrooms within a structured framework of field concentration and professional development. All programs must be planned on an individual basis with an advisor from the department. Emphasis is placed on selected areas of concentration and professional course work for the development of individual competencies.

Individuals seeking Connecticut certification must take courses required for their license in a Master's Planned Program of Study. This program consists of foundation courses, professional courses, field experiences, and student teaching.

The following certification tracks are available: Elementary Education; Middle Grades; Secondary Academic Subjects: Biology, Physics, General Science, Chemistry, Earth Science, English, Mathematics, History and Social Studies, Remedial Reading and Remedial Language Arts, and Music.

**Teacher Preparation Programs**

**Associate Dean:** Margaret Lally Queenan  
Carlson Hall, Room 106  
Telephone: (203) 576-4218  
Fax: (203) 576-4200  
Email: mqueenan@bridgeport.edu

Candidates who seek certification to teach in Connecticut must follow a Planned Program of Study that results in a Master's Degree and a recommendation by the State Certification Officer at the University for an initial educator certificate in the State of Connecticut.

**Admissions into the Master's Degree (Certification Track Programs)**

Students seeking certification must apply to the program of their choice and must meet the following requirements PRIOR to admission into a Certification Track Program in Elementary Education, Middle Grades Education, Secondary Academic Subjects, or Music:

1. A Bachelor's Degree in a subject area major (not professional education) from an accredited institution with thirty-nine credits in general education including course work in English, Mathematics, Natural Science, Social Studies, and World Language or Fine Arts (Grades of D or F are NOT accepted for this category).

2. Passing scores on the PRAXIS I exams in Reading, Writing, and Mathematics or an official Essential Skills Test waiver based on required passing scores on the SAT, ACT, or La Prueba de Aptitud Academica.

3. Undergraduate GPA of at least B-.

4. A well-written essay, at least 350 words, describing the candidate's reasons for enrolling in the program and experience relevant to teaching and demonstrating the appropriate dispositions for becoming a teacher.

5. Two letters of recommendation from persons able to testify to the candidate's suitability as a prospective teacher and potential for graduate-level work.

Students seeking admission to the certification-track programs are expected to possess basic technology proficiencies, such as word processing, sending and receiving e-mail messages, and using the Internet.

All candidates for Connecticut State Certification must meet the following additional requirements prior to recommendation for certification:

1. Completion of all required course work

2. Survey course in U.S. History

3. PRAXIS I (or waiver) and PRAXIS II examinations, as well as any additional state mandated assessments for specific certification areas

4. Demonstration of all state-required program competencies

5. Demonstration of the knowledge, skills, and dispositions for teaching in the program area, including successful completion of all performance assessments specific to the certification program.

**Program Goals**

The Teacher Preparation Program Goals coincide with the six domain goals of the Connecticut Common Core of Teaching (2010). The Teacher Preparation Program at the University of Bridgeport seeks to develop teachers who can accomplish all of the following:

- Understand and apply essential skills, central concepts, and tools of inquiry in their subject matter or field.
- Promote student engagement, independence, and interdependence in
learning by facilitating a positive learning community.

- Plan instruction in order to engage students in rigorous and relevant learning and to promote their curiosity about the world at large.
- Implement instruction in order to engage students in rigorous and relevant learning and to promote their curiosity about the world at large.
- Use multiple measures to analyze student performance and to inform subsequent planning and instruction.
- Maximize support for student learning by developing and demonstrating professionalism, collaboration with others, and leadership.

### Elementary Education, K-6, Certification Track Program

**Chair:** Margaret Lally Queenan  
**Email:** mqueenan@bridgeport.edu

### Planned Program of Study

#### Pre-professional Requirements

**Coursework**

- **Foundations of Education** – 3 credits (required)  
  - EDUC 502 Philosophical Foundations of Modern Education 3  
  - or EDUC 503 Differentiated Instruction: Building on Student Diversity 3

- **Human Growth and Development** – 3 credits (required)  
  - EDUC 509 Psychological Foundations in Education 3

- **Special Education** – 3 credits (required)  
  - EDUC 564 Education of the Exceptional Student 3

**Professional Educational Requirements**

**Curriculum and Methods of Teaching**

- **Methods and Materials** – 6 credits (required)  
  - (Two of the following)  
    - EDUC 441C Methods and Materials in Teaching Mathematics 2  
    - and EDUC 442C Methods and Materials in Teaching Social Studies 2  
    - and EDUC 443C Methods and Materials in Teaching Science 2

- **Literacy** – 9 credits (required)  
  - EDUC 440C Methods and Materials in Teaching Language Arts 3  
  - EDUC 573 Early Literacy Instruction 3  
  - and EDUC 574 Developmental Reading in the Elementary School 3

**Technology in Education** – 2 credits (required)  

- EDUC 592 Technology Literacy for Educators 2  
- or EDUC 594 New Technologies for Learning 2

**Statutory Requirements** – 1 credit (required)  

- EDUC 511 Statutory Requirements in Education 1

**Field Experience/Student Teaching** – 3 credits plus Student Teaching  

- EDUC 450 Field Experience 6  
- or EDUC 515C Internship — First Semester 3  
- and EDUC 516C Internship — Second Semester 3  
- and EDUC 346C Directed/Supervised Student Teaching 6

**Praxis II Examinations** (required)  

- Connecticut Foundations of Reading Test  
- MATHEMATICS (Adviser approval is needed for this course.)  
- EDUC 348M Directed/Supervised Student Teaching 6  
- EDUC 515M Internship — First Semester 3  
- or EDUC 516M Internship 3  
- or EDUC 516C Internship — Second Semester 3  
- or EDUC 346M Directed/Supervised Student Teaching 6

**Additional Graduate Courses and Electives**

- Additional Graduate Coursework (Required if noted)  
  - Mathematics (Adviser approval is needed for this course.)  
  - EDUC 537 Middle Grades Interdisciplinary Teaching and Teams 3

**Literacy and English Language Learning**

- EDUC 536C Instruction for the English Language Learner 1

**United States History**

- HIST 500 U.S. History for Teachers 3

**Final Degree Requirement**

- (Choose one; certification-track students must take PRAXIS II and Connecticut Foundations of Reading Test.)  
  - Examination (required for certification)  
    - PRAXIS II  
    - Connecticut Foundations of Reading Test  
    - EDUC 566 Contemporary Educational Problems II 3  
    - EDUC 595 Thesis Research 3

**Total Number of Credits**

- MS Ed. Total Minimum: 33 credits  
  - (not including 6 credits for student teaching)

**Other Requirements for State of Connecticut Certification**

- Additional Coursework for Certification (required if noted)

### Middle Grades, 4-8, Certification Track Program

**Chair:** Joyce A. Cook  
**Email:** joycecc@bridgeport.edu

### Planned Program of Study

#### Pre-professional Requirements

**Coursework**

- **Foundations of Education** – 3 credits (required)  
  - EDUC 502 Philosophical Foundations of Modern Education 3  
  - or EDUC 503 Differentiated Instruction: Building on Student Diversity 3

**Human Growth and Development** – 3 credits (required)  

- EDUC 509 Psychological Foundations in Education 3

**Special Education** – 3 credits (required)  

- EDUC 564 Education of the Exceptional Student 3

**Professional Educational Requirements**

**Curriculum and Methods of Teaching**

- **Methods and Materials** Subject Area Courses  
  - (One of the following)  
    - EDUC 444C Methods and Materials in Teaching Mathematics 2  
    - and EDUC 442C Methods and Materials in Teaching Social Studies 2  
    - and EDUC 443C Methods and Materials in Teaching Science 2

- **Literacy** – 9 credits (required)  
  - EDUC 440C Methods and Materials in Teaching Language Arts 3  
  - EDUC 573 Early Literacy Instruction 3  
  - and EDUC 574 Developmental Reading in the Elementary School 3

- **Technology in Education** – 2 credits (required)  
  - EDUC 592 Technology Literacy for Educators 2  
  - or EDUC 594 New Technologies for Learning 2

- **Field Experience/Student Teaching** – 6 credits plus Student Teaching  
  - EDUC 450 Field Experience 6  
  - or EDUC 515M Internship 3  
  - and EDUC 516M Internship 3  
  - and EDUC 346M Directed/Supervised Student Teaching 6

**Additional Program Requirements**

**Statutory Requirements** – 1 credit (required)
EDUC 511 Statutory Requirements in Education 1
Additional Coursework Required if Noted
EDUC 515M Internship 3

ELECTIVES IN MATHEMATICS:
EDMM 600B Analyses for Teachers (Cross list - Math 407) 3
EDMM 600B Advanced Numerical Analysis (Cross list - Math 14) 3
EDMM 600B Mathematical Modeling: Iterative Functions and Fractals (Cross list - Math 480) 3

ELECTIVES IN LITERACY AND ENGLISH LANGUAGE LEARNING:
EDUC 536M Adolescent Literature–Middle Level 3
EDUC 570 Instruction for the English Language Learner 3
Other Electives 1-6

FINAL DEGREE REQUIREMENT
(Choose one of the following:)
EXAMINATIONS (required for certification)
PRAXIS II
EDUC 566 Contemporary Educational Problems II 3
or EDUC 595 Thesis Research 3

Total Number of Credits
MS Ed. Total Minimum: 33 credits (not including 6 credits of student teaching)

OTHER REQUIREMENTS FOR STATE OF CONNECTICUT CERTIFICATION
SURVEY COURSE OF UNITED STATES HISTORY – 3 credits (required)
Additional Coursework for Certification or Endorsement (required if noted)
PRAXIS I (or waiver) and PRAXIS II Examinations (required for certification)

Secondary Academic Subjects Certification Track Program

Planned Program of Study

PRE-PROFESSIONAL REQUIREMENTS

FOUNDATION OF EDUCATION – 3 credits (required)
EDUC 502 Philosophical Foundations of Modern Education 3
or EDUC 503 Differentiated Instruction: Building on Student Diversity 3

HUMAN GROWTH AND DEVELOPMENT – 3 credits (required)
EDUC 509 Psychological Foundations in Education 3

SPECIAL EDUCATION – 3 credits (required)
EDUC 564 Education of the Exceptional Student 3

PROFESSIONAL EDUCATIONAL REQUIREMENTS

CURRICULUM AND METHODS OF TEACHING
Methods and Materials–Secondary Level – 3 credits (required)
(Students must take the Methods and Materials course specific to the certification area).
EDUC 440J Methods and Materials in Teaching Language Arts 3
or EDUC 441J Methods and Materials in Teaching Mathematics 3
or EDUC 442J Methods and Materials in Teaching Social Studies 3
or EDUC 443J Methods and Materials in Teaching Science 3

CONTENT LITERACY & LITERATURE – 3 credits (required)
EDUC 575J Reading and Writing in the Content Areas 3
(Secondary English Education Program Students) – 3 credits (required)
Educ 536J Adolescent Literature 3

TECHNOLOGY IN EDUCATION – 2 credits (required)
EDUC 592 Technology Literacy for Educators 2
or EDUC 594 New Technologies for Learning 2

STATUTORY REQUIREMENTS – 1 credit (required)
EDUC 511 Statutory Requirements in Education 1

FIELD EXPERIENCE/STUDENT TEACHING – 6 credits plus Student Teaching
EDUC 450 Field Experience 6
or EDUC 515J Internship 3
and EDUC 516J Internship 3
EDUC 392 Directed/Supervised Student Teaching 6

ADDITIONAL PROGRAM REQUIREMENTS

Additional Coursework Required if Noted
EDUC 500 Research and Report Writing 3
EDUC 570 Instruction for the English Language Learner 1
HIST 300 U.S. History for Teachers 3

FINAL DEGREE REQUIREMENT

EXAMINATIONS (required for certification)
PRAXIS II
EDUC 566 Contemporary Educational Problems II 3
or EDUC 595 Thesis Research 3

Total Number of Credits
MS Ed. Total Minimum: 33 credits (not including 6 credits of student teaching)

OTHER REQUIREMENTS FOR STATE OF CONNECTICUT CERTIFICATION

Specific Subject Area Requirements for Secondary Certification

Each student must have the appropriate undergraduate coursework for the certification area. Students are advised to check with their academic advisor for all undergraduate and graduate certification requirements.

BIOLoGY, CHEMISTRY, EARTH SCIENCE, GENERAL SCIENCE, OR PHYSICS

Chair: Nelson Ngoh
Email: ngoh@bridgeport.edu

REQUIREMENTS
Undergraduate major in certification area or 30 credits plus nine credits in related subject(s) in certification area
EDUC 443J Methods/Materials, Teaching Science 3
Students need to complete all requirements on their Planned Programs of Study and pass all performance assessments.
ENGLISH

Chair: Patricia Mulcahy-Ernt
Email: mulcahyp@bridgeport.edu

Requirements

English major or 30 credits plus nine credits in related subject(s)

EDUC 440J Methods/Materials, Teaching Language Arts 3
EDUC 536J Adolescent Literature 3
EDMM 600L Teaching Writing in Classrooms 1

Students need to complete all requirements on their Planned Programs of Study and pass all performance assessments.

MATHEMATICS

Chair: Allen P. Cook
Email: acook@bridgeport.edu

Requirements

Mathematics major or 30 credits plus nine credits in related subject(s)

EDUC 441J Methods/Materials, Teaching Mathematics 3

Students need to complete all requirements on their Planned Programs of Study and pass all performance assessments.

HISTORY AND SOCIAL STUDIES

Requirements

History major plus 18 credits in other social sciences; or major in Anthropology, Sociology, Political Science, Geography, Economics, plus 18 credits in history

EDUC 442J Methods/Materials, Teaching Social Studies 3

Students need to complete all requirements on their Planned Programs of Study and pass all performance assessments.

Music Education, K-12, Certification Track

Chair: Jeffrey Johnson
Email: jjohnson@bridgeport.edu

Planned Program of Study

Foundations of Education Requirements

Foundations of Education – 3 credits (required)

EDUC 502 Philosophical Foundations of Modern Education 3
or EDUC 503 Differentiated Instruction: Building on Student Diversity 3

Human Growth and Development – 3 credits (required)

EDUC 509 Psychological Foundations in Education 3
or EDUC 560M Human Growth and Development* 3

*These course requirements may be met by taking an appropriate undergraduate course with a grade of at least a “B,” taken within the past five years.

Special Education – 3 credits (required)

EDUC 564 Education of the Exceptional Student 3

Professional Education Requirements

Curriculum and Methods of Teaching

Methods and Materials – 6 credits (required)

MSED 343 Music in Elementary Schools 3
MSED 380 Music in Secondary Schools 3

Content Literacy – 3 credits (required)

EDUC 575M Reading and Writing in the Content Areas 3

Technology in Education – 2 credits (required)

or EDUC 594 New Technologies for Learning 2

Field Experience/Student Teaching – 6 credits plus Student Teaching

EDUC 450 Field Experience 6
or EDUC 515M Internship 3
and EDUC 516M Internship 3
and MSED 390 Directed/Supervised Student Teaching, Music 6

Additional Program Requirements

Statutory Requirements – 1 credit (required)

EDUC 511 Statutory Requirements 1

Additional coursework (required if noted)

EDUC 500 Research and Report Writing 3
EDUC 570 Instruction for the English Language Learner 3
Other Electives 1-9

Final Degree Requirement

Examinations (required for certification)

Praxis II
EDUC 566 Contemporary Educational Problems II 3
EDUC 595 Thesis Research 3

Total Number of Credits

MS Ed: Total Minimum: 33 credits
(not including 6 credits of student teaching)

Other Requirements for State of Connecticut Certification

Survey Course of United States History – 3 credits (required)

Certificate Track Program in Remedial Reading and Remedial Language Arts

Chair: Patricia Mulcahy-Ernt
Email: mulcahyp@bridgeport.edu

This 33 credit graduate course of study provides extensive course work and experiences in working with students in the field of literacy and language arts, leading to the initial educator certification in Remedial Reading and Remedial Language Arts for grades 1-12. This concentration focuses on working with students in a variety of instructional settings for the purpose of teaching literacy processes, for evaluating students in reading and language arts, and for developing and evaluating literacy programs. Students learn to create appropriate literacy instruction for learners experiencing difficulty in reading and language arts. Upon completion of the coursework, field experiences, and appropriate performance assessments, students may apply for the Connecticut initial educator certificate in Remedial Reading/Remedial Language Arts, 1-12.

Admissions Criteria

1. A valid Connecticut teaching certificate (or proof of eligibility);
2. At least two letters of recommendation from persons able to testify to your suitability as a prospective teacher and your potential for graduate-level work;
3. An essay demonstrating a command of the
Education Master of Science Degree

English language and setting out the reasons for wanting to enroll in the program and emphasizing experience relevant to teaching;

4. A successful team interview with faculty;

5. Completion of at least 30 school months of successful classroom teaching experience.

6. Connecticut’s essential skills testing requirements: passing scores in the PRAXIS I exams in Reading, Writing, and Mathematics or an official essential skills test waiver currently meeting this requirement.

Planned Program of Study

**PREREQUISITE REQUIREMENTS**

- Foundations of Education 3
- Educational Psychology 3
- Children’s or Adolescent Literature 3
- Special Education 3

**PROFESSIONAL EDUCATION REQUIREMENTS**

**READING AND LANGUAGE ARTS – 8 credits (required)**

EDUC 440C Methods and Materials in Teaching Language Arts 3

or EDUC 440M/J Methods and Materials in Teaching Language Arts 3

and EDUC 574 Developmental Reading in the Elementary School 3

and EDUC 575 Reading and Writing in the Content Area 3

**DIAGNOSIS AND REMEDIATION OF READING AND LANGUAGE ARTS DIFFICULTIES – 3 credits (required)**

EDUC 571 Diagnosis and Intervention of Reading and Language Arts Difficulties 3

**TESTS AND MEASUREMENTS – 3 credits (required)**

EDUC 558 Evaluation of Instructional Outcomes 3

**CLINICAL PRACTICES IN READING AND LANGUAGE ARTS – 7 credits (required)**

EDUC 596 Field Experience in Reading and Language Arts 1

EDUC 597 Practicum in Reading and Language Arts 6

**TECHNOLOGY IN EDUCATION – 2 credits (required)**

EDUC 592 Technology Literacy for Educators 2

or EDUC 594 New Technologies for Learning 2

**SECOND LANGUAGE LEARNING AND ACQUISITION – 1 credits (required)**

EDUC 570 Instruction for the English Language Learner 1

**ADDITIONAL GRADUATE COURSEWORK (required if noted)**

EDUC 500 Research and Report Writing 3

EDUC 515 Internship 3

EDUC 516 Internship 3

EDUC 570 Instruction for the English Language Learner 3

EDUC 573 Early Literacy Instruction 1

**FINAL DEGREE REQUIREMENT**

(Choose one of the following):

EDUC 566 Contemporary Educational Problems II 3

EDUC 568 Studies in Literacy Research 1

or EDUC 595 Thesis Research 2-6

**ADDITIONAL COURSEWORK FOR CERTIFICATION (required if Noted)**

Total Number of Credits

M.S. Total Minimum: 33 credits

Students need to complete all requirements on their Planned Programs of Study and pass all performance assessments.
Education  Master of Science Degree

Chair: Norma Atkinson  
Carlson Hall, Room 108 
Telephone: (203) 576-4028 
Fax: (203-576-4200 
Email: natkinso@bridgeport.edu

This degree program provides advanced study for certified teachers and for persons interested in careers related to school-age students.

Teacher Leadership  
(33 SEMESTER HOURS)

This program is designed for students who are certified teachers or who wish to pursue a Master's degree or 6th year Certificate of Advanced Studies in education with greater flexibility than a program leading to certification.

Teacher Leadership is an alternative approach to graduate study which combines a basic core with selected courses. In the needs analysis and assessment core, students analyze their own school experiences and determine competencies they wish to achieve. In the final core requirement students demonstrate those competencies in a clinical and a research setting.

The wide variety of learning topics provides flexibility through which students may gain competencies.

Summary of Requirements

PROGRAM REQUIREMENTS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDMM 500</td>
<td>Analysis, Assessment &amp; Planning Core</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 566</td>
<td>Contemporary Educational Problems II</td>
<td>3</td>
</tr>
</tbody>
</table>

COURSE TOPICS

Courses are offered in the following topics, with several courses available under each topic. For courses offered each semester, consult the course schedule.

(Choose among the following)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDMM 600A</td>
<td>Reading</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600B</td>
<td>Mathematics</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600C</td>
<td>Social Studies</td>
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<tr>
<td>EDMM 600D</td>
<td>Science</td>
<td>1</td>
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<tr>
<td>EDMM 600E</td>
<td>Exceptional Children, Gifted Students</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600F</td>
<td>Art 1-3 SDS 599G, Foreign Languages</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600H</td>
<td>Home Economics</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600J</td>
<td>Industrial Arts, Vocational Education</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600K</td>
<td>Curriculum Studies</td>
<td>3</td>
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<tr>
<td>EDMM 600L</td>
<td>Language Arts</td>
<td>1</td>
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<tr>
<td>EDMM 600M</td>
<td>Music</td>
<td>1</td>
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<tr>
<td>EDMM 600N</td>
<td>Physical Education</td>
<td>1</td>
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<tr>
<td>EDMM 600P</td>
<td>Drama</td>
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<tr>
<td>EDMM 600Q</td>
<td>Early Childhood Education</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600R</td>
<td>Guidance and Human Development</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600S</td>
<td>Technology Literacy for Educators</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600T</td>
<td>Adult Educ. and Parent Educ.</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600U</td>
<td>Leadership, Admin., and Supervision</td>
<td>3</td>
</tr>
<tr>
<td>EDMM 600V</td>
<td>Classroom Mngm and Teaching Skills</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600W</td>
<td>Educational Law and Legal Issues</td>
<td>3</td>
</tr>
<tr>
<td>EDMM 600X</td>
<td>Testing and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>EDMM 600Z</td>
<td>Foundations of Education</td>
<td>1</td>
</tr>
</tbody>
</table>

Several programmatic arrangements are available through Teacher Leadership from the School of Education office.

TOTAL: 33
Education Master of Science Degree (Instructional Technology)

Chair: Jerald D. Cole  
Carlson Hall, Room 224  
Telephone: (203) 576-4217  
Fax: (203) 576-4200  
Email: jcole@bridgeport.edu

The Master of Science Program in Instructional Technology (36 credits/12 courses) prepares students for careers related to the discipline of Instructional Technology, with programmatic focus in three tracks:

1. Teaching K-12 with cross-endorsement options, and technology management in higher education. This track is NETS standards aligned.

2. Training in business or industrial settings. Covers ASTD frameworks and ISPI endorsed content.

3. Development of educational software applications. Run in conjunction with the Department of Computer Science and Engineering.

Hallmarks of the program are a focus on social constructionist pedagogy, use of the learning objects model and SCORM in instructional design, use of open source software and open source curricula, cross-platform accessibility, emphasis on distributed learning frameworks, and modeling uses of mobile tablet applications in learning.

Unique to the program are instruction via blended delivery and its cohort-basis, whereby students are selectively admitted as a group to complete core curriculum requirements. The cohort approach offers participants the benefits of shared experiences and peer support in learning.

The core curriculum consists of 6 required courses. The remaining 6 courses consist of electives in the trainer and developer tracks, and 4 electives plus research methods and practicum in the teacher track.

The program may be pursued at three paces: Regular, Part-time, or Accelerated.

Regular students complete degree requirements over two academic years (4 semesters). They take three courses per term as a cohort the first academic year and three electives per term the second academic year. Three courses per semester is considered a full-time load.

Part-time students pursue the degree at 1 or 2 courses per semester. A concerted effort is made to align their program of study with that of allied cohorts in subsequent years.

Accelerated students complete degree requirements in three semesters and a summer. Their load consists of 4 courses in each of the first two semesters, two in the summer, and depending on their track, two electives or the research course and practicum the following fall semester.

Blended Instruction

The curriculum is presented via blended instructional delivery; a combination of live instruction (one-weekend-a-month) and online interaction via text/audio/video conferencing. The requirement of a standard issue tablet computer with wireless networking capability and standardized software bundle is another hallmark of the program.

We are moving to new delivery model using synchronous and asynchronous conferencing technologies in 2008-2009. Courses delivered in this mode will be entirely online.

Courses in the teacher cross endorsement track may be augmented with electives for a Professional Diploma (6th Year) or 30-Plus program of study. Graduates of the Master of Science teacher track will be qualified to pursue Professional Diplomas with further specializations, or Doctoral studies in instructional technology and/or human performance improvement.

It is not uncommon for teachers and trainers to require industrial certifications in conjunction with academic training. School computer laboratory coordinators, for example, typically need certification in networking (MCSE) and/or computer repair (A+) in order to fulfill their job responsibilities. Technical trainers also require these certifications and expertise in information technologies.

Learning Outcomes

The M.S. in Instructional Technology student will have the following learning outcomes:

1. Demonstrated competency in constructivist pedagogy and using these principles to develop media for instruction, tutoring, and school management systems.

2. Developed the skills in instructional systems design and distributed learning systems.

3. Developed and use new media in instruction, intelligent tutoring systems and administration of learning management systems.

4. Developed the skills to utilize social constructionist pedagogy utilizing the learning objects model.

5. Developed the understanding of instructional systems design and distributed learning systems.

Admission Requirements

Matriculation in all three tracks requires:

1. Bachelors degree from an accredited institution.

2. Transcripts from all institutions attended.

3. Two letters of recommendation.

4. Essay indicating intentions for pursuing the degree and career objectives.

5. Demonstrated proficiencies in the use of computers.*

6. International students must present an official TOEFL report with a score of at least 550.

7. Wireless tablet computer ownership prior to initiating coursework.

Teacher Track

The teacher cross endorsement track serves those already certified in primary, secondary, and higher education. This track emphasizes:

1. Utilization of technology in classroom settings as an adjunct to traditional pedagogical methods.

2. Standards-based assessment and tracking via technology (NETS aligned).

3. Synchronous/asynchronous instructional delivery outside of the traditional classroom.
Point 3, above, addresses the needs of educators involved in the implementation of online and televised distance learning programs. Graduates will be qualified to become school or district-level technology directors.

Accelerated Teacher Track (Example Program of Study)

**FALL SEMESTER (1)**
- EDIT 600 Cognitive Foundations of Education 3
- EDIT 606 Technology, Methods and Materials 3
- EDIT 610 New Technologies for Learning 1 3
- EDIT 640 Graphical User-Interface Design 3

**SPRING SEMESTER (2)**
- EDIT 606 New Technologies for Learning 2 3
- EDIT 630 Networks & Distributed Learning Systems 3
- EDIT 680 Adaptive Technologies 3
- EDIT 633 Administrative Computing Applications 3

**SUMMER TERM (3)**
- EDIT 620 Multimedia Curriculum Development 3
- EDIT 631 Cyber Ethics and School Law 3

**FALL SEMESTER (4)**
- EDIT 685 Research Methods & Thesis 3
- EDIT 690 Practicum 3

**Total Credits** 36

Consult the State Department of Education website (http://www.state.ct.us/sde) for cross endorsement requirements. See http://cnets.iste.org/ncate for an overview of the NETS standards and ISTE/NCATE endorsement frameworks.

**Trainer Track**

The trainer track focuses on instructional delivery in corporate and industrial settings. This cohort pursues courses in instructional systems design, computer-based training and assessment using high-level authoring tools. The scope of applications studied emphasizes the acquisition of business presentation skills using desktop publishing, Web-based delivery, multimedia, video for instructor-led training and computer help desk support.

**Accelerated Trainer Track**

*(Example Program of Study)*

**FALL SEMESTER (1)**
- EDIT 600 Cognitive Foundations of Education 3
- EDIT 605 Instructional Systems Design 3
- EDIT 610 New Technologies for Learning 1 3
- EDIT 640 Graphical User-Interface Design 3

**SPRING SEMESTER (2)**
- EDIT 606 New Technologies for Learning 2 3
- EDIT 630 Networks & Distributed Learning Systems 3
- Computer Science/Management/HR Elective 3
- Computer Science/Management/HR Elective 3

**SUMMER TERM (3)**
- EDIT 620 Multimedia Curriculum Development 3
- EDIT 635 Computer-Based Training and Assessment 3

**FALL SEMESTER (4)**
- EDIT 665 Distance Learning 3
- Computer Science/Management/HR Elective 3

**Total Credits** 36

**Developer Track**

The developer track prepares students interested in the creation of educational software. This includes the growing number of professionals involved in the production of computer-disseminated content for publishers, and in-house development of training modules using high and low-level development tools for corporations.

The developer track covers both multimedia and Internet programming in the creation of learning objects (packaged components that teachers and trainers can integrate into their presentations without knowledge of programming). This option offers a challenging alternative for computer science and management information systems majors who wish to apply their programming skills to the creation of instructional applications. The program is run in collaboration with the Department of Computer Science and Engineering.

**Accelerated Developer Track**

*(Example Program of Study)*

**FALL SEMESTER (1)**
- EDIT 600 Cognitive Foundations of Education 3
- EDIT 605 Instructional Systems Design 3
- EDIT 610 New Technologies for Learning 1 3
- EDIT 640 Graphical User-Interface Design 3

**SPRING SEMESTER (2)**
- EDIT 606 New Technologies for Learning 2 3
- EDIT 630 Networks & Distributed Learning Systems 3
- EDIT 620 Multimedia Curriculum Development 3
- Computer Science and Engineering Elective 3
- Computer Science and Engineering Elective 3

**SUMMER TERM (3)**
- EDIT 645 Intelligent Tutoring Systems 3
- EDIT 650 Internet Programming 3
  *or* Computer Science and Engineering Elective 3

**FALL SEMESTER (4)**
- EDIT 655 Animation and Simulation for Instruction 3
- Computer Science and Engineering Elective 3

**Total Credits** 36
Program Goals

The program goals in literacy are adapted from the international Reading Association Standards for reading professionals revised 2010. The goals in Literacy for the Remedial Reading and Remedial Language Arts Program and for the Reading and Language Arts consultant Program are as follows:

- Reading professionals understand the theoretical and evidence-based foundations of reading and writing processes and instruction.
- Reading professionals use instructional approaches, materials, and an integrated, comprehensive, balanced curriculum to support learning in reading and writing.
- Reading professionals use a variety of assessment tools and practices to plan and evaluate effective reading and writing instruction.
- Reading professionals create and engage their students in literacy practices that develop awareness, understanding, respect, and a valuing of differences in our society.
- Reading professionals create a literate environment that fosters reading and writing by integrating foundational knowledge, instructional practices, approaches and methods, curriculum materials, and the appropriate use of assessments.
- Reading professionals recognize the importance of, demonstrate, and facilitate professional learning and leadership as a career-long effort and responsibility.

This program is designed for certified teachers who elect graduate-level preparation in reading and language arts. This program leads to an initial educator certificate in Remedial Reading and Remedial Language Arts, grades 1-12. Applicants must have completed a Master’s degree, must have a valid teaching certificate (or be eligible for certification) in elementary, middle, or secondary education, must show that they have passed the Connecticut essential skills testing requirement, and must have completed at least three years of classroom teaching experience. Upon completion of the Planned Program with appropriate coursework, field experiences, and performance assessments, a student may apply for the Connecticut initial Educator Certificate in Remedial Reading and Remedial Language Arts.

In this program students gain extensive preparation in learning to teach students in reading and language arts; to work with learners experiencing difficulty in reading, writing, and literacy-related processes; to assess literacy development; and to develop and evaluate programs that improve literacy processes.

An individual with a pre-existing regionally accredited Master’s degree may use the 6th Year CAS degree program to achieve teacher certification. Please see the description of the Master’s Teacher Preparation program on p. 183.

**PREREQUISITE REQUIREMENTS**

(9 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 509 Psychological Foundations in Education</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 536C Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>or EDUC 536J Adolescent Literature</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 564 Education of the Exceptional Student</td>
<td>3</td>
</tr>
</tbody>
</table>

**PROFESSIONAL EDUCATION REQUIREMENTS**

(9 credits)

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>EDUC 440C Methods and Materials in Teaching Language Arts</td>
<td>3</td>
</tr>
<tr>
<td>or EDUC 440M/Js Methods and Materials in Teaching Language Arts</td>
<td>3</td>
</tr>
<tr>
<td>and EDUC 574 Developmental Reading in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>and EDUC 575M/Js Reading and Writing in the Content Areas</td>
<td>3</td>
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</table>

**ADDITIONAL PROGRAM REQUIREMENTS**

(4-12 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>EDUC 668 Literacy Research Project</td>
<td>1</td>
</tr>
<tr>
<td>EDUC 669 Sixth Year Project</td>
<td>1-3</td>
</tr>
<tr>
<td>EDUC 695 Advanced Thesis Research — Sixth Year</td>
<td>2-6</td>
</tr>
<tr>
<td>EDUC 573 Early Literacy</td>
<td>3</td>
</tr>
</tbody>
</table>

**FINAL DEGREE REQUIREMENT**

(Choose one of the following:)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 668 Literacy Research Project</td>
<td>1</td>
</tr>
<tr>
<td>EDUC 669 Sixth Year Project</td>
<td>1-3</td>
</tr>
<tr>
<td>EDUC 695 Advanced Thesis Research — Sixth Year</td>
<td>2-6</td>
</tr>
<tr>
<td>EDUC 573 Early Literacy</td>
<td>3</td>
</tr>
</tbody>
</table>

Credits for Certification

Students need to complete all requirements on their Planned Programs of study. Students seeking to complete the Sixth Year Degree must complete an additional 9 credits, inclusive of the Final Degree Requirement.

Total Number of Credits:

Sixth Year degree Total Minimum: 30 Credits

*With prior written adviser approval these courses may be met by taking undergraduate courses with a grade of a “B” or higher.

**These courses are required for the Sixth Year Certificate Program in Remedial Reading and Remedial Language Arts.
Education  
Sixth Year Certificate of Advanced Study (CAS)  
Reading and Language Arts Consultant Certification Program

Chair: Patricia Mulcahy-Ernt  
Carlson Hall, Room 118  
Telephone: (203) 576-4201  
Fax: (203) 576-4200  
Email: mulcahyp@bridgeport.edu

The Reading and Language Arts Consultant Certification Program is a Sixth Year degree program designed to prepare educators for leadership positions in elementary, middle, and secondary schools. The program prepares the student for the roles of a curriculum and instructional leader, including the following: organizing, supervising, and enhancing literacy programs; coordinating the instruction and assessment of students in reading and language arts; guiding, improving, and enriching reading and language arts instruction in all content areas; and collaborating with teachers, administrators, parents, and other literacy leaders.

Applicants must have completed a Master’s degree, must have a valid teaching certificate (or be eligible for Connecticut certification) in elementary, middle, or secondary education; must have completed a minimum of thirty months of successful classroom teaching experience; and must have completed all state required tests including the Connecticut Foundations of Reading Test. Upon the completion of the Planned Program with appropriate coursework, field experiences, performance assessments, and the demonstration of required certification competencies, a student may apply for the Reading and Language Arts initial educator endorsement.

An individual with a pre-existing regionally accredited Master’s degree may use the 6th Year CAS degree program to achieve teacher certification. Please see the description of the Master’s Teacher Preparation program on p. 183).

PREREQUISITE REQUIREMENTS*  
*These requirements may be met by taking an undergraduate or graduate course with a grade of at least a “B.”

EDUCATIONAL PSYCHOLOGY – 3 credits (required)  
EDUC 509 Psychological Foundations in Education  

CHILDREN’S OR ADOLESCENT LITERATURE – 3 credits (required)  
EDUC 536C Children’s Literacy  
or EDUC 536J Adolescent Literacy  

SPECIAL EDUCATION – 3 credits (required)  
EDUC 564 Education of the Exceptional Student  

TESTS AND MEASUREMENTS – 3 credits (required)  
EDUC 558 Evaluation of Instructional Outcomes  

CURRICULUM: METHODS AND MATERIALS IN TEACHING LANGUAGE ARTS – 3 credits (required)  
EDUC 440C Methods and Materials in Teaching Language Arts  
or EDUC 440M/J Methods and Materials in Teaching Language Arts  

TECHNOLOGY IN EDUCATION – 2 credits (required)  
EDUC 592 Technology Literacy for Educators  
or EDUC 594 New Technologies for Learning  

SECOND LANGUAGE LEARNING AND ACQUISITION – 1 credit (required)  
EDUC 570 Instruction for the English Language Learner  

Total Credits 16

INITIAL PROGRAM REQUIREMENTS  
(Required courses that may be completed prior to the planned program.)

DEVELOPMENTAL READING – 6 credits (required)  
EDUC 574 Developmental Reading in the Elementary School  
and EDUC 575M/J Reading and Writing in the Content Areas  

DIAGNOSIS AND REMEDIATION OF READING AND LANGUAGE ARTS DIFFICULTIES – 3 credits (required)  
EDUC 571 Diagnosis and Intervention of Reading and Language Arts Difficulties  

CLINICAL FIELD EXPERIENCE – 7 credits (required)  
EDUC 596 Field Experience in Reading and Language Arts  
EDUC 597 Practicum in Reading and Language Arts  

Total Credits 16

ADVANCED PROGRAM REQUIREMENTS

ADVANCED READING AND LANGUAGE ARTS DIAGNOSIS – 2 credits (required)  
EDUC 572 Advanced Diagnosis of Reading and Language Arts Difficulties  

ORGANIZATION, ADMINISTRATION, AND SUPERVISION OF READING – 4 credits (required)  
EDLD 611 Administration: Organizing and Staffing Educational Institutions  
or EDLD 613 Leadership  
EDLD 611A Organization, Administration, and Supervision of Reading and Language Arts Programs  

READING AND LANGUAGE ARTS CONSULTANT PRACTICUM AND APPLIED RESEARCH – 6 credits (required)  
EDLD 683 Internship for the Reading & Language Arts Consultant  

Total Credits __________________________ 12

ADDITIONAL PROGRAM REQUIREMENTS

FINAL DEGREE REQUIREMENT  
(Choose one of the following):

EDUC 668 Literacy Research Project 1  
EDUC 669 Sixth Year Project 3  
or  
EDUC 695 Advanced Thesis Research – Sixth Year 3

ADDITIONAL COURSEWORK FOR CERTIFICATION  
(required if noted)

Total Number of Credits  
Sixth Year Total Minimum: 30 credits
**Education**  *Sixth Year Certificate of Advanced Study (CAS)*

*Chair:* Norma Atkinson  
Carlson Hall, Room 108  
Telephone: (203) 576-4028  
Fax: (203) 576-4200  
Email: natkinso@bridgeport.edu

This program is for teachers who wish to obtain an additional graduate degree beyond the Master’s degree. The format of the program facilitates an innovative and flexible approach which can respond to the most current trends in education and will further the skills and competence of the student.

The student may concentrate in either elementary, middle, or secondary education.

An individual with a pre-existing regionally accredited Master’s degree may use the 6th Year CAS degree program to achieve teacher certification. Please see the description of the Master’s Teacher Preparation program on p. 183).

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**Summary of Requirements**

**PROGRAM REQUIREMENTS**

<table>
<thead>
<tr>
<th>Course Code</th>
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<td>EDMM 500</td>
<td>Analysis, Assessment and Planning Core</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 669</td>
<td>Sixth Year Project</td>
<td>3</td>
</tr>
<tr>
<td>or EDM 695</td>
<td>Advanced Thesis Research</td>
<td>3</td>
</tr>
</tbody>
</table>

**COURSES**

**ELEMENTARY EDUCATION**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educ 598</td>
<td>Clinical Assessment</td>
<td>2</td>
</tr>
<tr>
<td>Choose Elementary Courses</td>
<td></td>
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</tr>
</tbody>
</table>

**Secondary Education**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDMM 600A</td>
<td>Reading</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600B</td>
<td>Mathematics</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600C</td>
<td>Social Studies</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600D</td>
<td>Science</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600E</td>
<td>Exceptional Children, Gifted Students</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600F</td>
<td>Art 1-3, SDS 599G, Foreign Languages</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600H</td>
<td>Home Economics</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600J</td>
<td>Industrial Arts, Vocational Education</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600K</td>
<td>Curriculum Studies</td>
<td>3</td>
</tr>
<tr>
<td>EDM 600L</td>
<td>Language Arts</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600M</td>
<td>Music</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600N</td>
<td>Physical Education</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600Q</td>
<td>Early Childhood Education</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600R</td>
<td>Guidance and Human Development</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600S</td>
<td>Technology Literacy for Educators</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600T</td>
<td>Adult Education and Parent Education</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600U</td>
<td>Leadership, Administration, and Super.</td>
<td>3</td>
</tr>
<tr>
<td>EDMM 600V</td>
<td>Classroom Management &amp; Teaching Skills</td>
<td>1</td>
</tr>
<tr>
<td>EDMM 600W</td>
<td>Educational Law and Legal Issues</td>
<td>3</td>
</tr>
<tr>
<td>EDMM 600X</td>
<td>Testing and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>EDMM 600Z</td>
<td>Foundations of Education</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTAL SEMESTER HOURS** 30

Several programmatic arrangements are available through ModMAP from the School of Education and Human Resources Office.
Educational Leadership Sixth Year Professional Diploma

Chair and Director: Ethan Margolis
Carlson Hall
Telephone: (203) 576-4218
Fax: (203) 576-4200

Program Goals
The Educational Leadership Program Goals are adapted from Connecticut State Department of Education’s common Core of Leading (2010). The Educational Leadership program at the University of Bridgeport seeks to develop leaders who can accomplish all of the following:

- Develop a shared vision for student learning that creates meaning for the people in the organization and infuses purpose into the strategies and standards for actions linked to that vision.
- Promote an instructional program, built on high expectations for all learners and conducive to student learning and professional growth, thereby developing a school culture of success for all learners.
- Establish positive learning environments by developing trust and credibility through meaningful relationships.
- Establish a culture that is open and inclusive, through modeling and expecting ethical and moral behaviors from all.

A student who holds a Master’s degree from an accredited college or university may apply to in the Sixth Year program. The Professional Diploma program consists of thirty semester hours.

The Sixth Year Program, leading to the professional Diploma in Educational Leadership, is designed to meet requirements leading to administrator and supervisor certification (092). This Connecticut State Certification enables a candidate to apply for the following positions: Principal, Assistant Principal, Director of Instruction, Assistant Superintendent, and Deputy Superintendent. With the exception of Reading and Language arts, this certification would also include subject area consultant and curriculum coordinator.

An individual with a pre-existing regionally accredited Master’s degree may use the 6th Year CAS degree program to achieve teacher certification. Please see the description of the Master’s Teacher Preparation program on p. 183).

Intermediate Administrator (092 Certification)
Certification Track
Summary of Requirements
(30 SEMESTER HOURS)

**CERTIFICATION REQUIRES COURSES IN EACH OF THE FIVE AREAS, AND A TOTAL OF 24 CREDITS BEYOND THE MASTER’S**

**REQUIRED CORE**
I. PSYCHOLOGICAL/PEDA GOGICAL
*EDLD 621 Evaluation of School Effectiveness
II. CURRICULUM/PROGRAM MONITORING
*EDLD 551 Curriculum Development
III. SCHOOL ADMINISTRATION
EDLD 613 Leadership
EDLD 618 School Finance (required)
EDLD 619 School Law (required)
IV. PERSONNEL EVALUATION/SUPERVISION
EDLD 652 Supervision: Evaluation/Development
V. CONTEMPORARY EDUCATIONAL PROBLEMS/POLICY MAKING
EDLD 601 Contemporary Problems in Education

Notes:
- Administrative Internship ED. 681A (3 credits) required
- CAT Examination – required for 092 certification
- EDUC 564 Education of the Exceptional Student (This requirement will be waived if the candidate holds special education certification).
- Must be completed for certification.
- Certification (092) = 24 credits
- 6th Year professional Diploma = 30 credits

SUGGESTED ELECTIVES
EDLD 682A Special Topics in the Management of Educational Institutions 3
EDLD 603 Computer Uses in Educational Management 3
EDLD 680A Topics in Educational Leadership 3
EDLD 682 Special Topics in Educ. Mgmt. 3

Electives offered by other topics or colleges, and related to the field of Educational Management, may be selected under advisement.

Total Semester Hours 30
**Educational Leadership Doctor of Education Degree**

**Dean:** Allen P. Cook
Carlson Hall, Room 109
Telephone: (203) 576-4192
Fax: (203) 576-4200
Email: acook@bridgeport.edu

The Doctoral Program in Educational Leadership, offered by the University of Bridgeport, is the first of its kind in Connecticut (1980). It is designed to improve the effectiveness of experienced administrators by integrating the study and practice of sound educational and management principles. Successful completion of the program leads to the Doctor of Education degree (Ed.D.)

As an advanced degree program focusing on the renewal of practicing administrators, the Doctoral Program addresses the needs of such personnel in terms of both the content of the curriculum and program organization. It is offered on a part-time basis at the University of Bridgeport campus. Courses and seminars are scheduled around the job demands of the working professional.

**Summary of Requirements**

*(62 SEMESTER HOURS)*

1. **Three years formal study**

**YEAR ONE AND YEAR TWO**
- FALL - 8 semester hours
- SPRING - 8 semester hours
- SUMMER - 6 semester hours

**YEAR THREE**
- FALL - 6 semester hours
- SPRING - 6 semester hours
- SUMMER - 6 semester hours

The following courses are offered on a rotating basis. Each course carries six semester hours.

- **EDLD 803** Higher Education Administration (K-12)
- **EDLD 804** Constitutional Legal and Political Issues Confronting Educational Leaders
- **EDLD 806** *Quantitative Analysis & Evaluation Strategies*
- **EDLD 807** Management of Educational Institutions
- **EDLD 808** Human Relations, Communication and Decisionmaking
- **EDLD 810** Computer Application in Educational Leadership

*Quantitative Analysis and Evaluation Strategies is required

2. **Residency**

*Twenty-five days for each of first three years*

- **EDLD 800D** Interdisciplinary Continuing Doctoral Seminars

During the first three years of the program, seminars meet on four Saturdays during the academic year and for two full weeks each summer. These seminars provide opportunities for students to work with scholars and leaders from a variety of disciplines to broaden perspectives on educational leadership and to develop an intellectual style for dealing with educational problems. The seminars are planned with student input.

3. **EDLD 845**

*Dissertation Preparation Seminars*

During the third year of the program, students participate in seminars during the fall, spring and summer sessions which focus on the selection and development of a dissertation proposal. Students are ordinarily expected to complete the major portion of their work on the dissertation proposal prior to the conclusion of the formal part of the program.

4. **Comprehensive Examination**

The major thrust of the comprehensive examination is to test the student's ability to utilize knowledge and skills gained through formal instructional activities in addressing the solution of educational problems. The examination is based upon the student's program of study. It is scheduled following completion of all course and seminar work, and prior to submission of the formal dissertation proposal.

5. **Dissertation**

*(MINIMUM - ONE YEAR)*

The individual dissertation represents the student's major effort during the program. It will focus on a significant problem in Educational Leadership which addresses a local, regional or national need, and relates to the personal needs and interests of the student. Ideas for dissertations will ordinarily emerge from the courses, the continuing seminars, personal contact with the faculty, on-the-job experience or requests for assistance from schools, school systems, or professional organizations. The student is expected to take at least one calendar year to complete the dissertation. During this year, the student is considered as having a half-time course load.

Each student has a three-member dissertation committee.

**Note: Completion of Doctoral Degree**

The degree must be completed within seven years of the date from which the student started coursework in the doctoral program. In exceptional cases, the department may recommend that the Dean grant an extension of this limit.
Electrical Engineering Master of Science Degree

Chair: Lawrence Hmurcik
Engineering Technology Building
Telephone: (203) 576-4678
Fax: (203) 576-4105
Email: hmurcik@bridgeport.edu

This Program is designed to increase the student’s knowledge and competence in basic areas necessary for Modern Electrical Engineering, while affording sufficient freedom to allow an in-depth study of such areas as Communications, Control Systems, Electronics and Digital Processing.

The Department also offers, as an integral part of the Electrical Engineering Masters Degree, the opportunity to specialize in several Concentration Areas.

Electrical Engineering Concentration Areas:
1. Bio-Medical Engineering
2. Computer Communications and Networking
3. Environmental and Energy Management
5. Robotics and Automation
6. Security (IT Security, Biometrics, etc.)
7. Signal and Image Processing
8. Very Large Scale Integration (VLSI)
9. Wireless and Mobile Communications

Please refer to the Graduate Studies Division Catalog pages for course details of the concentration areas.

In addition, the department also offers the opportunity to acquire dual graduate degrees along with the M.S. degree in Electrical Engineering. Candidates for these dual Masters degree programs are typically required to complete a total of 48 credit hours to satisfy the requirements of two Masters degrees. This implies 18 credit hours in addition to the 30 hours required for the M.S. degree in Electrical Engineering.

Please refer to the Graduate Studies Division catalogue pages for detailed information on Dual Graduate Degree programs.

Furthermore, customized study plans to allow receiving the Electrical Engineering M.S. degree while pursuing either the Ph.D. degree in Computer Science and Engineering or the Ed.D. degree in Education are available. Doctoral students in these two programs should consult their respective doctoral advisors to work on their individualized plans. Further details on the dual M.S. in Electrical Engineering degree programs are available in the catalog section on Graduate Studies Division.

Admission Requirements
Students must have a Bachelor of Science in Electrical Engineering or a related field. In both cases, the department may require make-up of background deficiencies.

COURSE REQUIREMENTS

A. A total of 30 semester hours is required in an approved program of study. Some students in this program enter with an undergraduate record lower than desired. These students are told in their admission letter that they must take 33 or 36 or 39 credits for their MS in E.E program.

B. The Master’s thesis is optional. If undertaken, it counts as 6 semester hours and must be conducted under the supervision of an EE Department faculty member. If the Master’s thesis is not taken, then EE-597 must be taken for 3 credits.

C. 400 or 500 level courses in Electrical Engineering, Computer Engineering and Computer Science are acceptable, with advisor approval, to count for the course requirements of the MS in E.E program.

D. It is recognized that not all students will have the necessary depth of study in their preparatory program for the MSEE. Consequently, the Department may permit a maximum of two undergraduate electives to be taken for graduate credit.

E. A total of one course in Mechanical Engineering or Technology Management is allowed to be taken toward the Master of Science in electrical Engineering.

The elective courses may be chosen from the list of Electrical Engineering concentration areas or chosen in consultation with the graduate advisor.

Learning Outcomes
Students in the M.S. Electrical Engineering Program will be able to 1) demonstrate the ability to use techniques, skills and modern engineering tools necessary for engineering practice; 2) demonstrate the ability to plan and conduct laboratory experiments and interpret and report results; 3) demonstrate the ability to identify and apply concepts of engineering economics and project planning; 4) demonstrate knowledge of contemporary global and societal issues and their relationship; and 5) exercise strong oral and written communication skills including those needed for technical writing.
Global Development and Peace Master of Arts Degree

Dean: Dr. Thomas J. Ward
Carlson Hall 235
Telephone: (203) 576-4966
Fax: (203) 576-4967
Email: mgldp@bridgeport.edu

The Master of Arts in Global Development and Peace is designed for individuals who intend to pursue careers in international public service through intergovernmental organizations, government agencies, and non-governmental organizations. Graduates of the Master of Arts in Global Development and Peace will also be prepared for the careers in the private sector, especially to work in banks, insurance companies, corporations, and management firms that have branch offices, holdings, partnerships, and/or clients in developing countries.

All courses are 3 credits.

This graduate degree is designed to allow future civil servants and business professionals interested in global development and human security to develop an understanding of:

- Extant models of socioeconomic development
- Prerequisites for good governance in developing countries
- The impact of religion and culture on intra- and interstate relations.

Students in the program will also develop competence in:

- Quantitative and qualitative research and analysis.
- Negotiation and conflict resolution.
- Project management and related problem-solving skills

They are also expected to develop or demonstrate a Foreign Service Level 2 (limited working proficiency) of at least one world language beside English.

Masters of Arts Core Requirements

The program is developed as a 36 credit graduate course of study that requires four semesters of study including a overseas internship.

It requires the student to have completed some foundational coursework in political economy and have a working knowledge of at least one world language. Students may apply without the prerequisites, but they will need to demonstrate competency in these areas prior to completion of their degree. Undergraduate students in the College of Public and International Affairs who complete 12 semester hours of the program in addition to all the requirements for their undergraduate degree may receive a Graduate Certificate in Global Development & Peace provided they receive no grade lower than a B in the 12 graduate credits that they complete. These 12 semester hours must be in excess of the required 120 semester hours for graduation with the Bachelor’s degree.

The curriculum of the Master’s degree is designed so that students will develop competency in the following areas:

- Qualitative and Quantitative Research Methods and Their Applications to Development.
- International Political Economy and the Major Theories of Development.
- An Appreciation of the Role played by Religion and Culture in Development
- Conflict Analysis and Resolution
- Diplomacy and Negotiation

The Masters offers three potential tracks and students should choose from one of the following:

CONFLICT ANALYSIS AND RESOLUTION TRACK (CULTURE, PEACE AND DEVELOPMENT)

For those interested in conflict management

INTERNATIONAL POLITICAL ECONOMY AND DEVELOPMENT TRACK

For those interested in development and its challenges

GLOBAL MANAGEMENT TRACK

For those interested in working in the commercial domain, especially in emerging and developing economies.

Course of Study

Sample Curriculum Sequence:

SEMMESTER I

Core (9 semester hours)
GLDP 511 Issues in Economic Development 3
GLDP 527 Culture and International Development 3
GLDP 522 International Conflict and Negotiation 3

Specialization Track A, B, or C (3 semester hours)

SEMMESTER II

Core (6 semester hours)
GLDP 501 Research Methods and International Development 3

Specialization Track A, B, or C (6 semester hours)

Track A Conflict Analysis and Resolution and Track B Global Management Track
GLDP 511 Sustainable Development 3
GSB 511/FIN 500 International Trade and Finance 3

Track C Global Management Track (Choose two)
GLDP 524 Political and Economic Integration 3
GSB 541/MKTG 550 Global Market Management 3
GSB 539 International Issues 3

Track B International Political Economy and Development Track (Choose two)
GLDP 524 Political and Economic Integration 3
GSB 541/MKTG 550 Global Market Management 3
GSB 539 International Issues 3

Track C Global Management Track (Choose three)

Chose one or two of the following:
GSB 537/AGMT 532 Global Program and Project Management 3
GSB 538/AGMT 533 Information Technology Strategy and Governance 3
GSB 539/AGMT 534 Strategic Sourcing and Vendor Management 3
GSB 580/AGMT 523 Leadership, Teams & Managing Change 3

Chose one or two of the following:
GSB 541/MKTG 550 Global Market Management 3
GSB 543/MKTG 543 Problems in Marketing Research 3
GSB 548/MKTG 530 e-Marketing GSB 549 3
MKTG 551 Product Management, Innovation and Commercialization 3
Global Development and Peace  Master of Arts Degree

SEMESTER III (SUMMER OVERSEAS INTERNSHIP)
Core GLDP 591 Internship (3 semester hours)

SEMESTER IV
Core (6 semester hours)
GLDP 599 Thesis
(Student’s Thesis must relate to the student’s Specialization Track)

Specialization Track A, B, or C
(6 semester hours)

Track A Conflict Analysis and Resolution (3 semester hours)
GLDP 581 Advanced Diplomacy and Negotiation 3

Track B International Political Economy and Development
Track (6 semester hours)
GLDP 528 Global Economy and Terrorism or
GSB 541/MKTG 550 Global Market Management. 3

Track C Global Management Track (6 semester hours)
Choose one of the following:
MGMT 598 Advanced Intellectual Property Management and 3
GSB 537/MGMT 532 Global Program and Project Management 3
GSB 538/MGMT 533 Information Technology Strategy and Governance 3
GSB 539/MGMT 534 Strategic Sourcing and Vendor Management 3
GSB 541/MKTG 550 Global Market Management. 3
GSB 543/MKTG 543 Problems in Marketing Research 3
GSB 548/MKTG 530 e-Marketing 3
GSB 549/MKTG 551 Product Management, Innovation and Commercialization 3

MINIMUM GRADE POINT AVERAGE REQUIREMENT
Candidates for the Masters of Arts in Global Development & Peace are required to maintain a minimum semester grade point average of 3.0 to remain in good academic standing. The Master of Arts in Global Development may only be conferred upon a student who has the minimum required average of a 3.0 at the conclusion of the student’s studies. To receive credit for the completion of one of the tracks, a minimum of a “B” must be received in each course within the concentration. Students failing to maintain minimum academic standards will be placed on academic probation at the end of the first semester in which they do not maintain a semester or overall GPA of at least 3.0 or earn a C- or lower grade in any class. If the student fails to raise his overall GPA above a 3.0 by the end of the semester following being placed on academic probation, fails again to earn at least a 3.0 semester GPA or again earns a C- or lower grade in any class, she or he will be separated from the GLDP program. A student separated from the program may apply for readmission to the program following a minimum of one semester of not participating in the program.

Learning Outcomes
The Master of Arts in Global Development & Peace has the following learning outcomes:

1. Students will be able to explain and compare the major extant models for socioeconomic development.
2. Students will demonstrate that they have acquired the the quantitative and qualitative research skills needed to undertake effective planning, analysis and implementation of projects related to socioeconomic development or conflict resolution.
3. Students will demonstrate an understanding of the institutional prerequisites for good governance in developing countries.
4. Students will demonstrate an appreciation of the impact that religion and culture can have on socioeconomic development.
5. Students will demonstrate the basic skills needed for effective communication and negotiation.
6. Students will demonstrate skills needed in problem solving and in project management through an overseas internship.
7. Students will demonstrate a working knowledge of a second language in addition to English.

*Note for all academic programs in the College of Public and International Affairs, a portfolio is collected to track progress in programmatic outcomes.

ENGLISH LANGUAGE REQUIREMENT
For applicants whose native language is not English, a minimum score of 213 (computer) or 550 (paper) on the TOEFL (Test of English as a Foreign Language) is required.

Exception to these requirements will be considered on a case-by-case basis in consultation with the Director of the University’s English Language Institute and following completion of an oral and written English exam that is administered by the English Language Institute. Students with demonstrated difficulty communicating in English may be required to take an advanced ELI course even if they have earned between 213/550 and 250/600 TOEFL scores.
Learning Outcomes

Students will 1) demonstrate the ability to design or analyze a system, component or process to meet desired needs within realistic, contemporary constraints such as health and safety, ethics, performance, sustainability and economics; 2) develop specialized advanced skills in mechanical engineering fields including fluid mechanics, heat transfer, material science, dynamics, vibrations, numerical methods, design and manufacturing; 3) demonstrate the ability to create, adapt, transfer and integrate existing and emerging technologies into new products, processes and services; 4) develop decision making, risk assessment and problem solving skills considering both economic and other constraints; and 5) develop both technical and management oral presentation and written communication skills.

Admission Requirements

The Master of Science degree in Mechanical Engineering is intended to prepare individuals with a strong mathematical, scientific, or technical background for entry into the Mechanical Engineering field at an advanced level and for further study leading to the doctorate. Admission to the program requires a Bachelor's degree in Mechanical Engineering or a related engineering and/or design curriculum and make up of any deficiencies in previous training. Furthermore, an undergraduate background that includes elementary physics and calculus sequences, and linear algebra is required. The Design Management concentration area also requires a substantial proficiency in design to be demonstrated via previous design training or work experience. The Manufacturing Management concentration area requires an engineering/business background with substantial industrial experience. Applicants are expected to have an average of B or better in their undergraduate coursework.

In addition, the department also offers the opportunity to acquire dual graduate degrees along with the M.S. degree in Mechanical Engineering. Candidates for these dual Masters degree programs are typically required to complete a total of 48 credit hours to satisfy the requirements of two Masters degrees. This implies 18 credit hours in addition to the 30 hours required for the M.S. degree in Mechanical Engineering.

Please refer to the Graduate Studies Division catalogue pages for detailed information on Dual Graduate Degree programs. Furthermore, customized study plans to allow receiving the Mechanical Engineering M.S. degree while pursuing either the Ph.D. degree in Computer Science and Engineering or the Ed.D. degree in Education are available. Doctoral students in these two programs should consult their respective doctoral advisors to work on their individualized plans. Further details on the dual M.S. in Mechanical Engineering degree programs are available in the catalog section on the Graduate Studies Division.

COURSE REQUIREMENTS

Programs of Study will ordinarily consist of a minimum of 30 semester hours and include at least 12 semester hours from one of the following concentration areas:

TRADITIONAL CONCENTRATION AREA:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEEG 410</td>
<td>Advanced Fluid Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 452</td>
<td>Advanced Vibration</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 453</td>
<td>Finite Element Methods</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 454</td>
<td>Advanced Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 463</td>
<td>Advanced Heat Transfer</td>
<td>3</td>
</tr>
<tr>
<td>MATH 401</td>
<td>Advanced Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

DESIGN MANAGEMENT CONCENTRATION AREA:

(Take 3 credits from Traditional Core Courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEEG 421</td>
<td>Computer Aided Engineering/Design</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 422</td>
<td>Advanced CAE/CAE/3D Projects</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 423</td>
<td>CAM &amp; NC Machining</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 430</td>
<td>Design &amp; Innovation</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 440</td>
<td>Ergonomics</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 490</td>
<td>Intellectual Property &amp; Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

MANUFACTURING MANAGEMENT CONCENTRATION AREA:

(Take 3 credits from Traditional Core Courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEEG 407</td>
<td>Materials &amp; Methods in Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 423</td>
<td>CAM &amp; NC Machining</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 571</td>
<td>Innovations &amp; Product Development</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 572</td>
<td>Production Technology &amp; Techniques</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 573</td>
<td>Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 574</td>
<td>Principles of Logistics</td>
<td>3</td>
</tr>
<tr>
<td>MEEG 575</td>
<td>Manufacturing Strategy</td>
<td>3</td>
</tr>
</tbody>
</table>

Students must elect one of the following to satisfy state licensure requirements:

- Thesis MEEG 598 (6 semester hours)
- Masters Project MEEG 597 (3 semester hours)

The elective courses may be chosen from the list of Mechanical Engineering concentration areas or chosen in consultation with the graduate advisor.
M.S. in Biomedical Engineering/M.S. Electrical Engineering

Dual Degree Program

Dual MS degree in Biomedical Engineering (BME) and Electrical Engineering (EE) is one of the rapidly emerging interdisciplinary programs at the University of Bridgeport. The MS degree in BME uses an integrated and interdisciplinary approach to advance the knowledge of its graduates toward developing an understanding of fundamental issues at the interface of engineering, biology, and medicine. BME has flexibility and it lends itself well for those students wishing to work in health professions (i.e. physical therapy, medical instrumentation, medical doctorate, etc.) and/or graduate schools. The MS degree in EE is designed to prepare students for a career in engineering with an emphasis on areas such as, but not limited to communications, control systems, sustainable energy, signal processing, VLSI and MEMS. Dual MS in BME/EE integrates electrical engineering principles with biomedical engineering. This dual degree interdisciplinary program provides an opportunity for students to exploit the emerging area of engineering in medicine to advance their careers.

COURSE REQUIREMENTS

REQUIRED COURSES

A. Required Core Courses in Biomedical Engineering

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMEG 410</td>
<td>Biosensors</td>
</tr>
<tr>
<td>BMEG 412</td>
<td>Introduction to Bioelectronics</td>
</tr>
<tr>
<td>BMEG 440</td>
<td>Ergonomic Factors in Design</td>
</tr>
<tr>
<td>BMEG 451</td>
<td>Introduction to BioMEMS</td>
</tr>
<tr>
<td>BMEG 452</td>
<td>Biomedical Imaging</td>
</tr>
<tr>
<td>BMEG 503</td>
<td>Biometrics</td>
</tr>
<tr>
<td>BMEG 506</td>
<td>Transport Phenomena in Biological Systems</td>
</tr>
<tr>
<td>BMEG 507</td>
<td>Algorithm in Bioinformatics</td>
</tr>
<tr>
<td>BMEG 508</td>
<td>Biomechanics</td>
</tr>
<tr>
<td>BMEG 511</td>
<td>Design and development of Biomedical Instrument</td>
</tr>
<tr>
<td>BMEG 520</td>
<td>Physiology</td>
</tr>
<tr>
<td>BMEG 530</td>
<td>Instrumentation and Laboratory Experience</td>
</tr>
<tr>
<td>BMEG 531</td>
<td>Robotics in Bioengineering</td>
</tr>
<tr>
<td>BMEG 533</td>
<td>Communication Engineering in Biomedical Systems</td>
</tr>
<tr>
<td>BMEG 534</td>
<td>Electrochemistry in Biological Systems</td>
</tr>
<tr>
<td>BMEG 540</td>
<td>Advanced Cellular and Molecular Biology</td>
</tr>
<tr>
<td>BMEG 541</td>
<td>Foundations of Biotechnology and Bioentrepreneurship</td>
</tr>
<tr>
<td>BMEG 546</td>
<td>Biosignal Processing</td>
</tr>
<tr>
<td>BMEG 560</td>
<td>Advanced Tissue Engineering</td>
</tr>
<tr>
<td>BMEG 569</td>
<td>Advanced Biomedical Materials and Engineering</td>
</tr>
<tr>
<td>BMEG 571</td>
<td>Ethical Issues in Biomedical Research</td>
</tr>
</tbody>
</table>

Minimum five courses are required from the list above. Cross-listed courses will be treated as either EE or BMEG courses but not both.

B. Required Core Courses in Electrical Engineering

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE 404</td>
<td>RF CMOS Circuits</td>
</tr>
<tr>
<td>EE 410</td>
<td>Biosensors</td>
</tr>
<tr>
<td>EE 412</td>
<td>Introduction to Bio-electronics</td>
</tr>
<tr>
<td>EE 415</td>
<td>Fiber Optics</td>
</tr>
<tr>
<td>EE 416</td>
<td>Fiber Optics Lab</td>
</tr>
<tr>
<td>EE 430</td>
<td>Satellites/Wireless Communication Systems</td>
</tr>
<tr>
<td>EE 437</td>
<td>Microwaves</td>
</tr>
<tr>
<td>EE 441</td>
<td>Analog Communications</td>
</tr>
<tr>
<td>EE 442</td>
<td>Digital Communications</td>
</tr>
<tr>
<td>EE 443</td>
<td>Digital Signal Processing</td>
</tr>
<tr>
<td>EE 444</td>
<td>Power Electronics</td>
</tr>
<tr>
<td>EE 445</td>
<td>DC Motor Drives</td>
</tr>
<tr>
<td>EE 446</td>
<td>MEMS (Micro-Electro-Mechanical Systems)</td>
</tr>
<tr>
<td>EE 447</td>
<td>Semiconductors</td>
</tr>
<tr>
<td>EE 448</td>
<td>Microelectronic Fabrication</td>
</tr>
<tr>
<td>EE 450</td>
<td>Communication Systems Lab</td>
</tr>
</tbody>
</table>

Minimum five courses are required from the list above. Cross-listed courses will be treated as either EE or BMEG courses but not both.

C. Team based research (Thesis): 6 credits

Must be an interdisciplinary project integrating EE and BMEG fundamentals.

Students are required to take minimum six courses from both EE and BMEG. Six credit team based research thesis is a requirement for the dual degree.

TOTAL NUMBER OF CREDITS 48
M.S. in Computer Science/M.S. in Computer Engineering

Dual Degree Program

Computer Science and Computer Engineering is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Masters Degree in Computer Science is intended to prepare individuals with a strong mathematical, scientific, or technical background for entry into the computer science field at an advanced level and for further study leading to the doctorate degree. The Masters Degree in Computer Engineering is a course of study intended to prepare individuals whose undergraduate background is in computer or electrical engineering for advanced professional work in the field and for further study leading to the doctorate degree. Admission to the program requires an undergraduate background that includes elementary physics, a calculus sequence, linear algebra, and the following fundamental coursework in computer science and computer engineering:

- Programming Languages and Technique
- Data Structures
- Digital Design / Lab
- Discrete Structures
- Computer Organization
- Microprocessors
- Probability and Statistics

**Course Requirements**

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>A. Required Core Courses in Computer Science</th>
<th>15 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 400 Object Oriented Programming Using C++</td>
<td></td>
</tr>
<tr>
<td>CS 450 Data Base Design</td>
<td></td>
</tr>
<tr>
<td>CS 502 Analysis of Algorithms</td>
<td></td>
</tr>
<tr>
<td>CS 503 Operating Systems</td>
<td></td>
</tr>
<tr>
<td>CpE 471 Data and Computer Communication</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Required Core Courses in Computer Engineering</th>
<th>9 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 400 Object Oriented Programming Using C++ (already in CS Core)</td>
<td></td>
</tr>
<tr>
<td>CpE 410 Introduction to Computer Architecture</td>
<td></td>
</tr>
<tr>
<td>CpE 471 Data and Computer Communication (already in CS Core)</td>
<td></td>
</tr>
<tr>
<td>CpE 448D Introduction to VLSI Design</td>
<td></td>
</tr>
<tr>
<td>or CpE 447 Logic Synthesis Using FPGAs</td>
<td></td>
</tr>
<tr>
<td>EE 443 Applied Digital Signal Processing</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Computer Engineering Masters Project:</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPEG 597</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D. Computer Science Masters Project:</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSC 597</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E. ELECTIVES</th>
<th>18 credits</th>
</tr>
</thead>
</table>

**TOTAL NUMBER OF CREDITS** 48

Students are required to study six elective courses. A student may select these six courses from among the course offerings of either the CS or CpE departments. These courses could be used to satisfy one or more of the concentration areas from either the CS or CpE concentration areas.

Concentration areas available for students in the CS/CpE Dual Graduate Degree program include:

1. Advanced Applications and Systems Programming
2. Bio-Medical Engineering
3. Computer and Information Security
4. Computer Communications and Networking
5. E-Commerce
7. Modern Data Base Systems
8. Robotics and Automation
9. Signal and Image Processing
10. Software Engineering
11. Very Large Scale Integration (VLSI)
12. Wireless and Mobile Communications

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
M.S. in Computer Science/M.S. in Electrical Engineering
Dual Degree Program

The Dual Masters of Science Program in Computer Science and Electrical Engineering is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Masters Degree in Computer Science is intended to prepare individuals with a strong mathematical, scientific, or technical background for entry into the computer science field at an advanced level and for further study leading to the doctorate degree. The Masters Degree in Electrical Engineering is a course of study designed to increase the student’s knowledge and competence in basic areas necessary for Modern Electrical Engineering, while affording sufficient freedom to allow an in-depth study of such areas as Communications, Control Systems, Electronics and Digital Processing. Admission to the program requires an undergraduate background that includes elementary physics, a calculus sequence, linear algebra, communications, signal processing and the following fundamental coursework in computer science and electrical engineering or related field.

- Programming Languages and Technique
- Data Structures
- Digital Design / Lab
- Discrete Structures
- Computer Organization
- Analog/Digital Communications
- Probability and Statistics
- Signal Processing

The departments may require students to take make-ups for background deficiencies.

Course Requirements

REQUIRED COURSES

A. Required Core Courses in Computer Science _______ 15 credits
   CS 400 Object Oriented Programming Using C++
   CS 450 Data Base Design
   CS 502 Analysis of Algorithms
   CS 503 Operating Systems
   CpE 471 Data and Computer Communication

B. Required Core Courses in Electrical Engineering _______ 15 credits
   (Five EE Courses to be approved by the EE Department advisor.)

C. Computer Science Masters Project:
   CPSC 597 ___________________ 3 credits

D. Electrical Engineering Masters Project:
   EE 597 _____________________ 3 credits

E. ELECTIVES __________________ 12 credits

TOTAL NUMBER OF CREDITS ________________ 48

Students are required to study four elective courses. A student may select these four courses from among the course offerings of either the CS or EE departments. These courses could be used to satisfy one or more of the concentration areas from either the CS or EE concentration areas.

Concentration areas available for students in the CS/EE Dual Graduate Degree program include:

1. Advanced Applications and Systems Programming
2. Bio-Medical Engineering
3. Computer and Information Security
4. Computer Communications and Networking
5. E-Commerce
6. Environmental and Energy Management
7. Microelectronics and Computer Architecture
8. Modern Data Base Systems
9. Robotics and Automation
10. Signal and Image Processing
11. Software Engineering
12. Very Large Scale Integration (VLSI)
13. Wireless and Mobile Communications

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
M.S. in Computer Science/M.S. in Mechanical Engineering
Dual Degree Program

The Dual Masters of Science Program in Computer Science and Mechanical Engineering is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Masters Degree in Computer Science is intended to prepare individuals with a strong mathematical, scientific, or technical background for entry into the computer science field at an advanced level and for further study leading to the doctorate degree. The Masters Degree in Mechanical Engineering provides advanced study in traditional and contemporary Mechanical Engineering areas such as solid mechanics, structural dynamics, fluid mechanics, heat transfer, mechanical design, computational methods, CAD/CAE/CAM, Ergonomics, Design and Innovation, Intellectual Property and Manufacturing. Admission to the program requires an undergraduate background that includes elementary physics, a calculus sequence, linear algebra and the following fundamental coursework in computer science and Mechanical Engineering or related field.

- Programming Languages and Technique
- Data Structures
- Digital Design / Lab
- Discrete Structures
- Computer Organization
- Probability and Statistics
- CAD/CAM

The departments may require students to take make-ups for background deficiencies.

Course Requirements

**REQUIRED COURSES**

A. Required Core Courses in Computer Science. 15 credits

- CPSC 400 Object Oriented Programming Using C++
- CPSC 450 Data Base Design
- CPSC 502 Analysis of Algorithms
- CPSC 503 Operating Systems
- CPEG 471 Data and Computer Communication

B. Required Core Courses in Mechanical Engineering. 12 credits

**ME Tracks (Choose 4 courses from one Track)**

B1. Traditional Track

- MEEG 410 Advanced Fluid Dynamics
- MEEG 452 Advanced Vibration
- MEEG 453 Finite Element Methods
- MEEG 454 Advanced Dynamics
- MEEG 463 Advanced Heat Transfer
- Math 401 Advanced Analysis I

B2. Design Management Track:

(Take 3 credits from Traditional Core Courses)

- MEEG 421 Computer Aided Engineering/Design
- MEEG 422 Advanced CAD/CAM Projects
- MEEG 423 CAM & NC Machining
- MEEG 430 Design & Innovation
- MEEG 440 Ergonomics
- MEEG 490 Intellectual Property & Technology

B3. Manufacturing Management Track

(Take 3 credits from Traditional Core Courses)

- MEEG 407 Materials & Methods in Manufacturing
- MEEG 423 Advanced CAD/CAM Projects
- MEEG 571 Innovations & Product Development
- MEEG 572 Production Technology & Techniques
- MEEG 573 Supply Chain Management
- MEEG 574 Principles of Logistics
- MEEG 575 Manufacturing Strategies

F. Computer Science Masters Project:

- CPSC 597 ___________________ 3 credits

G. Mechanical Engineering Masters Project:

- MEEG 597 ___________________ 3 credits

II. ELECTIVES 15 credits

**TOTAL NUMBER OF CREDITS** 48

Students are required to study five elective courses. A student may select these five courses from among the course offerings of either the CPSC or ME departments. These courses could be used to satisfy one or more of the concentration areas from either the CPS or ME concentration areas.

Concentration areas available for students in the CPSC/ME Dual Graduate Degree program include:

1. Advanced Applications and Systems Programming
2. Bio-Medical Engineering
3. CAD/CAM
4. Computer and Information Security
5. Computer Communications and Networking
6. E-Commerce
7. Intellectual Property Management
8. Manufacturing Management
10. Modern Data Base Systems
11. New Product Development and Management
12. Robotics and Automation
13. Software Engineering
14. Supply Chain Management
15. Very Large Scale Integration (VLSI)
16. Wireless and Mobile Communications

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
M.S. in Computer Science/M.S. in Technology Management Dual Degree Program

The Dual Masters of Science Program in Computer Science and Technology Management is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Masters Degree in Computer Science is intended to prepare individuals with a strong mathematical, scientific, or technical background for entry into the computer science field at an advanced level and for further study leading to the doctorate degree. The Technology Management Master's Program is designed to develop leaders adept at managing technological change, and skilled in establishing and maintaining superior competitive advantage for their respective enterprises. Admission to the program requires an undergraduate background that includes elementary physics, a calculus sequence, linear algebra and the following fundamental coursework in computer science and Technology Management or related field.

- Programming Languages and Technique
- Data Structures
- Digital Design / Lab
- Discrete Structures
- Computer Organization
- Probability and Statistics
- Management Related Courses

The departments may require students to take make-ups for background deficiencies.

**Course Requirements**

**REQUIRED COURSES**

A. Required Core Courses in Computer Science ________________ 15 credits
   - CPSC 400 Object Oriented Programming Using C++
   - CPSC 450 Data Base Design
   - CPSC 502 Analysis of Algorithms
   - CPSC 503 Operating Systems
   - CPEG 471 Data and Computer Communication

B. Required Core Courses in Technology Management ________________ 15 credits
   - TCMG 400 Marketing, Entrepreneurial & Innovation Issues and Practices in Management
   - TCMG 424 Total Quality Management and Continuous Process Improvement
   - TCMG 495 Contemporary Issues in Communications and Quantitative Methods
   - TCMG 505
     or GSB 537
     or MGMT 532 Global Program & Project Management
   - TCMG 523
     or GSB 580
     or MGMT 532 Leadership, Teams and Managing Change
   - TCMG 525
     or GSB 535
     or MGMT 535 Finance and Accounting for Non-Financial Managers

C. Computer Science Masters Project:
   - CPSC 597 ________________ 3 credits

D. Technology Management Masters Project:
   - TCMG 597 ________________ 3 credits

E. ELECTIVES ________________ 12 credits

**TOTAL NUMBER OF CREDITS** ________________ 48

Students are required to study four elective courses. A student may select these four courses from among the course offerings of either the Computer Science and Engineering or TM departments. These courses could be used to satisfy one or more of the concentration areas from either the CS or TM concentration areas.
The Dual Masters of Science Program in Computer Science and Instructional Technology (Developer Track) is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Masters Degree in Computer Science is intended to prepare individuals with a strong mathematical, scientific, or technical background for entry into the computer science field at an advanced level and for further study leading to the doctorate degree. The developer track of the iMSIT program prepares students for careers in the educational software industry. The program provides proficiencies in the production of computer-disseminated content and assessments for publishers, academics, and corporations using high and low level development tools. Admission to the program requires an undergraduate background that includes elementary physics, a calculus sequence, linear algebra and the following fundamental coursework in computer science and Instructional Technology or related field.

- Programming Languages and Technique
- Data Structures
- Digital Design / Lab
- Discrete Structures
- Computer Organization
- Probability and Statistics
- Instructional Technology Related Courses

The departments may require students to take make-ups for background deficiencies.

**Course Requirements**

**REQUIRED COURSES**

A. Required Core Courses in Computer Science ______ 15 credits
   - CPSC 400  Object Oriented Programming Using C++
   - CPSC 450  Data Base Design
   - CPSC 502  Analysis of Algorithms
   - CPSC 503  Operating Systems
   - CPEG 471  Data and Computer Communication

B. Required Core Courses in Instructional Technology ______ 18 credits
   - Cognitive Foundations of Education
   - New Technologies for Learning 1
   - New Technologies for Learning 2
   - Networks and Distributed Learning Systems
   - Graphical User-Interface Design
   - Multimedia Curriculum Development

C. MSIT Capstone ____________ 6 credits

D. Computer Science Masters Project:
   - CPSC 597 ____________ 3 credits

E. Computer Science Electives ______ 6 credits

**TOTAL NUMBER OF CREDITS ____________ 48**

A student may select two courses from among the course offerings of the Computer Science. These courses could be used to satisfy one or more of the concentration areas from the CPSC concentration areas.

Concentration areas available for students in the CPSC/MSIT Dual Graduate Degree program include:

1. Advanced Applications and Systems Programming
2. Computer and Information Security
3. Computer Communications and Networking
4. E-Commerce
5. Information Technology
6. Modern Data Base Systems
7. Software Engineering
8. Wireless and Mobile Communications

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
M.S. in Computer Engineering/M.S. in Electrical Engineering
Dual Degree Program

The Dual Masters of Science Program in Computer Engineering and Electrical Engineering is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Masters Degree in Computer Engineering is a course of study intended to prepare individuals whose undergraduate background is in computer or electrical engineering for advanced professional work in the field and for further study leading to the doctorate degree. The Masters Degree in Electrical Engineering is a course of study designed to increase the student’s knowledge and competence in basic areas necessary for Modern Electrical Engineering, while affording sufficient freedom to allow an in-depth study of such areas as Communications, Control Systems, Electronics and Digital Processing. Admission to the program requires an undergraduate degree in engineering that includes the following fundamental coursework:

- Programming Languages and Techniques
- Data Structures
- Digital Design
- Digital Design Lab
- Computer Organization
- Microprocessors
- Probability and Statistics
- Communications
- Signal Processing

Course Requirements

REQUIRED COURSES

<table>
<thead>
<tr>
<th>Required Core Courses in Computer Engineering</th>
<th>15 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSC 400 Object Oriented Programming Using C++</td>
<td></td>
</tr>
<tr>
<td>CPEG 410 Introduction to Computer Architecture</td>
<td></td>
</tr>
<tr>
<td>CPEG 471 Data and Computer Communication</td>
<td></td>
</tr>
<tr>
<td>CPEG 448D Introduction to VLSI Design</td>
<td></td>
</tr>
<tr>
<td>or CPEG 447 Logic Synthesis Using FPGAs</td>
<td></td>
</tr>
<tr>
<td>EE 443 Applied Digital Signal Processing</td>
<td></td>
</tr>
</tbody>
</table>

B. Required Core Courses in Electrical Engineering    15 credits

(Five EE Courses to be approved by the EE Department.)

C. Computer Engineering Masters Project: 15 credits  
CPEG 597 ___________________ 3 credits

D. Electrical Engineering Masters Project: 3 credits  
EE 597 _____________________ 3 credits

E. ELECTIVES __________________ 12 credits

TOTAL NUMBER OF CREDITS ________________ 48

Students are required to study five elective courses. A student may select these five courses from among the course offerings of either the CPEG or EE departments. These courses could be used to satisfy one or more of the concentration areas from either the CPEG or EE concentration areas.

Concentration areas available for students in the CPEG/EE Dual Graduate Degree program include:

1. Advanced Applications and Systems Programming
2. Bio-Medical Engineering
3. Computer and Information Security
4. Computer Communications and Networking
5. E-Commerce
6. Environmental and Energy Management
7. Microelectronics and Computer Architecture
8. Modern Data Base Systems
9. Robotics and Automation
10. Signal and Image Processing
11. Software Engineering
12. Very Large Scale Integration (VLSI)
13. Wireless and Mobile Communications

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
The Dual Masters of Science Program in Computer Engineering and Mechanical Engineering is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Masters Degree in Computer Engineering is a course of study intended to prepare individuals whose undergraduate background is in computer or electrical engineering for advanced professional work in the field and for further study leading to the doctorate degree. The Masters Degree in Mechanical Engineering provides advanced study in traditional and contemporary Mechanical Engineering areas such as solid mechanics, structural dynamics, fluid mechanics, heat transfer, mechanical design, computational methods, CAD/CAE/CAM, Ergonomics, Design and Innovation, Intellectual Property and Manufacturing. Admission to the program requires an undergraduate degree in engineering that includes the following fundamental coursework:

- Programming Languages and Techniques
- Data Structures
- Digital Design
- Digital Design Lab
- Computer Organization
- Microprocessors
- Probability and Statistics
- CAD/CAM
- Manufacturing/Design

### Course Requirements

#### REQUIRED COURSES

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSC 400</td>
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<tr>
<td>CPEG 410</td>
<td>3</td>
</tr>
<tr>
<td>CPEG 471</td>
<td>3</td>
</tr>
<tr>
<td>CPEG 448D</td>
<td>3</td>
</tr>
<tr>
<td>EE 443</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Required Core Courses in Computer Engineering

- CPSC 400 Object Oriented Programming Using C++
- CPEG 410 Introduction to Computer Architecture
- CPEG 471 Data and Computer Communication
- CPEG 448D Introduction to VLSI Design
  or CPEG 447 Logic Synthesis Using FPGAs
- EE 443 Applied Digital Signal Processing

#### Required Core Courses in Mechanical Engineering (any 4)

- MEEG 410 Advanced Fluid Dynamics
- MEEG 452 Advanced Vibration
- MEEG 453 Finite Element Methods
- MEEG 454 Advanced Dynamics
- MEEG 463 Advanced Heat Transfer
- MATH 401 Advanced Analysis I

#### ME Tracks (Choose 4 courses from one Track)

**B1. Traditional Track**

- MEEG 410 Advanced Fluid Dynamics
- MEEG 452 Advanced Vibration
- MEEG 453 Finite Element Methods
- MEEG 454 Advanced Dynamics
- MEEG 463 Advanced Heat Transfer
- MATH 401 Advanced Analysis I

**B2. Design Management Track**

(Take 3 credits from Traditional Core Courses)

- MEEG 421 Computer Aided Engineering/Design
- MEEG 422 Advanced CAE/CAD Projects
- MEEG 423 CAM & NC Machining
- MEEG 430 Design & Innovation
- MEEG 440 Ergonomics
- MEEG 490 Intellectual Property & Technology

**B3. Manufacturing Management Track**

(Take 3 credits from Traditional Core Courses)

- MEEG 407 Materials & Methods in Manufacturing
- MEEG 423 Advanced CAE/CAD Projects
- MEEG 571 Innovations & Product Development
- MEEG 572 Production Technology & Techniques
- MEEG 573 Supply Chain Management
- MEEG 574 Principles of Logistics
- MEEG 575 Manufacturing Strategies

#### C. Computer Engineering Masters Project:

- CPEG 597 3 credits

#### D. Mechanical Engineering Masters Project:

- MEEG 597 3 credits

#### ELECTIVES

- 15 credits

**TOTAL NUMBER OF CREDITS** 48

Students are required to study five elective courses. A student may select these five courses from among the course offerings of either the CPEG or ME departments. These courses could be used to satisfy one or more of the concentration areas from either the CPEG or ME concentration areas.

Concentration areas available for students in the CPEG/ME Dual Graduate Degree program include:

1. Advanced Applications and Systems Programming
2. Bio-Medical Engineering
3. CAD/CAM
4. Computer and Information Security
5. Computer Communications and Networking
6. E-Commerce
7. Environmental and Energy Management
8. Intellectual Property Management
9. Manufacturing Management
10. Microelectronics and Computer Architecture
11. New Product Development and Management
12. Robotics and Automation
13. Service Management and Engineering
14. Signal and Image Processing
15. Software Engineering
16. Supply Chain Management
17. Very Large Scale Integration (VLSI)
18. Wireless and Mobile Communications

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
The Dual Masters of Science Program in Computer Engineering and Technology Management is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Masters Degree in Computer Engineering is a course of study intended to prepare individuals whose undergraduate background is in computer or electrical engineering for advanced professional work in the field and for further study leading to the doctorate degree. The Technology Management Master's Program is designed to develop leaders adept at managing technological change, and skilled in establishing and maintaining superior competitive advantage for their respective enterprises. Admission to the program requires an undergraduate degree in engineering that includes the following fundamental coursework:

- Programming Languages and Techniques
- Data Structures
- Digital Design
- Digital Design Lab
- Computer Organization
- Microprocessors
- Probability and Statistics
- Management Related Courses

### Course Requirements

**REQUIRED COURSES**  
A. Required Core Courses in Computer Engineering  
   - CPSC 400 Object Oriented Programming Using C++  
   - CPEG 410 Introduction to Computer Architecture  
   - CPEG 471 Data and Computer Communication  
   - CPEG 448D Introduction to VLSI Design  
   - or CPEG 447 Logic Synthesis Using FPGAs  
   - EE 443 Applied Digital Signal Processing  
   **15 credits**

B. Required Core Courses in Technology Management  
   - TCMG 400 Marketing, Entrepreneurial & Innovation Issues and Practices in Management  
   - TCMG 424 Total Quality Management and Continuous Process Improvement  
   - TCMG 484  
   - or GSB 535 Finance and Accounting for Non-Financial Managers  
   - TCMG 505  
   - or GSB 537 Global Program & Project Management  
   - TCGM 523  
   - or GSB 580 Leadership, Teams and Managing Change  
   - TCMG 523  
   - or MGMT 523 Global Program & Project Management  
   **15 credits**

C. Computer Engineering Masters Project:  
   - CPEG 597 _________________ 3 credits

D. Technology Management Masters Project:  
   - TCMG 597 _________________ 3 credits

E. ELECTIVES _________________ 12 credits

**TOTAL NUMBER OF CREDITS** ________________ 48

Students are required to study four elective courses. A student may select these four courses from among the course offerings of either the Computer Science and Engineering or TM departments. These courses could be used to satisfy one or more of the concentration areas from either the CPEG or TM concentration areas.

Concentration areas available for students in the CPEG/TM Dual Graduate Degree program include:

1. Advanced Applications and Systems Programming
2. Bio-Medical Engineering
4. CAD/CAM
5. China / India Trade
6. Computer and Information Security
7. Computer Communications and Networking
8. Corporate, Government and Information Security & Continuity Management
9. E-Commerce
10. Entrepreneurship
11. Environmental and Energy Management
12. Global Business
13. Global Marketing
14. Global Program and Project Management
15. Health Care Management & Administration
16. Human Resources Management & Development
17. Information Technology
18. Intellectual Property Management
19. Management and Operations
20. Manufacturing Management
22. Modern Data Base Systems
23. New Product Development and Management
24. Robotics and Automation
25. Service Management and Engineering
26. Signal and Image Processing
27. Software Engineering
28. Strategic Sourcing and Vendor Management
29. Supply Chain Management
30. Very Large Scale Integration (VLSI)
31. Wireless and Mobile Communications

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
The Dual Masters of Science Program in Electrical Engineering and Mechanical Engineering is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Masters Degree in Electrical Engineering is a course of study designed to increase the student's knowledge and competence in basic areas necessary for Modern Electrical Engineering, while affording sufficient freedom to allow an in-depth study of such areas as Communications, Control Systems, Electronics and Digital Processing. The Masters Degree in Mechanical Engineering provides advanced study in traditional and contemporary Mechanical Engineering areas such as solid mechanics, structural dynamics, fluid mechanics, heat transfer, mechanical design, computational methods, CAD/CAE/CAM, Ergonomics, Design and Innovation, Intellectual Property and Manufacturing. Admission to the program requires an undergraduate degree in engineering, and includes the following fundamental coursework:

- Communications
- Signal Processing
- VLSI
- Electronics
- CAD/CAM
- Manufacturing/Design

Students are required to study five elective courses. A student may select these five courses from among the course offerings of either the EE or ME departments. These courses could be used to satisfy one or more of the concentration areas from either the EE or ME concentration areas.

Concentration areas available for students in the EE/ME Dual Graduate Degree program include:

1. Bio-Medical Engineering
2. CAD/CAM
3. Computer Communications and Networking
4. Computer and Information Security
5. Environmental and Energy Management
6. Intellectual Property Management
7. Manufacturing Management
9. Robotics and Automation
10. Signal and Image Processing
11. Supply Chain Management
12. Very Large Scale Integration (VLSI)
13. Wireless and Mobile Communications

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
M.S. in Electrical Engineering/M.S. in Technology Management
Dual Degree Program

The Dual Masters of Science Program in Electrical Engineering and Technology Management is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Masters Degree in Electrical Engineering is a course of study designed to increase the student's knowledge and competence in basic areas necessary for Modern Electrical Engineering, while affording sufficient freedom to allow an in-depth study of such areas as Communications, Control Systems, Electronics and Digital Processing. The Technology Management Master's Program is designed to develop leaders adept at managing technological change, and skilled in establishing and maintaining superior competitive advantage for their respective enterprises. Admission to the program requires an undergraduate degree in engineering, and includes the following fundamental coursework:

- Communications
- Signal Processing
- VLSI
- Electronics
- CAD/CAM
- Management Courses

Course Requirements

REQUIRED COURSES

A. Required Core Courses in Electrical Engineering

(Five EE Courses to be approved by the EE Department.)

B. Required Core Courses in Technology Management

TCMG 400 Marketing, Entrepreneurial & Innovation Issues and Practices in Management
TCMG 424 Total Quality Management and Continuous Process Improvement
TCMG 484 or GSB 535 Finance and Accounting for Non-Financial Managers
TCMG 505 or MGMT 532 Global Program & Project Management
TCMG 523 or GSB 580 Leadership, Teams and Managing Change

C. Electrical Engineering Masters Project:
EE 597 _____________________ 3 credits

D. Technology Management Masters Project:
TCMG 597 ___________________ 3 credits

E. ELECTIVES __________________ 12 credits

TOTAL NUMBER OF CREDITS ________________ 48

Students are required to study four elective courses. A student may select these four courses from among the course offerings of either the EE or TM departments. These courses could be used to satisfy one or more of the concentration areas from either the EE or TM concentration areas.

Concentration areas available for students in the EE/TM Dual Graduate Degree program include:

1. Bio-Medical Engineering
2. Bio-Tech Management
3. China/India Trade
4. Computer and Information Security
5. Computer Communications and Networking
6. Corporate, Government and Information Security & Continuity Management
7. E-Commerce
8. Entrepreneurship
9. Environmental and Energy Management
10. Global Business
11. Global Marketing
12. Global Program and Project Management
13. Health Care Management & Administration
14. Information Technology
15. Intellectual Property Management
16. Management and Operations
17. Manufacturing Management
18. Microelectronics and Computer Architecture
19. New Product Development and Management
20. Robotics and Automation
21. Service Management and Engineering
22. Signal and Image Processing
23. Strategic Sourcing and Vendor Management
24. Supply Chain Management
25. Very Large Scale Integration (VLSI)
26. Wireless and Mobile Communications

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
M.S. in Mechanical Engineering/M.S. in Technology Management
Dual Degree Program

Mechanical Engineering and Technology Management is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Masters Degree in Mechanical Engineering provides advanced study in traditional and contemporary Mechanical Engineering areas such as solid mechanics, structural dynamics, fluid mechanics, heat transfer, mechanical design, computational methods, CAD/CAE/CAM, Ergonomics, Design and Innovation, Intellectual Property and Manufacturing. The Technology Management Master’s Program is designed to develop leaders adept at managing technological change, and skilled in establishing and maintaining superior competitive advantage for their respective enterprises. Admission to the program requires an undergraduate degree in engineering, and includes the following fundamental coursework:

- Design
- Manufacturing
- CAD/CAM
- Management Courses

Course Requirements

REQUIRED COURSES

A. Required Core Courses in Mechanical Engineering _______________ 12 credits

ME Tracks (Choose 4 courses from one Track)

B1. Traditional Track

- MEEG 410 Advanced Fluid Dynamics
- MEEG 452 Advanced Vibration
- MEEG 453 Finite Element Methods
- MEEG 454 Advanced Dynamics
- MEEG 463 Advanced Heat Transfer
- Math 401 Advanced Analysis I

B2. Design Management Track:

(Choose 3 credits from Traditional Core Courses)

- MEEG 421 Computer Aided Engineering/Design
- MEEG 422 Advanced CAD/CAD Projects
- MEEG 423 CAM & NC Machining
- MEEG 430 Design & Innovation
- MEEG 440 Ergonomics
- MEEG 490 Intellectual Property & Technology

B3. Manufacturing Management Track

(Choose 3 credits from Traditional Core Courses)

- MEEG 407 Materials & Methods in Manufacturing
- MEEG 423 Advanced CAD/CAD Projects
- MEEG 571 Innovations & Product Development
- MEEG 572 Production Technology & Techniques
- MEEG 573 Supply Chain Management
- MEEG 574 Principles of Logistics
- MEEG 575 Manufacturing Strategies

B. Required Core Courses in Technology Management _______________ 15 credits

TCMG 400 Marketing, Entrepreneurial & Innovation Issues and Practices in Management
TCMG 424 Total Quality Management and Continuous Process Improvement
TCMG 484
or GSB 535
or MGMT 535 Finance and Accounting for Non-Financial Managers
TCMG 505
or MGMT 532 Global Program & Project Management
TCMG 523
or GSB 580
or MGMT 523 Leadership, Teams and Managing Change

C. Mechanical Engineering Masters Project:

- MEEG 597 ___________________ 3 credits

D. Technology Management Masters Project:

- TCMG 597 ___________________ 3 credits

E. ELECTIVES __________________ 15 credits

TOTAL NUMBER OF CREDITS ________________ 48

Students are required to study five elective courses. A student may select these five courses from among the course offerings of either the ME or TM departments. These courses could be used to satisfy one or more of the concentration areas from either the ME or TM concentration areas.

Concentration areas available for students in the ME/TM Dual Graduate Degree program include:

1. Bio-Tech Management
2. CAD/CAM
3. China / India Trade
4. Computer & Information Security
5. Corporate, Government and Information Security & Continuity Management
6. E-Commerce
7. Entrepreneurship
8. Environmental and Energy Management
9. Global Business
10. Global Marketing
11. Global Program and Project Management
12. Health Care Management & Administration
13. Human Resources Management & Development
14. Information Technology
15. Intellectual Property Management
16. Management and Operations
17. Manufacturing Management
18. New Product Development and Management
19. Robotics and Automation
20. Service Management and Engineering
21. Strategic Sourcing and Vendor Management
22. Supply Chain Management

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
The Dual Masters degree program in Computer Science and MBA is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Masters of Science Degree in Computer Science is intended to prepare individuals with a strong mathematical, scientific, or technical background for entry into the computer science field at an advanced level and for further study leading to the doctorate degree.

The MBA is a course of study intended to prepare individuals whose undergraduate background is in business. The MBA Program requires 30 to 54 semester hours of study depending on the student's academic background and level of academic achievement. Students with a recent four-year bachelor's degree and good academic average from an accredited business college may be able to complete the program with 30 semester hours of advanced study. Students with a bachelor's degree in a non-business field may require up to 24 credits of business core courses as foundation for the degree.

### Course Requirements

**REQUIRED COURSES**

A. **Required Core Courses in Computer Science** ___________ 15 credits

- CS 400  Object Oriented Programming Using C++
- CS 450  Data Base Design
- CS 502  Analysis of Algorithms
- CS 503  Operating Systems
- CpE 471  Data and Computer Communication

B. **Required Core Courses in MBA**

B1. Required Courses ______________ 9 credits

- GSB 561  or MGMT 597  Business Strategy (Capstone)
- GSB 560  or MGMT 580  Business and Society: Intellectual Property and Antitrust Law
- GSB 570  or MGMT 539  International Issues

B2. Experiential Learning ____________ 3 credits

ONE OF THE FOLLOWING COURSES:

- GSB 581  or MGMT 581  Business Games
- GSB 582  or MGMT 599  Internship
- CPSC 500  Computer Science Internship (3 credits)

C. **One course (3 credits) from each of the following MBA discipline areas** ___________ 12 credits

- C.1  Accounting
- C.2  Finance
- C.3  Management and Operations
- C.4  Global Marketing

The list of approved courses for the MBA disciplines are included in the MBA program catalog pages.

D. **Computer Science Masters Project:**

- CPSC 597  ___________ 3 credits

E. **ELECTIVES** ___________ 6 credits

**TOTAL NUMBER OF REQUIRED CREDIT HOURS** ___________ 48

Students are required to study an additional two elective courses. A student may select these courses from among the graduate course offerings of the Computer Science and Engineering Department. These courses could be used to satisfy one or more of the concentration areas within the Computer Science graduate concentration areas. The list of concentrations is detailed in the catalog pages of the M.S. in Computer Science program.

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
The Dual Masters Program in Computer Engineering and MBA is one of the available Dual Graduate Degree Programs at the University of Bridgeport. The Master’s Degree in Computer Engineering is a course of study intended to prepare individuals whose undergraduate background is in computer or electrical engineering for advanced professional work in the field and for further study leading to the doctorate. Emphasis is placed on current state-of-the-art applications including parallel computing, VLSI design, sensing, robotics, mobile computing, automation and the like.

The MBA is a course of study intended to prepare individuals whose undergraduate background is in business. The MBA Program requires 30 to 54 semester hours of study depending on the student’s academic background and level of academic achievement. Students with a recent four-year bachelor’s degree and good academic average from an accredited business college may be able to complete the program with 30 semester hours of advanced study. Students with a bachelor’s degree in a non-business field may require up to 24 credits of business core courses as foundation for the degree.

**Course Requirements**

**REQUIRED COURSES**

<table>
<thead>
<tr>
<th>A. Required Core Courses in Computer Engineering</th>
<th>15 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSC 400 Object Oriented Programming Using C++</td>
<td></td>
</tr>
<tr>
<td>CPEG 410 Introduction to Computer Architecture</td>
<td></td>
</tr>
<tr>
<td>CPEG 471 Data and Computer Communication</td>
<td></td>
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<tr>
<td>CPEG 448D Introduction to VLSI Design</td>
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<tr>
<td>or CPEG 447 Logic Synthesis Using FPGAs</td>
<td></td>
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<tr>
<td>EE 443 Applied Digital Signal Processing</td>
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</tbody>
</table>

**B. Required Core Courses in MBA**

<table>
<thead>
<tr>
<th>B1. Required Courses</th>
<th>9 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSB 561 or MGMT 597</td>
<td>Business Strategy (Capstone)</td>
</tr>
<tr>
<td>GSB 560 or MGMT 580</td>
<td>Business and Society: Intellectual Property and Anti-trust Law</td>
</tr>
<tr>
<td>GSB 570 or MGMT 539</td>
<td>International Issues</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B2. Experiential Learning</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONE OF THE FOLLOWING COURSES:</td>
<td></td>
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<tr>
<td>GSB 581 or MGMT 581 Business Games</td>
<td></td>
</tr>
<tr>
<td>GSB 582 or MGMT 599 Internship</td>
<td></td>
</tr>
<tr>
<td>CPSC 500 Computer Science Internship (3 credits)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>C. One course (3 credits) from each of the following MBA discipline areas</th>
<th>12 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.1 Accounting</td>
<td></td>
</tr>
<tr>
<td>C.2 Finance</td>
<td></td>
</tr>
<tr>
<td>C.3 Management and Operations</td>
<td></td>
</tr>
<tr>
<td>C.4 Global Marketing</td>
<td></td>
</tr>
</tbody>
</table>

**D. Computer Engineering Masters Project:**

| CPEG 597                                 | 3 credits |

**E. ELECTIVES**

| 6 credits |

**TOTAL NUMBER OF CREDITS**

48

Students are required to study an additional two elective courses. A student may select these courses from among the graduate course offerings of the Computer Science and Engineering Department. These courses could be used to satisfy one or more of the concentration areas within the Computer Engineering graduate concentration areas. The list of concentrations is detailed in the catalog pages of the M.S. in Computer Engineering program.

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
The Dual Masters Program in Electrical Engineering and MBA is one of the available Dual Graduate Degree Programs at the University of Bridgeport.

The Masters of Science Degree in Electrical Engineering is a course of study designed to increase the student’s knowledge and competence in basic areas necessary for Modern Electrical Engineering, while affording sufficient freedom to allow an in-depth study of such areas as Communications, Control Systems, Electronics and Digital Processing. Admission to the program requires an undergraduate background that includes elementary physics, a calculus sequence, linear algebra, communications and signal processing. The department may require students to take make-ups for background deficiencies.

The MBA is a course of study intended to prepare individuals whose undergraduate background is in business. The MBA Program requires 30 to 54 semester hours of study depending on the student’s academic background and level of academic achievement. Students with a recent four-year bachelor’s degree and good academic average from an accredited business college may be able to complete the program with 30 semester hours of advanced study. Students with a bachelor’s degree in a non-business field may require up to 24 credits of business core courses as foundation for the degree.

**Course Requirements**

**REQUIRED COURSES**

A. Required Core Courses in Electrical Engineering _________________ 15 credits
   (Five courses approved by the Electrical Engineering academic advisor)

B. Required Core Courses in MBA

   B1. Required Courses _______________ 9 credits
       GSB 561
       or MGMT 597 Business Strategy (Capstone)
       GSB 560
       or MGMT 580 Business and Society: Intellectual Property and Anti-trust Law
       GSB 570
       or MGMT 539 International Issues

   B2. Experiential Learning ____________ 3 credits
       ONE OF THE FOLLOWING COURSES:
       GSB 581
       or MGMT 581 Business Games
       GSB 582
       or MGMT 599 Internship
       CPSC 500 Computer Science Internship (3 credits)

C. One course (3 credits) from each of the following MBA discipline areas ________ 12 credits

   C.1 Accounting
   C.2 Finance
   C.3 Management and Operations
   C.4 Global Marketing

   The list of approved courses for the MBA disciplines are included in the MBA program catalog pages.

D. Electrical Engineering Masters Project:
   ELEG 597 ___________________ 3 credits

E. ELECTIVES ____________________ 6 credits

Students are required to study an additional two elective courses. A student may select these courses from among the graduate course offerings of the Electrical Engineering or Computer Science and Engineering Department. These courses could be used to satisfy one or more of the concentration areas within the Electrical Engineering graduate concentration areas. The list of concentrations is detailed in the catalog pages of the M.S. in Electrical Engineering program.

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
M.S. in Mechanical Engineering/MBA  Dual Degree Program

The Dual Masters of Science Program in Mechanical Engineering and MBA is one of the available Dual Graduate Degree Programs at the University of Bridgeport.

The Masters Degree in Mechanical Engineering provides advanced study in traditional and contemporary Mechanical Engineering areas such as solid mechanics, structural dynamics, fluid mechanics, heat transfer, mechanical design, computational methods, CAD/CAE/CAM, Ergonomics, Design and Innovation, Intellectual Property and Manufacturing. Admission to the program requires an undergraduate background that includes elementary physics, a calculus sequence, linear algebra and the following fundamental coursework in Mechanical Engineering or related field. The department may require students to take make-ups for background deficiencies.

The MBA is a course of study intended to prepare individuals whose undergraduate background is in business. The MBA Program requires 30 to 54 semester hours of study depending on the student’s academic background and level of academic achievement. Students with a recent four-year bachelor’s degree and good academic average from an accredited business college may be able to complete the program with 30 semester hours of advanced study. Students with a bachelor’s degree in a non-business field may require up to 24 credits of business core courses as foundation for the degree.

Course Requirements

REQUIRED COURSES ____________________

A.  Required Core Courses in Mechanical Engineering ____________ 15 credits

Choose four courses from one of the following concentration areas and a fifth course from the other area.

Traditional Track
(Take 3 credits from Traditional Core Courses)
MEEG 410  Advanced Fluid Dynamics
MEEG 452  Advanced Vibration
MEEG 453  Finite Element Methods
MEEG 454  Advanced Dynamics
MEEG 463  Advanced Heat Transfer
MATH 401  Advanced Analysis I

Design Management Track:
(Take 3 credits from Traditional Core Courses)
MEEG 421  Computer Aided Engineering/Design
MEEG 422  Advanced CAE/CAD Projects
MEEG 423  CAM & NC Machining
MEEG 430  Design & Innovation
MEEG 440  Ergonomics
MEEG 490  Intellectual Property & Technology

Manufacturing Management Track
(Take 3 credits from Traditional Core Courses)
MEEG 407  Materials & Methods in Manufacturing
MEEG 423  Advanced CAE/CAD Projects
MEEG 571  Innovations & Product Development
MEEG 572  Production Technology & Techniques
MEEG 573  Supply Chain Management
MEEG 574  Principles of Logistics
MEEG 575  Manufacturing Strategies

B.  Required Core Courses in MBA

B1. Required Courses____________________ 9 credits

GSB 561
or MGMT 597  Business Strategy (Capstone)
GSB 560
or MGMT 580  Business and Society: Intellectual Property and Antitrust Law
GSB 570
or MGMT 539  International Issues

B2. Experiential Learning ____________ 3 credits

ONE OF THE FOLLOWING COURSES:

GSB 581
or MGMT 581  Business Games
GSB 582
or MGMT 599  Internship
CPSC  500  Computer Science Internship (3 credits)

C.  One course (3 credits) from each of the following MBA discipline areas _______ 9 credits

C1  Accounting
C2  Finance
C3  Global Marketing

The list of approved courses for the MBA disciplines are included in the MBA program catalog pages.

D. Mechanical Engineering Masters Project:
MEEG 597 ___________________ 3 credits

E. ELECTIVES ____________________ 9 credits

TOTAL NUMBER OF CREDITS ________________ 48

Students are required to study an additional three elective courses. A student may select these courses from among the graduate course offerings of the Mechanical Engineering Department. These courses could be used to satisfy one or more of the concentration areas within the Mechanical Engineering graduate concentration areas. The list of concentrations is detailed in the catalog pages of the M.S. in Mechanical Engineering program.

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
The Dual Masters degree program in Technology Management and MBA is one of the available Dual Graduate Degree Programs at the University of Bridgeport.

The Technology Management Master’s Program is designed to develop leaders adept at managing technological change, and skilled in establishing and maintaining superior competitive advantage for their respective enterprises.

The MBA is a course of study intended to prepare individuals whose undergraduate background is in business. The MBA Program requires 30 to 54 semester hours of study depending on the student’s academic background and level of academic achievement. Students with a recent four-year bachelor's degree and good academic average from an accredited business college may be able to complete the program with 30 semester hours of advanced study. Students with a bachelor's degree in a non-business field may require up to 24 credits of business core courses as foundation for the degree.

**Course Requirements**

**REQUIRED COURSES**

| A. Required Core Courses in Technology Management | 15 credits |
| TCMG 400 Marketing, Entrepreneurial & Innovation Issues and Practices in Management | |
| TCMG 424 Total Quality Management and Continuous Process Improvement | |
| TCMG 484 or MGMT 535 Finance and Accounting for Managers | |
| TCMG 505 or MGMT 532 Global Program & Project Management | |
| TCMG 523 or MGMT 523 Leadership, Teams and Managing Change | |

Four courses will count in satisfying the MBA requirements in the areas of Marketing, Accounting, and Management.

| B. Required Core Courses in MBA | 16 credit hours |
| Completion of the following core courses | |
| B1. Required Courses | 9 credits |
| TCMG 499 or MGMT 597 or MGMT 580 or MGMT 539 | |
| or MGMT 581 Business Games | |
| or MGMT 599 Business Strategy (Capstone) | |
| or Business and Society: Intellectual Property and Anti-trust Law | |
| or International Issues | |
| B2. Experiential Learning | 3 credits |
| ONE OF THE FOLLOWING COURSES: | |
| MGMT 581 Business Games | |
| or MGMT 599 Internship | |
| CPSC 500 Computer Science Internship (3 credits) | |

| C. One course (3 credits) from each of the following MBA discipline areas | 6 credits |
| Finance | C.1 | |
| Information Technology | C.2 | |

D. ELECTIVES | 15 credits |

**TOTAL NUMBER OF CREDITS** | 48 |

Students are required to study an additional five elective courses. A student may select these courses from among the graduate course offerings of the Technology Management or MBA programs. These courses could be used to satisfy one or more of the concentration areas within the Technology Management or MBA concentration areas. The list of concentrations is detailed in the catalog pages of the M.S. in Technology Management program and the MBA program.

Please refer to the Graduate Studies Division section of this catalog for course work details for all the concentration areas.
Technology Management Master of Science Degree

Chairman: Jami Palis, Ph.D.
Engineering Technology Bldg
Telephone: (203) 576-4579
Fax: (203) 576-4750
Email: jpalis@bridgeport.edu

The Technology Management Master’s Program is designed to develop leaders adept at managing technological change, and skilled in establishing and maintaining superior competitive advantage for their respective enterprises. For an enterprise, continuing advancement of technology provides both opportunities and threats. It is essential that an enterprise continually develops, sources and/or applies, the latest relevant technology in products, services, and systems in support of the key business functions and processes such as R & D, marketing, sales, customer service engineering, manufacturing, operations, finance, accounting, distribution and others.

Learning Outcomes

The UB Technology Management Program is specifically designed to develop skills and competencies such as:

1. Identifying and evaluating the impact of relevant changing technology and managing those changes.
2. Designing programs to identify, develop and implement innovative technological based solutions.
3. Managing the effective planning and execution of those technology based initiatives and the integration of their results into the mainstream of an enterprise’s strategy, processes and operations.
4. The application of technology to create wealth.
5. Leadership, the creation and sustenance of high-performance global teams and enabling innovation.

The Department offers, as an integral part of the Technology Management Masters Degree, the opportunity to specialize in a number of concentrations, which are interdisciplinary and available through various departments to provide more educational and career choices and flexibility for the students:

(I) List of Concentrations:
1. Bio-Tech Management
2. Environmental and Energy Management
3. Global Program and Project Management
4. Intellectual Property Management
5. Management and Operations
6. New Product Development and Management
7. Strategic Sourcing and Vendor Management
8. Supply Chain and Service Management
9. Total Quality Management

Please refer to the Graduate Studies Division Catalog pages for course details of the concentration areas.

A student may select elective courses from one or more of the above concentrations to satisfy the MS or dual Masters degree requirements.

In addition, the department also offers the opportunity to acquire dual graduate degrees along with the M.S. degree in Technology Management. Candidates for these dual Masters degree programs are typically required to complete a total of 48-51 credit hours to satisfy the requirements of two Masters degrees. This implies 18 credit hours in addition to the 34 hours required for the M.S. degree in Technology Management.

Please refer to the Graduate Studies Division Catalogue pages for detailed information on Dual Graduate Degree programs.

(II) List of available dual graduate degree programs:
1. M.S. in Technology Management and M.S. in Computer Science
2. M.S. in Technology Management and M.S. in Computer Engineering
3. M.S. in Technology Management and M.S. in Electrical Engineering
4. M.S. in Technology Management and M.S. in Mechanical Engineering
5. M.S. in Technology Management and MBA

Furthermore, customized study plans to allow acquiring the Technology Management M.S. degree while pursuing either the Ph.D. degree in Computer Science and Engineering or the Ed.D. degree in Education are available. Doctoral students in these two programs should consult their respective doctoral advisors to work on their individualized plans. Further details on the dual Masters degree programs are available in the catalog section on dual graduate programs.

COURSE REQUIREMENTS

A. A total of 34 semester hours is required in an approved program of study for the M.S. in Technology Management.

B. Completion of the following core courses (18 credit hours):

TCMG 400 Marketing, Entrepreneurship and Innovation Issues & Practices in Management
TCMG 424 Total Quality Management and Continuous Process Improvement
TCMG 495 Contemporary Issues in Communications and Quantitative Methods
TCMG 505 or GSB 537
TCMG 523 or GSB 580
TCMG 523 or MGMT 523
TCMG 525 or GSB 535
TCMG 525 or MGMT 535

C. Completion of TCMG 597AB/ GSB 597 or TCMG 598 or a Master’s Project (3 credit hours):

TCMG 597AB/ GSB 597 is a Capstone/ Project course designed to integrate concepts taught throughout the program and requires the development of a Business Plan as one of the course requirements. Students may alternately complete a the-
sis or master’s project.

D. Completion of ENGR 400 (1 credit)

E. Elective Courses (12 credit hours)

Students must take four elective courses (12 credit hours). These electives may be selected from any of the concentration areas listed in (I) List of Concentrations, above, in consultation with the program academic advisor. A list and description of the courses available in each concentration is available in the catalog section on course descriptions.

The concentration areas can be applied to satisfy the requirements of dual Masters degree programs of study.

Other Technology Management project courses:

TCMG 500 Graduate Co-Op/Internship in Technology Management (1-3 credit hours)

TCMG 597C Masters Project (1 credit hour)

TCMG 598 Thesis in Technology Management (3-6 credit hours)

TCMG 599 Independent Study in Technology Management (3 credit hours)

As a pre-requisite for the program, all students are expected to have a demonstrated familiarity with statistical analysis. Any remedial course taken to meet this requirement will not be considered as an elective. Students are also expected to demonstrate basic computing skills.

Since July 2004, the Department of Technology Management has been offering the full M.S. degree program in Technology Management through distance learning. For more information please contact the department or visit: http://www.bridgeport.edu/ub/dlearning/
Computer Science and Engineering Ph.D. Program

Program Coordinator:
Prof. Khaled Elleithy
Engineering Technology Building
Telephone: (203) 576-4703
Fax: (203) 576-4765
Email: elleithy@bridgeport.edu

The Ph.D. degree is a certification of critical aptitude in scholarship, imagination, knowledge in the discipline, enterprise in research, and proficiency and style in communication. A candidate obtaining a Ph.D. degree must display a thorough understanding in the major areas of computer science and engineering and must master the necessary tools and techniques so as to be able to make original contributions to the field of computer science and engineering. An equally important aspect is that of proficiency in oral and written communication skills.

The requirements of the Ph.D. program are: successful completion of preliminary examinations and courses, satisfactory performance in written comprehensive and oral examinations, admission to Ph.D. candidacy, successful completion and defense of original work documented as a dissertation, and the satisfaction of additional requirements such as teaching and seminars.

The formal degree to be offered is the Doctor of Philosophy in Computer Science and Engineering. This will be awarded to candidates who complete all the requirements of the Ph.D. degree described later in this section.

Admission Requirements

Students admitted to the Ph.D. program should have a master degree in computer science or engineering or related discipline with at least a 3.3 GPA. Interested students in the Ph.D. program without an M.S. degree must apply and be admitted into the M.S. program first, and then upon finishing the M.S. degree, they would be eligible to apply for the Ph.D. program.

Students admitted from non-English speaking foreign countries, having a master's degree in computer science and engineering will also be required to have a TOEFL score of at least 550. GRE's are not required for admission into the program, but are recommended.

Learning Outcomes

The graduate from the Ph.D. program in the School of Engineering will: 1) use advanced mathematical proof methodologies in computer science and engineering; 2) demonstrate a strong and in depth background in hardware and software issues in computer science; 3) posses a strong background in implementing software systems and/or hardware systems; 4) posses a strong background in designing diverse and integrated software/hardware systems solutions; and 5) critically analyze problems and thoroughly evaluate potential benefits of alternative solution in designing software and/or hardware systems.

Program Requirements

A. Academic Requirements:

1. Completion of the formal requirements for an MSc. degree in computer science or computer engineering, including a thesis.
2. An additional eight (3-credit hours) courses, or 24 credit hours, in the discipline, including no more than two independent studies.
3. A two-semester teaching practice requirement (3 credit hours each), for which students are to register with no fees. The students will be expected to teach lower undergraduate level classes, and/or assist professors as teaching assistants (i.e., perform a significant teaching role), thus giving Ph.D. graduates experience for an academic teaching career.
4. At least 15 semester hours of dissertation research, culminating in a dissertation proposal defense and dissertation defense.
5. Comprehensive examination: written and oral (proposal defense).
6. Publication of at least two journal papers, or one journal and two refereed conference papers, within the course of the Ph.D. topic research. These publications are not required to be single authored by the student and they might be co-authored with members of the dissertation committee.

B. Time and Load Guidelines:

Both full and part-time students are encouraged to apply for the Ph.D. degree, which should be completed within a maximum of seven calendar years. A Ph.D. student (part-time or full-time) is expected to devote the necessary time to courses and research in order to make satisfactory progress toward the degree. Satisfactory progress includes active personal participation in the research and teaching environment of the School of Engineering. The student advisor and dissertation committee should advise the student as to her/his progress in the program. Full time students are required to register for at least 9 credit hours each semester while part-time students are required to register for at least 6 credit hours per academic year (spring and fall semesters).

C. Course Work:

A Ph.D. candidate must complete at least 24 credit hours of course work, not including the dissertation, beyond the MSc. degree. Upper level undergraduate remedial courses cannot be used to fulfill the course work requirement.

D. Course Grade Point Average:

A Ph.D. student is expected to maintain a G.P.A. of 3.0 or more. If the G.P.A. falls below 3.0, the student is automatically placed on probation. (Note: the grades in the transferred courses would not be used in the calculation of G.P.A.). Continued probationary status for two semesters may lead to dismissal of the candidate from the program. No grade less than C is acceptable towards the course work requirement.

E. Seminar Requirement:

A Ph.D. student is expected to present her/his research findings in public seminars. She/he is also expected to interact and participate in professional discussions and meetings such as conferences and workshops. In order to fulfill these requirements, a Ph.D. student is expected to present one seminar after the written comprehensive examination and before the dissertation defense. The seminar of his/her research topic for the dissertation serves as the oral (proposel defense) part of the comprehensive exam. The Ph.D.
Computer Science and Engineering Ph.D. Program

Coordinate awards a Pass/Fail grade after consultation with the student's dissertation advisor. The student is required to register for one seminar course.

F. Comprehensive Examination:
One of the major checkpoints in the Ph.D. program that assesses the breadth and depth of the student is the written and oral (proposal defense) comprehensive examination. The comprehensive examination will test the breadth and depth of knowledge in all aspects of computer science and engineering.

The Ph.D. program coordinator will organize this comprehensive examination. The seminar requirement represents the oral (proposal defense) section of the exam. The outcome of this examination will be of fail or pass. A student can retake this examination no more than once. A student who does not pass the comprehensive examination in two attempts will be dismissed from the program.

G. Dissertation Committee:
After passing satisfactorily the written comprehensive examination and selecting a dissertation advisor, the student is required to define a problem of merit, carry out a literature search and prepare a course of action to solve the selected problem. The candidate is expected to produce a dissertation proposal. The Ph.D. program coordinator, in consultation with the dissertation advisor, recommends a dissertation committee for the student. The dissertation committee contains at least three members in addition to the dissertation advisor. At least four members of the dissertation committee must be from a professorial rank within the school. Additionally, an external examiner is appointed as well. The external examiner is one who has been distinguished in the field of computer science and engineering. S/he might not hold a professorial rank. Ph.D. Program Coordinator and the Dean of the School of Engineering must then approve the dissertation committee.

H. Admission to Candidacy:
When a student passes the comprehensive examination and fulfills all other requirements, s/he will be admitted to Ph.D. candidacy. This serves as another important milestone in the progress towards the Ph.D. degree.

I. Dissertation:
The student is expected to work on the accepted topic and come up with original results. S/he has to report the results in the form of a Ph.D. dissertation. The student is encouraged to document the intermediate results in the form of technical reports. S/he is also encouraged to publish these results as they are discovered, in the international professional literature, i.e., refereed conference proceedings and journals. Proof of good work is the acceptance of the results by reputed journals. Intermediate results can also be discussed in departmental seminars. The completed dissertation must be distributed to the dissertation committee members at least two weeks before the dissertation defense. The committee will read it and certify that the dissertation is a work of substantial merit and that it can be defended. It is the responsibility of the student that the final draft of the dissertation addresses all legitimate concerns of the committee members.

J. Dissertation Defense Examination:
After having secured approval from the dissertation committee members regarding the worthiness of the dissertation, a student will proceed with a request for the dissertation defense examination. The chairman of the dissertation committee will chair the examination. The student will schedule a convenient time for a public defense. It is the responsibility of the student to find a time that is suitable to all the members of the dissertation committee, at least 2 weeks prior to the defense. At the end of the defense, the decision of the dissertation committee will be pass or fail. It is the responsibility of the dissertation advisor to see that the comments and the criticism of the audience are addressed adequately in the final version of the dissertation. Based on the recommendation of the dissertation committee, the Ph.D. coordinator, and the Departmental Chairman, the Dean of the School of Engineering will recommend the Ph.D. degree subject to the satisfaction of all other formal requirements.

CONCENTRATION AREAS
The following is a list of Research / Concentration Areas under the Ph.D. Program.

1. Computer architecture and VLSI and FPGA
2. Design, modeling and simulation of embedded and integrated systems
3. Electromechanical systems prototyping and optimization
4. Robotics, automation, machine perception and sensing
5. Software engineering, Web development and computational sciences
6. Systems and computer security and biometrics
7. Wireless and mobile computing and networking
8. Information Technology Globalization Track

SUMMARY OF MILESTONES
A summary of steps, not necessarily ordered, through which a student will proceed is as follows:

1. Admission to the Ph.D. program of computer science and engineering on a 'provisional status', if needed.
2. Completing prerequisites and finish the master degree, if needed.
3. Getting the status restored to 'regular Ph.D. student', if needed.
4. Completing the course work requirement for the Ph.D.
5. Passing the written comprehensive examination.
6. Admission to 'Candidacy'.
7. Selection of a dissertation advisor.
8. Writing a dissertation proposal.
9. Completion of the seminar requirement and working on the proposed research topic.
11. Approval of the dissertation by the dissertation committee.
12. Successful completion of the dissertation defense.
13. Submission of dissertation to the School of Engineering.

SUMMARY OF RESEARCH CONCENTRATIONS

1. Computer architecture and VLSI and FPGA
2. Design, modeling and simulation of embedded and integrated systems
3. Electromechanical systems prototyping and optimization
4. Robotics, automation, machine perception and sensing
5. Software engineering, Web development and computational sciences
6. Systems and computer security and biometrics
7. Wireless and mobile computing and networking
8. Information Technology Globalization Track
Undergraduate Course of Instruction
Course of Instruction

Courses bearing two numbers joined by a dash, such as Education 337-338, extend through two semesters, and no graduation credit is given for one semester's work unless otherwise authorized by the dean or director of the college or school concerned. Courses bearing only one number are complete in themselves. If they have a consecutively numbered companion course, the two are listed separately or with their numbers joined by a comma — as with History 101, 102 — to indicate that credit is given for one semester's work.

Courses numbered 100-199 are intended primarily for freshmen; courses numbered 200-299, for sophomores; and courses 300-399, for juniors and seniors. Courses numbered 400-499 are graduate courses (undergraduate students may check with the dean’s or director’s office to determine if registration in 400-level courses is possible). Courses numbered 500 and above are exclusively for graduate students. Some advanced courses are not taught every year but are scheduled in cycles.

The University reserves the right to limit the number of students registered in any course and to cancel any course for which there is insufficient enrollment. Under a reciprocal agreement, a full-time student at the University of Bridgeport may take certain courses at Fairfield or Sacred Heart Universities and Bridgeport Engineering Institute without payment of extra fees, provided that (1) the course is not currently offered by the University of Bridgeport; (2) the course is on an approved list; (3) the student has prior permission from his dean or director to take the course; (4) tuition commitments have been met in full at the University of Bridgeport; and (5) the student observes all regulations of the host institution.

Accounting

ACCOUNTING 101
Principles of Accounting I
An introduction to the basic principles of Accounting, and how to account for business transactions. Emphasis on the understanding of how financial statements are prepared, and how they are used as a basis for decision making by business owners, investors, creditors, government and others interested in the financial condition of an economic entity and the results of its operations. Topics include Analyzing Transactions; the Matching Concept and the Adjusting Process; Completing the Accounting Cycle; Accounting for Merchandising Businesses; Accounting Systems, Internal Controls, and Cash; and Receivables.
3 semester hours

ACCOUNTING 102
Principles of Accounting II
A continuation of Accounting 101. Topics include Inventories; Fixed Assets and Intangible Assets; Current Liabilities; Corporations: Organization, Capital Stock Transactions, and Dividends; Income Taxes, Unusual Income Items, and Investments in Stocks; Bonds Payable and Investments in Bonds; Statement of Cash Flows; and Financial Statement Analysis. Prerequisite: Accounting 101.
3 semester hours

ACCOUNTING 103
Managerial/Cost Accounting
3 semester hours

ACCOUNTING 210
Financial Accounting Systems
Accounting systems for internal control, cash management, accounts receivables, inventories, plant assets, payroll, taxes, and other liabilities. Study of manual and computerized systems.
3 semester hours

ACCOUNTING 300
Intermediate Accounting I
Study of generally accepted accounting principles underlying the preparation of basic financial statements; balance sheet, income statement, and cash flow statement. Emphasis on standards issued by the Financial Accounting Standards Board and reporting requirements of the Securities and Exchange Commission.
3 semester hours

ACCOUNTING 301
Intermediate Accounting II
3 semester hours

ACCOUNTING 302
Advanced Accounting
Coverage of selected advanced topics including: accounting for investments, accounting for mergers and acquisitions, consolidation procedures, foreign currency transactions and currency translation, segment reporting, and accounting for government and not-for-profit organizations.
3 semester hours

ACCOUNTING 311
Fundamentals of Taxation
Study of accounting and income tax law as it applies to individuals and business entities. Concepts of gross income, allowable deductions and credits, determination of tax liabilities.
3 semester hours

ACCOUNTING 327
Multinational Accounting
A global perspective of accounting practices. Development and role of accounting in selected countries, comparative practices in financial reporting and disclosure, setting international accounting standards, and examinations of auditing and taxation issues. Prerequisite: Accounting 101.
3 semester hours

ACCOUNTING 335
Auditing
Study of generally accepted auditing standards, practice and procedures in the audit of financial statements. Includes study of ethical issues and professional responsibilities of the Certified Public Accountant to investors, creditors and others who rely on the auditor's opinion when using audited financial statements to make decisions. Prerequisite: Accounting 308.
3 semester hours
ART & DESIGN

The Art Department reserves the right to retain selected samples of student work. A minimum of four hours of outside assignments per week is required in Studio Courses.

STUDIO FEES
Most studio courses have a fixed standard materials fee per course. Studio fees listed are subject to change. Consult course schedules for current rates.

ART & DESIGN 100
Introduction to Art & Design
Introduction to art and design professions in the context of the majors available at the University.
1 semester hour

ART & DESIGN C101
Fine Arts
Introduction to theories of value in the arts. Principles of aesthetics as historically applied to plastic and performing arts. Theories of Beauty and their critique in Western and non-Western contexts. Pre-modern, modern and post-modern approaches to the analysis of the arts and architecture. This course may include a studio or performing component. A Core Heritage Course. Prerequisite: ENGL C101 or department permission.
3 semester hours

ART & DESIGN 103
2D Design
Problems in two-dimensional design and the interaction of color: the exploration of the elements of art and their interrelationships; visual and psychological factors involved in two-dimensional design and visualization. Introduces art and design presentation techniques including the portfolio. Emphasizes topics not covered in ADSN 104.
3 semester hours

ART & DESIGN 104
Visual Organization II
Problems in two-dimensional design and the interaction of color: the exploration of the elements of art and their interrelationships; visual and psychological factors involved in two-dimensional design and visualization. Introduces art and design presentation techniques including the portfolio. Emphasizes topics not covered in ADSN 103.
3 semester hours

ART & DESIGN 105
Drawing I
Fundamentals of drawing. Visualizing in two and three dimensions. An introduction to various media techniques and orthographic delineation methods including perspective drawing systems. Use of objects and figures in developing rapid visualization skills. Emphasizes topics not covered in ADSN 106.
3 semester hours

ART & DESIGN 106
Drawing II
Fundamentals of drawing. Visualizing in two and three dimensions. An introduction to various media techniques and orthographic delineation methods including perspective drawing systems. Use of objects and figures in developing rapid visualization skills. Emphasizes topics not covered in ADSN 105.
3 semester hours

ART & DESIGN 107
Survey of Art History I
The development of visual art from prehistoric civilizations through the Medieval period. Multicultural developments and the changing role of the artist in society will be emphasized.
3 semester hours

ART & DESIGN 118
Survey of Art History II
The development of visual art from the Renaissance through the 20th Century, focusing on the modern role of art and artists in a global context.
3 semester hours

ART & DESIGN 119A, 119B
Introduction to Computer Applications
A survey of the primary image processing, layout, vector graphic and digital presentation software. Color correction, scanning and document set up for desktop publishing output is also covered.

ART & DESIGN 200
Co-op Work Experience
Through the co-op program, the student will be placed in full-time and part-time working positions in art, illustration, graphic design, industrial design and interior design. Prerequisite: 30 semester hours; by arrangement.
1-6 semester hours

GRAPHIC 203
Typography I
The history, design and execution of letter forms in both analog and digital form are covered. Projects include the development of letter forms from pen and brush to digital font design. The emphasis is on the arrangement of type in design layout and the use of letter forms in an electronic presentation environment. Prerequisite: ADSN 219.
3 semester hours

GRAPHIC DESIGN 204
Calligraphy
This course addresses the origin of the Roman alphabet(s), the development of historical letter style categories, manual methods of producing distinctive and beautiful letters and text, various parameters of legibility and readability, methods of utilizing calligraphic and lettering forms in both traditional and innovative ways.
2 semester hours
ART & DESIGN 205
Drawing III
Advanced drawing techniques utilizing a variety of media and subjects. Investigates structure, materials, and scale by illustrating and rendering figures, objects and environments. Emphasizes topics not covered in Art & Design 206 such as advanced orthographic drawing techniques. Prerequisite: ADSN 105 and ADSN 106.
3 semester hours

ART & DESIGN 206
Interiors Drawing IV
Advanced drawing techniques utilizing a variety of media and subjects. Investigates structure, materials and scale by illustrating and rendering figures, objects and environments. Emphasizes topics not covered in Art & Design 205 such as production and assembly drawings. Prerequisite: ADSN 105 and ADSN 106.
3 semester hours

ART & DESIGN 207
Illustration I
A basic hands on course for developing a strong technical rendering foundation. An emphasis is placed on creative problem solving and simultaneous technical development. Editorial illustration for books, magazines, and advertising, etc. is the purpose of the course. Prerequisite: ADSN 103, ADSN 104, ADSN 105 and ADSN 106.
3 semester hours

ART & DESIGN 208
Illustration II
Continuation and second level of Art & Design 208 Illustration I. An emphasis is placed on creative problem solving and simultaneous technical development in an electronic environment. Editorial illustration for books, magazines, and advertising, etc for an electronic prepress environment is accompanied with learning advanced paint, photo-manipulation and logo software. Prerequisite: ADSN 207 and ADSN 219.
3 semester hours

ART & DESIGN 209
Painting I
The principles of painting, through a series of visual problems, working from nature. The understanding of pictorial space through control of drawing, value and color. Emphasizes topics not covered in Art & Design 210.
3 semester hours

ART & DESIGN 210
Painting II
The principles of physical and digital painting through a series of problems uniquely structured for the combination of analog and digital media. The understanding of representation and appropriate presentation methods relative to analog and digital media is the emphasis of the course. Prerequisite ADSN 209, and ADSN 219.
3 semester hours

ART & DESIGN 212
Introduction to Visual Semiotics
Semiotics (from the Greek semeion ‘sign’). In semiotics, ‘signs’ and symbols may be words, images or anything from which meanings may be generated and used to communicate. The course is an introduction to the analysis, appreciation and reading of broad range of signs and symbols to empower the communication practitioner to expand their visual vocabulary. Myth, Metaphor, Religious Iconography, Advertising and more, will be investigated to establish a communication value. With this added knowledge the students can be a more sophisticated globally aware communicator in their field of practice. The course consists primarily of video and slide screenings, followed by written analysis, reading and discussion. Prerequisite: ADSN 219, and ADSN 249.
3 semester hours

ART & DESIGN 221
Ceramics I
A basic approach to functional and sculptural clay modeling and firing techniques. The course exposes students to a variety of techniques used by different cultures from around the globe, both past and present. The course is to develop an appreciation for 3-Dimensional form.
3 semester hours

ART & DESIGN 223
Sculpture I
Techniques of three dimensional design applied to a variety of materials and used for expressive purposes. Includes figure sculpting and armature construction.
3 semester hours

ART & DESIGN 230
Video I
History, theory, and practice of analog and digital capturing and editing. Use of cameras and software for digitizing and editing. An emphasis on a narrative film style (story telling) is utilized to prepare students for later work in Web and Multimedia design. Prerequisite: ADSN 219.
3 semester hours

ART & DESIGN 231
Photography I
This is a non-darkroom course for using professional studio equipment in and out of the studio to fulfill assignments in advertising, industrial, commercial and portrait photography by combining creativity and technical knowledge. The fundamentals of picture taking, camera types, and history will be covered. Emphasis is on studio lighting with a final concern for documenting 2D and 3D work in a portfolio format.
3 semester hours

GRAPHIC DESIGN 255
Studio I
Print Design I – Fundamentals of page composition. Students will demonstrate an understanding of basic typographic and page composition principles through a variety of traditional and digital mediums. Prerequisites: ADSN 103 and ADSN 119.
3 semester hours

GRAPHIC DESIGN 256
Studio II
Print Design II – Intermediate print design. This course explores the combination of type and image on the printed page. The course focuses on using grids, along with the basic principles of typography as methods for organizing content in print. Prerequisites: GDSN 255 (DS I).
3 semester hours

GRAPHIC DESIGN 305
Studio III
Print Design III – Advance printing design: Students will create campaigns in a series of projects to cover all aspects of identity design, from business stationary to promotional brochures, packaging design and environmental signage. Techniques for reinforcing a corporate identity will be covered. Prerequisites: GDSN 256 (DS II).
3 semester hours

GRAPHIC DESIGN 306
Studio IV
Web Design: Producing and displaying design content for the Web branch of the Internet and adapting that content to the re-
Art & Design

requirements and restrictions of that medium. Students will develop skills in using mark-up languages to make functional and accessible documents for the World Wide Web, develop skills in structuring, linking, and maintaining multiple documents within a website, and develop skills in incorporating visual elements to enhance information. Prerequisites: GDSN 305 (DS III).

3 semester hours

ART & DESIGN 309
Painting III
Investigation of a variety of media and techniques. Problems emphasizing composition formulation. Emphasizes topics not covered in ADSN 310. Prerequisite: 30 units of Art & Design courses or equivalent and ADSN 209, ADSN 210.

3 semester hours

ART & DESIGN 317
Photography II — Digital & Non Silver, Alternative Photography
This is a studio course for the photographer that is more concerned with the esthetic, process, materials and digital technology to support content. Various methods of photographic representation will be explored, both digital and non-silver for the purpose of presentation and exhibition. Methods will vary from polaroid transfer, cyanotype, gum-bichromate and digital prints. Prerequisite: ADSN 231 and ADSN 219.

3 semester hours

ART & DESIGN 319
Printmaking I
Introduction to printmaking studio practices including intaglio, lithography, relief, paper making, etc. The course exposes students to a variety of techniques used by different cultures from around the globe, both past and present.

3 semester hours

GRAPHIC DESIGN 355
Portfolio Preparation
Students will prepare their portfolios for both print and web formats. Reworking of previous design to improve for portfolio presentation. Developing new pieces to enhance and broaden the current body of work. Prerequisite: GDSN 306 (DS IV).

3 semester hours

GRAPHIC DESIGN 356
Thesis/Portfolio II
This is an individual statement. The applied knowledge of five semesters of study will support future investigation. The body of work and research should reflect a concentration of study in a chosen area of practice as stated in the thesis proposal, e.g., design, advertising, publishing (www), etc. The student will work with an advisor in the chosen field and thesis teacher for 2 semesters. The focus of the class is to assist the student in developing a critical appreciation of their work through concentrated input from faculty, students and guest critics. The course requires a body of work accompanied by a written statement and slide documentation, as well as a complete portfolio.

3 semester hours

ART & DESIGN 337
Illustration III
Advanced illustration problems and techniques for magazines, advertising, fashion, children's books, newspapers and preparation of a professional portfolio. Media used by illustrators including specialized painting and drawing techniques will be studied with emphasis on the importance of style in contemporary illustration. Various markets will be studied to identify appropriate potential markets for student illustrations. Work with editors and art directors. Deadline development and portfolio preparation for each market type. Emphasizes topics not covered in ADSN 358. Prerequisite: ADSN 207, ADSN 208.

3 semester hours

ART & DESIGN 337
History of Modern Art
Global art of the 20th Century with the inclusion of electronic and computer art. Prerequisite: Art & Design 117 and 118.

3 semester hours

ART & DESIGN 337
History of Modern Design
Survey of major design movements of the 19th & 20th Centuries. Studies in the national and international relationship of art and design in such groups as De Stijl and the Bauhaus.

3 semester hours

ART & DESIGN 338
History of Photography
A survey of photographic history from its earliest beginning to the present day. Major photographers, styles, and trends in a social context are covered. The course will also include political, social, and scientific influences on photography, and the role of photography in everyday life. Through slide lectures and class work, students will learn to look at, talk, and write about photographs. Prerequisite: ADSN 117 and ADSN 118.

3 semester hours

ART & DESIGN 379
History of the Graphic Arts
Survey of the history of illustration and graphic design, with emphasis on their global application in communications media.

3 semester hours

ART & DESIGN 380
History of Modern Architecture & Urbanism
Survey of the major movements in architecture and urban planning from the 19th Century to the present. Considers the problems of vernacular architecture, urban design, historicism, functionalism, post-modernism.

3 semester hours

ART & DESIGN 389
Internship
Professional, supervised, unpaid work in an organization related to career goals. Prerequisite: Permission of advisor and School Director.

3 semester hours

ART & DESIGN 399
Independent Study/Special Projects
For the student who desired to specialize in advance projects not covered by the regular course offerings. Individual or group conferences with designated faculty advisor. Prerequisite: Permission of School Director.

1-6 semester hours

ART & DESIGN 408
Selected Topics in Modern Art & Design History
Seminar examining specific topics in the global history of modern art and design such as Dada, Abstract Expressionism, furniture design, performance art, computer & media arts. Prerequisite: 12 semester hours of art history or permission of the instructor.

3 semester hours

ART & DESIGN 425
Advanced Topics I
Advanced undergraduate or graduate level topics with directed or independent study formats. Prerequisite: division approval; advanced standing; 30 semester hours of Art & Design courses or equivalent.

By arrangement; 2-10 semester hours.
Industrial Design

INDUSTRIAL DESIGN 107 (IDDSN 107/ITDSN 107)
Product Lab Orientations
This non credit course is required prior to student use of the lab equipment. It is an introduction to the proper operation of equipment and an understanding of the lab rules. Students will gain a respect for the equipment and an understanding of proper equipment practices. Eye protection and other safety protection will be worn at all times while in the lab.
0 semester hours

INDUSTRIAL DESIGN 215
Materials and Manufacturing I
Introduction to ferrous and nonferrous metals and their manufacturing methods, including liquid state, plastic state, and solid state forming; chip and non chip cutting; welding; chemical and mechanical joining; and the finishing process available. Students will develop an individual or group project and complete semester research/project report.
3 semester hours

INDUSTRIAL DESIGN 216
Materials and Manufacturing II
Introduction to thermoset and thermoplastic polymers and elastomers, rubber and other natural engineering materials and their manufacturing methods, including liquid state, plastic state, and solid state forming, chip and non-chip cutting, welding, chemical and mechanical joining, and the finishing processes available. Students will develop an individual or group project and complete semester research/project report.
3 semester hours

INDUSTRIAL DESIGN 217 (IDDSN 217/ITDSN 217)
Computer Aided Drafting
In this course students will learn the basics of computer aided drafting. Students will be expected to complete a tutorial and several assigned projects. A semester report including all projects will be completed.
Three 1 semester hour modules

INDUSTRIAL DESIGN 218A (IDDSN 218A/ITDSN 218A)
Beginning CADD
This course is an introduction to computer aided 3D Modeling. Subjects covered will include Introduction and Interface, drawing 2D shapes, mixing straight lines and arcs, numerical input, generating, viewing and rendering objects, moving rotating, sizing and mirroring objects, and drawing derivative objects. Elementary projects may be assigned, and a semester report may be generated.
2 semester hours

INDUSTRIAL DESIGN 218B
Intermediate CADD
This is an intermediate class in computer aided 3D modeling. Subjects covered will include reference planes and their palettes; drafting tools, advanced rendering, export features and animation models. Advanced projects will be assigned and a semester report will be generated.
2 semester hours

INDUSTRIAL DESIGN 218C
Advanced CADD
This is an advanced class in computer aided 3D modeling. Subjects covered will include reference planes and their palettes; drafting tools, advanced rendering, export features and animation models. Advanced projects will be assigned and a semester report will be generated.
2 semester hours

INDUSTRIAL DESIGN 255
Industrial Design Studio I
A studio course where elementary product design projects are assigned. Projects will begin with advanced foundation studies, along with simple hand held products, and advance through simple mechanically activated products. Emphasis will be placed on aesthetic development, user requirements, and design for manufacturability. A beginning professional portfolio will be initiated. Prerequisite: Foundation courses and Drafting.
3 semester hours

INDUSTRIAL DESIGN 256
Industrial Design Studio II
Continuation of IDDSN 256
3 semester hours

INDUSTRIAL DESIGN 259
Industrial Design Studio III
A studio course where complex product design projects are assigned. These projects will begin with simple, electrically powered products, and advance through more sophisticated electromechanical products. Emphasis will be placed on aesthetic development, user requirements, and design for manufacturability. Students will be expected to produce a report for each project and for the semester. A professional portfolio will be further developed. Prerequisite: IDDSN 256, IDDSN 218A &B, and IDDSN 309.
3 semester hours

INDUSTRIAL DESIGN 306
Industrial Design Studio IV
Continuation of IDDSN 305.
3 semester hours

INDUSTRIAL DESIGN 309 (IDDSN 309/ITDSN 309)
Human Factors
Analysis of Human anatomy versus function. Recognition, investigation, exploitation of static/dynamic human movements. Relationships of products, systems and environments to the human scale. Ergonomics and motions that relate to the performance of tasks. Students will develop apparatus to provide significant quantitative data. Variety of advanced studies on dynamic interaction of the body and the environment, products, and systems. Study of the relationship of age, sex, and disabilities to human movements. Creative research projects and the development of mechanical/electric test prototypes to collect quantitative data.
3 semester hours

INDUSTRIAL DESIGN 311 (IDDSN 311/ITDSN 311)
Exhibit Design
A course exploring the fields of display and exhibit design including trade shows, fairs, theme exhibits, mobile exhibits, pavilion and museum design, point of purchase, window and showroom design. The student will be exposed to a variety of project experiences including rendered presentations, model making and construction details. Area included will cover special effects, dioramas, crowd flow management, lighting design, acoustics, graphics, signage, subcontract specifications and portfolio techniques unique to the field. Field trips. Prerequisite: ADSN 205, ADSN 206.
3 semester hours

INDUSTRIAL DESIGN 355
Industrial Design Studio V
A studio course where complex product system projects are assigned. Projects will include sophisticated electromechanical products. Emphasis will be placed on research, aesthetic development, user requirements, and design for manufacturability. Project reports will be generated which will include detailed analysis, synthesis, material specification, and complete design documentation. A professional portfolio will be completed. When possible,
Industrial Design • Interior Design

the student is encouraged to work with other professions like engineering and with corporate sponsorship. Prerequisite: IDDSN 306. 3 semester hours

INDUSTRIAL DESIGN 356
Industrial Design Thesis
A studio course where individual and interdisciplinary group projects of complex product systems are initiated and executed by the student(s). Projects will include sophisticated computer controlled electromechanical products and systems. Emphasis will be placed on research, aesthetic development, user requirements, material specifications, and design for manufacturability. A thesis report will be generated, which will include detailed analysis and synthesis, material specification and complete design documentation, including a set of working drawings and a final model and rendering. A professional portfolio will be completed. Prerequisite: IDDSN 355. 3 semester hours

INDUSTRIAL DESIGN 398
Internship I & II
Summer internship following the Sophomore and Junior years. The student is expected to locate a summer job with the assistance of the ID department. A mutually beneficial job description and expected output will be developed with the participating entity and conveyed to the student. A portfolio of projects is required. Where confidentiality is required, care will be taken to protect the company, yet provide the student with adequate work examples, including a strong emphasis on CAD/CAM. Students will develop a project(s) portfolio and complete an intern project report. 1-6 semester hours each

INDUSTRIAL DESIGN 399
Special Projects
This is an advanced studio course for competitions, sponsored projects, and other design projects like furniture and lighting. Students will develop a semester research/project report. 1-9 semester hours

Interior Design

INTERIOR DESIGN 107 (ITDSN 107/IDDSN 107)
Product Lab Orientations
This non credit course is required prior to student use of the lab equipment. It is an introduction to the proper operation of equipment and an understanding of the lab rules. Students will gain a respect for the equipment and an understanding and proper equipment practices. Eye protection and other safety protection will be worn at all times while in the lab. 1 semester hour

INTERIOR DESIGN 200
Co-Op Work Experience
Through the co-op program, the student will be placed in full-time and part-time work working positions. Prerequisite: Completion of 30 semester hours; Permission of advisor and School Director; by arrangement. 3 semester hours

INTERIOR DESIGN 215
Interior Construction Systems
Students study architectural systems, details, and building codes. Construction methods and materials of foundations, walls, partitions, floors, ceilings, and roofs are covered, as well as doors, windows, stairs, and fireplaces. Continued study of building components and energy systems. Plumbing, heating, ventilating, air conditioning, acoustics and solar energy will be examined. Students will be able to represent knowledge of systems and sub-structure details. 3 semester hours

INTERIOR DESIGN 217
Color Studies for Interiors
This course is an extension of 2D principles/Color Theory. Students are introduced to further color studies and rendering techniques using various media. Additional studies will focus on composition of materials/color boards as visual presentation tools. 3 semester hours

INTERIOR DESIGN 218A (ITDSN 218A/IDDSN 218A)
Beginning CADD
This course is an introduction to computer aided 3D Modeling. Subjects covered will include Introduction and Interface, drawing 2D shapes, mixing straight lines and arcs, numerical input, generating, viewing and rendering objects, moving rotating, sizing and mirroring objects, and drawing derivative objects. Elementary projects may be assigned, and a semester report may be generated. 2 semester hours

INTERIOR DESIGN 218B (ITDSN 218B/IDDSN 218B)
Intermediate CADD
This is an intermediate class in computer aided 3D modeling. Subjects covered will include terrain models, curved lines and meshes, deformations, boolean, trim and stitch operations, and attaching extending and attaching objects. Intermediate projects will be assigned, and a semester report will be generated. 2 semester hours

INTERIOR DESIGN 219C (ITDSN 219C/IDDSN 219C)
Advanced CADD
This is an advanced class in computer aided 3D modeling. Subjects covered will include reference planes and their palettes; drafting tools, advanced rendering, export features and animation models. Advanced projects will be assigned and a semester report will be generated. 2 semester hours

INTERIOR DESIGN 255
Studio I
Introductory level course in Interior Design. Application of design theory to commercial and residential interiors. Introduction to human factors, programming, space planning, application of color, form, texture, pattern and aesthetic sensitivity to various interior problems with an emphasis on creativity and innovation. Students will communicate design ideas with a variety of two and three dimensional presentation techniques. 3 semester hours

INTERIOR DESIGN 256
Studio II
Exploration of more complicated problems in commercial and residential interiors with continued emphasis on human factors, space planning, creativity and innovation. Application of knowledge of architectural systems to design solutions. Introduction to multi level spaces, atypical users and barrier free design. Design solutions will be presented using a variety of two and three dimensional skills with continued development of media and presentation techniques. 3 semester hours

INTERIOR DESIGN 303
Materials, Products and Applications
Examination of background finishes and materials from construction and manufacturing processes through measurement and installation methods. Areas covered include floor, wall, and ceiling materials as well as woods, laminates, and glass. 3 semester hours

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**Interior Design • Biology**

**INTERIOR DESIGN 304**

**Business Practices and Ethics**
Lecture course on business practices and professional ethics as applied to the Interior Design profession. Survey of business types, marketing and selling of services and products, and fee structures will be discussed. Current trends in safety, codes and licensing issues will be explored. Examination and preparation of business forms including contractual agreements, budget estimates, purchase orders, and invoices will be covered in depth and applied to the thesis project. Prerequisite: ITDSN 356

3 semester hours

**INTERIOR DESIGN 305**

**Studio III**
Introduction to more difficult Interior problems in both commercial and residential design. Students will work more advanced programming, space planning, circulation problems and human factors. Continued emphasis on creativity and innovative problem solving. Application of architectural and energy systems as well as safety and building codes to design solution. Sensitivity to atypical users and their needs will be expanded. Architectural and design details, materials and finishes will be incorporated in the final design proposal. Prerequisite: ITDSN 265, ITDSN 266.

3 semester hours

**INTERIOR DESIGN 306**

**Studio IV**
Continued development of knowledge and skills learned in Interior Design 305 to effectively solve interior design problems in residential and commercial design solutions. Design proposals will be presented Prerequisite: ITDSN 355.

3 semester hours

**INTERIOR DESIGN 307**

**Preparation of Construction Documents**
Prerequisite: ITDSN 356.

3 semester hours

**INTERIOR DESIGN 308**

**Preparation of Business Forms**
Course involving extensive work in large office space planning and residential design. Knowledge of interior products and specifications will be incorporated into design solutions. Students will assemble a final portfolio representative of their design education experiences. Prerequisite: ITDSN 365.

3 semester hours

**INTERIOR DESIGN 309**

**Human Factors**
Analysis of Human anatomy versus function. Recognition, investigation, exploitation of static/dynamic human movements. Relationships of products, systems and environments to the human scale. Ergonomics and motions that relate to the performance of tasks. Students will develop apparatus to provide significant quantitative data. Variety of advanced studies on dynamic interaction of the body and the environment, products, and systems. Study of the relationship of age, sex, and disabilities to human movements. Creative research projects and the development of mechanical/electric test prototypes to collect quantitative data.

3 semester hours

**INTERIOR DESIGN 310**

**Exhibit Design**
A course exploring the fields of display and exhibit design including trade shows, fairs, theme exhibits, mobile exhibits, pavilion and museum design, point of purchase, window and showroom design. The student will be exposed to a variety of project experiences including rendered presentations, model making and construction details. Area included will cover special effects, dioramas, crowd flow management, lighting design, acoustics, graphics, signage, subcontract specifications and portfolio techniques unique to the field. Field trips. Prerequisite: ADSN 205, ADSN 206.

3 semester hours

**INTERIOR DESIGN 312**

**Furniture Design**
Students will have an opportunity to do specialized design work in furniture. Exploration of materials, colors, textures, forms, human factors and manufacturing techniques to create uniquely aesthetic and functional solutions to furniture design problems. Students will be required to do free hand and orthographic drawings as well as a variety of three dimensional models from sketch to final prototype. Prerequisite: ITDSN 309.

3 semester hours

**INTERIOR DESIGN 362**

**Construction Documents**
Preparation of Construction Documents for Interiors will be covered in depth and applied to the Thesis project. Drawings to be prepared include construction/demolition, electric/telephone, reflected ceiling, floor finishes, applied finishes, panel and post, and furniture plans as well as detail drawing for special construction, custom cabinetry, furniture and millwork. Prerequisite: ITDSN 365.

3 semester hours

**INTERIOR DESIGN 398**

**Internship**
Professional, supervised, paid or unpaid work in an organization related to career goals. Students will be required to develop a project portfolio and complete an intern project report. Prerequisite: Permission of advisor and School Director.

3 semester hours

**Biology**

**BIOLOGY 101**

**General Biology I**
The course deals with the general biological principles that govern all living organisms. Concepts dealt with include origin of life, structure and function of cells, genetics and evolution. Co-requisite: MATH 105.

3 class periods; 1 three-hour laboratory period; 4 semester hours
An integrated study of vertebrate structure from a phylogenetic approach. Laboratory studies will include dissection of representative forms. Prerequisite: Biology 102.

BIOLOGY 211

General Physiology
Physiological and biochemical control and functioning in systems. Laboratory work designed to acquaint the student with basic physiologic experimentation, and the interpretation and presentation of data. Required of all biology majors. Prerequisite: Biology 101.

3 class periods; 1 three-hour laboratory; 4 semester hours

BIOLOGY 223

Ecology
Relationship of living organisms to their environment; distribution, climatic factors, ecological succession; homeostasis and adaptability of the organism are considered. Field trips designed to emphasize and illustrate major habitats, life zones, and ecological principles. Required of all biology majors. Prerequisite: Biology 101, 102.

3 class periods; field trips by arrangement; 1 three-hour laboratory; 4 semester hours

BIOLOGY 300

Internship
Practical application of previous course work during supervised training in commercial, government or private laboratories. Prerequisite: Permission of Chair. By arrangement; 1-16 semester hours; Pass/Fail only

0-1 semester hours

BIOLOGY 303

Histology
Detailed analysis of the microscopic structure of animal cells and tissues. Laboratory work limited to study of prepared microscopic material. Prerequisite: Biology 101.

3 class periods; 1 three-hour laboratory; 4 semester hours

BIOLOGY 307

Genetics
The laws of biological inheritance and their practical application to life; principles of genetics and evolution derived from historical evidence of both plants and animals. Brief consideration of theories of organic evolution. Required of all biology majors. Prerequisite: Biology 101 or Biology 113-114.

3 semester hours
Permission of the instructor and Department Chair.
1-3 semester hours*

* A student may take not more than 6 semester hours of total combined credit in 398 & 399.

**Biology 399**
**Directed Research**
Opportunity for the student to pursue laboratory research under the direction of a faculty specialist. Prerequisite: Permission of the instructor and Department Chair.
1-6 semester hours*

**Biology 402**
**Evolution**
Survey of modern evolutionary theory, including bio-medical applications. Prerequisite: BIOL 101, BIOL 102.
2 lectures; field trips by arrangement; 3 semester hours

**Biology 418**
**Environmental Health**
Introduction by lecture and on-site visits to aspects of the biotic world of man, water, air and noise pollution sewage disposal, food handling. Prerequisites: BIOL 101, BIOL 102.
2 lectures; field trips by arrangement; 3 semester hours

**Biology 430**
**Marine Ecology**
Examination of the ecology of the oceans; relation of distribution to the physical and chemical environments; productivity of the marine communities and the interaction of man with marine communities. Prerequisite: BIOL 211 and permission of the instructor.
3 lectures; 1 three-hour lab; 4 semester hours

**Biology 441**
**Immunology**
Consideration of the basic principles and concepts of the mechanics of immunity and the relation of immunological phenomena to biological problems. Prerequisite: BIOL 211. 4 lectures; 4 semester hours

**Biology 443**
**Molecular Biology**
A course on Molecular Biology; the study of genes and their activity at the molecular level, DNA replication and repair, transcription, translation, recombination, translocation, and mutations. Techniques and experiments leading to important discoveries on DNA will be covered. Prerequisite: BIOL 211, CHEM 206. 3 lecture hours; 1 three-hour laboratory period; 4 semester hours

**Biology 444**
**Toxicology**
Pharmacology studies the effect(s) of drugs on living organisms. Toxicology is the study of adverse effects induced by exogenous and endogenous physical and chemical agents, including therapeutic agents. The pharmacokinetics (toxicokinetics) - pharmacodynamics (toxicodynamics), of certain classes of drugs and toxic agents, and their effect, at the molecular, cellular and organ level will be covered. The student will be introduced to all aspects of toxicology including forensic toxicology. Prerequisite: CHEM 206 and BIOL 211.
3 lecture hours; 3 semester hours; 1-3 Laboratory hours

**Biology 470**
**Field Work**
Practical field experience in the collection, identification, and preservation of various animal or plant groups. The actual title to vary with the organisms or area investigated. Prerequisite: Permission of the instructor; field work by arrangement.
1-4 semester hours

**Biology 480**
**Selected Topics**
Modern courses in diverse areas of faculty specialization within the biological sciences. Prerequisites to vary with the course and instructor; permission of the instructor required.
1-4 semester hours

**Biology 490**
**Seminar**
A series of intermediate level seminars delivered by specialists and concerned with varying aspects of a selected topic area. Prerequisite: Permission of the moderator.
1-3 semester hours

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**Business Administration**

**Business Administration 200**
**Co-op Work Experience**
A paid work experience related to the student’s major. Faculty approval required.
0-1 semester hours

**Business Administration 300**
**Philanthropy**
3 Semester hours

**Business Administration 382**
**Internship**
Field study of an organization in action. Students can fulfill the course requirements in...
Business Administration • Capstone Seminar • Chemistry

one of three ways: a) to do an internship in an outside organization or one of the learning institutes within the College, and submit a paper with an analysis of their experiential learning; b) to write a case study with critical evaluation of an organization in action; or c) to develop a new business venture and submit a comprehensive business plan.

BUSINESS ADMINISTRATION 395
Honors Thesis
Students are expected to write and present a paper to the faculty which demonstrates evidence of research in a field of business studies. The paper should contain the following elements: a) the review of literature of business studies in the field; b) description of new trends of thought, practice and application in the field; the writer’s own assessment of current research.
3 semester hours

BUSINESS ADMINISTRATION 399
Independent Study
An opportunity to specialize in advanced projects not covered by regular course offerings. Students have individual conferences with assigned faculty members and meet several times as a group to discuss findings and common problems.
1-3 semester hours

Capstone Seminar

CAPSTONE 390
Capstone Seminar
The Capstone Seminar is the culmination of learning in the Core Curriculum. As such, it reflectively builds upon learning from the various liberal arts. The course is conducted as a seminar and thus requires substantial reading and informed participation. All students write an original essay that integrates themes raised in course readings and discussions. Prerequisite: Completion of at least 75 semester credit hours and fulfillment of all other Core requirements.

Chemistry

CHEMISTRY 101
Chemistry, Society and You
This course deals with chemistry and its effect on society with examples dealing with the environment, pollution, the energy crisis and the drug culture. Students examine both the investigative methods of chemistry and its interaction with public policy.
2 lecture periods; 1 discussion or two-hour laboratory period per week; 3 semester hours

CHEMISTRY 103
General Chemistry I
A study of basic chemical principles and their application. This course is designed for the science and engineering majors and includes theoretical and experimental studies of such topics as composition and structure of matter, stoichiometry, chemical reactions, chemical bonding, gases, atomic and molecular structure, and periodic trends. Prerequisites: 2 years high school mathematics or MATH 105.
3 lecture hours; 1 discussion period; 1 three-hour laboratory period; 4 semester hours

CHEMISTRY 104
General Chemistry II
This course completes the sequence in general chemistry for science and engineering majors. Equilibrium, acids and bases, thermodynamics, nuclear chemistry, introductory organic chemistry. Prerequisites: CHEM 103, MATH 109 or MATH 110 (or 111) or equivalent.
3 lecture hours; 1 discussion period; 1 three-hour laboratory period; 4 semester hours

CHEMISTRY 113
Introductory Chemistry
An introductory course in chemistry for liberal arts and pre-professional students who wish to broaden their general education or feel that their previous preparation was inadequate. Pre-med and science majors are strongly advised to take CHEM 103, although credits may be given for the CHEM 113, CHEM 103, and CHEM 114 sequence.
3 lecture hours; 1 discussion period; 1 three-hour laboratory period; 4 semester hours

CHEMISTRY 114
Introduction to Biochemistry
After a brief review of general chemistry and an introduction to organic chemistry, the chemistry and biochemistry of carbohydrates, fats, proteins, nucleic acids, vitamins, enzymes, and hormones are studied. Included is an introduction to diseases caused by metabolic disturbances and in-born errors of metabolism. Prerequisite: CHEM 113.
3 lecture periods; 1 two-hour laboratory period per week; 4 semester hours

CHEMISTRY 200
Chem./Co-op
Students who enter the Chem./Co-op Program take this course each semester they are on a paid work assignment with an employer. All work assignments must be approved by the Chemistry Co-op director. A report is required. Prerequisite: At least sophomore standing.
1 semester hour per work-semester to a maximum of 6 semester hours

CHEMISTRY 202
Principles of Chemical Analysis
An introduction to the physiochemical behavior of electrolytic solutions, and its application to chemical separations and analyses. Prerequisites: CHEM 103, 104.
3 lecture hours; 1 three-hour laboratory period; 4 semester hours

CHEMISTRY 205
Organic Chemistry I
Study of aliphatic and aromatic compounds, synthesis, properties, and reaction mechanisms. Laboratory work in techniques, synthesis, properties and typical reactions. Prerequisites: CHEM 103, CHEM 104.
3 lecture hours; 1 three-hour laboratory period; 4 semester hours

CHEMISTRY 206
Organic Chemistry II
Study of aliphatic and aromatic compounds, synthesis, properties and reaction mechanisms. Laboratory work in techniques, synthesis, properties and typical reactions. Prerequisites: CHEM 103, 104, CHEM 205.
3 lecture hours; 1 three-hour laboratory period; 4 semester hours

CHEMISTRY 319, 320
Physical Chemistry I, II
Principles of Thermodynamics and structure of matter applied to homogeneous and heterogeneous equilibria, electrochemistry, reaction kinetics. Must be taken with Chemistry 321, 322 unless prior credit has been earned. Prerequisites: CHEM 202, MATH 215; PHYS 107, 108. Co-requisite: CHEM 205.
3 lecture hours; 6 semester hours

CHEMISTRY 321, 322
Physical Chemistry Laboratory I, II
Laboratory experiments in modern physical chemistry. Must be taken with Chemistry 319, 320 unless prior credit has been earned.
Chemistry • Cinema History • Computer Applications and Information Systems

Co-requisite: CHEM 319 for CHEM 321 and CHEM 320 for CHEM 322.

1 four-hour laboratory period; 4 semester hours

CHEMISTRY 351
Instrumental Analysis
The principles of physical chemistry are applied to chemical instrumentation, including the operation, capabilities, and limitations of various forms of chemical instrumentation. Spectrometry, spectrophotometry, chromatography, and electrical measurement methods are among the methods considered. Sample preparation and handling, electronics, computer controls, and the advantages and disadvantages of various detectors, sources, optical components, electronic variations are emphasized. Prerequisite: CHEM 320.
1 lecture hour; 2 three-hour laboratory periods; 3 semester hours; upon student demand

CHEMISTRY 355
Identification of Organic Compounds
Chemical and instrumental identification or organic compounds and separation of mixtures of compounds. Prerequisite: CHEM 206.
1 lecture hour; 2 three-hour laboratory periods; 3 semester hours

CHEMISTRY 358
Intermediate Inorganic Chemistry
Atomic and molecular structure and bonding; chemistry of the less familiar elements; compounds of unusual structure; coordination complexes and stereochemistry. Laboratory work includes special preparations and their assay. Prerequisites: CHEM 206, 319; Co-requisites: CHEM 320, 322.
3 lecture hours; 1 three-hour laboratory period; 4 semester hours

CHEMISTRY 351, 356
Biochemistry
The unifying and quantifying central concepts of biochemistry are studied by applying fundamental physiochemical principles of biological systems. Mechanisms and regulation of major metabolic pathways and structure and function of cellular elements on the molecular scale are covered in detail. Prerequisite: CHEM 206.
3 lecture hours; 1 three-hour laboratory period; 8 semester hours

CHEMISTRY 370
Organic Synthesis
Multisteps organic synthesis with emphasis on the structure and mechanism of the reactions involving carbon formation and functional group manipulations. The applications of modern spectroscopy in ascertaining structures of the reaction products with a view on the stereochemistry. Prerequisite: CHEM 205, 206 or equivalent.
3 semester hours

CHEMISTRY 394, 395
Chemical Research
Training in creative thinking, design of experiments, use of research literature. Choice of a laboratory research problem. Prerequisites: CHEM 319, 320, 321, 322 and permission of the instructor.
Semester hours arranged

CHEMISTRY 399
Independent Study
Opportunity for the student to pursue advanced individual study in his field of interest under the supervision of a specialist. Prerequisite: Permission of the instructor and the Department Chair.
Semester hours (1-6) arranged

Cinema History and Theory

CINEMA HISTORY 181
Introduction to Film Appreciation, Criticism and Analysis
An introduction to critical analysis and aesthetic appreciation of film, through lectures, discussions, readings, and screenings of dramatic, documentary and experimental films. The course, interdisciplinary in nature, explores various aspects of film style, the similarities and differences between film and other mediums of expression (including painting, music, theatre, and literature), and the various functions of film — as art, entertainment, social statement, propaganda, education, and experiment. Core course in the Fine Arts.
4 periods; 3 semester hours

CINEMA HISTORY 262
Film History
4 periods; 3 semester hours

CINEMA HISTORY 361
American Film
A survey of major works in the American cinema emphasizing techniques, styles, and the film medium as an index of cultural and social change.
3 semester hours

Computer Applications and Information Systems (CAIS)

COMPUTER APPLICATIONS AND INFORMATION SYSTEMS 101
Statistics
This course covers basic statistics, including descriptive statistics, probability, discrete distributions, continuous distributions, sampling, and hypothesis testing. This course is required of all Business students. Prerequisite: Math 105 or Math placement exam at Math 109, or higher.
3 semester hours
Computer Applications and Information Systems • Computer Engineering

Computer Engineering

COMPUTER APPLICATIONS AND INFORMATION SYSTEMS 102
Applied Statistics
This is a continuation of CAIS 101 and involves searching the Internet, downloading, and analysis of economic data. “Analysis of data” may also include problems from the former MS 110 (Linear Programming). This course is required of all Business students. Prerequisite: CAIS 101.
3 semester hours

COMPUTER APPLICATIONS AND INFORMATION SYSTEMS 191
Computer Concepts
This course provides elementary instruction in basic productivity packages, like Microsoft’s Office 97. It is for those students with no prior exposure to computer applications.
3 semester hours

COMPUTER APPLICATIONS AND INFORMATION SYSTEMS 201
Intro to CAIS
This course covers computer and systems hardware, operating systems, application development, the value of information, databases, networks, and their integration and management within the modern firm. This course is required of all Business students. Prerequisite: CAIS 102.
3 semester hours

COMPUTER ENGINEERING 286
Introduction to Microprocessors
Theory and application of microprocessors, and associated peripheral devices such as memory, ports, clocks, system design and debugging techniques, including specific design problems using existing devices. Programming aids, including assemblers and simulators. Programming problems including peripheral device service routines and arithmetic operations. Information structures for real-time data acquisition systems. Prerequisite: Computer Engineering 210 and Computer Science 102.
3 lecture hours; 1 three-hour laboratory; 3 semester hours

COMPUTER ENGINEERING 312
Computer Organization
Organization of computer systems. Central processing unit; micro programmed control; input/output organization; interrupts; traps; direct memory access; arithmetic operations; main memory. Prerequisite: Computer Engineering 315.
3 semester hours

COMPUTER ENGINEERING 315
Digital Design I with Laboratory
Design of complex digital systems; top-down design and modularization. Implementation of controllers. Use of hardware design languages (VHDL) to implement systems. Rapid prototyping. Fault tolerant design. Prerequisite: Computer Engineering 210. Laboratory includes implementation of digital systems using FPGAs.
3 lecture hours; 4 semester hours; 1 three-hour laboratory

COMPUTER ENGINEERING 387
Embedded System Design
Design of systems having major hardware and software components. Software implementations are used to control specific hardware such as micro controllers. Major laboratory emphasis to realize embedded systems. Prerequisite: Computer Engineering 286.
3 semester hours

COMPUTER ENGINEERING 399
Independent Study in Computer Engineering
Independent study of advanced topics in Computer Engineering and submission of project report as required. Problem assignment to be arranged with and approved by the Department Chair. Open only to qualified seniors.
3 semester hours

COMPUTER ENGINEERING 408
Operating Systems
Structure and design of computer operating systems. Synchronization of processes; deadlock avoidance; CPU management; file management; memory management; and device management. Prerequisite: Computer Science 102, Computer Engineering 312.
3 semester hours

COMPUTER ENGINEERING 410
Introduction to Computer Architecture
Instruction set; data path and controller design for computers. Design and analysis of a RISC processor including integer and floating point pipeline design. Cache and virtual memory design, interrupts and DMA. Pre-requisite: Computer Engineering 312 or equivalent background.
3 lecture hours, 3 semester hours

COMPUTER ENGINEERING ( CPEG 446/ELEG 446)
MEMS (Micro-Electro-Mechanical Systems)
Basic micro fabrication techniques, MEMS materials and their properties, MEMS device design and simulation, MEMS packaging and assembly, signal testing and MEMS reliability analysis. MEMS industrial applications in various areas will also be discussed. Students used ANSYS FEM software to design and simulate their behavior.

COMPUTER ENGINEERING 447
Logic Synthesis Using FPGAs
Logic design using textual design entry, VHDL. Behavioral, structural and data flow descriptions. Technology-dependent vs. technology-independent design. CPLD, SEAM and antifuse technologies. Rapid prototyping and retargeting designs. A major design project. Prerequisite: Computer Engineering 315.
3 lecture hours, 3 semester hours

Computer Engineering 200
Undergraduate Co-op/Internship in Computer Engineering
By arrangement.
1-3 semester hours

Computer Engineering 210
Digital Design I
Basic digital design principles. Boolean algebra. Combinational logic design with gates, MSI, LSI. Sequential logic design; register, counters, memory and programmable logic. Prerequisite: Mathematical sophistication.
3 semester hours

Computer Engineering 286
Introduction to Microprocessors
Theory and application of microprocessors, and associated peripheral devices such as memory, ports, clocks, system design and debugging techniques, including specific design problems using existing devices. Programming aids, including assemblers and simulators. Programming problems including peripheral device service routines and arithmetic operations. Information structures for real-time data acquisition systems. Prerequisite: Computer Engineering 210 and Computer Science 102.
3 lecture hours; 1 three-hour laboratory; 3 semester hours

Computer Engineering 312
Computer Organization
Organization of computer systems. Central processing unit; micro programmed control; input/output organization; interrupts; traps; direct memory access; arithmetic operations; main memory. Prerequisite: Computer Engineering 315.
3 semester hours

Computer Engineering 315
Digital Design I with Laboratory
Design of complex digital systems; top-down design and modularization. Implementation of controllers. Use of hardware design languages (VHDL) to implement systems. Rapid prototyping. Fault tolerant design. Prerequisite: Computer Engineering 210. Laboratory includes implementation of digital systems using FPGAs.
3 lecture hours; 4 semester hours; 1 three-hour laboratory

Computer Engineering 387
Embedded System Design
Design of systems having major hardware and software components. Software implementations are used to control specific hardware such as micro controllers. Major laboratory emphasis to realize embedded systems. Prerequisite: Computer Engineering 286.
3 semester hours

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Independent study of advanced topics in Computer Engineering and submission of project report as required. Problem assignment to be arranged with and approved by the Department Chair. Open only to qualified seniors.
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3 lecture hours, 3 semester hours

Computer Engineering ( CPEG 446/ELEG 446)
MEMS (Micro-Electro-Mechanical Systems)
Basic micro fabrication techniques, MEMS materials and their properties, MEMS device design and simulation, MEMS packaging and assembly, signal testing and MEMS reliability analysis. MEMS industrial applications in various areas will also be discussed. Students used ANSYS FEM software to design and simulate their behavior.

Computer Engineering 447
Logic Synthesis Using FPGAs
Logic design using textual design entry, VHDL. Behavioral, structural and data flow descriptions. Technology-dependent vs. technology-independent design. CPLD, SEAM and antifuse technologies. Rapid prototyping and retargeting designs. A major design project. Prerequisite: Computer Engineering 315.
3 lecture hours, 3 semester hours
COMPUTER ENGINEERING 448
**Introduction to VLSI Design**
Design and implementation of a very large scale integrated circuits. CMOS and BiCMOS technologies, basic topological structure of ICs, clocking characteristics, resistance, capacitance and power estimation, system-level design and implementation issues. Custom layout and verification using CAD tools. Synthesis of designs from VHDL descriptions. Term project will include the design and testing of an integrated circuit. Prerequisites: Computer Engineering 315 and Electrical Engineering 348.

*3 lecture hours, 3 semester hours*

COMPUTER ENGINEERING 449 A
**Senior Project**
Major open-ended design project to integrate student’s knowledge of hardware and software. Formulation of design specifications, use of design tools, feasibility considerations. Prerequisites: Computer Engineering 312, 387, Engineering 300, English 204, Integrated Studies C101 and senior status.

*1 semester hours*

COMPUTER ENGINEERING 449 B
**Senior Project**
Major open-ended design project to integrate student’s knowledge of hardware and software. Formulation of design specifications, use of design tools, feasibility considerations. Prerequisites: Computer Engineering 312, 387, Engineering 300, English 204, Integrated Studies C101 and senior status.

*3 semester hours*

COMPUTER ENGINEERING 457
**Electronic Design Using Programmable Analog Arrays**
Use of design methodologies to implement analog circuits using programmable analog arrays. Introduction to design tools for circuit implementation. Laboratory experience includes design of analog filters, photoplethysmography, a non-invasive method of measuring blood pulsations, temperature measurements with PWM fan control, motor control using PID controllers, among others. Design tools include Matlab and design tools from Anadigm, Inc. (schematic capture and simulation)

COMPUTER ENGINEERING (CPEG 458/LEG 458)
**Analog VLSI**
Modeling, design and analysis of analog VLSI circuits. CMOS processing and layout, current mirrors, Opamp, comparators, S/H voltage references, switched-capacitor circuits, data converters, filters and PLLs. Students design analog VLSI layouts, extract the netlists and simulate the circuit behavior. Transistors sizing will also be discussed. EDA tools PSPICE, Mentors Graphics are used.

**COMPUTER ENGINEERING 460**
**Introduction to Robotics**
Basic robotics, including: position and velocity sensing, actuators, control theory, robot coordinate systems, robot kinematics, differential motions, path control, dynamics, and force control. Robot sensing, simulation of manipulators, automation, and robot programming languages are also investigated. Prerequisites: CS 102, Electrical Engineering 360, Math 214 or Math 314 or permission of instructor.

*3 semester hours*

**COMPUTER ENGINEERING 471**
**Data and Computer Communications**

*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 472**
**Computer Networks**
Introduction to computer networks. Circuits, message, packet and cell switching, WAN and LAN design issues. LAN standards. Network layer design issues. Routing and congestion control. Inter-networking ISDN, B-ISDN, and ATM. Transport layer design issues and protocols. Application layer design issues and protocols. Examples of protocol suites and networks. Prerequisite: Computer Engineering 471 or permission of instructor.

*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 473**
**Local Area Networks**
Introduction to Local Area Networks (LANs).


*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 481**
**Mobile Communications**
This course covers the basic technologies in the field of wireless and mobile communications. The following topics are covered in the course: wireless transmission, media access control, satellite systems, broadcast systems, wireless LANS, wireless ATM, network layer protocols, transport protocols and support for mobility. Prerequisites: Computer Engineering 471 or Computer Engineering 472 or permission of instructor.

*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 482**
**Network Administration**

*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 489**
**Software Engineering**
Structural development and methodology for large software systems. Planning requirements, design, test and validation. Advanced topics in software development. Prerequisites: Computer Science 102 and senior status.

*3 semester hours*

**Computer Science**

**COMPUTER SCIENCE 101**
**Introduction to Computing I**
Introduction to high level languages, data types, subprograms; arrays and records. Topdown programming. Algorithmic development and flow charting.

*3 lecture hours, 3 semester hours*
Computer Science

COMPUTER SCIENCE 101A
Introduction to Computing I Lab
This is an accompanying laboratory to the Computer Science 101 course. Students will do supervised work on assigned laboratory projects. In addition, some sessions may be used to cover new or review CPSC 101 lecture material as well as to administer CPSC 101 examinations. Co-requisite: CPSC 101. 2 lecture hours; 1 semester hours

COMPUTER SCIENCE 102
Introduction to Computing II
Introduction to data structures. Top-down design and structured programming, debugging. String processing, stacks, queues, lists, linked lists, trees, hash tables. Searching and sorting. Prerequisite: CPSC 101. 3 lecture hours; 3 semester hours

COMPUTER SCIENCE 102A
Introduction to Computing II Lab
This is an accompanying laboratory to the Computer Science 102 course. Students will do supervised work on assigned laboratory projects. In addition, some sessions may be used to cover new or review CPSC 102 lecture material as well as to administer CPSC 102 examinations. Students must take CPSC 102 con-currently. Pre-requisite: CPSC 101 and CPSC 101a. Co-requisite: CS 102. 2 lecture hours; 1 semester hours

COMPUTER SCIENCE 200
Undergraduate Co-op/Internship in Computer Science
By arrangement. 1-3 semester hours

COMPUTER SCIENCE 201
Data and File Structures.
Advanced treatment of data structures and file structures including manipulating data stored in the file systems. Topics include fundamentals of file processing operations, secondary storage characteristics, and managing files of records. Additional topics will include performance file organization, sorting large files, multi-level indexing, 2-3 Trees, B-Trees, and Hashing and Extendable Hashing. Pre-requisites: CPSC102 and CPSC 102a. 3 lecture hours; 3 semester hours

COMPUTER SCIENCE 203
Second Language Course
A class for computer science majors to broaden the programming background. Students will take a course in a language other than the current teaching language. This class is not an actual course, but a number of departmental course offerings may satisfy this requirement. Courses which may be taken will include computer science offerings which assume programming competency (CPSC 101 and CPSC 102 equivalent) in the instructional language. The department will announce courses which qualify for satisfaction of CPSC 203 requirement. Pre-requisites: CPSC 102 and CPSC 102a. 3 lecture hours; 3 semester hours

COMPUTER SCIENCE 227
Discrete Structures
This course is an introduction to some of the discrete mathematical structures relevant to computer science, including set theory, propositional calculus, predicate calculus, algebraic operations and relations, counting techniques, and graph theory. Prerequisite: MATH 109. 3 lecture hours; 3 semester hours

COMPUTER SCIENCE 300
Economics and Management of Computing Projects
The design process, engineering economics, project planning and ethics in engineering practice. A required course for all Computer Science majors, normally taken in the junior year, offered both semesters. Prerequisites: CPSC 102, 102a, MATH 215, PHYS112 and junior standing. 3 lecture hours, 3 semester hours

COMPUTER SCIENCE 301
Programming Languages
This is a second computer language course organized around the concepts of data objects, data types, abstraction mechanisms, sequence and data control, storage management, syntax, and operating environments. Several widely used programming languages are analyzed to illustrate these concepts. Prerequisite: CPSC 201. 3 lecture hours; 3 semester hours

COMPUTER SCIENCE 306
Compiler Design
Introduction to compiler design. Major parts of a compiler, lexical, syntactic, and semantic analysis. Introductory language theory. Code optimization techniques. Examples of modern compilers. Prerequisite: CPSC 201, 227. 3 lecture hours; 3 semester hours

COMPUTER SCIENCE 311
Computer Architecture
Introduction, Processing Unit Design, Memory System Design, Input-Output Design and Organization, Pipelining, reduced Instruction Set Computers (RISCs), Introduction to Multiprocessors, Shared Memory Architectures, Parallel Algorithms and Programming, Other Computational Paradigms. Pre-requisites: CPEG 210, CPEG 286. 3 lecture hours; 3 semester hours.

COMPUTER SCIENCE 320
Theory of Computation
Elements of the theory of formal languages, grammars, finite state machines, computability, primitive recursive functions, Turing machines and computation. Prerequisite: CPSC 227. 3 lecture hours; 3 semester hours

COMPUTER SCIENCE 325
Structure and Interpretation of Computer Programs
Procedures and data both primitive and compound. Iteration and recursion. Abstraction of data and procedures. Sequences and trees. Manipulation of lists. Data-directed programming, dispatch on type, message passing. Object-oriented programming. Local state and environment diagrams. Streams. Prerequisite: CPSC 201. 3 lecture hours; 3 semester hours

COMPUTER SCIENCE 329
Fundamentals of Algorithms
This course aims to develop an understanding of the process by which an algorithm is developed to solve a problem and how it is translated into a working computer program. Emphasis is placed on problem-solving approaches and efficient programming techniques. Topics covered are: data structures, stacks, lists, trees, search algorithms, introduction to parsing and sorting techniques; structures programming; interactive and recursive programming, analysis of algorithms and special purpose algorithms. Prerequisite: CPSC 201, 227. 3 lecture hours; 3 semester hours

COMPUTER SCIENCE 340
Queuing Theory
Important probability distributions, Markov chains, Poisson process, birth-and-death process, queuing theory, queuing models of computer systems. Prerequisite: CPSC 320, MATH 323. 3 lecture hours; 3 semester hours
Operations Research
Linear programming formulation of optimization problems, hyper planes, convex sets, linear independence, bases of vector spaces, matrix inversion, theory and computation techniques of simple, revised simplex methods, degeneracy, duality. Transportation and assignment problems, integer programming and network flows. Prerequisite: Computer Science 320, "C" or better in MATH 323.
3 lecture hours; 3 semester hours

COMPUTER SCIENCE 399
Independent Study in Computer Science
Independent study of advanced topics in Computer Science and submission of project report as required. Problem assignment to be arranged with and approved by the Department Chair.
Open only to qualified seniors
3 semester hours

COMPUTER SCIENCE 400
Object-Oriented Programming Using C++
This course introduces the modern object-oriented programming philosophy using C++ to the beginning graduate students. The emphasis is on developing the programming thought process in terms of objects and their interactions to each other. Concepts covered include data hiding, code reuse through inheritance, polymorphism, templates, exception handling, developing appropriate class hierarchy and code maintenance for large software projects. Prerequisites: CPSC 102 or equivalent background.
3 lecture hours; 3 semester hours

COMPUTER SCIENCE 410
Java Programming
Object oriented programming, using Java, packages, interfaces, multi-threading, classes, inheritance, exceptions, interfaces, native methods, applets. Prerequisite: CPSC 400 or permission of instructor.
3 lecture hours; 3 semester hours

COMPUTER SCIENCE 411
Advanced Object-Oriented Programming with Java
Covered topics include advanced features of Java, such as Database inter-connectivity (JDBC) with Servlets and JSP, remote method interface (RMI), distributed applications objects using CORBA and JNDI, Java Beans, introspection and reflection, Enterprise Java applications with EJB, interfacing Java to C++ with JNI, and additional advanced topics. A focus on developing components and packages. A major project is developed. Prerequisite: CPSC 410
3 lecture hours; 3 semester hours

COMPUTER SCIENCE 435
Unix System Programming
Introduction to shell programming and system programming languages in the Unix environment. Files, directories, filters, processors, queues, semaphores. A major project focuses information towards a particular application. Prerequisite: CPSC 400.
3 lecture hours; 3 semester hours

COMPUTER SCIENCE 440
Windows Programming
This course covers Graphical User Interface (GUI), design and Windows programming using Visual C++ and Microsoft Foundation Class (MFC) library. Topics covered include windows architecture, message/event driven programming, designing Dialog based, SDI and MDI applications, Document/View architecture, Device Contexts, Database access using the MFC ODBC classes and ADO. A comprehensive project is assigned towards the end of the course, which covers important windows programming concepts. Prerequisite: CPSC 400.
3 lecture hours, 3 semester hours

COMPUTER SCIENCE 449 A
Senior Design Project
Student will initiate and complete a project that meets career interests and objectives. One or more faculty will be available to each student in a consulting capacity. The department chair must approve an outline of the project in the semester prior to registration for this course.
1 semester hour

COMPUTER SCIENCE 449 B
Senior Design Project
Student will initiate and complete a project that meets career interests and objectives. One or more faculty will be available to each student in a consulting capacity. The department chair must approve an outline of the project in the semester prior to registration for this course.
3 semester hours

COMPUTER SCIENCE 450
Data Base Design
Survey of data structures used in data bases; relations; hierarchical and network data models; theoretical issues in data base processing; practical issues in data base design, programming, and implementation. Prerequisite: CPSC 400.
3 lecture hours; 3 semester hours

COMPUTER SCIENCE 460
Introduction to Robotics
Basic robotics including: position and velocity sensing, actuators, control theory, robot coordinate systems, robot kinematics, differential motions, path control, dynamics, and force control. Robot sensing, simulation of manipulators, automation, and robot programming languages are also investigated. Prerequisites: CPSC 102, MATH 214 or MATH 314, or permission of instructor.
3 semester hours

COMPUTER SCIENCE 485
Software Design Patterns
Introduce design patterns and software architectures. Combines pattern theory with examples to show why and when to use patterns and how to implement them. How to apply design patterns at the enterprise level. The use of design patterns to design and implement systems of high stability and quality. Compare and contrast patterns, including differences between Mediator and Facade. Discuss relationships between patterns. Study how patterns are collaborated within domains to solve complicated problems.
3 semester hours

Dental Hygiene

DENTAL HYGIENE 100
Introduction to Dental Hygiene
This course provides the opportunity to develop basic knowledge of the dental hygiene profession and the responsibilities of licensure. Students will learn the role of the dental hygienist in total patient care.

DENTAL HYGIENE 123
Oral Anatomy and Embryology
This course is an introduction to the study of the oral cavity and its associated structures. Included in the curriculum are lectures covering anatomy, embryology and histology of oral structures and the head and neck, emphasizing teeth and their supporting tissues. Knowledge of content is emphasized during clinical practice.
4 lecture hours; 4 semester hours

DENTAL HYGIENE 124
Dental Radiology
This course provides the fundamental sc-
Dental Hygiene

scientific principles upon which clinical dental radiology is based. Content includes radiation history, radiation physics, radiographic anatomy, application to radiation safety for patient and operator, quality assurance, infection control practice, standard intra and extra oral radiographic techniques, quality film production and film evaluation.

2 lecture hours; two-hour laboratory periods;
3 semester hours

DENTAL HYGIENE 127
Pharmacology for the Dental Hygienist
general principles of pharmacology and use of pharmaceuticals; derivation and effect of drugs, especially those used in dentistry. Values and uses of chemical sterilizing agents, pre-and post-operative medications, anesthetics, antibiotics, and other pharmaceutical adjuncts to oral hygiene and dental care.

2 lecture hours; 2 semester hours

DENTAL HYGIENE 129
Clinical Practice I
Introduction to the role and function of the Dental Hygienist in preventive dentistry; history and ethics of the Dental Hygiene profession; relationship of general and oral health to the disease process. Clinical hours are devoted to development of: infection control procedures, oral self care, basic clinical skills of patient assessment/data collection, basic instrumentation, patient education and dental emergencies.

3 lecture hours; 7 clinical hours; 4 semester hours

DENTAL HYGIENE 130
Clinical Practice II
This course is a continuation of Clinical Practice I and focuses on the role of the Dental Hygienist in preventive oral health, disease of the oral cavity, and patient education. Students will learn advanced instrumentation techniques and deliver comprehensive dental hygiene services in the Fones Dental Hygiene Health Center as well as in the community setting. The community setting will provide the students the opportunity to interact with a variety of patient populations. Evidenced-based decision making will be a common theme throughout the semester. The student will utilize the dental hygiene process of care by assessing clinical information and external research to implement and evaluate the dental hygiene treatment care plan; applying the ADHA Standards of Clinical Dental Hygiene Practice. Prerequisite: Successful completion of DHYG 129 and 130 providing students with a practical and treatment oriented study of the oral manifestations of systemic diseases. Students will learn advanced instrumentation techniques and deliver comprehensive dental hygiene services in the Fones Dental Hygiene Health Center as well as in the community setting. The community setting will provide the students the opportunity to interact with a variety of patient populations. Evidenced-based decision making will be a common theme throughout the semester. The student will utilize the dental hygiene process of care by assessing clinical information and external research to implement and evaluate the dental hygiene treatment care plan; applying the ADHA Standards of Clinical Dental Hygiene Practice. Prerequisite: Successful completion of all first-year required courses.

2 lecture hours, 14-21 clinical hours per week; 5 semester hours

DENTAL HYGIENE 140
Introduction to Periodontology
This course provides the basic principles of periodontology, which covers the recognition of clinical characteristics of the periodontium, classification of periodontal diseases, role of microorganisms and local factors in the etiology of periodontal diseases.

1 semester hours

DENTAL HYGIENE NUTRITION 204
Nutritional Biochemistry
This course will teach the basic principles of the science of human nutrition and nutritional biochemistry with an emphasis on the effects of nutrition on dental health. The focus will be on the roles of micro- and macronutrients and the importance of proper energy balance, digestion, absorption and metabolism of these nutrients. Correlations to dental hygiene are discussed at each class as it obtains to the weekly subject matter. Strategies of counseling patients to improve optimum oral health are taught throughout the course.

3 credits

DENTAL HYGIENE 227
Clinical Practice III
This course provides students the opportunity to expand on the basic dental hygiene skills learned in Clinical Practice I and II (DHYG 129 and 130) providing students with a practical and treatment oriented study of the oral manifestations of systemic diseases. Students will learn advanced instrumentation techniques and deliver comprehensive dental hygiene services in the Fones Dental Hygiene Health Center as well as in the community setting. The community setting will provide the students the opportunity to interact with a variety of patient populations. Evidenced-based decision making will be a common theme throughout the semester. The student will utilize the dental hygiene process of care by assessing clinical information and external research to implement and evaluate the dental hygiene treatment care plan; applying the ADHA Standards of Clinical Dental Hygiene Practice. Prerequisite: Successful completion of all first-year required courses.

2 lecture hours, 14-21 clinical hours per week; 5 semester hours

DENTAL HYGIENE 230
Local Anesthesia
DHYG 230 Local Anesthesia for the Fones Dental Hygiene Students. This course is designed to prepare the student dental hygienist to qualify to administer local anesthesia and receive a certificate in local anesthesia acceptable in the State of Connecticut. The student will be introduced to safe, effective administration of local anesthesia through lecture, laboratory and clinical settings. The comprehensive content areas will include rational for pain management, client management, medical emergencies and review of essential anatomy, physiology, and pharmacology of pain control agents. In addition, the student will perform efficient techniques of pain management through local anesthesia on clinical partners under the direct supervision of clinical faculty.

1 semester hour

DENTAL HYGIENE 232
Dental Public Health
Dental Public Health consists of didactic and field work components in community services. It is designed to enable Dental Hygiene students to identify Dental Hygiene career opportunities within the public health setting; describe the structure and function of public health; explain federal, state and local legislation, policies and procedures pertaining to public health; assess the dental needs and demands of the public including special populations; and plan and evaluate dental health care programming. Prerequisite: Successful completion of all first year required courses.

2 lecture hours; 72 hours of field experience per rotation; 4 semester hours

DENTAL HYGIENE 233
Oral and General Histo-Pathology
This course will provide the dental hygienist with an in-depth discussion of various types of oral diseases of the hard and soft tissues. Em-
Dental Hygiene • Economics

phasis will be placed on the etiology, clinical picture, radiographic picture, histologic/microscopic findings, pathogenesis, treatment and prognosis for each condition discussed. Some systemic conditions with specific oral findings will also be covered. Prerequisite: Successful completion of all first year required courses.

3 semester hours

DENTAL HYGIENE 241
Periodontology
This course expands on the basic principles of periodontology introduced during the first year Dental Hygiene curriculum. Students receive a sound foundation in the history and management of periodontal diseases including the etiology and pathogenesis of periodontal diseases, the systemic disease connection with periodontal disease, the role of the immune system in the disease process and the various periodontal treatment modalities available with emphasis on the Dental Hygiene treatment plan. Prerequisite: Successful completion of DHYG 140.

2 semester hours

DENTAL HYGIENE 250
Dental Materials
This course provides didactic and clinical information relating to dental materials utilized in the dental office. Content includes: terminology, basic principles, properties of materials, techniques and procedures, recognition of restorations and indications for their use. Students will also gain exposure to expanded auxiliary utilization, and the role of the Dental Hygienist in specialty practice. Prerequisite: Successful completion of all required first year Dental Hygiene courses.

2 lecture hours; 1 two-hour laboratory period; 3 semester hours

DENTAL HYGIENE 299
Dental Hygiene Independent Study
Selected independent projects conducted under the supervision of a Dental Hygiene faculty member.

1-6 semester hours

DENTAL HYGIENE 301
Dental Hygiene Practice Management
Through discussion of legal, regulatory, and ethical issues governing dental healthcare, the student will develop strategies to provide optimum client care and understand the Dental Hygienist role within an interdisciplinary healthcare team. Appreciation for the role of administrator / manager is obtained through lecture content and group activities focused on the development of communication, teamwork, personnel, business, and patient management skills. These skills are necessary to prepare for emerging practice models in dental hygiene.

3 semester hours

DENTAL HYGIENE 302
Instructional Strategies for the Health Professional
Assessment, planning, implementation and evaluation of various instructional methodologies/strategies to facilitate presentations. Fundamentals of instructional theory with practical skill applications.

2 lecture hours; 2 hour observation/presentation; 3 semester hours

DENTAL HYGIENE 303
Advanced Clinical Concepts
Advanced Clinical Concepts expands upon the basic knowledge and skills utilized in the dental hygiene process of care. Students are introduced to advanced clinical concepts through evidence based practice methods. Oral medicine, advanced periodontology, pain management, and current research and technologies are emphasized.

DENTAL HYGIENE 304
Dental Hygiene Internship
This course will provide the Dental Hygiene student with the opportunity to apply the knowledge and skills acquired throughout the dental hygiene curriculum in an internship experience. Under the guidance of the course instructor the dental hygiene student intern will select a field site in an alternative practice setting (not private practice). With the help of the site’s primary mentor the intern will set goals and objectives that will allow them to become an integral member of the organization. The internship will consist of direct observation, participation and supervised teaching or fieldwork. Prerequisite: DHYG 302

By arrangement; 3-6 semester hours

DENTAL HYGIENE 305
Dental Hygiene Research I
This course will introduce the student to the fundamentals of research design and process. It will enable Dental Hygiene students to develop skills in the analysis of dental research findings and the evaluation of dental issues through critical analysis. Students will also gain exposure to the development of research protocols and develop an original research proposal. Prerequisite: DHYG 302

3 semester hours

DENTAL HYGIENE 306
Dental Hygiene Research II
This course is designed to familiarize Dental Hygiene students with evolving professional trends related to private or public practice. Students, working in groups of two or three, will utilize and reinforce acquired Dental Hygiene research concepts while developing advanced assessment, planning implementation and evaluation skills, original research will be implemented. Required of all candidates for a Bachelor of Science degree in Dental Hygiene. Prerequisite: DHYG 302, DHYG 305 and senior status.

4 semester hours

DENTAL HYGIENE 400
Statistical Reasoning
This course will provide a basic overview of statistical analysis and how certain tests can be performed to determine if there is a statistically significant relationship between variables. The student will receive an introduction to the use of statistical software for data analysis.

Economics

ECONOMICS 201
Principles of Economics I — Macro
Analysis of basic concepts; national income, employment, monetary and fiscal policy and economic growth.

3 semester hours

ECONOMICS 202
Principles of Economics II — Micro
An analysis of price, output, income distribution, market structures and international trade.

3 semester hours

ECONOMICS 311
Managerial Economics
The theoretical analysis of the behavior of the consumer and the firm. Problems of income distribution, welfare economics, and general equilibrium analysis. Prerequisites: ECON 201 and ECON 202; junior or senior status.

3 semester hours
Economics • Education • Electrical Engineering

ECONOMICS 375
International Business Economics
A basic model of the international economy. International macroeconomic theory is examined using a set of economic flow diagrams. Examination of issues including interest rates, exchange rates and asset prices in the global economy; causes and consequences of trade deficits; effects of monetary policy; debate on IMF and World Bank reform; globalization of financial markets. Intensive use of the Web and Internet resources to retrieve and analyze data. Prerequisites: ECON 201 and ECON 202, junior or senior status.
3 semester hours

ECONOMICS 376
Business Forecasting
Macroeconomic forecasting to improve asset allocation and investment performance over the business cycle. Examining and forecasting the behavior of stock, bond, commodity and currency prices. Forecasting tools to analyze the economy and forecast price movements in the financial markets. Prerequisites: ECON 201 and ECON 202, junior or senior status.
3 semester hours

Economics

EDUCATION 450
Field Experience
This course is a structured observation in a public school. The goals of the course are to facilitate the students' awareness of self, of school pupils, and of prospective teachers. Course can serve as an elective for other majors. The number of credits taken should be determined with the student's advisor. Required prior to student teaching.
1 6 semester hours

Electrical Engineering

EDUCATION 399
Independent Study in Education
Permission of Department Chair is required
1 6 semester hours

ELECTRICAL ENGINEERING 233
Network Analysis I
3 semester hours

ELECTRICAL ENGINEERING 234
Network Analysis II
2 semester hours

ELECTRICAL ENGINEERING 235
Network Analysis I Lab
Use of resistor networks and DC voltage sources in various configurations; measurement of current flow and voltage difference. Introduction to RLC circuits in steady AC conditions. Familiarization with standard laboratory instruments. Co-requisite: ELEG 233.
1 three-hour laboratory, 1 semester hour

ELECTRICAL ENGINEERING 236
Network Analysis II Lab
Steady state and transient analysis of RLC circuits. Typical series and parallel resonance circuits are examined and their parameters experimentally determined; two pole network analysis; transformers; frequency response plots. Extensive use of the oscilloscope. Pre-requisite: ELEG 235, Co-requisite: ELEG 234.
1 three-hour laboratory, 1 semester hour

ELECTRICAL ENGINEERING 333
Signal and Systems
Students learn to analyze theoretically and by computer both continuous and discrete signals and the application of each to real-world problems. Applications involve the definition of a system, defined either by a laplace or z-transform and the output of same to the application of any input signal.
3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 348
Electronics
Application of diodes, bipolar transistors (BJT) and field effect transistors (FET) to signal amplification and switching. Computer Simulation. Pre-requisite: ELEG 233, Pre-requisite: ELEG 235.
3 semester hours; 3 semester hours

ELECTRICAL ENGINEERING 349
Senior Project
Student work for approximately 150 hours performing research work within the department of Electrical Engineering. Emphasis is on good technical writing and imaginative design of solutions to a given problem.
3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 403
RF VLSI
The course covers fundamental concepts of RF circuit design. Students will learn circuit level design of high speed analog/RF circuits. Specific topics include impact of scaling and noise in high-speed communication circuits, low noise amplifiers, mixers, power amplifiers and frequency synthesizers.
3 lecture hours; 3 semester hours

Digital VLSI
The objective of this course is to teach students the CMOS transistor design in VLSI circuits. (CMOS stands for complementary metal oxide semiconductor.) Supported by CAD

Teaching the Special Needs Students
This course is designed to provide educators with the understanding of the development of exceptional students and the methods of identifying, diagnosing, and prescribing the activities for teaching such students in regular classrooms. This course in special education satisfies the state's requirement for Certification and includes the major categories of exceptionality e.g., the learning disabled, the handicapped, the gifted, etc.
3 semester hours

Teaching Exceptional Students
This course is designed to provide educators with the understanding of the development of exceptional students and the methods of identifying, diagnosing, and prescribing the activities for teaching such students in regular classrooms. This course in special education satisfies the state's requirement for Certification and includes the major categories of exceptionality e.g., the learning disabled, the handicapped, the gifted, etc.
3 semester hours

ECONOMICS 333
Business Forecasting
This course is designed to provide educators with the understanding of the development of exceptional students and the methods of identifying, diagnosing, and prescribing the activities for teaching such students in regular classrooms. This course in special education satisfies the state's requirement for Certification and includes the major categories of exceptionality e.g., the learning disabled, the handicapped, the gifted, etc.
3 semester hours

EDUCATION 450
Field Experience
This course is a structured observation in a public school. The goals of the course are to facilitate the students' awareness of self, of school pupils, and of prospective teachers. Course can serve as an elective for other majors. The number of credits taken should be determined with the student's advisor. Required prior to student teaching.
1 6 semester hours

EDUCATION 337
Teaching the Special Needs Students
This course is designed to provide educators with the understanding of the development of exceptional students and the methods of identifying, diagnosing, and prescribing the activities for teaching such students in regular classrooms. This course in special education satisfies the state's requirement for Certification and includes the major categories of exceptionality e.g., the learning disabled, the handicapped, the gifted, etc.
3 semester hours
tools, students will learn gate level design, IC design, fabrication, and layout of digital CMOS integrated circuits. With these skills, students will also be able to interact with integrated circuit fabrication process engineers after completing this course.

3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 405
Statistics for Engineers
From elements of probability, probability distributions and descriptive statistics to hypothesis testing, confidence intervals, linear regression and correlation, analysis of variance and engineering applications to include quality control.

3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 406 (ELEG/CPSC 406
Soft Computing I
Modeling and solving engineering problems using computational methods. Topics include exact (provable) methods (linear and convex programming) and fast methods (heuristic search, genetic algorithm, neural networks, etc.).

3 lecture hours; 3 semester hours

Bio Sensors
This course will provide an interview of biosensors, including their use in Pharmaceutical research, diagnostic testing, and policing the environment. Topics include the sensitivity, resolution, selectivity, dynamic range, and noise of biosensors. Other topics covered include transducer phenomenology, biosensor structure, and sensor performance.

3 lecture hours; 3 semester hours

Advanced PLC’s (Programmable Logic Controls)
This course builds on PLC’s (ELEG 464) by using sensors (both thermal sensors, motion sensors, and camera input) to control the automation process; topics in servo motors, variable frequency drives, and HMI (human machine interaction) and touch screens are also introduced both in theory and in a lab setting.

3 lecture hours; 3 semester hours

Bioinformatics
The course covers algorithmic aspects of modern DNA and protein analysis. Topics include: (i) Reviews of DNA, RNA and Proteins, (ii) Genome rearrangements, (iii) Sequence Alignment and fast algorithms (BLAST), (iv) Genome expressions and DNA-microarray, (v) Phylogenetic trees, (vi) Protein docking and drug discovery, etc.

3 lecture hours; 3 semester hours

Electrical Engineering 415
Fiber Optics

3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 416
Fiber Optics Lab
Hands on experience with fiber optic hardware. Fiber properties, sources, detectors, splices, connectors. Design and test fiber optic transmission and receiver circuits for both analog and digital applications. Pre-requisite: ELEG 415.

3 semester hours

ELECTRICAL ENGINEERING 417
Modern Electronics
See ELEG 348.

ELECTRICAL ENGINEERING 418 (ELEG 428/BMEG 428)
Wireless Communications
Evolution of Mobile Radio Communications to cell phones and personal communications: 2nd and 3rd and 4th generation. Concepts include cell fundamentals, path loss, fading, ghosts, modulation techniques, equalization, speech coding and networks.

3 lecture hours; 3 semester hours

Satellite/Wireless communication Systems
Detailing concepts and calculations from the entire field is enough to permit the kinds of analysis needed for major systems planning decisions. This course covers channel capacity, picture quality, signal to noise ratio, bit error rate, earth station antenna size and offers new materials on orbital mechanics and geometry.

Pre-requisite: ELEG 441 or equivalent.

3 semester hours; 3 semester hours

Fields and Waves
Solutions of static electric and magnetic fields are derived from Maxwell’s equations and Gauss’s law. Approximation, including multi-pole modeling, are used where exact solutions to theory do not exist. Also, the computer is used to solve these problems exactly without approximations. The course also introduces time varying fields and their link to the creation and propagation of radiation.

3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 437
Microwaves
Passive and Active elements for the generation, modulation, amplification and reception of microwaves. Radar and other microwaves systems. Pre-requisite: Field Theory.

3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 439
Radar Theory and Simulation
Radar Fundamentals, Radar Cross Section, Types of Radars, Radar Detection, Waveform Analysis, SNR, Compression and Wave Propagation, Target Indicator and Tracking. The course will include extensive use of MATLAB for programming and simulation.

3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 440
Distribution Power System Design
A comprehensive study of modeling of the distribution of power system components and planning, including load characteristics, application of power transformers, design of transmission lines, distribution sub-stations, primary systems and secondary systems, voltage drop and power loss calculations, application of capacitors, harmonics on distribution systems, voltage regulation, fault calculation and protection.

3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 441
Analog Communications
Spectral analysis, modulation and demodulation system analysis, including AM, FM, pulse modulation and transmission of digital information. Signal design and system considerations. Pre-requisite: ELEG 234.

3 semester hours

ELECTRICAL ENGINEERING 442
Digital Communications
Detection of noise in thermal noise. Digital
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 443 (ELEG 443/BIOMD DIGITAL SIGNAL PROCESSING
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 444 POWER ELECTRONICS
Application of power diodes and power transistors in rectifier arrangements and voltage regulators. Properties and application in power converters, inverters and motor drives. Pre-requisite: ELEG 348.
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 445 DC MOTOR DRIVES
Application to control speed and efficiency of motors using conventional thyristors control as well as modern variable frequency drives.
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 446 (ELEG 446/BMGE 446/ CPEG 446) MEMS (MICRO-ELECTRO-MECHANICAL SYSTEMS).
Basic micro fabrication techniques, MEMS materials and their properties. MEMS device design and simulation, MEMS packaging and assembly, signal testing and MEMS reliability analysis. MEMS industrial applications in various areas will also be discussed. Students used ANSYS FEM software to design and simulate their behavior.
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 447 SEMICONDUCTORS.
Crystal fabrication: MBE, MOCVD, LEC, Bridgeman. Study material and electronic properties of single crystal Si, poly, a-Si, GaAs, GaN, SiC, Ge and II-VI compounds. Transport properties: Hall, Peltier, resistivity, mobility. Analysis of capacitance and I/V data for pn, pin, schottky and hetero-junction devices. Pre-requisite: MATH 110.
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 448 MICROELECTRONIC FABRICATION
This class covers basic microfabrication processes for semiconductor and VLSI fabrication, including photolithography, plasma and reactive ion etching, ion implantation, diffusion, oxidation, evaporation, vapor phase epitaxial growth, sputtering, and CVD. Advanced processing topics such as next generation lithography, MBE, and metal organic CVD are also introduced. The physics and chemistry of each process are introduced along with descriptions of the equipment used for the manufacture of integrated circuits. The integration of microfabrication process into CMOS, bipolar, and MEMS technologies are also discussed. The purpose of this course is to provide students with technical background and knowledge in silicon microelectronic fabrication process. Upon finishing this course, students will be familiar with the basic semiconductor and VLSI microfabrication processes.
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 449 INTRODUCTION TO WIRELESS SENSOR NETWORKS
In recent years, tiny computing devices equipped with low-power radios and sensors—made possible due to advances in micro-electronics and radio technologies—have obliterated the wall between the physical world and the cyber world, spawning a virtually unlimited number of new applications—some of them beyond our wildest imaginations. Successful design of these massively distributed wireless sensor networks requires a synergistic combination of multiple aspects: from the physical layer to decision algorithms and more. This course will introduce the students to the application areas, various challenges commonly faced in this application, state-of-the-art solution techniques and fundamental those have emerged in the recent years.
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 450 INTRODUCTION TO NANOTECHNOLOGY
Nanotechnology is the science and engineering involved in the design, synthesis, characterization and application of materials and devices with the size in nanometer (10-9m) scale. As a newly emerged exciting high-technology, it has attracted intensive interest and heavy investments around the world. Nanotechnology is a general-purpose technology which will have significant impact on almost all industries and all areas of society. It can offer better built, longer lasting, cleanser, safer and smarter products for home, communications, medicine, transportation, agriculture and many other fields. This course will cover basic concepts in nanoscience and nanotechnology.
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 451 ANALOG VLSI CIRCUITS (ELEG 458/CPSC 458)
Modeling, design and analysis of analog VLSI circuits. CMOS processing and layout, current mirrors, Opamp, comparators, S/H voltage references, switched-capacitor circuits, data converters, filters and PLLs. Students design analog VLSI layouts, extract the netlists and simulate the circuit behavior. Transistors sizing will also be discussed. EDA tools PSPICE, Mentor Graphics are used.
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 452 CONTROL SYSTEM
To introduce the fundamentals of speech processing and related applications. Course covers speech enhancement, speech coding, and speech recognition.
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 453 ADAPTIVE SIGNAL PROCESSING
This course introduces students to the field of adaptive signal processing as well as several practical aspects of adaptive systems. This course provides an in-depth analysis of various adaptation algorithms such as least mean square adaptive filters, recursive least squares algorithms, and Kalman filters etc. The subject learning is enhanced through experimentation of adaptation techniques using Matlab and/or Labview projects centered on applications such as adaptive noise/interference cancellation, signal estimation/detection, and system identification etc.
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 454 DIGITAL SIGNAL PROCESSING
The subject learning is enhanced through experimentation of adaptation techniques using Matlab and/or Labview projects centered on applications such as adaptive noise/interference cancellation, signal estimation/detection, and system identification etc.
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 455 VLSI DESIGN
This class covers basic microfabrication processes for semiconductor and VLSI fabrication, including photolithography, plasma and reactive ion etching, ion implantation, diffusion, oxidation, evaporation, vapor phase epitaxial growth, sputtering, and CVD. Advanced processing topics such as next generation lithography, MBE, and metal organic CVD are also introduced. The physics and chemistry of each process are introduced along with descriptions of the equipment used for the manufacture of integrated circuits. The integration of microfabrication process into CMOS, bipolar, and MEMS technologies are also discussed. The purpose of this course is to provide students with technical background and knowledge in silicon microelectronic fabrication process. Upon finishing this course, students will be familiar with the basic semiconductor and VLSI microfabrication processes.
3 lecture hours, 3 semester hours

THE ELECTRICAL ENGINEERING 456 PATTERN RECOGNITION
Operation and Design of systems that recognize patterns in data, based primarily on statistical and neural network approaches. Topics include Bayesian decision theory, Parametric likelihood estimation, Nonparametric techniques, Linear discriminant functions and Neural Networks.
3 lecture hours, 3 semester hours
Electrical Engineering • Engineering

ELECTRICAL ENGINEERING 459
Audio Processing Lab
Introduction to TMS320C55x Digital signal Processor, Audio Signal Processing, Basic Principles of Audio Coding, Speech Enhancement Techniques, Quantization of Audio signals, Calculating LPC coefficient using C55x Intrinsic, Matlab Implementations of noise Reduction (NR), Mixed C55x Assembly and Intrinsic Implementations of Voice Activity Detection (VAD), Combining AEC with NR, Voice over Internet Protocol Applications, Overview of CELP Vocoder.
3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 460
Controls
3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 461
Controls Lab
Laboratory study of feedback control systems with experiments analyzing different types of plants, transducers and control techniques; emphasis on real-time computer control.

ELECTRICAL ENGINEERING 462
Advanced Controls
This is a graduate level course and aims to introduce the analysis of nonlinear system. The course will cover: the state space description of nonlinear system; the phase portrait analysis of the second order system; stability analysis of the nonlinear system based on linearization method; the Lyapunov stability theory, etc.
3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 463
Industrial Controls
This course covers the basics of Industrial Controls, including but not limited to relay control, ladders, counters, timers, switches and all electrical components necessary to program the control of a large machine.
3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 464
PLC's (Programmable Logic Controls)
This course will start with the basics of Boolean Algebra; it will cite the differences between PLC control and relay control and full automation of major machines and appliances; the differences in these controls will show how hard relay control is to implement and how flexible PLC control actually is; many different math functions will be analyzed and implemented in the theoretical construction of fully functioning PLC.
3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 465
Adaptive Controls
Adaptive Controls provides a graduate level introduction to the basic concepts, techniques, and the state-of-the-art of adaptive control systems. Upon completion of the course, students are expected to be able to conduct design, research, and development in the field. The course covers real time system identification algorithms, model reference adaptive control, pole assignment adaptive control, self-tuning and gain scheduling control systems, stochastic adaptive control, model-predictive control, and robustness issues of adaptive control systems. Prerequisites: Digital Control System (or equivalent)
3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 466
Solar Energy and Solar Cells
This course offers a review of renewable energy (solar, winds, and tides) versus bioenergy (coal, oil, natural gas). The concept of light as electromagnetic radiation and pure energy as well as the concepts of converting sunlight into thermal energy will be discussed. Students will learn the semiconductor and electronic properties of solar cells, used to convert light into electricity. Secondary solar energy sources include solar hydrogen and concentrator technology.
3 semester hours

ELECTRICAL ENGINEERING 467
Digital Integrated Circuit Design
Several integrated circuit architectures are analyzed at the transmitter level to find key parameters by hand analysis as well as computer simulation: rise time, fall time, noise margins, logic state, hysteresis/memory, fanout, and power dissipation. Analysis includes an analysis of the major logic families: TTL, CMOS, NMOS, ECL, PECL, differential logic.
3 lecture hours; 3 semester hours

ELECTRICAL ENGINEERING 468
Alternative Energy Technologies
This is a graduate level course and aims to introduce the alternative energy technologies in photovoltaic cells (PV) and fuel cells. It will cover: the physics, energy conversion efficiency, and challenges in PV cells, the principles, the stack and system design in fuel cells.
3 lecture hours; 3 semester hours

Engineering

ENGINEERING 111
Introduction to Engineering I
This course introduces the student to the engineering design process on a beginning level. Emphasis is placed on the structure of the design process involving problem definition, development of alternatives, analysis, decision making and iteration. One guided design project and one independent project are completed by student project teams. Concurrent lectures and homework assignments develop skills in data management, mechanics, chemistry, electrical theory, energy and economics. Personal computer usage is emphasized for mathematical calculations and the preparation of engineering reports. Prerequisite: MATH 109.
3 lecture hours; 3 semester hours

ENGINEERING 300
Economics and Management of Engineering Projects
The design process, engineering economics, project planning and ethics in engineering practice. A required course for all engineer-
ing majors, normally taken in the junior year, offered both semesters. Prerequisites: CPEG 286, CPSC 102, CHEM 103, ELEG 235, ENGR 111, MATH 215, PHYS 112 and junior standing.

3 lecture hours, 3 semester hours credit

Engineering • English

English

Unless specifically stated in the course description, the only prerequisite for any undergraduate English department course is the fulfillment of the freshman composition requirement.

Composition

ENGLISH 100
Basic Composition
Techniques of composition, including sentence structure, paragraph development, organization of the whole theme, with regular written assignments. Additional emphasis on fundamentals to assist students with weak backgrounds. A passing grade admits the students to ENGL C101. Students who have a grade of A or B at the end of the semester may take the essay final for ENGL C101. If they score an A or B on that examination, they may waive ENGL 101.

3 semester hours

ENGLISH 101
Composition and Rhetoric
An introduction to the elements of effective writing, concentrating on structure, logic, specificity, focus, grammar, sentence structure, and mechanics. Frequent writing in and out of class. By the end of the semester, students should be able to compose and organize a grammatically correct and adequately developed expository essay.

3 semester hours

ENGLISH 100I
Developmental English
For those who need academic preparation before studying in English, this course provides focused, individualized work on special problems in using English fundamentals, oral/aural problems, reading and oral comprehension, English patterning and structures, leading to the production of short written works. Students receiving a grade of D+ or below must take ENGL 100.

3 semester hours

ENGLISH 115
Methods of Inquiry
This course is designed to help students become active participants in their own education and thereby to help them succeed in college. The course will address: questioning skills, critical thinking strategies and the use of every university resource in completing course assignments. Active listening, note taking, and test taking strategies are rehearsed, while units dealing with stress management, attitude and decision making skills aim to provide opportunities to increase the individual’s emotional stability.

3 semester hours

ENGLISH 200
English Cooperative Education Program.
An opportunity for English majors to work off-campus and put into practice those skills acquired within departmental programs. The co-op course requires a written report to be evaluated by the School Director. In addition, the department will require an evaluation from the employer.

By arrangement with the Chair
1-6 semester hours

ENGLISH 202
Advanced Exposition
Essay writing, with a stylistic approach and a concern for accuracy in presenting or explaining ideas in an orderly, logical manner. Emphasis on improved clarity and effectiveness, through careful revision in written reports and assigned papers, especially those pertaining to the student’s major field. This course is required for Business majors and emphasizes business forms. Prerequisite: Completion, with passing grades, of ENGL C101.

3 semester hours

ENGLISH 204
Technical Writing for Computer Engineers
A workshop course that covers the following topics: lab reports, engineering memos, technical business plans, scientific/engineering grant proposals, patent applications, technical papers, user manuals of product/software, and final engineering project reports. Prerequisite: ENGL C101.

1 semester hour

Creative Writing

ENGLISH 201
Creative Writing
Extensive writing in short fiction. Progression from simple narrative, basic character description, dialogue and scene writing to vignette, short-short and short story. Marketing advice. Specific emphasis varies with instructor. Designed for the undergraduate who writes well but needs practice, direction, motivation.

3 semester hours

ENGLISH 205
Poetry Writing
For students with a demonstrated basic ability in the writing of poetry. Introduction to the techniques of poetry, covering such elements as meter, rhyme, image patterns, stanza forms, lyric, dramatic, narrative modes, blank verse, and free verse. Some history of poetic movements. Study of contemporary poetry. Work in the course is mainly writing and discussing of student poems.

3 semester hours

ENGLISH 218
Autobiographical Writing
This course focuses on the use of personal experience and history as the basis for literary pieces.

3 semester hours

ENGLISH 308
Advanced Creative Writing
Seminar workshop: Considerable attention to the creative desires of individual students. Student may choose to write poetry, short stories, sections of novels, drama. Emphasis on completed manuscripts, potential publication, individual explorations of form and content. Prerequisite: English 201 or the permission of the instruction which is given only upon presentation of an acceptable piece of creative writing done by the student.

3 semester hours

Language and Literature

ENGLISH 102
Introduction to Literature
A writing intensive course that uses representative examples of poetry, drama, and fic-
tion to develop one's ability to analyze and appreciate literature.
3 semester hours

ENGLISH 110
Major Figures in Literature
This course is offered in three one-semester hour sections, each section dealing with representative works of a major writer, and last- ing one—third of a semester. Students may register for one or more sections. Usually the writers are related by either period or genre, as in the case of Henrik Ibsen, George Bernard Shaw, and Anton Chekhov, or Tennessee Williams, Arthur Nillier, and August Wilson.
1 semester hour

ENGLISH 105A
Introduction to Drama
Introductory study of drama. Readings are drawn from a variety of genres and literary periods.
3 semester hours

ENGLISH 105B
Introduction to Fiction
Introductory study of fiction. Readings include short stories and several novels.
3 semester hours

ENGLISH 180
Science Fiction
Study of the science fiction and speculative fiction genre, covering such aspects as the history of science fiction; treatment of character, plot, heroes, style, theme; science fiction as a vehicle for predicting the future; impact on society; role of science and space flight; ecological and mystical concerns. Authors read and discussed range from Hawthorne and Poe, Wells and Verne to such as Asimov, Heinlein, Bradbury, Delany, Brunner, Clark, Vonnegut, and Silverberg.
3 semester hours

ENGLISH 197
Masterpieces of English Literature
Designed primarily for other than English majors. An attempt to get some feeling for and pleasure from the development and continuity of English literature. Readings and discussions of selected major works by the major authors including Chaucer, Shakespeare, Milton, Swift, Blake, Wordsworth, Dickens, Tennyson and Lawrence. Open to all students, including freshmen. May be taken concurrently with ENGL 100, 101, 102, or 103.
3 semester hours

ENGLISH 198
Masterpieces of American Literature
Designed primarily for other than English majors. The course will focus on individual masterpieces of American fiction, poetry and drama. Open to all students including freshmen. Recommended for international students.
3 semester hours

ENGLISH 207
American Literature I
A systematic survey of the major literary movements and their cultural contexts from the writings of the first settlers to the establishment of a uniquely American literature in the mid-nineteenth century.
3 semester hours

ENGLISH 208
American Literature II
A survey of the literature of transition from an era of traditional and idealized values to one of realist and relativist perceptions, covering the period from the Civil War to World War II.
3 semester hours

ENGLISH 209
British Literature I
A survey of British literature from the beginnings to the eighteenth century.
3 semester hours

ENGLISH 210
British Literature II
A survey of British literature from the eighteenth century through the twentieth century.
3 semester hours

ENGLISH 212
Masterpieces of World Literature
An introduction to some of the basic texts reflecting the West's Judeo-Christian, Classical, and Medieval heritage, ending with one or two masterpieces from the Renaissance. Selections from the Old and New Testaments, Homer, Greek tragedy and comedy, Plato, Virgil, Dante, and Cervantes.
3 semester hours

ENGLISH 215
Thematic Studies in Literature
Introductory study of literature in relation to major areas of concern in contemporary life. Courses will vary from semester to semester. Topics include are Folklore & Folk life, The Literature of Cruelty, Childhood in Literature, and Confession and Autobiography.
3 semester hours

ENGLISH 223
Modern African-American Literature
Study of the fiction, drama, poetry, and essays of such significant black writers as Richard Wright, James Baldwin, Ralph Ellison, Lorraine Hansberry, Arna Bon-temps, and Malcolm X.
3 semester hours

ENGLISH 233
The Roots of Modern Culture
Topics and themes important to the understanding of the origin and development of modern Western society and culture. Subjects such as industrialism, the growth of the city, class conflict, the emergence of new values and expectations, the importance of war, and the role of minorities are explored in a variety of literary and historical texts.
3 semester hours

ENGLISH 252
Women in Literature
The course examines the stereotypes, myths and realities involved in the way women are viewed by male and female authors. Authors include D.H. Lawrence, Ibsen, Kate Chopin,
English • Fashion Merchandising

Virginia Woolf, Edith Wharton.
3 semester hours

ENGLISH 305
Shakespeare
Selected examples of the comedies, tragedies, and history plays. The principal emphasis is on drama, but some consideration is given to the Renaissance political, religious, and social backgrounds of the plays.
3 semester hours

ENGLISH 322
Understanding English Grammar
This course is intended for anyone who is interested in understanding English, but particularly for those intending to teach English at the secondary level. It takes a structural approach to English grammar, focusing on ten descriptive sentence patterns and classifying works based on English usage.
3 semester hours

ENGLISH 325
Contemporary Poetry
Lectures and discussion concerning such movements as Modernism, Imagism, and Feminism in 20th century poetry. Can involve examination of non-Western poetry. Topics vary from year to year as the English faculty may direct.
3 semester hours

ENGLISH 330
Studies in 19th Century American Literature
A variable content course covering both the close study of individual authors (Hawthorne, Melville, Poe, Twain, Emerson) and of the major literary movements of the century (Romanticism, Naturalism, Realism).
3 semester hours

ENGLISH 332
Studies in 20th Century American Literature
A variable content course covering such major novelists and poets as Fitzgerald, Hemingway, Faulkner, Dos Passos, Wright, Eliot, Frost, and Stevens, as well as contemporary fiction and poetry.
3 semester hours

ENGLISH 357
Studies in the Novel
A variable content course covering major figures and movements in the development of the novel from the 18th Century to the present. The authors studied are primarily, but not exclusively, North American and British.
3 semester hours

ENGLISH 395
Topics in Literature
Taught in seminar fashion, this course concentrates on one or two major writers or a general theme. Topics in recent years have been Jane Austen, Charles Dickens, Yeats, the novel in transition, The Spirit of '76: Literature of Early American Republic; Literature and Psychology; the Quest; Literature of Revolt.
3 semester hours

ENGLISH 398
Internship
Professional, supervised, unpaid work in an organization related to career goals. Prerequisite: Permission of advisor and School Director.
3 semester hours

ENGLISH 399
Independent Studies
For the student who wishes to specialize in advanced projects not covered by the regular course offerings. Individual or small group conferences with designated advisor. Prerequisite: Permission of School Director.
1-6 semester hours

FASHION MERCHANDISING

FASHION MERCHANDISING 101
Fashion Fundamentals
The course includes an overview of the fashion industry; the changing world of fashion, history of retailing, the producers of fashion, global fashion markets, influential designers, and the auxiliary levels of fashion. This course also explores careers in fashion, and the most up-to-date computer technology. Students learn to use the basic technology to perform merchandising activities for manufacturers, contractors, and retailers. This course uses PDM (Product Data Management) and Micrografx designer applications. PDM is the standard for the industry and Micrografx is a CAD system used to create silhouettes, color, fabrics, and manipulate images that interface with PDM. Prerequisites: A trip to the NYC Fashion Markets is required.
3 semester hours

FASHION MERCHANDISING 108
Product Knowledge–Fashion Accessories
In-depth studies of fashion accessories and non-woven consumer products designed to give students a realistic appreciation of quality choices in merchandise selection, in performance standards, and consumer care. Specifically, the course emphasizes raw materials: leather, plastic, rubber, fur, precious metals, precious and semi-precious stones and products: shoes, hand-bags, luggage, gloves, furs, fine jewelry, cosmetics, and fashion accessories. Course requires that students research and prepare portfolios of fashion accessories from historic and current fashion periods. Students design and create some accessory items for the current marketplace.
3 semester hours

FASHION MERCHANDISING OR RETAILING 200
Full Semester Co-op Experience
A paid co-op with faculty approved, fashion or retail affiliated organization offered to selected Fashion Merchandising and Retail Bachelor’s or Associate’s degree candidates. Applications should be submitted during the freshman fall semester or the spring semester for transfer students. Acceptance into the program and maintenance of a minimum 2.5 QPR for Bachelor’s degree and 3.0 QPR for Associate degree students. Faculty approved Fashion Merchandising and Retailing majors only.
1 semester hour

FASHION MERCHANDISING 270
Fashion Show
A practical study of the techniques for Fashion Show production. The ultimate result is a fashion show presentation showing current styles from the New York and local fashion markets. Course includes planning, budgeting, organizing, writing commentaries, promoting, choosing fashions, staging and reviewing for the final show.
1 semester hour

FASHION MERCHANDISING OR RETAILING 299
Independent Study in Fashion Merchandising or Retailing
Prerequisite: Permission of the Director and Advisor. Senior’s only.
1-3 semester hours
FASHION MERCHANDISING 303

History of Costume
An introduction to the development of clothing and period dress. Includes clothing designs and fabrications from Mesopotamia, Greek, Roman, Byzantine, the 12th, 13th, 14th, 15th and 16th Century, Renaissance, 17th Century Baroque, 18th, 19th Century through modern dress. A portfolio of historical and modern day adaptations of clothing is required. Prerequisite: FM101
3 semester hours

FASHION MERCHANDISING 305

Home Furnishings
The importance of home furnishings in the marketplace has expanded as new stores dedicated to home goods have opened and department stores have enlarged their home goods departments. This course presents a comprehensive coverage of the materials and products used in home furnishings in the global market, and gives our students an opportunity to focus on the merchandising and marketing of these products in retail stores today. Prerequisites: Senior FM students only.
3 semester hours

Finance

FINANCE 309

Financial Management
Fundamental tools of analysis for the financial management of the firm. Sources and uses of funds analysis for capital budgeting and working capital management. Prerequisites: ECON 201 and 202, CAIS 102; junior or senior status.
3 semester hours

FINANCE 321

Investment Principles
Provides the student with the tools necessary for evaluating investments, including stocks, bonds, options and commodities. Additionally, it presents a systematic methodology for constructing efficient portfolios and evaluating portfolio performance. Prerequisite: FIN 309; junior or senior status.
3 semester hours

FINANCE 345

Management of Financial Institutions
Financial management concepts and techniques for the managerial problems of depository institutions. Includes traditional bank management concerns and those resulting from the changing economic environment. Prerequisites: ECON 301; FIN 309; junior or senior status.
3 semester hours

FINANCE 365

Advanced Financial Management
General survey of financial theories, from the viewpoint of both the financial officer or manager and creditor or stockholder. Prerequisites: FIN 309 and FIN 321; junior or senior status.
3 semester hours

FINANCE 366

Cases in Finance
Application of financial theories to solve real world problems in Finance. Case studies involving financing and investment decisions, mergers and acquisitions, financial restructuring, dividend policies, and risk management; how these issues relate to the overall strategic objectives of the firm. Prerequisites: FIN 309; junior or senior status.
3 semester hours

FINANCE 380

Multinational Finance
The course concerns the international dimensions of corporate finance. The goal of the course is to equip students with the tools to deal with some of the major environmental and decision-making problems relating to corporate overseas finance and investments. Prerequisites: FIN 309; junior or senior status.
3 semester hours

First Year Studies

FIRST YEAR STUDIES 101
First Year Seminar
First Year Seminar helps first-year students get the most out of their college experience. Specifically, the purposes and learning outcomes of the course are (A) to develop a love of learning, (B) to examine and practice the norms of UB's academic culture, and (C) to acquire and hone the thinking skills that lead to success in college. As a seminar, the course emphasizes guided discussion of challenging texts.
3 semester hours

FIRST YEAR STUDIES 102
First Year Seminar
The purpose of the First Year Seminar 102 course is to awaken intellectual curiosity and foster a strong commitment to academic culture. As an adult student in an accelerated program, the Seminar course is designed to encourage students to be active participants and to acquaint (or re-acquaint) students with the performance skills, thinking skills, and personal qualities necessary to succeed as an adult learner.
3 semester hours

French

FRENCH 101
Elementary French I
This course is for students who have little or no knowledge of French. Emphasis on listening, speaking, reading and writing skills. Instruction based on in-class use of video-cassettes and regular laboratory attendance.
3 semester hours

FRENCH 102
Elementary French II
Continuation of French 101. Further development of listening, speaking, reading and writing skills. Introduction to contemporary French customs through use of video-cassettes and reading of selected passages of literature. Emphasis on basic structural linguistics. Laboratory attendance essential. Prerequisite: FREN 101.
3 semester hours

FRENCH 103
Intermediate French I
Provides a systematic review of grammatical structures. Dictées. Introduction to various short literary texts by Francophone authors. Use of video-cassette program and attendance at laboratory as needed. Prerequisite: FREN 102, or four years of high school French.
French • Geology • Gerontology

3 semester hours

FRENCH 104
Intermediate French II
This course is conducted entirely in French, with emphasis on reading, writing, and oral presentations by students. Study of texts by Gide, Proust, Claudel, Romaines, Pragnol, Saint-Exupéry, Sartre, Camus, Senghor, Cézanne, and others, including selections from the Surrealists and authors of the nouveau roman.
3 semester hours

FRENCH 205
Pensez Français
This course is designed for the French student with at least two years of university French or the equivalent. It will familiarize the student with French culture from an historical and literary overview beginning in the 16th Century through colonialism and the Second World War. Use is made of film and text. Emphasis is placed on the expansion of vocabulary, review of advanced grammar and oral and written practice based on the films and literary texts.
3 semester hours

FRENCH 275
Topics in French & Francophone Literature
Reading of representative works drawn from French and Francophone (West African & Caribbean) literature and discussion of trends and idioms among speakers of French. This course may be given in French or in a mixture of French and English, according to student needs. Pre-requisite: FREN 104, if given in French.
3 semester hours

FRENCH 298
Internship
Professional, supervised, unpaid work in an organization related to career goals. Pre-requisite: Permission of advisor and School Director.
3 semester hours

FRENCH 399
Individual Study
Special projects on topics not studied in detail in regular courses, or projects on topics included in regular courses when those courses are not available. Prerequisite: Permission required of School Director.
1-6 semester hours

Geology

GEOLOGY 105
Introduction to Geology
Concepts of physical geology presented with a view to increasing awareness and appreciation of man’s natural geologic environment. Topics include: plate tectonics, volcanoes, earthquakes, glaciers, groundwater, rocks, minerals, fossils; field trips. Requires no background in the physical sciences.
2 lecture periods; 1 two-hour laboratory; 3 semester hours

GEOLOGY 205
Environmental Geology
The application of geology to problems arising out of the interaction of man and the planet. Topics include: natural resources and conservation, geothermal energy; geologic hazards such as earthquakes, volcano, floods, mass movement and subsidence; and geology and regional planning; field trips. Recommended: a course in laboratory science.
2 lecture periods; 1 two-hour laboratory period; 3 semester hours

Gerontology

GERONTOLOGY 101
Introduction to Gerontology
An interdisciplinary overview of the implications of aging in American society. This course is designed to acquaint the student who is contemplating a career in gerontology, with the physical, psychological, social, economic and cultural dimensions of the total experience of growing older.
3 semester hours

GERONTOLOGY 150
Health Problems of Older Persons
This course provides an introduction to the variety of health problems faced by many older persons. Each bodily system is reviewed and the effects of both normal aging and age-related disease processes on each bodily system are examined. The impact of different health problems upon the ability of older persons to adapt to the challenges of later life is an underlying theme throughout the course. It also introduces the student to therapeutic strategies for dealing with selected health problems of older persons.
Prerequisites: GERO 101 or BIOL 113-114
3 semester hours

GERONTOLOGY 276
Mental Health Work with the Aged
This course provides an overview of the key ingredients necessary for a successful old age, with an emphasis on mental health needs of older persons. Common emotional problems facing older persons are considered. Both functional and organic brain disorders, the major mental disorders of late life are also discussed. The course will review a variety of treatment principles and skills supportive of positive mental health among the elderly.
Prerequisites: GERO 101 or Mental Health 101
3 semester hours

GERONTOLOGY 301
Special Topics
Special areas and problems in gerontology designed to meet specific needs of gerontology students and practitioners in the field.
1-3 semester hours; upon student demand

GERONTOLOGY 331
Process of Living and Dying
A seminar based on the premise that death and dying are closely related to life and living. This course explores the processes of death and dying, its effect on family members, cultural attitudes toward death, and various professional and paraprofessional roles available to deal with these issues.
3 semester hours

GERONTOLOGY 351
Social Gerontology
This course deals with societal aspects of aging and focuses upon socio-cultural factors that contribute to patterns of aging in the USA. Topics covered include the cultural meaning of aging; the socialization process of aging; the population dimension of aging; human ecology of the aged; social stratification among the aged; deviance and crime among the aged; social power of the aged; and social change and the aged. Prerequisites: GERO 101 or SOC 101.
3 semester hours

GERONTOLOGY 399
Independent Study
Requires permission of Chair and instructor. This course is open only to Gerontology majors with at least twelve semester hours
### Health Sciences

**HEALTH SCIENCES 101**
**Seminar in Healthcare Professions**
This seminar course provides the health sciences student with an overview of a variety of healthcare professions and professionals. Daily activities and responsibilities, scope of practice, training, credentialing and philosophy of practice are explored for various health professionals (i.e., medical, osteopathic, naturopathic, chiropractic, dental and veterinary physicians, acupuncture, physician assistant, nurse practitioner, physical therapy, medical technologist, dental hygiene, health education, etc.).

**3 semester hours**

**HEALTH SCIENCES 201**
**Medical Terminology**
This course introduces concepts and terms that are used within the health sciences and related fields.

**1 semester hour**

**HEALTH SCIENCE 240**
**Theory and Practice of Community Health Education**
An introductory course that will provide students with the historical, philosophical and theoretical principles that govern the development of health education. Health promotion, the role of the health educator in clinical, community and school systems will be emphasized. Ethical issues, careers, organizations and future trends in the profession will also be examined.

**3 semester hours**

**HEALTH SCIENCES 250**
**Intro to Public Health**
This is an introductory course on public health principles and the current delivery systems in the US. It introduces the major areas of public health, epidemiology, health care management, environmental and social behavioral health, health informatics. Current problems and alternative solutions will also be examined.

**3 semester hours**

**HEALTH SCIENCES 301**
**Intro to Exercise Science**
This course presents an overview of the field of Exercise Science, including its development, professional activities and sub-disciplines.

**3 semester hours**

**HEALTH SCIENCES 310**
**Water Supply and Wastewater Treatment**
This course introduces students to issues related to water supply and wastewater treatment. Topics covered include federal and state rules and regulations, water reuse, environment and watershed, population growth, and the multiple uses of water and reclaimed wastewater. Introduction of concepts of urban planning, processes such as reverse osmosis, and public health also are raised.

Prerequisite: CHEM 103, 104, 205, 206

**4 semester hour**

**HEALTH SCIENCES 320**
**Food Sanitation**
The course introduces concepts related to the production, storage, preparation of food for human consumption. Attention is given to disease processes and their relationship to food preparation and consumption. Topics covered also include the commercial, social, and legal environments of food production and recall of contaminated food.

**3 semester hours**

**HEALTH SCIENCES 321**
**Exercise Physiology**
This course examines how the body functions under exercise stress and how fitness behaviors and strategies affect performance, health and wellness. Emphasis is placed upon the muscular, cardio respiratory, and other physiological processes that occur as a result of exercise, conditioning, and the effects of disease. A one credit laboratory component is also included.

**4 semester hours**

**HEALTH SCIENCES 330**
**Solid and Hazardous Waste**
The course introduces the nomenclature of the Environmental Protection Agency, wherein Hazardous waste is divided into listed wastes, characteristic wastes, universal wastes, and mixed wastes. Specific procedures determine how waste is identified, classified, listed, and delisted. Attention in the course is given to the safe handling, rec-
Health Sciences • History

This course explores and compares various dietary strategies, including low-fat, high-carbohydrate, high-protein, macronutrient-balanced, macrobiotic, high-fiber, vegetarian, vegan, Paleolithic, and Mediterranean. The pros and cons of these various approaches are discussed, along with the evidence-base that exists, or does not exists, to support their use.

3 semester hours

HEALTH SCIENCES 350
Institutions and Housing
Introduction of concepts related to the US Department of Housing and Urban Development and other sources of housing development and redevelopment. Rules and regulations governing institutional safety, environmental impact, and sustainability are studied.

3 semester hours

HEALTH SCIENCES 351
Fitness and Wellness Program Development
The course examines features of fitness and wellness program design and development. Disease prevention as a feature of fitness and wellness is studied in detail, with attention to social systems and infrastructure.

3 semester hours

HEALTH SCIENCES 361
Food Service Management
Examination of topics such as body composition, cardiorespiratory fitness, nutritional analysis, pulmonary function, flexibility, muscular strength with respect to the development of individual fitness assessment programs.

3 semester hours

HEALTH SCIENCES 365
Environmental Planning and Management
The course examines environmental planning and management, land use and reclamation, industrial, residential, and commercial use of natural resources. Attention is given to Green technologies, such as renewable energy and biofuel development.

3 semester hours

HEALTH SCIENCES 380
Internship in Exercise & Fitness
A structured off-campus learning experience designed to provide senior students with a practical professional experience in Fitness and Exercise Science.

3 semester hours

HEALTH SCIENCES 385
Internship in Community Health
A supervised internship in a Community Health site.

3 semester hours

HEALTH SCIENCES 390
Internship in Environmental Health
A 180 hour supervised internship.

3 semester hours

HEALTH SCIENCES 401
Health Sciences Information Literacy
This course introduces topics in information literacy, including information analysis and evaluation, the most important databases in health care and health sciences fields, and the like.

3 semester hours

HEALTH SCIENCE 420
Food Service Management
The basic principles of microbiology, sanitation, safety, equipment selection, and facility layout for a food service operation are explored, including environmental control and the prevention of food-borne illnesses, cleaning materials and procedures, general safety regulations, food processing methods, first aid, and fire prevention.

3 semester hours

HEALTH SCIENTES 423
Environmental Microbiology
The course introduces study of relationship microorganisms to the earth including the atmosphere. The role of microbes in air, water, soil (in light of human waste and interaction) is studied in detail. Prerequisites: Senior standing in Environmental Health track.

3 semester hours

HEALTH SCIENCE 460
Vitamins & Minerals
Basic and clinical aspects of macronutrients will be discussed with emphasis on vitamin and mineral metabolism at the cellular and tissue level. Lectures will include specific functions, requirements, sources, and effects of deficiencies and excesses of vitamins and minerals.

3 semester hours

HEALTH SCIENCES 470
Clinical Herbology and Botany
This course presents a study of the use of herbs in nutritional practice. Lectures will include the plant sources, mechanism of action, pharmacological/toxicological properties, and clinical applications of individual medicinal herbs commonly used for the promotion of health.

3 semester hours

HEALTH SCIENCES 471
Exercise Nutrition
The course examines aspects of sports nutrition detailing proper dietary and nutritional supplement protocols for enhancing endurance and performance during exercise and sports.

3 semester hours

History

HISTORY 100
Major Figures in World History
This course is offered in three one-semester hour sections, each section dealing with one person of historical significance, and lasting 12 class periods. Students may register for one or more sections. Usually the three persons are related chronologically or thematically, as in the case of Hitler, Mussolini and Stalin, or Washington, Jefferson and Adams, or Florence Nightingale, Emmeline Pankhurst, and Emma Goldman.

1 semester hour

HISTORY 101
World Civilization I to the 17th Century
The first semester of a historical survey of world cultures. The development of social, political, economic, and religious institutions and the major trends of philosophy, science, literature, and art.

3 semester hours

HISTORY 102
World Civilization II — 17th Century to the Present
The second semester of a historical survey of major world cultures. Because of the nature
of the period studied, additional emphasis on political, economic and social developments and on the role of science and technology.

3 semester hours

HISTORY 200
History Co-Operative Education Program
Provides history majors an opportunity to work in local historical collections, museums, libraries, governmental offices, and other relevant places, where the skills of historical research and writing are used. Co-op requires consultation and reports between student, employer, and School Director.

O-2 semester hours

HISTORY 207
American History to 1877
European background to discovery and exploration. The English colonies; struggle for North America; the Revolution; constitutional development; growth of democracy; westward expansion; sectionalism; Civil War and Reconstruction. Major political, social, economic, and cultural trends in American society through Reconstruction.

3 semester hours

HISTORY 208
American History Since 1877
Gilded Age; industrial development; big business; expansion; imperialism; the U.S. as a world power; wars and foreign affairs; constitutional trends; political developments, economic and social trends and problems; cultural trends.

3 semester hours

HISTORY 222
The Ancient Greeks
From pre-Mycenaean times to the Hellenistic period, ending in 146 B.C. Emphasis on institutions, everyday life, ideas, and culture.

3 semester hours

HISTORY 223
Ancient Rome
From earliest Roman society to the time of Constantine. Emphasis on institutions of the Roman Republic and Empire and their impact on Western Civilization.

3 semester hours

HISTORY 233
Roots of Modern Culture
Topics and themes important to the understanding of the origin and development of modern Western society and culture. Subjects such as industrialism, the growth of the city, class conflict, the emergence of new values and expectations, the importance of war, and the role of minorities are explored in a variety of literary and historical texts.

(Cross-listed as English 233)

3 semester hours

HISTORY 250
Introduction to the Third World
General review of the principal countries of the Third World, their history, philosophical outlook and culture, and the political implications of their status in between the major powers of the East and West. Particular emphasis on social, economic, and political changes under and after colonialism.

3 semester hours

HISTORY 280
East Asian Civilization
An introduction to the traditional society of China, Japan, Korea, and Vietnam and its modern transformation.

3 semester hours

HISTORY 299
Independent Study in History
Designed for the student who wishes to develop a survey project not covered by the listed course offerings. Individual or group conferences with designated faculty advisor.

Prerequisite: Permission of School Director

1-6 semester hours

HISTORY 301
North America in Colonial and Revolutionary Times
Study of the methods of European expansion; Indian, African and European contact in the 17th Century; political development of the British colonies; events leading to the revolutionary acts of 1763-1789; the period of the Confederation and social conditions in a revolutionary context.

3 semester hours

HISTORY 303
The Seedtime of the Republic: American Politics and Society, 1789-1815
The establishment of the U.S. government and economy; U.S. state relations; the rise of political parties; Federalist and Republican social thought and ideology; the War of 1812 and the development of American nationalism.

3 semester hours

HISTORY 304
Civil War and Reconstruction
Causes of the war; sectionalism, slavery, the territories, economic, social and intellectual factors, secession and war; major military campaigns, constitutional developments, presidential and congressional reconstruction, and the disputed election of 1876.

3 semester hours

HISTORY 313
American Social History from Colonial Times to the Civil War
Life styles and reciprocal attitudes of Indians, Puritans, Blacks, Sectarians, women, and immigrants elucidated through a study of original materials including diaries, art, music, and literature.

3 semester hours

HISTORY 315
History of American Immigration
Close study of the immigration experience from the 17th to the 20th Centuries. Emphasis on social, cultural and economic impact of immigrants on America, and of America upon them, especially with regard to the reaction of Native Americans.

3 semester hours

HISTORY 316
Early African-American History
A study of the slavery experience from 1619 to 1877 focusing on the political, social, and economic aspects of the system, and the varieties of resistance to the system.

3 semester hours

HISTORY 317
Twentieth Century African-American History
Emphasis is placed on the struggle of African Americans to attain full rights of citizenship. Examination of African-American leadership, its ideas, and the impact of its ideas upon various African-American movements, such as integration, emigration, separatism, civil rights, and black power.

3 semester hours

HISTORY 319
Diplomatic History of the United States
Foreign relations of the United States from the Treaty of Paris of 1783 to the end of the Cold War. Treaty-making, involvement in international law and organizations, intercontinental economic and military arrangements.

3 semester hours
**History • Human Services**

**HISTORY 326**
**Europe Since 1918**
Treaty of Versailles; Lenin and Wilson; German Revolution; Weimar and European culture; Communism; Fascism; National Socialism; Third Republic and Fall of France; origins of the World War II; European resistance movements; wartime diplomacy; political collapse of Europe; postwar Europe and the world. The instructor may focus on a particular nation and its relationship to European events during this time period.
3 semester hours

**HISTORY 336**
**Portrait of an Age**
Comprehensive study of life and manners of a particular historical period, with emphasis on original sources such as diaries, memoirs, official records, literature, art and music. Periods could include the antebellum South, the Gilded Age, Victorian Society in England or the United States, France in the time of Louis XIV, and so on. May be repeated for credit if topics vary.
3 semester hours

**HISTORY 360**
**Studies in African History and Culture**
Examinations of African historiography up to, including, and after the period of colonization, as well as of the concepts underlying African religions.
3 semester hours

**HISTORY 361**
**Modern Africa**
This course takes up where History 360 leaves off. It addresses the following: 19th century colonialism in Africa, African resistance to European colonization, African independence movements, decolonization in the mid 20th century and the subsequent establishment of independent African states.
3 semester hours

**HISTORY 398**
**Internship**
Professional, supervised, unpaid work in an organization related to career goals. Prerequisite: Permission of advisor and School Director.
3 semester hours

**HISTORY 399**
**Independent Study in History**
For the student who desires to specialize in advanced projects not covered by the regular course offerings. Individual or group conferences with designated faculty advisor. Prerequisite: Permission of School Director.
1-6 semester hours

**HISTORY 441**
**Topics in American History**
Examination in depth of topics ranging from the development of slavery, the foundation of the Republic, the War of 1812, Indian-European relations, the rise of industry, the Civil War, diplomacy, the New Deal, the impact of World War II on American life, and so on. Topic varies by semester. Course may be repeated for credit if topics vary. Prerequisite: 6 hours of American History.
3 semester hours

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**Human Services**

**HUMAN SERVICES 110**
**Alcohol and Other Drugs in Society**
This course explores alcohol and other drug use and abuse in society. Included in the course will be a historic review, the role of culture in use of drugs, the effect on society, the family and the individual, and an overview of the etiology, assessment and treatment of dependence.
3 semester hours

**HUMAN SERVICES 150**
**Career Management**
This course prepares students to manage their own careers early in their college experience for their eventual college to work transition. Through self-exploration, students learn more about themselves in relationship to the world of work and about creating college experiences that will make them more marketable in a global community.
1-3 semester hours

**HUMAN SERVICES 201**
**Introduction to Counseling**
This course focuses on skills, theories and techniques of the helping profession. The importance of helpers knowing themselves is crucial in the helping field. An integrated, experiential component designed for self-exploration and increased understanding of self is explored through family of origin work.
3 semester hours

**HUMAN SERVICES 203**
**Introduction to Human Services**
This course briefly explores the historical beginnings of the human service field and focuses on the present day service delivery models, the needs of clients and the training of human service professionals. An integrated approach including community site visits and case studies will assist students in gaining a firm understanding of this field.
3 semester hours

**HUMAN SERVICES 205**
**Counseling Methods for Specialized Populations**
Students study through biographies specialized populations (i.e. those with mental and physical disabilities, drug and alcohol users, and emotionally, physically, and sexually abused) while becoming familiar with the various counseling approaches useful in effecting changes in these individuals.
3 semester hours

**HUMAN SERVICES 277**
**Practicum in Human Services**
Students enrolled in the practicum receive individually arranged on-site placement in human service agencies. This arrangement is intended to provide students the opportunity to experientially investigate the specific area of interest that they have developed and/or to allow for the individualization necessary to meet the student’s specific skill area needs. Students are expected to be concurrently in a class where they have an opportunity to discuss and process their on-site learning experiences.
1-6 semester hours (Every Semester)

**HUMAN SERVICES 299**
**Special Topics**
Investigation of current topics in the human services field.
1-6 semester hours

**HUMAN SERVICES 301**
**Crisis Management**
This course provides a background in cultural diversity and competence specifically related to human services settings. This includes culturally centered communication skills related to clients. It also includes sensitivity and awareness around the design and implementation of human services programs. The course will help students effectively navigate ethnic, race, gender and age related issues as they relate to client service and program development.
3 semester hours
Human Services

HUMAN SERVICES 302
Multicultural Perspectives in Human Services
Students are exposed to models of crisis intervention that facilitate crisis resolution. Crisis theory, critical factors, developmental and situational crisis as well as intervention with unique populations and special issues are discussed. Course includes competency-based skill-building exercises.
3 semester hours

HUMAN SERVICES 305
Strategies and Techniques of Group Interaction
Students become aware of strategies and techniques of group interaction as they relate to behavioral outcomes. Different theoretical models will be offered and opportunities will be given to demonstrate the effectiveness of specific approaches to unique populations.
3 semester hours

HUMAN SERVICES 309
Strategies for Effective Parenting
Students will acquire relevant child-raring information and constructive parenting techniques. Several therapy models useful for understanding child development will be explored. Emphasis will be on exploring personal parenting influences and preparing students to parent positively.
3 semester hours

HUMAN SERVICES 312
Internship in Human Services
The internship differs from the practicum in that it emphasizes the organizational aspects of the placement, i.e. management, planning, research, etc.
1-6 semester hours

HUMAN SERVICES 315
Substance Abuse and Chemical Dependency
This course concentrates on assessment and diagnosis of substance abuse and chemical dependency as well as the different treatment modalities and methods used to help the addicted. Included in the course will be a look at the different addictions and compulsive behavior patterns including alcohol and other drug dependency, gambling, and eating disorders.
3 semester hours

HUMAN SERVICES 316
Strategies for Effective Families
This course explores functional and dysfunctional families. Students will gain an understanding of the family system and methods of intervention and treatment for the family as well as individuals within the family.
3 semester hours

HUMAN SERVICES 320
Applied Ethics for Human Services Professionals
A general introduction to basic ethical principles as applied to human services and direct support workers across a spectrum of programs. Programs include work in hospital, community, day care, school, recreational, rehabilitation and mental health settings. Students apply ethical principles throughout the course to topics and case studies from the class text and from actual examples from their own practicum placements. Students engage in reading, discussion, writing, and individual presentations during the course. Students recognize basic ethical terminology, apply ethical models to relevant cases, and draft their own ethical decision-making model as a product of this course.
3 semester hours

HUMAN SERVICES 330
Making Career Management Decisions
Students will be presented with strategies and techniques for career decision-making as they relate to different issues and populations such as re-entry, mid-life, aging, youth and adult offenders, addiction (drug and alcohol), and cultural issues. Establishing career management strategies and the utilization of community resources in career planning will also be explored.
1-6 semester hours

HUMAN SERVICES 331
Social Policy and Administration
This course introduces the student to the various components of social policy; formation, implementation, administration, and evaluation. Theoretical issues as well as historical factors in policy are presented. Practical problems in administration of non-profit agencies are presented and analyzed.
3 semester hours

HUMAN SERVICES 350
Seminar in Human Services
This seminar course is designed as a culminating experience incorporating primary readings and case studies. Students will have an opportunity to explore and discern current issues and personal interests in the human service field.
3 semester hours

HUMAN SERVICES 332
Counseling Strategies for Career Decision-Making
Students will be presented with strategies and techniques for career decision-making as they relate to different issues and populations such as re-entry, mid-life, aging, youth and adult offenders, addiction (drug and alcohol), and cultural issues. Establishing career management strategies and the utilization of community resources in career planning will also be explored.
3 semester hours

HUMAN SERVICES 333
Social Gerontology
An interdisciplinary overview of the implications of aging in American society. This course is designed to acquaint the student who is contemplating a career in gerontology, with the physical, psychological, social, economic and cultural dimensions of the total experience of growing older.
3 semester hours

HUMAN SERVICES 335
Social Gerontology
This course deals with societal aspects of aging and focuses upon socio-cultural factors that contribute to patterns of aging in the USA. Topics covered include the cultural meaning of aging; the socialization process of aging; the population dimension of aging; human ecology of the aged; social stratification among the aged; deviance and crime among the aged; social power of the aged; and social change and the aged. Prerequisites: GERO 101 or SOC 101
3 semester hours

HUMAN SERVICES 351
Introduction to Gerontology
An interdisciplinary overview of the implications of aging in American society. This course is designed to acquaint the student who is contemplating a career in gerontology, with the physical, psychological, social, economic and cultural dimensions of the total experience of growing older.
3 semester hours

Human Services • Intergrated Studies • International Business •
International Political Economy and Diplomacy

HUMAN SERVICES 389
Seminar in Critical Issues in Contemporary Gerontology
This course is interdisciplinary in its orientation and its purpose is to familiarize students with the rich diversity of professional literature contributing to the field of gerontology. In addition, it is designed to demonstrate the linkages between theoretical issues and practical concerns in the field of aging. The course will draw upon the knowledge and experience of a variety of scientists and practitioners who will lead discussions on selected issues to be identified by the seminar’s participants. Prerequisites: GER 101 and 12 additional hours of gerontology course work.
3 semester hours; upon student demand

HUMAN SERVICES 399
Independent Study
Requires permission of Chair and instructor. This course is open only to Gerontology majors with at least twelve hours in gerontology. Students wishing to take this course must submit a detailed description of study.
1-6 semester hours; upon student demand (Every Semester)

Integrated Studies

INTEGRATED STUDIES C101B
Ethical Issues in Computing
Ethical basis for dealing with technological issues involving the computer. Context for ethical decision-making; ethical relativism, utilitarianism, deontology, virtue ethics. Software piracy, intellectual property rights, computer crime, computer viruses and worms, privacy, responsibility, liability and professional ethics. The course includes oral presentations, discussions and written papers on issues currently in the news and/or related to the topics at hand. Prerequisite: ENGL C101 or Department Permission.
3 semester hours

International Business

INTERNATIONAL BUSINESS 325
Import/Export
This course surveys functions and responsibilities of international traffic personnel; terms of trade; U.S. and foreign rules and regulations; documentation; methods of payment; ocean transportation; price quotations; analysis of transportation and marine insurance. Prerequisites: ECON 201, ECON 202; junior or senior status.
3 semester hours

INTERNATIONAL BUSINESS 360
Business and International Law
This course covers International Business Law fundamentals which operate as the “constitution” for international economic relations. A basic proposition of the course is that understanding International Business Law is essential to the study of International Relations, including the global economy and business.
3 semester hours

INTERNATIONAL BUSINESS 362
International Sales (Commercial) Transactions
This course introduces the basic issues in an international sales transaction. Based on the United Nations Convention on Contracts for the International Sale of Goods (CISG), the course examines formation of international sales contracts, transfer of title to goods, allocation of risk of loss, methods of financing the sale of goods, assurance of payment for goods, and rights and responsibilities of air and sea carriers.
3 semester hours

INTERNATIONAL BUSINESS 363
Settlement of International Business Disputes
This course examines the techniques and institutions available to states, corporations, or individuals for the peaceful settlement of international business disputes. It focuses on the settlement of international business disputes through such means as negotiation, mediation, arbitration, court systems of sovereignty, and the International Court of Justice.
3 semester hours

INTERNATIONAL BUSINESS 366
International Business and Customs Unions
This course examines the origins and historical development of the European Union, its institutions, business policies and special relationships with the rest of the world to create a common currency to achieve open trade in business across borders.
3 semester hours

International Political Economy and Diplomacy

INTERNATIONAL POLITICAL ECONOMY AND DIPLOMACY 201
Economics and Development
This is an introductory course of economics from a political science perspective. Major concepts and issues in both macro and micro economics will be covered, particularly as they relate to politics.
3 semester credits

INTERNATIONAL POLITICAL ECONOMY AND DIPLOMACY 202
Intro to Political Economy
The Introduction to Political Economy reviews the ways in which politics, trade, and economics are interwoven in today’s world. The course introduces students to basic concepts and issues in political economy and examines the factors that have contributed to the evolution of political economy and to the rise and fall of competing models of political economy.
3 semester credits

INTERNATIONAL POLITICAL ECONOMY AND DIPLOMACY 203
Political Economy of North America
This course examines the interactions of politics and economies of the United States, Mexico, and Canada. Issues to be covered include NAFTA, immigration, drug-trafficking, environment, terrorism, and foreign policies of the region.
3 semester credits

INTERNATIONAL POLITICAL ECONOMY AND DIPLOMACY 321 (IPED 321/PSCI 321)
Political Economy of East Asia
In recent decades, the East Asian region has often been described as a model of socioeconomic development, which newly developing regions should emulate. This course will encourage learners to explore the extent to which the East Asian paradigm of development is valid for other regions. This course will explore the cultural and historical factors contributing to the political and economic trajectories China, Korea, and Japan. Through studying East Asia’s unique socio-political and economic trajectory, students should be equipped to better contextualize and assess the challenges and opportunities currently facing the Peoples Republic of
International Political Economy and Diplomacy • Japanese

China, Taiwan, Hong Kong, Japan, and the Koreas.
3 semester hours
INTERNATIONAL POLITICAL ECONOMY
AND DIPLOMACY 329
Political Economy of China
This course is designed to help students make sense of contemporary China—its dy-
namic social and economic changes, its last-
ing political culture, its enduring struggle for
modernization and democratization, and its
evolving relations with the rest of the world.
The focus will be on major achievements,
problems, and challenges facing China to-
day. Instructor's permission may be required
for this course.
3 semester credits

INTERNATIONAL POLITICAL ECONOMY
AND DIPLOMACY 340 (IPED 340/PSCI 303)
Political Economy of Latin America
This course will explore pre-Colombian, as
well as colonial and post-colonial political
and economic development in Latin Amer-
ica. It will pay particular attention to socio-
political developments of the Cold War pe-
riod as well as recent significant initiatives
such as the Santiago Commitment, MERCOS-
SUR, and NAFTA, attempting to assess their
impact upon Latin America’s transformation
from developmentalism, to Third World polit-
ics, to an emerging center of democratic
capitalism.
3 semester credits

INTERNATIONAL POLITICAL ECONOMY
AND DIPLOMACY 390 (IPED 390/PSCI 303)
Multinational Corporations in IPE
This course analyzes the role of MNCs in
IPE. Topics include the nature, objectives,
and decisions of MNCs in today’s politics
and economics, the political and economic
implications of foreign direct investment,
and the effects of MNCs’ operations overseas
on the political economy of the host country
and the home country such as issues of out-
sourcing and insourcing. Instructor's permis-
sion may be required for this course.
3 semester credits

INTERNATIONAL POLITICAL ECONOMY
AND DIPLOMACY 391
Sustainable Development
This course concentrates on the relatively
new concept of sustainable development in
international political economy. Topics in-
clude, but are not limited to, pollution and
pollution control, environmental protec-
tion, education and occupational training,
infrastructure, legal system, political and
economic reform, productivity, human re-
sources, and linkage to the outside world.
Instructor's permission may be required for
this course.
3 semester credits

INTERNATIONAL POLITICAL ECONOMY
AND DIPLOMACY 392
The Geopolitics of Oil
Due to its critical importance in world econ-
omy, petroleum has assumed a significant
role in the maintenance of a stable interna-
tional political, economic, and security order.
This course examines the international po-
litical economy associated with the explora-
tion, production, trading, and consumption
of petroleum. It focuses on how petroleum
influences global and regional politics and
economics in an interdependent world. In-
structor’s permission may be required for
this course.
3 semester credits

INTERNATIONAL POLITICAL ECONOMY
AND DIPLOMACY 395
Political Economy of Environment
This course studies various environmental
issues in international political economy. A
global perspective is stressed with references
made to several international environmental
agreements, their enforcement, and their
impact on global and regional economy.
The course will also discuss issues related
to environment such as epidemics and their
relations. Instructor's permission may be re-
quired for this course.
3 semester credits

INTERNATIONAL POLITICAL ECONOMY
AND DIPLOMACY 396
Seminar on IPE
This is an advanced research seminar for
IPED majors. It focuses on IPE research
methods and senior thesis writing. Instruc-
tor’s permission may be required for this
course.
3 semester credits

Japanese

JAPANESE 101
Elementary Japanese I
Introduction to the Japanese language,
stressing speaking, listening, reading and
writing. The course will feature the Japanese
writing system, and introduce the student to
the language's phonetic/phonemic structure
gradually, with additional stress on pronun-
ciations, aural comprehension and basic
conversation.
3 semester hours

JAPANESE 102
Elementary Japanese II
Continuation of Japanese 101. Prerequisite:
Japanese 101
3 semester hours

JAPANESE 103
Intermediate Japanese I
Conversation based on the reading of cur-
cent prose texts. Thorough review of gram-
mar and vocabulary, and continued drill in
writing. Introduction to Japanese culture and
recent history through use of film, video s,
and newspapers. Prerequisite: JAPN 102.
3 semester hours

JAPANESE 104
Intermediate Japanese II
Continuation of Japanese 103, with special
focus on reading and writing with style and
fluency. Prerequisite: JAPN 103.
3 semester hours
Japanese • Korean • Law • Literature and Civilization • Management and Industrial Relations

Japanese 275

Japanese Culture and Literature
This course examines and discusses the traditional and changing images of women in Japanese culture, language, and literature. Students are provided with an opportunity to nurture critical points of view on stereotypical gender notions. Class discussions are conducted in Japanese.
3 semester hours

Japanese 398

Internship
Professional, supervised, unpaid work in an organization related to career goals. Prerequisite: Permission of advisor and School Director.
3 semester hours

Japanese 399

Independent Study
Special projects on topics not studied in detail in regular courses, or on topics included in regular courses when those courses are not available. Prerequisite: Permission of advisor and School Director.
1-6 semester hours

Korean

Korean 101
Elementary Korean I
Introduction to the Korean language, stressing speaking, listening, reading and writing. The course will start with the Korean writing system, its phonetic/phonemic system, and its structure, continue with an examination of what makes Korean unique to other languages, and then proceed with a step by step study of grammar, vocabulary, writing and conversation.
3 semester hours

Korean 102
Elementary Korean II
Continuation of Korean 101. Prerequisite: KORN 101
3 semester hours

Korean 103
Intermediate Korean I
Conversation based on the reading of modern prose texts. Drill in written and oral expression. Prerequisite: KORN 102
3 semester hours

Korean 104
Intermediate Korean II
Continuation of Korean 103. Prerequisite: KORN 103
3 semester hours

Korean 398
Internship
Professional, supervised, unpaid work in an organization related to career goals. Prerequisite: Permission of advisor and School Director.
3 semester hours

Korean 399
Independent Study
Special projects on topics not studied in depth in regular courses, or on topics included in regular courses when those courses are not available. Prerequisite: Permission of advisor and School Director.
1-6 semester hours

Literature and Civilization

Humanities C201A
The American Dreamer
An interdisciplinary course which employs history, literature and philosophy to examine and explain the cultures and values of a civilization over time and place. Works studied include primary historical and philosophical texts, as well as literary and artistic creations. Currently, the course looks at the civilization of the United States, focusing on the “American Dream,” its origins, growth and significance. This is a Core Heritage Course. Prerequisite: English C101 or department permission.
3 semester hours

Humanities 300
Seminar
An interdisciplinary and thematic seminar that focuses on the different approaches of history, literature, and philosophy to a common theme or text.
3 semester hours

Humanities 395
Thesis
The student will work closely with his or her academic advisor on a mutually acceptable project involving serious research.
3 semester hours

Law

Law 251
Business Law I
Court systems, sources of law in the United States, the constitutional basis of the legal system, government power to regulate business, the types and powers of administrative agencies, civil dispute resolution and alternatives to civil litigation; the law of contracts, fairness and good faith in interpretation of contracts, and the United Nations Convention on Contracts for the International Sale of Goods; problems in Agency and Employment, the ethical implications of business decisions, the broad functions of criminal and tort law, the Foreign Corrupt Practices Act, and the constitutional limitations on criminal procedure.
3 semester hours

Law 252
Business Law II
Uniform Commercial Code (Sales, Commercial Paper, Bank Deposits and Collection); business organization; Property (Personal Property, Real Property, including Landlord and Tenant, and Estates and Wills).
3 semester hours

Management and Industrial Relations

Management 300
Interpersonal and Group Behavior in Organizations
The student is introduced to behavior in organizations on interpersonal, group and intergroup levels. Group process is examined on both conceptual and experiential levels to enhance understanding of interpersonal and group processes, as well as to test and hone individual interpersonal and group participation skill. Theories of Social Psychology and Group Sociology are examined and applied. Prerequisite: junior or senior status.
3 semester hours

Management 301
Operations Management
The student is introduced to the basic tools and concepts used in managing the delivery
of products and services. Inventory cost control, work flow design, development of work standards, workplace layout, quality control, project management, forecasting, capital investment planning, capacity policy and related methods for management of operations are presented in this course. Prerequisite: junior or senior status.
3 semester hours

MANAGEMENT 302
Multicultural Management
This course introduces students to the basics of organization and management theory, as they apply to the global market place. A cross-cultural approach is used to examine the similarities, differences and application of theory across national boundaries; and to identify those structural constants that permit business to be conducted on a global scale. Organization culture, role structure, coordination and control methods, leadership, and business strategy are the basic theoretical constructs introduced and evaluated in the course. Prerequisite: junior or senior status.
3 semester hours

MANAGEMENT 305
Human Resource Issues in Management
The student is introduced to current theory, research and practice in the management of human resources in organizations. Job design, recruitment, selection, performance feedback, goal setting, training, employee rights, safety, compensation and benefits issues are reviewed within the context of their application in the US as a world standard for such practices, with comparisons to customs and practices in the international arena. Prerequisite: MGMT 302; junior or senior status.
3 semester hours

MANAGEMENT 311
Comp and Benefit Administration
Students in this course will examine the major foundation programs and skills that under grid the current practice of Human Resource Management. Theory and method used in the design of compensation systems is explored, interviewing method and skill as applied to data gathering for problem solving or personnel selection, surveys for compensation benchmarking or employee attitude measurement, and development of performance feedback and goal setting (MBO) programs are intensively reviewed. Student projects in program applications are required. Prerequisite: MGMT 302; junior or senior status.
3 semester hours

MANAGEMENT 320
Entrepreneurship and Small Business Management
For starting or buying a new business, it is critical to develop practical business plans, obtain financing, develop a marketing plan, project cash flow, organize the business, and develop financial controls to take advantage of opportunities in both domestic and international markets. Work is done in teams and computer analysis is used. Prerequisites: ACCT 102, MKTG 305, and MGMT 302.
3 semester hours

MANAGEMENT 330
Leadership Lessons from the Movies
In this course students will watch a variety of movies to examine the dynamics of leadership. Organizations and work units rise and fall based on leadership. Leaders must influence other people to accomplish organizational goals in a way that often entails self-sacrifice and living for the sake of others.
3 semester hours

MANAGEMENT 340
Conflict and Negotiation
The development of conflict-management and negotiating skills with particular emphasis on achieving effective and efficient outcomes within a global and multi-cultural context. Experiential exercises, readings and discussions will demonstrate various strategies for a broad range of negotiating scenarios, e.g., buyer-seller, management-labor, personal salary increase, cross-national, etc. Prerequisite: junior or senior status.
3 semester hours

MANAGEMENT 342
Labor Law and Arbitration
Modern labor legislation and its practical impact on present relations between labor and management. Increasing role of government through federal statutes and agencies. Historical background, principles, procedures and judicial aspects of arbitration process. Nature and function of arbitration; powers of arbitrator, and arbitration cases. Prerequisite: MGMT 305; junior or senior status.
3 semester hours

MANAGEMENT 350
Business Policy and Strategy
A study of decision-making including integrating analyses and policy determination at the overall management level. Students search for new knowledge and solutions to long and short term problems and opportunities in specific businesses. The coordination, integration and innovative application of theory and methods learned in previous courses are the tools of research. Accordingly, the final examination of each course shall constitute, therefore, an outcome assessment of what the student has learned in the program. This examination, normally an extensive and comprehensive case study, will be graded by several faculty members representing different and relevant disciplines.
3 semester hours; open only to seniors

The following courses are suggested for those students who wish to take elective courses in other disciplines which are related to or useful in the practice of management:

Communication in Industry.
—See MCOMM 385.
Industrial Psychology.
—See PSYC 309.
Social Psychology.
—See PSYC 305.
Tests and Measurements.
—See PSYC 323.

Marketing

MARKETING 305
Principles of Marketing
The scope and significance of marketing. The retailing and wholesaling of consumer goods. Marketing agricultural and industrial goods. Marketing policies and practices of business firms. Prerequisite: junior or senior status.
3 semester hours

MARKETING 306
Consumer Behavior
A qualitative analysis of marketing as a system for the satisfaction of human wants. The contribution of psychologists, sociologists, anthropologists, and other behavioral scientists to the understanding of consumer behavior. Such topics as motivation, learning, life-cycle and social-class analysis, culture and custom. Prerequisite: junior or senior status.
3 semester hours
Marketing • Martial Arts Studies

MARKETING 307 Management of Promotion
Advertising, personal selling, trade support, and public relations as elements of strategy. Situation analysis planning, execution, and evaluation of promotional campaigns. Social responsibilities of the firm and some of its ethical problems. The impact of consumerism. Prerequisite: MKTG 305; junior or senior status.
3 semester hours

MARKETING 308 Marketing Research
Objectives, techniques, and limitations of library and field research applied to advertising, retailing, or sales management problems. Assignment of group projects requiring considerable initiative and resourcefulness. Measurements of individual accomplishment by both group activity and individual evaluation of the project. Prerequisites: MGMT 120 and MKTG 305; junior or senior status.
3 semester hours

MARKETING 310 Service Marketing
Marketing in service industries, stressing the unique problems of marketing intangibles. This course focuses on the development, implementation, and control of strategy, systems and people for effective service operations. Case studies are selected from professional services, transportation, hotels and resorts, and various other retail services. Prerequisite: MKGT 305.
3 semester hours

MARKETING 319 Advertising Management
A critique of advertising from the viewpoint of management. Case problem-solving of situations that have confronted businessmen. The impact of advertising on demand for products and services. Principal problems in the building, implementing and evaluating of advertising programs. Prerequisite: MKGT 305, Junior or senior status.
3 semester hours

MARKETING 325 Sales Management
Management of manufacturer’s salesmen. Sales department organization. Selecting, training, compensating, and supervising salesmen. Sales territories, travel expenses, quotas, and budgets. Principles are applied to concrete problems. Prerequisite: MKGT 305; junior or senior status.
3 semester hours

MARKETING 339 Retailing Management
Use of the case method to analyze and solve problems faced by senior retail executives. Case histories set forth detailed background information to train the student in developing alternative solutions and choosing from among them. Cases in each of the major fields of retail management, merchandising, publicity, personnel, control, and service activities. Prerequisite: MKGT 305; junior or senior status.
3 semester hours

MARKETING 342 Multinational Marketing
Lecture and case studies, exploring cultural, political, economic and legal aspects of the development and operation of companies marketing overseas. Planning, organizing, controlling, and promoting for industrial and consumer goods. Prerequisite: junior or senior status.
3 semester hours

MARKETING 350 Marketing Management
The nature and scope of marketing management. The interpretation of environmental factors affecting marketing decisions and application of managerial concepts to marketing strategy. Adaptation of resources and objectives in the development of marketing plans. Prerequisite: junior or senior status.
3 semester hours

Martial Arts Studies

MARTIAL ARTS STUDIES 110 Taekwondo Practicum 1
This is an introduction to Taekwondo, commencing with instructions in essential classroom etiquette and training rules. Through this course, students are expected to achieve mastery of Taekwondo forms. Prerequisite: MKGT 305. Junior or senior status.
1 semester hour

MARTIAL ARTS STUDIES 111 Taekwondo Practicum 2
This level of Taekwondo training focuses on the adaptation of the body to martial art training. Through this course, students are expected to achieve mastery of Taekwondo forms. Prerequisite: MKGT 305; junior or senior status.
3 semester hours

MARTIAL ARTS STUDIES 112 Taekwondo Practicum 3
This course focuses on enhancing the student’s ability to maintain and increase physical balance. Through this course, students are expected to achieve mastery of Taekwondo forms. Prerequisite: MKGT 305; junior or senior status.
3 semester hours

MARTIAL ARTS STUDIES 114 Taekwondo Practicum 4
This Taekwondo class will focus on enhancing concentration skills. Through this course, students are expected to achieve mastery of Taekwondo forms. Prerequisite: MKGT 305; junior or senior status.
3 semester hours

Martial Arts Studies

MARTIAL ARTS STUDIES 110 Taekwondo Practicum 1
This is an introduction to Taekwondo, commencing with instructions in essential classroom etiquette and training rules. Through this course, students are expected to achieve mastery of Taekwondo forms. Prerequisite: MKGT 305; junior or senior status.
1 semester hour

MARTIAL ARTS STUDIES 111 Taekwondo Practicum 2
This level of Taekwondo training focuses on the adaptation of the body to martial art training. Through this course, students are expected to achieve mastery of Taekwondo forms. Prerequisite: MKGT 305; junior or senior status.
3 semester hours

MARTIAL ARTS STUDIES 112 Taekwondo Practicum 3
This course focuses on enhancing the student’s ability to maintain and increase physical balance. Through this course, students are expected to achieve mastery of Taekwondo forms. Prerequisite: MKGT 305; junior or senior status.
3 semester hours

MARTIAL ARTS STUDIES 114 Taekwondo Practicum 4
This Taekwondo class will focus on enhancing concentration skills. Through this course, students are expected to achieve mastery of Taekwondo forms. Prerequisite: MKGT 305; junior or senior status.
3 semester hours

Martial Arts Studies

MARTIAL ARTS STUDIES 110 Taekwondo Practicum 1
This is an introduction to Taekwondo, commencing with instructions in essential classroom etiquette and training rules. Through this course, students are expected to achieve mastery of Taekwondo forms. Prerequisite: MKGT 305; junior or senior status.
1 semester hour

MARTIAL ARTS STUDIES 111 Taekwondo Practicum 2
This level of Taekwondo training focuses on the adaptation of the body to martial art training. Through this course, students are expected to achieve mastery of Taekwondo forms. Prerequisite: MKGT 305; junior or senior status.
3 semester hours

MARTIAL ARTS STUDIES 112 Taekwondo Practicum 3
This course focuses on enhancing the student’s ability to maintain and increase physical balance. Through this course, students are expected to achieve mastery of Taekwondo forms. Prerequisite: MKGT 305; junior or senior status.
3 semester hours

MARTIAL ARTS STUDIES 114 Taekwondo Practicum 4
This Taekwondo class will focus on enhancing concentration skills. Through this course, students are expected to achieve mastery of Taekwondo forms. Prerequisite: MKGT 305; junior or senior status.
3 semester hours
Students will learn to incorporate Taiji principles into the form. At this stage, greater emphasis will be placed on integrated body movement and mind power (concentration) to move the body as a single unit and will include Qigong training level 3 on the entire set of exercises one to twelve.

Taiji 3 reinforces the understanding of the physical principles (head suspended; pelvis tucked in with toe in and knee out; chest concave; body rounded; shoulders lowered; waist loose; ‘qua’ loose; and deep breathing). It introduces the skills required to incorporate the principles into Taiji learning and practice. The concepts of flexibility and range of motion are presented for discussion and written assignments. Research methods will be introduced to permit independent gathering of Taiji information for study and personal growth. Taiji 3 also presents Qigong training, continuing to prepare students physically for proper Taiji execution. Qigong exercises are more strenuous and are aimed at greater flexibility with longer strength-training periods. 

Prerequisite: Marts 122 or Instructor’s Approval based on Testing.

1 semester hour
MARTIAL ARTS STUDIES 124
Taiji Practicum 4
This course will introduce the third part of the Yang Style Short Form. It will incorporate breathing techniques into the form and will introduce the concept of form assessment for the incorporation and execution of Taiji principles. It will build on earlier training to begin to introduce the martial arts applications of Taiji in preparation for push hands classes and Qigong training level 4 on the entire set (exercises one to twelve). This course will begin to prepare students to assume leadership roles in higher levels of study. Taiji 4 reviews Taiji’s principles and communicates how the Taiji form performance is assessed based on the principles. Both the self-defense aspects and the self-cultivation aspects (of body, mind & spirit) of the Yang Style Short Form will be presented. The class will stress ongoing individual Taiji training and students will be encouraged to develop individual Taiji training formats. This class also presents training and information required to lead Qigong classes on the entire set of twelve exercises. Prerequisite: Marts 123 or Instructor’s Approval based on Testing.

1 semester hour
MARTIAL ARTS STUDIES 212
The History of Martial Arts
This course traces the origins, growth and diversification of the Martial Arts in China, Korea and Japan. Emphasis is placed on the evidence of primary historical texts, including the Five Classics of pre-Qin China as well as early histories of Korea and Japan such as the Samguk Yusa and the Kojiki. The historical information gleaned from these sources is compared to the narratives and mythologies passed down through the written and oral traditions of the various schools. We examine the unfolding of the Shaolin Gongfu schools influenced by Chan as well as the Wudang tradition influenced by Daoism, the emergence of Martial Arts in the Hwarang movement of the Korean Silla kingdom and their revival after the Japanese occupation, and the transformation of Gongfu traditions in Japan via Okinawa.

3 semester hours
MARTIAL ARTS STUDIES 213
Martial Arts and East Asian Thought
This course examines the impact of East Asian philosophy and religion on the Martial Arts. The course begins by outlining the major teachings of Buddhism, Daoism, and to a lesser extent, Confucianism, focusing on key classics. Following this we will explore the ways in which these teachings came to influence what was originally a martial tradition, resulting in a variety of complex systems that placed greater emphasis on mental as well as physical powers, self-cultivation and personal fulfillment.

3 semester hours
MARTIAL ARTS STUDIES 214
Daoism and Taiji
This course will examine both the historical and conceptual relationship between Daoism and Taiji. It will examine ways in which key concepts of Daoism are reflected in Taiji practice. In the study of the history of the relationship between Daoism and Taiji, we will note the differences between the received tradition of this relationship (as transmitted from master to student in the pedagogical process) versus historical documentation that, through primary sources, independently confirms the longstanding ties between the two. In the review of the linkage between Daoism and Taiji we will focus on the cosmology of the Book of Changes, which informs the conceptual framework of
Martial Arts Studies

Taiji, as well as influential Daoist concepts such as Wu Wei (No Action), Yin and Yang and passive values as depicted in the Laozi, Zhuangzzi, the Book of Changes, and the Taji-juan Treatise.

3 semester hours

MARTIAL ARTS STUDIES 234
Issues in Taiji
This course invites students to be participants in a discussion on the challenges faced by Taiji at this stage of its one thousand year history. Through selected readings and class discussions students will consider pertinent issues such as the ongoing division among the styles of Taiji and various perceptions of Taiji in modern society (e.g., the view of Taiji as primarily an activity for seniors and the perception that Taiji is disengaged from the world). Furthermore, it will invite students to consider ways in which the study of Taiji can contribute to academic discourse, to the improvement of social well-being, and to the future direction of society.

3 semester hours

MARTIAL ARTS STUDIES 235
Issues in Taekwondo
This course invites students to consider the challenges faced by Taekwondo at this stage in its history. Through selected readings and class discussions students will consider such pertinent issues as the perception of Taekwondo as an overly aggressive sport or as an unregulated industry, far removed from the ideals of its progenitors. Discussion will also consider ways in which Taekwondo has been transformed through its assimilation into academia and into non-Korean society. Participants will consider the impact that Taekwondo has had on youth in the United States and will examine whether and how it might make a positive contribution towards the problems that they face.

3 semester hours

MARTIAL ARTS STUDIES 241
Taekwondo Practicum 5
This level of Taekwondo training focuses on the cultivation of self-control. Through this course, students are expected to achieve mastery of Taekwondo forms Go-Ryo & Pal-Gae No. 1, intermediate self defense techniques No. 1 & 2, kicking technique and board breaking with a focus on the Jump Axe kick and Jump Front kick, sparring techniques with a focus on Olympic style sparring offense combination skills, 1st degree black belt (level 7) Jump Axe kick breaking techniques and 1st degree black belt level 6 belt Jump Front kick breaking techniques.

1 semester hour

MARTIAL ARTS STUDIES 242
Taekwondo Practicum 6
This level of Taekwondo training focuses on the cultivation of self-confidence. Through this course, students are expected to achieve mastery of Taekwondo forms Pal-Gae No. 2 & 3, intermediate self defense techniques No. 3 & 4, kicking techniques with a focus on the Jump Roundhouse kick and Jump Side kick, sparring techniques with a focus on Olympic style sparring defense combination skills, 1st degree black belt level 5 Jump Roundhouse kick breaking techniques and 1st degree black belt level 4 belt Jump Side kick breaking techniques.

1 semester hour

MARTIAL ARTS STUDIES 243
Taekwondo Practicum 7
This level of Taekwondo training focuses on the cultivation of patience and endurance. Through this course, students are expected to achieve mastery of Taekwondo forms Pal-Gae No. 4 & 5, intermediate self defense techniques No. 5 & 6, kicking technique with a focus on the Jump Back kick and Jump Hook kick, sparring techniques with a focus on Olympic style sparring offense and defense combination skills, 1st degree black belt level 3 Jump Back kick breaking techniques and 1st degree black belt level 2 belt Jump Hook kick breaking techniques.

1 semester hour

MARTIAL ARTS STUDIES 244
Taekwondo Practicum 8
This level of Taekwondo training focuses on the cultivation of self-esteem as well as self-control. Through this course, students are expected to achieve mastery of Taekwondo forms Pal-Gae No. 6 (guiding theme “water”), intermediate self defense technique No. 7, kicking techniques with a focus on the Jump Back Spinning Hook kick, sparring techniques with a focus on Olympic style sparring offense and defense combination skills and hand combination techniques, 1st degree black belt level 1 breaking Jump Back Spinning Hook kick techniques. After this level is completed, there will be the 2nd degree black belt test including a Martial Arts Essay test.

1 semester hour

MARTIAL ARTS STUDIES 251
Taiji Practicum 5
Practicum 5 introduces the ways in which beginning fighting techniques rely on movements from the Short Form. The intermediate practica (practica 5-8) are meant to provide a comprehensive grasp of the self-defense and martial arts aspects of Taiji through the acquisition of specific techniques and training. Systematic training is divided into 4 levels designed to educate students in basic self-defense techniques and internal strength training up to the competitive Martial Artist level. Practicum 5 emphasizes coordination and flexibility. In Practicum 5 students begin the practice of the push hands and are introduced to the fast form that consists of set routines of defense, repositioning, attacks, movements and strikes. Prerequisite: MARTS 124 or Instructor’s Approval based on Testing.

1 semester hour

MARTIAL ARTS STUDIES 252
Taiji Practicum 6
Practicum 6 dedicates special attention to the philosophy and practice of Qi Gong for the purpose of cultivating qi and improving self-defense and short form skills. Self-defense on this level includes the study of yielding and sticking to neutralize an attacker’s strength and skills. The intermediate practica provide a comprehensive grasp of the self-defense and martial arts aspects of Taiji through the acquisition of specific techniques and training. Systematic training is divided into 4 levels designed to educate students in basic self-defense techniques and internal strength training up to the competitive Martial Artist level. Practicum 6 also emphasizes correction and improvement of the Short Form. Prerequisite: MARTS 251 or Instructor’s Approval based on Testing.

1 semester hour

MARTIAL ARTS STUDIES 253
Taiji Practicum 7
Practicum 7 focuses on the application of the short form for self-defense and it also emphasizes continued Short Form improvement. The intermediate practica (5-8) provide a comprehensive grasp of the self-defense and martial arts aspects of Taiji through the ac-
Martial Arts Studies

Survey of the Martial Arts
This course introduces the theoretical foundations of a variety of Martial Arts, including Taiji, Gongfu, Taekwondo, Hapkido, Karate, Judo, and Jujitsu. Through video, demonstrations, and other modalities, students will also be exposed to the major techniques used in each of the Martial Arts introduced.
3 semester hours

Communication and Martial Arts
This course is designed to introduce Martial Arts Studies students to the concepts and practices of intercultural communication. Topics will include Martial Arts and non-verbal communication, Martial Arts and verbal communication, the influence of culture on communication and intercultural conflict resolution. The course will be conducted in the context of the martial artist as a leader and as a communicator. The martial artist will be viewed as a communicator both in the role of instructor and in the role of manager.
3 semester hours

Image and Reality in the Martial Arts
This course explores popular concepts about the Martial Arts as depicted in modern media, particularly cinema and television, and contrasts them with historical and literary perspectives drawn from East Asian classics and Martial Arts texts.
3 semester hours

Psychosocial Aspects of Martial Arts
The present course introduces students to the Western concepts of psychosocial development and self-actualization and to the East Asian concept of self-cultivation. It then identifies the character development objectives of three different martial arts—Taiji, Taekwondo, and Judo. It follows with an examination of research on the psychological impact of practicing martial arts, with an emphasis on self-concept, self-esteem, mood, phenomenology, psychological health, psychotherapeutic outcomes, and self-actualization. In addition, the course examines the impact of the martial arts on aggression and hostility, sex discrimination and feminist awareness, and traditionalism versus modernization.
3 semester hours

Systematic training on this level is meant to help prepare with the basic self-defense techniques and internal strength training needed to begin to compete on the level of a Taiji Martial Artist. Prerequisite: MARTS 252 or Instructor’s Approval based on Testing.
1 semester hour

Martial Arts Studies 245

Taiji Practicum 8
Practicum 8 is meant to complete students’ training in basic self-defense techniques and internal strength training to the level needed to be a Martial Artist who can participate in Taiji competitions. Practicum 8 focuses on Punching & kicking techniques, footwork and endurance training. It also emphasizes correction and preparation of the Short Form for demonstration. In preparing students for graduation, Practicum 8 provides a comprehensive review of the Taiji topics and techniques introduced in earlier practica. Prerequisite: MARTS 253 or Instructor’s Approval based on Testing.
1 semester hour

Martial Arts Studies 261

Taekwondo Practicum 11
This level of Taekwondo training focuses on cultivating dedication to goals and ideals. Through this course, students are expected to achieve mastery of Taekwondo form Sipjin (guiding theme “nature’s 10 ideas”), advanced self defense techniques No. 5 & 6, kicking technique with a focus on the Double Hook kick and Double Back Hook kick, sparring techniques with a focus on Olympic style offense and defense strategy skills, 2nd degree black belt level 3 Double Hook kick breaking techniques and 2nd degree black belt level 2 belt Double Back Hook kick breaking techniques. Students in this class are qualified to serve as teaching assistants.
1 semester hour

Martial Arts Studies 262

Taekwondo Practicum 12
This level of Taekwondo training focuses on cultivating humility. Through this course, students are expected to achieve mastery of Taekwondo form Keumkang (guiding theme “wisdom and virtue”), advanced self defense techniques No. 7, kicking technique with a focus on the Tornado kick, sparring techniques with a focus on Olympic style psychological strategy skills, 2nd degree black belt level 1 breaking techniques of Tornado kick. After this level is completed, there will be the 3rd degree black belt test including a Martial Arts Essay test. Students in this class are qualified to serve as teaching assistants.
1 semester hour

Martial Arts Studies 278

Survey of the Martial Arts
This level of Taekwondo training focuses on enhancing team spirit and cooperation. Through this course, students are expected to achieve mastery of Taekwondo form Keumkang (guiding theme “wisdom and virtue”), advanced self defense techniques No. 1 & 2, kicking technique with a focus on the Double Front kick and Double Roundhouse kick, sparring techniques with a focus on Olympic style offense strategy skills, 2nd degree black belt level 7 Double Front kick breaking techniques and 2nd degree black belt level 6 belt Double Roundhouse kick breaking techniques. Beginning with the achievement of the 2nd degree black belt, students are qualified to serve as teaching assistants.
1 semester hour

Martial Arts Studies 291

Taekwondo Practicum 13
This level of Taekwondo training focuses on enhancing the sense of magnanimity and service to others. Through this course, students are expected to achieve mastery of Taekwondo form Jitae (guiding theme “human and nature”), high advanced self defense techniques No. 1 & 2, kicking techniques with a focus on the Jump Point kick and Jump Scissor kick, sparring techniques with a focus on Olympic style defense strategy skills, 2nd degree black belt level 5 Double Side kick breaking techniques and 2nd degree black belt level 4 belt Double Back kick breaking techniques. Students in this class are qualified to serve as teaching assistants.
1 semester hour

Martial Arts Studies 302

Taekwondo Practicum 10
This level of Taekwondo training focuses on cultivating the sense of personal achievement. Through this course, students are expected to achieve mastery of Taekwondo form Taebuck (guiding theme “human”), advanced self defense techniques No. 3 & 4, kicking technique with a focus on the Double Side kick and Double Back kick, sparring techniques with a focus on Olympic style defense strategy skills, 2nd degree black belt level 5 Double Side kick breaking techniques and 2nd degree black belt level 4 belt Double Back kick breaking techniques. Students in this class are qualified to serve as teaching assistants.
1 semester hour
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with a focus on free style defense sparring, 3rd degree black belt level 7 Jump Point kick breaking techniques and 3rd degree black belt level 6 belt Jump Scissor kick breaking techniques. Students in this class are qualified to serve as teaching assistants.

1 semester hour

MARTIAL ARTS STUDIES 324
Taekwondo Practicum 14
This level of Taekwondo training focuses on cultivating social and leadership skills. Through this course, students are expected to achieve mastery of Taekwondo form Cheonkwon (guiding theme “universal”), high advanced self-defense techniques No. 3 & 4, kicking technique with a focus on the Jump Split Front kick & Jump 360º Back Kick, sparring techniques with a focus on free style offensese breaking, 3rd degree black belt level 5 Jump Split Front kick breaking techniques and 3rd degree black belt level 4 belt Jump 360º Back kick breaking techniques. Students in this class are qualified to serve as teaching assistants.

1 semester hour

MARTIAL ARTS STUDIES 325
Taekwondo Practicum 15
This level of Taekwondo training focuses on the cultivation of ethical thinking. Through this course, students are expected to achieve mastery of Taekwondo form Hansoo (guiding theme “water”), high advanced self-defense techniques No. 5 & 6, kicking technique with a focus on the Jump Triple Front kick & Jump Triple Roundhouse Kick, sparring techniques with a focus on free style offensese/defense combination sparring, 3rd degree black belt level 3 Jump Triple Front kick breaking techniques and 3rd degree black belt level 2 belt Jump Triple Roundhouse kick breaking techniques. Students in this class are qualified to serve as teaching assistants.

1 semester hour

MARTIAL ARTS STUDIES 326
Taekwondo Practicum 16
This level of Taekwondo training focuses on consolidating the various aspects of self cultivation. Through this course, students are expected to achieve mastery of Taekwondo form Ilyo (guiding theme “mind/body unity”), high advanced self-defense techniques No. 7, kicking technique with a focus on the Creative kick, sparring techniques with a focus on the meaning of sparring, 3rd degree black belt level 1 Creative kick breaking techniques. Upon the completion of this level, students will have the 4th degree black belt test including both a practical test and a written examination. Students in this class are qualified to serve as teaching assistants.

1 semester hour

MARTIAL ARTS STUDIES 330
Internship
Senior level students of the Martial Arts Studies degree program should complete an internship at an established Martial Arts school or in a business, or government agency. The internship will be complemented by a written report and will be done under the supervision of a professor.

3 semester hours

MARTIAL ARTS STUDIES 340
Senior Thesis or Presentation
The senior thesis or a creative presentation based on the Martial Arts emphasizes research and research methods. This course may only be taken after having completed 90 semester hours or more in the program. If a student elects to write a thesis, his/her work will be expected to demonstrate a theoretical understanding of the Martial Arts (e.g., technical, philosophical, and historical) and their relationship with the broader cultural, philosophical, and social context in which they evolved. Independent research and creative thinking will be emphasized as well as the ability to gather and conduct research and formulate a position in a critical and analytical manner. Students choosing to do a presentation based on their Martial Arts skills would normally do so both to demonstrate their technical mastery of the Martial Arts as well as their creativity. The senior presentation might consist of projects such as the creation and performance of a new form or the adaptation of a Martial Arts form to music or to poetry. The presentation should show ways in which the Martial Arts contribute to a broader socio-cultural context.

3 semester hours

MARTIAL ARTS STUDIES 350
Senior Thesis or Presentation
The senior thesis or a creative presentation based on the Martial Arts emphasizes research and research methods. This course may only be taken after having completed 90 semester hours or more in the program. If a student elects to write a thesis, his/her work will be expected to demonstrate a theoretical understanding of the Martial Arts (e.g., technical, philosophical, and historical) and their relationship with the broader cultural, philosophical, and social context in which they evolved. Independent research and creative thinking will be emphasized as well as the ability to gather and conduct research and formulate a position in a critical and analytical manner. Students choosing to do a presentation based on their Martial Arts skills would normally do so both to demonstrate their technical mastery of the Martial Arts as well as their creativity. The senior presentation might consist of projects such as the creation and performance of a new form or the adaptation of a Martial Arts form to music or to poetry. The presentation should show ways in which the Martial Arts contribute to a broader socio-cultural context.

3 semester hours

MARTIAL ARTS STUDIES 352
Taiji Practicum 10
Practicum 10 introduces the second part of the Long Form. Systematic training in this practicum is designed to build on basic and intermediate Taiji knowledge in self defense and in physical strength training to bring students to the level of accomplished Martial Artists. Study includes emphasis on self-cultivation (body and mind), internal strength training and cultivation of qi. Practicum 10 again stresses continuity of movement, coordination and presents new Taiji movements that are not found in the Short Form. Students are also introduced to the Qi Gong 10 exercise set. Prerequisite: MARTS 351 Taiji Practicum 9.

1 semester hour

MARTIAL ARTS STUDIES 353
Taiji Practicum 11
In practicum 11 students are introduced to the third part of the Long Form. Systematic training in advanced practica is designed to build on basic and intermediate Taiji knowledge in self defense and in physical strength training to bring students to the level of accomplished Martial Artists. Study includes emphasis on self-cultivation (body and mind), internal strength training and cultivation of qi. Practicum 11 stresses continuity of movement and coordination. In this Practicum, students are introduced to new Long Form movements, not included in the Short Form. They continue the study and application of the Qi Gong 10 exercise set. Prerequisite: MARTS 352 Taiji Practicum 10.

1 semester hour

MARTIAL ARTS STUDIES 354
Taiji Practicum 12
Martial Arts Studies • Mass Communication

Practicum 11 includes the Long Form correction and places emphasis on coordination and continuity of (108) movements. It also continues with the Qi Gong 10 exercise set. The advanced practica provide a comprehensive grasp of Taiji through the acquisition of sets of advanced techniques. Systematic training in practica 9-16 is designed to build on basic and intermediate Taiji knowledge in self defense and in physical strength training to bring students to the level of accomplished Martial Artists. Study includes emphasis on self-cultivation (body and mind), internal strength training and cultivation of qi. Prerequisite: MARTS 353 Taiji Practicum 11.

1 semester hour

MARTIAL ARTS STUDIES 355
Taiji Practicum 13
Practicum 13, along with continuing the study of Long Form technique, provides an introduction to the role of meditation in martial arts and introduces meditation techniques. Each advanced practicum represents an additional step toward the student developing a comprehensive grasp of Taiji through the acquisition of sets of advanced techniques. Systematic training in practica 9-16 is designed to build on basic and intermediate Taiji knowledge in self defense and in physical strength training to bring students to the level of accomplished Martial Artists. Study includes emphasis on self-cultivation (body and mind), internal strength training and cultivation of qi. Prerequisite: MARTS 354 Taiji Practicum 12.

1 semester hour

MARTIAL ARTS STUDIES 356
Taiji Practicum 14
Practicum 14 introduces advanced Taiji fighting techniques. Systematic training in practica 9-16 is designed to build on basic and intermediate Taiji knowledge in self defense and in physical strength training to bring students to the level of accomplished Martial Artists. Study includes emphasis on self-cultivation (body and mind), internal strength training and cultivation of qi. Practicum includes light contact sparring and introduces students to the role that the forms play in self-defense. Prerequisite: MARTS 355 Taiji Practicum 13.

1 semester hour

MARTIAL ARTS STUDIES 357
Taiji Practicum 15
Practicum 15 continues the systematic training designed to build on basic and intermediate Taiji knowledge in self-defense and physical strength training to help to bring students to the level of accomplished Martial Artists. In Practicum 15 students are introduced to the philosophy of qi and are provided with an understanding of how qi relates to the meridian chart, to alignment, and to the body’s internal systems. Prerequisite: MARTS 356 Taiji Practicum 14.

1 semester hour

MARTIAL ARTS STUDIES 358
Taiji Practicum 16
Practicum 16 represents the highest level of training in Taiji at the University. It is meant to contribute to the students’ comprehensive grasp of Taiji because of their acquisition of proficiency in sets of advanced techniques. This course is meant to build on basic and intermediate Taiji knowledge in self defense and in physical strength training in previous practica to bring students to the level of accomplished Martial Artists. Study in this practicum continues the emphasis on self-cultivation (body and mind), internal strength training and cultivation of qi. Practicum 16 prepares each student to perform a demonstration of the combined Long and Short forms. This practicum serves as a comprehensive review of Taiji topics and techniques prior to graduation. Prerequisite: MARTS 357 Taiji Practicum 15.

1 semester hour

Mass Communication

MASS COMMUNICATION 110
Public Communication
The process and variables of everyday public address are examined through situations, content, presentation strategies and effects, and by classroom practice in the basic principles of oral communication.

3 semester hours

MASS COMMUNICATION 111
Introduction to Mass Communication
The role and function of the mass media. Survey of newspapers, magazines, books, radio, television, film, advertising and public relations. Criticism, challenges and professional opportunities.

3 semester hours

MASS COMMUNICATION 200
Co-Operative Education
Professional, supervised work in an organization related to career goals. Prerequisite: Permission of department required.

1-3 semester hours

MASS COMMUNICATION 201
Persuasive Communication
Study of communication as a form of influence; the process and functions involved, its potential and limitations; social and personality factors related to persuasibility, attitude formation and change. Students will analyze and present persuasive messages.

3 semester hours

MASS COMMUNICATION 205
Interpersonal Communication
An introductory survey of interpersonal communication theories and their application to face-to-face, group, organizational and mediated contexts. The classroom becomes a laboratory for gaining knowledge of the processes of communication, perception, language and meaning.

3 semester hours

MASS COMMUNICATION 211
Communication Theory
An examination of communication theories which includes theories on verbal communication, nonverbal communication, interpersonal communication, self-concept, relationship development, influence, conflict, group communication, decision-making, gender communication, organizational communication, intercultural communication, and media communication.

3 semester hours

MASS COMMUNICATION 218
Media Aesthetics
The artistic philosophy and practical applications of creating effective media. This is a hands-on laboratory course. The study focuses on aesthetics as a physical expression of creative and marketing goals and how this is put into practice when communicating messages through images and words. Subjects include compositional strategy, visual literacy and message design. This knowledge shapes design critical to working in new media and every other type of media produced—documents, ads, brochures, video, proposals, and more. This course will offer an introduction to Photoshop. Instructor’s permission may
be required for this course.
3 semester hours

MASS COMMUNICATION 220
Introduction to Advertising
An examination of the theories and practices of advertising. Historical, legal, and social psychological aspects of advertising. Advertising explored from both client side and agency side perspectives. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 235
Writing for Media
This course is an introduction to media writing. Students will practice writing and editing news, public relations materials, broadcast scripts, and advertising copy. It includes a grammar and style review specifically for print and interactive media.
3 semester hours

MASS COMMUNICATION 240
News Reporting & Writing
Introduction to reporting techniques – sources of news, interviewing, public document and database searches – and their application in writing various forms of news stories. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 242
Introduction to New Media
An overture to computer-based media, technology and the digital information age. This primer includes history, current digital media, a look at technology trends and the future of digital media. Topics include computers— their origins and functions; hardware and software; file management; networks; data security; E-Commerce; the Internet—its history and development; the basis of interactivity between humans and machines, and machine to machine, and other timely issues. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 247
Fashion Journalism
This course covers the basic elements of fashion journalism for magazines (women’s and men’s) and newspapers. Students will analyze examples of fashion journalism and will learn fashion writing, photo shoot coordination (planning, styling, budgeting, etc.), and copy preparation. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 251
Sports Journalism
It covers both sports writing and sports broadcasting. Learn skills of reporting of competition and play-by-play coverage, communicating about sports through word and image, commentary, and interview skills. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 252
Introduction to Web Publishing
A comprehensive overview in planning, organizing and creating a web site. The course features emphasis on creative and communications imperatives in web page creation including design, layout, navigation and usability. This course offers the use of Dreamweaver. Topics include web site types, structures, the importance of the home page, understanding screen real estate and how to use it effectively, white space, typography, titles and headlines, search engines and how to get listed and many other issues and topics related to effective web page creation. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 255
Sports Business and Marketing
This course provides an overview of major sports business issues. It covers professional, Olympic, collegiate sports, studies sports as a business, and discusses sports marketing, promotion, and sports sponsorships. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 262
Writing for Interactive Media
Understanding the Internet as an information vehicle and how the role of the writer is more than just creating strong text. This course offers discussion and hands-on work in the art and science of effective organization, preparation, writing and editing for the interactive media audience. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 270
Public Relations
Current practices and problems, with emphasis on the role of the public relations practitioner as a specialist in communications, analyst of public opinion, and counselor to the major sponsors of public communication. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 272
Creating Digital Media
From pre-production through post-production, video production technique for digital media is explored. Lectures and projects will lead students to a greater understanding of message direction, aesthetics and finesse of a project through conclusion. This course is designed as an introductory primer to the creation of digital video. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 284
Business and Professional Communications
Understanding and development of communications skills necessary for individuals to function effectively in business and corporate roles. Special consideration given to the verbal and nonverbal elements of the work situation: barriers to communications, listening skills, interviewing, instructional skills, forms of negotiation, technical reports, and principles of group behavior. Students’ skills are assessed relative to the levels of communication required in various career areas and cultural milieus.
3 semester hours

MASS COMMUNICATION 290
Intercultural Communication
Study of basic concepts, theories, and practices of intercultural communication, including elements of cultural systems, social identification and group relations, influence of culture, language and culture, nonverbal communication, intercultural negotiation, and intercultural conflict resolution. Intercultural communication as applied to interpersonal communication, group communication, organizational communication, public communication, and mass communication. Communication principles will be applied to intercultural interaction so that misunderstanding, prejudice, stereotypes, and discrimination can be reduced or eliminated.
Mass Communication

3 semester hours
MASS COMMUNICATION 303
Communication and Group Decision-Making
Study of group communication patterns, group functions, group dynamics, and theories of group communication. Special attention given to listening, formation of messages, critical thinking, decision-making process, leadership, group conflicts, problem solving, and techniques for effective group communication.
3 semester hours

MASS COMMUNICATION 304
Newspaper Editing and Production
Principles of editing in print media. The relationship between writing headlines and designing newspaper pages. Legal and ethical issues confronting newspaper editors. The editor-writer relationship. Laboratory training in the making of editorial judgments. Instructor's permission may be required for this course.
3 semester hours

MASS COMMUNICATION 339
Advertising and Public Relations Campaigns
In-depth analysis and practice in strategies and tactics employed in creating advertising and public relations programs for clients. Principal focus on working on a competitive group project preparing an agency-style presentation for a real or hypothetical client. Instructor's permission may be required for this course.
3 semester hours

MASS COMMUNICATION 340
Magazine and Feature Writing
An in-depth experience of writing for periodicals. Focus is on the additional research and preparation needed for this medium. Principles of advocacy and rhetoric and their relevance in the news media are explored. Instructor's permission may be required for this course.
3 semester hours

MASS COMMUNICATION 341
Digital Project Management
Students work in teams to create and produce an original web site or extensively improve an existing one, working in conjunction with a real-world client. The work is performed in a real-life, deadline driven environment and will produce a portfolio piece for those entering the field of digital media. Students learn the roles and duties of those who work on interactive teams. Instructor's permission may be required for this course. Prerequisite: MCOM 252 Introduction to Web Publishing
3 semester hours

MASS COMMUNICATION 345
Newspaper Editing and Production
Principles of editing in print media. The editorial process from selection of editorial materials to publication. Analysis of contemporary editing styles. Preparation of materials for production, including copyediting, writing headlines and designing newspaper pages. Legal and ethical issues confronting newspaper editors. The editor-writer relationship. Laboratory training in the making of editorial judgments. Instructor's permission may be required for this course.
3 semester hours

MASS COMMUNICATION 351
Broadcast News Writing
A course on writing news for broadcast media. Emphasis on broadcast style, specificity of language, time constraints, writing to tape and other actualities, and other considerations unique to radio and television news.
Mass Communication • Mathematics

Instructor’s permission may be required for this course. Prerequisite: MCOM 240.
3 semester hours

MASS COMMUNICATION 364
International Journalism
This course examines the practices of newsgathering, news making and news reporting in different countries. It also studies international news agencies, issues of freedom of the press, global information flow, new world information order, media development and barriers to media development, cultural imperialism, the relationship between Western media and world media, foreign news reporting, and media and international relations. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 357
The Portfolio Project
The semester is spent creating professional portfolios students can use to seek employment. This is a highly specialized, hands-on class where actual portfolios are created to help students obtain work in their specific area of interest - advertising, public relations, sports media, new media, broadcast, non broadcast, production, and many more. Prerequisites: Juniors and Seniors who already have portfolio pieces created from prior classes. Sophomores upon instructor’s approval.
3 semester hours

MASS COMMUNICATION 370
Publicity Methods
Elements of publicity writing for mass media. Students may work for not-for-profit organizations in planning and implementing publicity campaigns or other public relations projects. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 372
Advanced Digital Video Creation
The semester is devoted to the creation and execution of one project which could potentially be used as a “reel” sample to find work in the digital video, advertising or public relations industries. Each student will work on a project most suitable to their ultimate career objective. Choices of projects might include: documentary, news stories, video news releases, product demonstration, training videos, and many others. Instructor’s permission may be required for this course. Prerequisite: MCOM 272 Creating Digital Video.
3 semester hours

MASS COMMUNICATION 384
Organizational Communication
Communication in formal organizations, such as schools, industry, hospitals, and government, with emphasis on how organizational variables affect communication behavior of humans at work. Simulation, role-playing, case method, and videotape are used as techniques for evaluating personal and organizational effectiveness.
3 semester hours

MASS COMMUNICATION 390
Media Law and Ethics
Legal interpretations and standards of judgment that affect the reporter and the mass media. Theory of the First Amendment. Problems of libel, privacy, censorship, contempt, news source protection. Relationship of media regulations to community standards and social mores. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 395
Senior Seminar in Mass Communication
A senior seminar, with emphasis on the analysis of mass media institutions, content, function, and policy. Problem-centered approach, requiring experimentation in media forms and journalistic inquiry. Prerequisite: Senior standing within the Department of Mass Communication. Instructor’s permission may be required for this course.
3 semester hours

MASS COMMUNICATION 398
Internship
Professional, supervised, unpaid work in an organization related to career goals. Prerequisite: Permission of department required.
3 semester hours

MASS COMMUNICATION 399
Independent Study
Advanced project not covered by a regular course offering. Term paper or other academic fulfillment project is required. Faculty sponsor must be secured in advance. Prerequisite: Permission of the department and school director is required. By arrangement, 1-6 semester hours

Mathematics

MATHEMATICS 98
Elementary Algebra
An introductory course in basic algebra with applications. Topics include fundamental operations, fractions, exponents, radicals, factoring, linear equations and systems, linear inequalities and quadratic equations.
0 semester hours

MATHEMATICS 100
Elementary Algebra
An introductory course in basic algebra with applications. Topics include fundamental operations, fractions, real numbers, algebraic equations, linear equations and inequalities, exponents and polynomials, factoring and rational equations. This is a course for those students who are not ready for Math C105, Intermediate Algebra. This course is a three university semester hour course which means it does not meet distribution requirements or count toward the minimum semester hour requirement for graduation. This course is not open to those students who have passed the Math Placement Exam (Basic Algebra Exam) or passed MATH C105 or above.
3 semester hours

MATHEMATICS C105
Intermediate Algebra
A survey course in selected topics from college algebra and elementary functions. This course satisfies the Core Curriculum Basic Skills mathematics requirement. Topics include set notion, number systems, rules of algebra, operations with polynomials, factoring, linear equations and inequalities, solving polynomial equations, linear systems, and functions. Prerequisite: “C” or better in MATH 100 or Mathematics Placement Exam.
3 semester hours

MATHEMATICS C105A
Intermediate Algebra
A survey course, covered at a slower pace than Math C105, in selected topics from college algebra and the elementary functions. Prerequisite: “C” or better in MATH 100 or Mathematics Placement Exam.
3 semester hours

MATHEMATICS 108
Ideas of Mathematics
A survey of mathematical ideas and their applications. The course will focus on five core
Mathematics

areas: logic, algebraic systems, functions and graphs, analysis, and probability and statistics. Applications will be drawn from the social sciences, natural sciences, arts, and technology. The course will introduce the use of graphing calculators and computer applications software as tools to enhance creative thinking. Intended for non-specialists, the course will explore the beauty and power of mathematical reasoning through problem-solving and readings. Prerequisite: Competency in high school level Intermediate Algebra as demonstrated by the University placement exam or completion of MATH C105 with a “C” or better.

4 periods, (3 lecture/1 lab); 3 semester hours

MATHEMATICS 109
Precalculus Mathematics

4 semester hours

MATHEMATICS 110
Calculus and Analytic Geometry I

4 semester hours

MATHEMATICS 111
Accelerated Calculus and Analytic Geometry I
Covers the same material as MATH 110, but at a faster pace. Either MATH 110 or MATH 111 is required of the mathematics majors. Prerequisite: four years of high school math or MATH 109.

4 semester hours

MATHEMATICS 112
Calculus and Analytic Geometry II

4 semester hours

MATHEMATICS 200
Mathematics Cooperative Work Study
Students entering the Mathematics Cooperative Education Program take this course each semester that they are employed full-time in paid work assignments. A written report will be required describing achievements resulting from the work experience. Prerequisite: Completion of at least 30 semester hours and permission of the Department. 1 semester hour with a maximum of 6 semester hours to be applied to the degree.

MATHEMATICS 203
Elementary Statistics
A non-calculus introduction to applied statistics for business, life and social science students. Probability. Classification of data, averages, dispersion, frequency distributions, confidence intervals, and test of significance. Elementary linear regression and correlation. The course will make extensive use of MINITAB™ statistical software. Prerequisite: “C” or better in MATH C105.

3 semester hours

MATHEMATICS 212
Introduction to Abstract Mathematics and Boolean Algebra
This course is designed to provide the mathematical background and basic concepts needed in upper division mathematics and computer science courses. Topics covered include basic logic, methods of proof, set theory, relations and functions, development of real number system, and an introduction to Boolean algebra. Required of mathematics major and strongly recommended for all science and engineering majors. Prerequisite: “C” or better in MATH 109 or equivalent.

3 semester hours

MATHEMATICS 214
Linear Algebra
System of linear equations and matrix algebra, determinants, vector spaces, eigenvectors, linear transforms and inner product spaces. Required of mathematics majors. Prerequisite: “C” or better in MATH 110.

3 semester hours

MATHEMATICS 215
Calculus and Analytic Geometry III
Vectors; two and three-dimensional vector spaces, Cartesian coordinates, scalar and vector product, triple products, normal vectors and curvature, tangential vectors. Partial differentiation; functions of several variables, linear approximations, extrema of surfaces, Lagrange multipliers. Vector calculus and analytic geometry, gradient of a scalar function, divergence and curl of vector functions. Coordinate systems; spherical and cylindrical coordinates. The Jacobian of transformation. Multiple integrals in Cartesian and other coordinate systems. Areas and volumes. Stroke’s Theorem and Green’s Theorem. Prerequisite: “C” or better in MATH 112.

4 semester hours

MATHEMATICS 227
Discrete Structures
This course is an introduction to some of the discrete mathematical structures relevant to computer science, including set theory, propositional calculus, predicate calculus, algebraic operations and relations, counting techniques and graph theory. Required of Math majors. Identical to Computer Science 227. Prerequisite: “C” or better in MATH 109.

3 semester hours

MATHEMATICS 301
Differential Equations
A course in ordinary differential equations (ODEs). Classification of ODEs. Existence and uniqueness theorems. Solution of first and second order linear ODEs. Nonlinear, exact, homogeneous and higher order ODEs. Power series and Laplace transform solutions. System of ODEs. Applications include topics in the physical, natural and social sciences, engineering, finance and ecology. Prerequisite: “C” or better in MATH 112.

3 semester hours
MATHEMATICS 314  
**Numerical Methods**  
A first course dealing with basic numerical methods for finding roots of non-linear equations, interpolation theory, approximation of functions, numerical integration and differentiation, numerical solutions of systems of linear equations, the matrix eigenvalue problem and the numerical solutions of ordinary differential equations. Prerequisite: CPSC 101 and "C" or better in MATH 112.  
3 semester hours  

MATHEMATICS 319  
**Introduction to the Theory of Numbers**  
3 semester hours  

MATHEMATICS 323  
**Probability and Statistics I**  
Classical theory of probability. Sample spaces, probability and conditional probability, random variables and their distributions. Standard discrete distributions, normal distributions, moment generating functions and central limit theorems. Prerequisite: "C" or better in MATH 112.  
3 semester hours  

MATHEMATICS 341 (MATH 341/CPSC 341)  
**Operation Research**  
Linear programming formulation of optimization problems, hyper planes, convex sets, linear independence, bases of vector spaces, matrix inversion, theory and computation techniques of simplex, revised simplex methods, degeneracy, duality. Transportation and assignment problems, integer programming and network flows. Prerequisite: "C" or better in MATH 214, CPSC 227.  
3 semester hours  

MATHEMATICS 347  
**Advanced Calculus I**  
Limits, continuity, differentiability, integrability. Functions of several variables, partial differentiation, implicit functions, multiple integrals, line integrals, Green’s theorem. Required of mathematics majors. Prerequisite: "C" or better in MATH 215.  
3 semester hours  

MATHEMATICS 348  
**Advanced Calculus II**  
Continuation of Mathematics 347. Line and surface integrals, Green’s theorem, limits, indeterminate forms, infinite series, improper integrals, Fourier series. Prerequisite: "C" or better in MATH 347.  
3 semester hours  

MATHEMATICS 380  
**Selected Topics in Mathematics**  
Selected topics such as calculus of variations which are not currently in other Mathematics courses. Topics will vary from semester to semester. May be taken more than once for credit when topics are different.  
1-3 semester hours  

MATHEMATICS 391  
**Modern Algebra**  
Set theory, including the concepts of mapping and denumerable and non-denumerable sets. Study of abstract structures such as groups, rings, fields and algebras. Required of mathematics majors; Prerequisite: "C" or better in MATH 214.  
3 semester hours  

MATHEMATICS 393  
**Senior Seminar in Mathematics**  
This course is, in part, designed to acquaint the participants with mathematics reference works, resource materials, periodicals, and expository writings. Each student is required to write several papers and to make periodic oral presentations. Visiting speakers conduct some of the seminars. Required of mathematics majors and normally taken in the junior or senior year. Prerequisite: "C" or better in MATH 214 or permission of instructor.  
3 semester hours  

MATHEMATICS 399  
**Independent Study**  
Prerequisite: Permission of Division Director.  
1-3 semester hours  

The following mathematics courses, described in the Graduate Section are also open to selected upperclassmen: 401, 402—Advanced Analysis for Scientists and Engineers I and II.  

MATHEMATICS 401  
**Advanced Analysis for Scientists and Engineers I**  
Partial differential equations, Bessel functions, Legendre polynomials. Fourier series, boundary and initial value problems, topics in vector analysis, tensor analysis. Prerequisite: Math 301 (Differential Equations) and one semester of advanced calculus strongly recommended.  
3 semester hours  

MATHEMATICS 402  
**Advanced Analysis for Scientists and Engineers II**  
Functions of a complex variable conformal mapping, calculus of residues, operators. Prerequisites: Math 301 (Differential Equations) and one semester of advanced calculus, or permission of the instructor.  
3 semester hours  

**Mechanical Engineering**  

MECHANICAL ENGINEERING 208  
**Introduction to Thermal Engineering**  
This course will introduce undergraduate engineering majors to three important interrelated areas of Mechanical Engineering (thermodynamics, fluid mechanics and heat transfer). The increased emphasis placed on energy in our society makes it necessary for all engineers to have a basic understanding of thermal engineering. Prerequisites: Permission of the instructor.  
3 semester hours  

MECHANICAL ENGINEERING 223  
**Materials Science for Engineers**  
A study of the properties of materials of importance to engineers. Structure-property-processing relationships. Mechanical, physical and electrical properties of metals, ceramics and polymers. Prerequisite: CHEM 103.  
3 semester hours  

MECHANICAL ENGINEERING 309  
**Fluid Mechanics II**  
Continuation of first course in fluid mechanics. Introduces the student to more advanced topics including laminar and turbulent boundary layer theory, lift and drag, subsonic and supersonic compressible flow, introduction to turbo-machinery and introduction to computational fluid mechanics. Prerequisites: Permission of the instructor.  
3 periods; 3 semester hours; 1 design semester hour  

MECHANICAL ENGINEERING 310  
**Thermodynamics II**  
Applications of thermodynamic principles to engineering problems. Analysis of power and refrigeration cycles. Availability and ir-

3 lecture hours; 3 semester hours; 1 design semester hour

MECHANICAL ENGINEERING 315
Mechanical Vibrations

3 lecture hours; 3 semester hours; 1 design semester hour

MECHANICAL ENGINEERING 407
Modern Materials and Advanced Manufacturing Technologies
This course focuses on the study of modern industrial materials and the process of developing creative solutions through conceptual analysis and synthesis on different advanced and automated manufacturing processes. The course will help students to learn the emerging topics in the material and manufacturing industries. The topics cover the study on today’s popular industrial materials, material selections and industrial applications, and their related manufacturing techniques in US industry. Topics also include the introduction of quality control (QC) process that is important to the production with the high quality. The course has two class projects which will guide and help students to learn the ways of preparing for professional research and keep track of the latest technologies in modern materials, advanced and automated manufacturing processes. Prerequisites: ENGR 111, MEEG 223.

3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 410
Advanced Fluid Dynamics
Advanced topics in applied fluid mechanics. Review of continuity, momentum, and energy equations for viscous, incompressible fluid; voracity and circulation concepts and theorems. Selected topics from the following areas: Complex potential, conformal mapping and applications. Airfoil and wing theory. Boundary layer theory; similarity solutions for laminar flows, integral techniques for turbulent flows. Compression and expansion waves in compressible flows; oblique shock waves, Prandtl-Meyer flow. Propagating waves and applications; shock tube, transients in duct systems. Prerequisite: Undergraduate Fluid Mechanics, MEEG 309.

3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 421
Computer Aided Engineering Design
This course applies 3-D CAD system e.g., Pro E to industrial product and system design. These CAD systems are very practical and powerful 3-D CAD tools and they have been widely used in the industry. The first half of the class focuses on learning fundamentals of the 3-D system, its popular applications and its related techniques. The special topics of design concept are also included. The second half covers several practical projects. Students will combine the design techniques with the real project and use 3-D tools to design the product or part of industrial system. All projects will be presented by students in class. Prerequisites: ENGR 111, PHYS 111.

3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 422
Advanced Computer Aided Project Design
This advanced course focuses on some hot and very practical topics in today’s industrial design applications. Also, some useful knowledge, such as PLC (Program Logic Control), calculation and selection of industrial motors, fundamentals of automation, sensor technology, and selection of material on different industrial applications are included. Several more complicated projects in this class will help students learn how to manage the different engineering projects and understand all related design issues which will improve the future production and manufacturing process. Pro E will be used as a 3-D CAD tool to design these advanced engineering projects. All projects should be presented by students in the class. Prerequisites: MEEG 421.

3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 423
Computer Aided Manufacturing (CAM) and NC Machining
This course applies manufacturing and various numerical controlled software for designing computer-aided manufacturing and NC machining systems, processes and algorithms. This course is heavy in implementation of various manufacturing technologies and programming of NC machines. Prerequisites: ENGR 111, PHYS 111, MEEG 421.

3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 430
Design & Innovation
The objective of this course is to convey a sense of Design and Innovation in the development of products. To accomplish this the class shall review a number of case studies and participate in the design of a project. In addition to the semester project we shall discuss a number of topics of concern to Design and Engineering through illustrated talks (slides/tapes) and when available with guest designers and engineers. Prerequisites: ENGR 111, ENGR 300.

3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 440
Ergonomic Factors in Design
This course introduces the student to the concepts of ergonomics. Ergonomics is the study of fitting the workplace and devises to the capabilities of the human worker. Students will have an understanding of the beginnings and evolution of the field of ergonomics. They will learn to recognize risk factors associated with repetitive stress disorders (e.g., carpal tunnel syndrome) and potential sprain/strain injuries as well as be familiar with the body areas affected. This course covers principles of physiology and biomechanics and how they apply to workstation and tool design. Prerequisites: ENGR 111.

3 lecture hours; 3 semester hours
formulation; applications to two-and three-dimensional stress analysis. Topics from the following areas will be chosen as time allows: buckling and vibration studies using discrete element techniques; finite element applications in fluid flow and heat transfer. Prerequisite: Mechanical Engineering 450 or permission of instructor. Pre-requisites: Basic Structural Mechanics, MATH 214, MATH 215, ENGR 111 or consent of instructor.

3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 454
Advanced Dynamics
Orthogonal coordinate systems and their transformations. Particle kinematics in inertial and noninertial rotating coordinate systems. Dynamics of systems of particles and rigid bodies. Virtual work and generalized coordinates. Lagrange’s equations and Hamilton’s principle for holonomic and non-holonomic systems with applications. Lagrange multipliers. Prerequisites: Undergraduate Dynamics, MATH 301.

3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 456
Mechanics of Composite Materials

3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 458
Fatigue and Fracture Mechanics
Brittle fracture of structures, elastic stress analysis of cracked components, static and dynamic failures, plane stress and plane strain, elastic-plastic fracture mechanics, fatigue crack growth and life prediction under constant and variable amplitude loading, environmental effects. Term work is mainly design problems and is computer oriented. Pre-requisites: Undergraduate Strength of Materials, MEEG 223.

3 lecture hours; 3 semester hours; 1 design semester hour

MECHANICAL ENGINEERING 463
Advanced Heat Transfer
Topics in conduction, convection and radiation heat transfer. Numerical methods, phase change, boundary layer principles, gas and solar radiation, combined heat and mass transfer. Prerequisite: MATH 301, PHYS 209, MEEG 208.

3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 490
Intellectual Property and Technology
This course is designed for graduate students who have an undergraduate degree in Engineering. Computer Science, Mathematics, Physics, Biology, Industrial Design, etc. Students need not have any familiarity with United States law but they must be prepared to read extensively under the instructor’s guidance, statutes and cases decided by the Federal and State courts. Prerequisites: Undergraduate degree in Engineering or Sciences.

3 lecture hours; 3 semester hours

Medical Laboratory Science (MLSC)

MEDICAL LABORATORY SCIENCE 301
Phlebotomy
Introduction to the theory and practice of phlebotomy and laboratory safety. Pre-analytical, analytical and post analytical components of laboratory service. Introduction to the principle and practice of quality assurance and quality improvement.
2 Semester hours

MEDICAL LABORATORY SCIENCE 310
Intro to Hematology
Lecture/laboratory course emphasizing hemostasis and components of laboratory service. Includes theory and practical applications of blood banking. Prerequisite: Biol 102 with a C or better. Recommend MLSC 314 or Bio 114 as a pre-requisite for Biology majors.
2 semester hours

MEDICAL LABORATORY SCIENCE 314
Intro to Immunohematology
Lecture/laboratory course emphasizing immunohematologic concepts and properties underlying scientific principles of blood banking. Includes theory and practical applications of blood-group systems, antibody identification and compatibility testing, hemolytic disease of the newborn, autoimmune hemolytic anemia, and donor testing introduction to procurement and processing. Prerequisite: BIOL 102 with a C or better.
2 semester hours

MEDICAL LABORATORY SCIENCE 315
Fundamentals of Medical Laboratory Science
Lecture and laboratory introduction to Medical Lab sciences. Topics to include: Safety, Professionalism, Introduction to all areas of the modern clinical laboratory (Chemistry, Hematology, Microbiology, Immuno/Serology, Blood banking with a special emphasis on Clinical Microscopy and urinalysis. Pre-requisite: Bio102, Chem 103 with a C or better.
2 semester hours

MEDICAL LABORATORY SCIENCE 317
Mycology/Parasitology/Virology
Overview of medically significant fungi, parasites, and viruses. Emphasis will be placed on pathogenesis, modes of transmission, and identification. Laboratory techniques used in isolation, cultivation, and identification will be used. Also included will be discussions of epidemiology and host response regarding these microorganisms. Prerequisite: BIOL 101 or BIOL 332, both with a C or better.
4 semester hours

MEDICAL LABORATORY SCIENCE 320
Pre-clinical Seminar
An introduction to the profession of clinical laboratory science. Review of Ethics and professionalism, confidentiality, health care issues, application of safety and government regulations and standards, customer service, interpersonal and interdisciplinary communication and team building skills. UBMEDICAL LABORATORY SCIENCE policy manual student handbook review, preparation for clinical interviews, resume writing, laboratory organization, roles, and credentialing of laboratory practitioners are discussed. Standards, ethics, and current professional issues are examined. Communication skill development and review of scientific literature are included. Review for
the successful completion of the clinical readiness examination.

1 semester hour

MEDICAL LABORATORY SCIENCE 321
Clinical Seminar I
Educational methodology, including objective and examination, writing and item analysis curriculum design and evaluation of Cognitive, affective and psychomotor domains. Accreditation, Certification and licensure related issues. Dynamics of the health care delivery system as it relates to the clinical laboratory and services.

1 semester hour

MEDICAL LABORATORY SCIENCE 322
Clinical Seminar II
Introduction to human resource and financial management, Lab operations including critical pathways and clinical decision making, performance improvement, lab information systems LIS, personnel management and financial management of a clinical laboratory. Advanced principles and practices of quality assurance and quality improvement Career advancement and planning, Professionalism, CMP.

1 semester hour

MEDICAL LABORATORY SCIENCE 332
Medical Microbiology
This course is taught in conjunction with the Bio332 Medical microbiology course, the laboratory section is open to MLS majors and focuses on techniques used for the identification of microorganisms in a clinical laboratory. Pre-requisite Bio 320 with a C or better.

4 semester hours

MEDICAL LABORATORY SCIENCE 380
Phlebotomy Internship
Performance and observation of various phlebotomy techniques in potentially both inpatient and outpatient settings.

2 semester hours

MEDICAL LABORATORY SCIENCE 410
Advanced Hematology
Lecture/laboratory focusing on advanced principles of hematologic testing leading to improved interpretative skills in hematology. Emphasis on correlation of data with disease states and disorders. Case studies and discussion used to illustrate the pathophysiology of hematological dysfunction. Prerequisite: MSLC 310 with a C or better.

2 semester hours

MEDICAL LABORATORY SCIENCE 411
Advanced Clinical Chemistry
Lecture/laboratory focusing on clinical significance and methodology of trace elements, vitamins, therapeutic drug monitoring, and toxicology. Newer testing methods used to identify diseases/disorders will be discussed. Emphasizes instrument selection and method validation process. Prerequisite: MSLC 311 with a C or better.

2 semester hours

MEDICAL LABORATORY SCIENCE 414
Advanced Immunohematology
Lecture/laboratory focusing on problem-solving and special techniques used in antibody identification and compatibility testing. Also includes a discussion of donor requirements, blood component preparation and therapy, and quality assurance in the blood bank/transfusion service. Prerequisite: MSLC 314 with a C or better.

2 semester hours

MEDICAL LABORATORY SCIENCE 420
Clinical Hematology Laboratory Rotation (Clinical)
Automated and manual methods of cell counting and differentiation are performed on blood and other body fluids. Instruction and experience in advanced instrumentation using automated cell counters and differential systems, coagulation and platelet analyzers, and special hemotologic testing of white and red cells using cytochemistry techniques are provided to identify disease states and disorders. Prerequisite: MSLC Successful completion of MSLC 310 with C or better. and successful completion of the clinical readiness examination.

4 semester hours

MEDICAL LABORATORY SCIENCE 421
Clinical Chemistry Laboratory Rotation (Clinical)
Provides an opportunity to apply chemical and immunologic theory and practice to routine and special clinical chemistry procedures, toxicology, therapeutic drug monitoring, and urinalysis. Also includes immunologic procedures. Includes instruction and experience in the use, standardization, and maintenance of sophisticated laboratory analyzers. Prerequisite: MSLC 311 with a C or better and successful completion of the clinical readiness examination.

5 semester hours

MEDICAL LABORATORY SCIENCE 422
Clinical Microbiology Laboratory Rotation (Clinical)
Isolation and identification of clinically important bacteria, mycobacteria, and fungi including antibiotic susceptibility testing. Techniques for identifying parasites are included. Prerequisite: MSLC 332 with a C or better and successful completion of the clinical readiness examination.

4 semester hours

MEDICAL LABORATORY SCIENCE 431
Clinical Correlation (Clinical)
Use of problem-based case studies to analyze clinical situations and correlate laboratory data. Prerequisite: Successful completion of the clinical readiness examination.

2 semester hours

MEDICAL LABORATORY SCIENCE 432
Clinical Research
A review of qualitative and quantitative research methods and statistics resulting in the completion of a clinical based technical or educational based research project.

1 semester hour

MEDICAL LABORATORY SCIENCE 441
Immunology
This course is taught in conjunction with the Bio441 immunology course, the laboratory section is devoted to immunologic and serologic techniques utilized in a clinical laboratory. Pre-requisite Bio 211 with a C or better.

4 semester hours

Music

MUSIC 100
Private Lessons
Private instrumental/vocal lessons are available at a special fee. One credit per semester will be given for 30 minute weekly lessons. Two credits per semester will be given for 60 minute weekly lessons. Applied music may be repeated for credit each semester. Prereq-
Music

A thorough exploration of music fundamentals: principles of notation, clefs, time signatures, musical terms, rhythmic concepts, scales, keys, triads, and seventh chords. Application of these fundamentals is emphasized through study of musical literature.

**3 semester hours**

**MUSIC 109A Aural Theory I**

Development of aural recognition and singing. Includes intervals, scales, and triads in all forms.

**1 semester hour**

**MUSIC 110 Theory II**

Counterpoint. Beginning with first species tonal counterpoint and progressing to four-part chorale textures, students will develop the skills of writing multiple musical lines according to standard practices. Musical examples are studied.

**3 semester hours**

**MUSIC 110A Aural Theory II**

Continues the development of aural recognition and singing, with emphasis on two-part music.

**1 semester hour**

**MUSIC 121 Music Appreciation**

A basic course in the elements of music and their historical application in Western music. Active listening and student participation is emphasized.

**3 semester hours**

**MUSIC 201A/201B Master Works of Music I, II**

Designed to increase knowledge of musical literature and to refine awareness of musical patterns and syntax. Representative works in contrasting instrumentation are analyzed and compared.

**2 semester hours each**

**MUSIC 203 History of Western Music I**

The historical development of music and musical styles from ancient Greece to the end of the baroque era.

**3 semesters hours**

**MUSIC 204 History of Western Music II**

The historical development of music and musical styles from the baroque era through succeeding classical, romantic and modern periods.

**3 semester hours**

**MUSIC 205 Twentieth Century Music**

An examination of the diverse styles of the 20th century, the composers, and social, cultural, and philosophical trends which influence them. Prerequisite: Music 203/204, or permission of the instructor.

**3 semester hours**

**MUSIC 207 The History of Jazz**

A study of the periods of jazz, jazz performers and composers, trends, influences, stylistic features, and related materials.

**3 semester hours**

**MUSIC 208A/208B Jazz Improvisation and Repertoire I, II**

A beginning approach to jazz improvisation through the study of contemporary harmony. Lyrical style will be emphasized. Students analyze and transcribe solos. Prerequisites: Music 109-110.

**3 semester hours**

**MUSIC 212 Studio Recording**

Introduction to the use of microphones, mixing consoles, digital and analog recorders in the university’s recording studio. Labs include on-campus concerts.

**2 semester hours**

**MUSIC 215 Theory III**

Harmony and Analysis. Introduction to the harmonic and formal practices of the seventeenth and eighteenth centuries in Western music. Examples from the repertoire studied. Continues the study of four-part writing.

**3 semester hours**

**MUSIC 216A 216B Aural Theory III, IV**

Continues the development of aural recognition and solfege singing. Includes aural recognition of four-part music, cadences, and modulations.

**1 semester hour each**

**MUSIC 216 Theory IV**

Harmony and Analysis. Introduction to the harmonic practices of the nineteenth and early twentieth centuries in Western music, with an emphasis on chromaticism and large scale formal considerations. Examples from the repertoire will be examined.

**3 semester hours**

**MUSIC 220 Vocal Diction**

Study of IPA and vowel and consonant production required for singing in Italian, German, French and English. Specific application to the song and operatic literature.

**3 semester hours**

**MUSIC 255 Group Piano**

A beginning course in the fundamentals of piano technique and playing. Simple pieces, scales, exercises and transposition.

**2 semester hours**

**MUSIC 256 Keyboard Harmony**

Keyboard skills are developed which include playing harmonic progressions in any key, cadences, and diatonic and chromatic sequences. Sight-reading diatonic melodies and simple figured bass are also required.

**2 semester hours**

**MUSIC 295 Junior Recital**

A full-length recital performed on declared major instrument. Format and repertoire must be approved by music faculty. Pass/Fail.

**0 credit**
MUSIC 298  
**Piano Maintenance and Repair**  
Aspects of piano tuning, regulation, maintenance and basic repairs are studied using project instruments supplied by the university.  
*3 semester hours*

MUSIC 304A, 304B  
**Jazz Arranging I, II**  
Beginning and intermediate study and application of modern techniques of writing for large and small jazz ensembles. Prerequisite Music 215 or permission of instructor.  
*3 semester hours each*

MUSIC 311  
**Conducting I**  
Fundamental patterns and expressive techniques of conducting. Emphasis in choral techniques and conducting choral ensembles.  
*3 semester hours*

MUSIC 312  
**Conducting II**  
Advanced patterns and expressive techniques of conducting. Emphasis in instrumental techniques and conducting instrumental ensembles and orchestras.  
*3 semester hours*

MUSIC 315  
**Introduction to Composition**  
Specific creative projects to be performed by University ensembles or soloists. Techniques of instrumentation and notation are emphasized. Prerequisite: Music 216 or permission of instructor.  
*3 semester hours*

MUSIC 195  
**Senior Recital**  
A full-length recital performed on declared major instrument. Format and repertoire must be approved by music faculty. Pass/Fail.  
*0 credit*

MUSIC 398  
**Internship**  
Professional, supervised, work experience in an organization related to career goals (may be unpaid). Prerequisite: Permission of advisor and School director.  
*3 semester hours*

MUSIC 399  
**Independent Study**  
Specialized advanced projects in subjects not covered by course offerings. Conferences with designated Independent Study advisor. Prerequisite: Permission of advisor and school director.  
*3 semester hours*

MUSIC 414  
**Business of Music**  
Practical knowledge of skills necessary to function and flourish as a professional musician. Standard business models for private studio teaching, not-for-profits, performing contracts, artist management, recording and publishing.  
*2 semester hours*

MUSIC 426  
**Computers in Music**  
An introduction to computer functions essential for musicians including music engraving, MIDI sequencing, and desktop publishing.  
*3 semester hours*

MUSIC 427  
**MIDI Performance**  
Using MIDI (Musical Instrument Digital Interface) as a recording studio tool, students learn to configure personal computers and MIDI controllable devices (synthesizers, lighting systems, sound modules, and/or effects). Emphasis placed on the creative end result. Prerequisite: Music 212 and Music 426.  
*3 semester hours*

**Ensembles**

MUSIC 103  
**Chorus**  
Presentation of choral works from a variety of cultural and historical perspectives. Performances at university and community functions. All who enjoy singing are encouraged to enroll.  
*1 semester hour*

MUSIC 105  
**Orchestra**  
A university-community orchestra offering opportunity for public performance.  
*1 semester hour*

MUSIC 107  
**Chamber Ensembles**  
Development of musical skills related to functioning within an ensemble. An exploration of rehearsal techniques and group dynamics leading to performance of repertoire for chamber ensembles. Prerequisite: Permission of instructor.  
*1 semester hour*

Brass Ensemble - 107A  
String Ensemble - 107B  
World Music Ensemble - 107E  
Chamber Singers - 107F  
Early Music Ensemble - 107M  
Accompanying - 107P  
Small Group Jazz Ensemble - 107R  
(Each 1 semester hour)

MUSIC 112  
**Sinfonietta**  
A large instrumental ensemble designed to produce compelling programs that showcase the variety of musical talents and skills of students.  
*1 semester hour*

MUSIC 115  
**Concert Choir**  
Limited to a balanced choral ensemble selected by audition during registration. Extensive performance opportunities with emphasis on traditional and contemporary choral literature. Membership on full-year basis only.  
*1 semester hour*

**Music Education**

MUSIC EDUCATION 183  
**Group Instruction in Voice**  
Instructing the future teacher in techniques of tone production, pitch, and modern effects used in choral singing, especially at the junior and senior high school levels.  
*2 semester hours*

MUSIC EDUCATION 221  
**Group Instruction in Strings**  
Designed to provide the future school music teacher with proficiency in tone production, and the technical development of string players at the junior and senior high school levels.  
*3 semester hours*

MUSIC EDUCATION 222  
**Group Instruction in Strings II**  
Designed to develop intermediate performance-level skills and to equip students with enough solo and ensemble techniques to develop and teach innovative string programs.  
*3 semester hours*

MUSIC EDUCATION 225  
**Group Instruction in Brass**  
Designed to provide the future school music teacher with the necessary proficiency in
brass instrument teaching.
3 semester hours

MUSIC EDUCATION 226
Group Instruction in Percussion
Designed to provide the future school music teacher with the necessary proficiency in percussion instrument teaching.
3 semester hours

MUSIC EDUCATION 227
Group Instruction in Recorder I
The recorder is one of the most important instruments in music education today. This class will present the history, and repertoire of the recorder. It will provide students with pedagogical tools and strategies for teaching all levels of music education.
3 semester hours

MUSIC EDUCATION 228
Group Instruction in Recorder II
This class will focus on repertoire and performance of repertoire most pedagogically useful when teaching recorder classes. This class, in conjunction with Group recorder I M227, and participation in early music ensembles will equip students with enough solo and ensemble techniques to develop and teach innovative recorder programs. Prerequisite: ME227
3 semester hours

MUSIC EDUCATION 240
Pre-Teaching Practicum
Consists of developing teaching styles, plans, and materials designed to: (1) help the student determine professional goals. (2) provide insights and experiences in music teaching prior to professional music education classes.
0 semester hours

MUSIC EDUCATION 241
Choral Practicum
Designed to give the education student an opportunity to expand conducting technique, develop rehearsal techniques, and expand familiarity with standard choral literature. Opportunity will be provided to rehearse and conduct University chamber ensembles.
0 semester hours

MUSIC EDUCATION 331
Literature and Techniques for Chorus
A study of choral literature appropriate for the middle and high school levels. Includes techniques of voice testing, tone development, range, diction, and musicianship. Prerequisite: Mse 183 or permission of instructor.
3 semester hours

MUSIC EDUCATION 332
Literature and Techniques for Band and Orchestra
Study of band and orchestra literature with emphasis on rehearsal techniques and problems related to band and orchestra organization. Prerequisite: Mse 221, 223, and 225
3 semester hours

MUSIC EDUCATION 336
Literature and Techniques for Jazz Ensemble
Methods, materials, and rehearsal techniques in arranging for small and large jazz ensembles at the high school level. Prerequisite Music 304 or permission of instructor.
3 semester hours

MUSIC EDUCATION 343
Music in Elementary Schools
An examination of significant teaching methods, procedures, materials, and problem-solving necessary to teach music in grades one through six.
3 semester hours

MUSIC EDUCATION 380
Music in Secondary Schools
An examination of significant teaching methods, procedures, materials, and problem-solving necessary to teach music in secondary schools.
3 semester hours

MUSIC EDUCATION 399A
Independent Study
Specialized advanced projects in subjects not covered by regular course offerings. Conferences with designated advisor. Prerequisite: permission of advisor and school director.
3 semester hours

NUTRITION

NUTRITION 107
Basic Nutrition
This is an introductory course in personal nutrition. The major and minor nutrients are studied within the context of deficiency requirements, function, characteristics and sources. Food and its components are discussed in relationship to growth, development, metabolism and energy.
2 semester hours

NUTRITION 121
Anatomy and Physiology I, II
A detailed study of the structure and function of cells, tissues, and organ systems. Control systems of the human body, homeostatic mechanisms, and the interrelations between the systems are studied.
8 full day weekend sessions; 6 semester hours

NUTRITION 122
Introduction to Biochemistry
A review of basic general chemistry topics including atomic theory, periodic law, chemical bonding, chemical reactions, kinetics, acids, bases and organic chemistry topics including isomerism, and physiochemical properties of various functional groups. Biochemical properties of carbohydrates, lipids, proteins, and nucleotides will also be discussed.
6 full day weekend sessions; 4 semester hours

NUTRITION 123
Nutrition Seminar
A seminar designed to provide students with the basic principles of nutrition. Topics include classes and sources of nutrients, energy intake and expenditure, dietary standards and guidelines, food labeling and food safety. Emphasis will be placed on the role of macronutrients in the diet.
2 full day weekend sessions; 1 semester hour

NUTRITION 205
Fundamentals of Nutrition
The fundamentals of normal and therapeutic nutrition are presented. Attention is focused on the promotion of health, prevention of illness and the restoration of health following illness for injury. This course includes a self-analysis of the participant’s diet.
3 semester hours

NUTRITION 299
Independent Study
Students examine specific nutritional topics of personal interest. Permission of instructor is required.
3-6 semester hours
Philosophy

PHILOSOPHY 101
General Philosophy
A survey of the central problems of metaphysics, epistemology, and ethics. Topics include the existence of God, extreme skepticism, the relationship between mind and body, free will versus determinism, and freedom of expression. The course includes analysis of representative thinkers.
3 semester hours

PHILOSOPHY 103
Men, Women, Issues
A discussion of gender differences and sex equality. The course critically examines topics such as sexual harassment, comparable worth, monogamous marriage, prostitution, and rape. These topics are examined from a variety of perspectives, including conservatism, liberal feminism, traditional Marxism, radical feminism, and the care and justice outlooks that Carol Gilligan has identified.
3 semester hours

PHILOSOPHY 104
Logic and Scientific Method
Study of logical inference, both deductive and inductive. Analysis of propositions, arguments, fallacies, language, and the nature and functions of the methods of the sciences.
3 semester hours

PHILOSOPHY 203
Ethics
A study of problems of applied ethics, such as abortion, animal experimentation, affirmative action, and gay and lesbian rights. These problems are explored from the standpoint of ethical theories such as utilitarianism and Kantian ethics. The course helps students formulate and interpret moral values by which they may think and act.
3 semester hours

PHILOSOPHY 205
History of Western Philosophy
A survey of the historical development of philosophy from antiquity through the 19th Century, with weight given to the contributions of Greek philosophers and those of the Middle Ages and the Enlightenment. In the 19th Century, attention is given to the rationalist, idealist, and empiricist schools of thought and their influence.
3 semester hours

PHILOSOPHY 216
Philosophy of World Religions
A comparison and analysis of the philosophical foundations of some of the world’s major religions. Among the religions studied are: Judaism, Christianity, Islam, Hinduism, Buddhism, and Confucianism.
3 semester hours

PHILOSOPHY 322 (PHIL 323/PSCI 323)
Classics in Political Theory
Analysis of principles of political theories of the Ancient Greek, Roman, Medieval, and Early Modern periods. Emphasis on the thought of Plato, Aristotle, the Stoics, St. Augustine, St. Thomas Aquinas, Machiavelli, Hobbes, Locke and Montesquieu. Application of these theories to contemporary political ideas and problems.
3 semester hours

PHILOSOPHY 324 (PHIL 324/PSCI 324)
Recent Political Theory
An examination of a broad spectrum of recent world views, with particular attention paid to systems such as anarchism, Marxism-Leninism, and fascism. Other topics include Third World perspectives, black power, radical feminism, and futurism.
3 semester hours

PHILOSOPHY 340
Selected Topics in Philosophy
Concentrated study of a major figure or theme that will supplement the offerings in the department.
3 semester hours

PHILOSOPHY 399
Independent Study
For the student who wishes to specialize in advanced topics not covered by regular course offerings. Individual or small group conferences with designated advisor. Prerequisite: Permission of School Director.
3 semester hours

Physics

PHYSICS 103
Basic Concepts of Physics I
Space and matter, particles in motion, Newtonian mechanics, atoms and heat, wave phenomena.
2 lectures; 1 two-hour lab; 3 semester hours

PHYSICS 104
Basic Concepts of Physics II
Electricity and magnetism, relativity, and optics. The fundamental structure of matter.
2 lectures; 1 two-hour lab; 3 semester hours

PHYSICS 111
Principles of Physics I
The principles of mechanics and their applications. Kinematics, Newtonian mechanics, conditions for equilibrium, static’s, work, energy and conservation laws. Rotation. Simple harmonic motion; Co-requisite: MATH 110, or MATH 111.
3 lectures; 1 three-hour lab; 4 semester hours

PHYSICS 112
Principles of Physics II
3 lectures; 1 three-hour lab; 4 semester hours

PHYSICS 201
General Physics I
A non-calculus course which presents an introduction to classical mechanics, heat and thermodynamics. Prerequisite: MATH C105 or its equivalent.
3 lectures; 1 three-hour lab; 4 semester hours

PHYSICS 202
General Physics II
A non-calculus course covering the fundamental laws of electricity and magnetism, electric circuits, and optics, including topics from modern physics. Prerequisites: Mathematics C105 or its equivalent, PHYS 201 or its equivalent.
3 lectures; 1 three-hour lab; 4 semester hours

PHYSICS 209
Principles of Physics III
Heat and heat transfer. The laws of thermodynamics, the kinetic theory of gases, and statistical mechanics. The laws of reflection and refraction of light. Lenses and mirrors. Interference, diffraction and polarization of light. The photon description of light. The wave description of electrons. The laboratory serves as an extension of the course lectures by introducing
such topics as the photoelectric effect, atomic spectroscopy, and electron diffraction. Prerequisite: PHYS 108; Co-requisite: MATH 215.

3 lecture periods; 1 three-hour lab; 4 semester hours

PHYSICS 304
Thermodynamics and Statistical Mechanics
The zeroth, first, second, and third laws of thermodynamics with applications to physical phenomena. An introduction to statistical physics. Prerequisite: PHYS 209; Co-requisite: MATH 215.

3 lectures; 3 semester hours

PHYSICS 305
Electricity and Magnetism I

3 lectures; 3 semester hours

PHYSICS 306
Electricity and Magnetism II

3 lectures; 3 semester hours

PHYSICS 310
Atomic and Nuclear Physics
The Schrödinger equation with applications to the barrier problems, spin, many electron atoms and molecules; special relativity; nuclear structure and the two nucleon problem. Prerequisite: MATH 215.

3 lectures; 3 semester hours

PHYSICS 312
Photonics
The wave aspects of radiation and the kinematics of wave motion giving rise to interference and diffraction, together with the interaction of electromagnetic waves and matter leading to such phenomena as reflection, dispersion, and polarization. Prerequisite: PHYS 209; Co-requisite: MATH 215.

3 lecture periods; 3 semester hours

PHYSICS 317
Analytical Mechanics I
Elements of Newtonian mechanics. Motion of a particle, particles, and rigid bodies in one, two, and three dimensions. Prerequisite: PHYS 209; Co-requisite: MATH 215.

3 lectures; 3 semester hours

PHYSICS 318
Analytical Mechanics II
Lagrangian and Hamiltonian Mechanics, perturbation theory, central force fields, applications of vector and tensor analysis to nonlinear physical problems. Prerequisite: PHYS 317.

3 lectures; 3 semester hours

PHYSICS 321
Techniques in Modern Physics
Experimentation and Instrumentation. Undergraduate laboratory experiments in physics. Prerequisite: At least two physics courses numbered above 300.

1 three-hour lab; 1 semester hour

PHYSICS 322, 323, 324
Physics Laboratory
Undergraduate laboratory experiments in physics. Prerequisite: At least two physics courses numbered above 300 and 321.

1 three-hour lab; 3 semester hours

PHYSICS 360
Selected Topics in Physics
Selected topics in physics on specialized subjects beyond the scope of required courses to inform students of current areas of interest or to train students in special areas of physics.

3 semester hours

PHYSICS 390, 391
Physics Seminar
Discussion of advanced and current topics in the field of physics. Students will make literature searches and present papers to the seminar in their areas of interest.

2 semester hours

Political Science

POLITICAL SCIENCE 101
American Government.
The Constitution. Structure and function of the national government: proper citizenship, civil rights, elections, and party organizations.

3 semester hours

POLITICAL SCIENCE 103
Intro to Political Science and Political Science Research Methods
This course serves as a gateway to the study of political science for IPED majors and political science/international relations minors. We'll survey the historical and philosophical foundations of the political science discipline, major subject fields under the general category of political science, key concepts and issues in political science, and basic scientific methods in political science study and research.

3 semester credits

POLITICAL SCIENCE 203
U.S. Foreign Policy
This course examines contemporary US foreign policy from theoretical and policy perspectives. How American foreign policy is formulated and conducted will be discussed during the first half of the semester. The second half will be devoted to evaluations of US policies, especially economic and trade policies, towards key regions of the world.

3 semester credits

POLITICAL SCIENCE 204
Government and Politics Abroad
Principal institutions, methods, and problems of government of selected foreign countries in Europe, Asia, Africa, and Latin America as compared with the American System.

3 semester hours

POLITICAL SCIENCE 206
The Political Economy of North-South Relations
Political-economic disparities between “North” (the developed nations) and “South” (developing countries). The causes of these disparities analyzed from an interdisciplinary point of view. Recurring patterns of obstacles to development in some new nations. The role of international financial and other organizations.

3 semester hours

POLITICAL SCIENCE 207
World Politics
This course explores the principal elements of world politics, examining the context in which the major actors play their roles, as well as the salient features of the international community. It will review the most significant aspects of global politics by examining such topics as foreign policy, the nature of national power, and war. It will examine the origin, organization, and function of the major international institutions, and conclude
with a discussion of global issues.  
**3 semester hours**

**POLITICAL SCIENCE 308**  
**Introduction to International Law**  
History and nature of international law, territorial sovereignty, natural resources and international norms (e.g., exclusive economic zones, the continental shelf, outer space, etc.), diplomatic & consular relations, International Court of Justice and other tribunals, and the use of force in international law.  
**3 semester hours**

**POLITICAL SCIENCE 209**  
**Introduction to United Nations Studies**  
Examination of the successes and failures of the United Nations, its prospects for the future, principal organs, especially the Security Council, budgetary system, role in arms control, relations between the United Nations and the United States, and related issues.  
**3 semester hours**

**POLITICAL SCIENCE 215**  
**International Human Rights**  
A study of the international protection of human rights. The course analyzes the origin and nature of human rights, the content of human rights standards guaranteed by international law, as well as the global international mechanism for the protection of human rights. It includes a comparative examination of the regional systems in Europe, the Americas, Asia, and Africa for the protection of human rights.  
**3 semester hours**

**POLITICAL SCIENCE 322**  
**An Introduction to the U.S. Legal System**  
This course will offer a comprehensive overview of the U.S. legal system, including an overview of legal practice sources and techniques with emphasis on the major substantive areas of the law. Students will begin by examining issues in constitutional law, with an overview of how government functions and how laws are made. A legal writing segment of the course will allow students to use legal analysis while refining their writing skills.  
**3 semester credits**

**POLITICAL SCIENCE 399**  
**Selected Topics in Political Science**  
A course with variable topic focus, dependent upon student needs and the expertise of the instructor.  
**3 semester hours**

**PSYCHOLOGY 201**  
**Child Psychology**  
Physical, cognitive, language, personality, moral, and social development from conception to pubescence.  
**3 semester hours**

**PSYCHOLOGY 202**  
**Adolescence**  
The development and behavior of human beings from pubescence through adulthood. Emphasis on developmental stages, adjustment issues, and effects of the social environment.  
**3 semester hours**
Psychology

PSYCHOLOGY 303
Personality Psychology
The structure, dynamics, and development of personality. Major personality theories – psychoanalytic, trait, behavioral, cognitive, socio-biological, humanistic/existential – and their implications for understanding both normal and deviant personality.
3 semester hours

PSYCHOLOGY 304
Abnormal Psychology
The study of those thoughts, feelings, and behaviors that interfere with psychologically adaptive functioning. The causes and appropriate treatments of neurosis, psychosis, personality disorders, and adjustment reactions.
3 semester hours

PSYCHOLOGY 305
Social Psychology
Scientific study of how people think about, influence, and relate to one another. Social cognition, persuasion, conformity and obedience, stereotyping and prejudice, aggression, pro-social behavior, and intragroup and intergroup dynamics.
3 semester hours

PSYCHOLOGY 307
Cognitive Psychology
Recent advances in the understanding of thought processes. Focus on attention, perception, memory, imagery, problem solving, language, intelligence, creativity, and dreaming.
3 semester hours

PSYCHOLOGY 309
Industrial/Organizational Psychology
Application of psychological principles to industry, business, transportation, communications, institutions, and consumer behavior.
3 semester hours

PSYCHOLOGY 310
Human Sexuality
Physiological and psychological components of human sexuality, and their interaction. Focus on health and social issues and on individual, gender, and cultural differences.
3 semester hours

PSYCHOLOGY 314
Educational Psychology
Application to the teaching-learning process of psychological concepts, principles, theory, and research results. Focus on growth and development, adjustment and personality, learning, measurement, and evaluation.
3 semester hours

PSYCHOLOGY 315
History of Psychology
Traces the development of modern psychology from its roots in philosophy and science. Examines such major 20th century developments as structuralism, functionalism, psychoanalysis, behaviorism, and cognitive, as well as emerging models of the 21st century.
3 semester hours

PSYCHOLOGY 316
Current Topics in Psychology
Examination of one or more currently prominent topics in psychology, such as memory reconstruction, sexual orientation, emotional intelligence, brain plasticity, or hate crimes. Prerequisite: Psychology 315.
3 semester hours

PSYCHOLOGY 321
Research in Psychology
Students explore and evaluate the validity of various experimental and non-experimental research strategies and gain experience collecting psychological data, in groups and individually. Foundations of statistical analysis, including both descriptive and introductory inferential statistics.
3 semester hours

PSYCHOLOGY 322
Psychological Assessment
Standardized intelligence and psychological tests and measurements and their application to educational, industrial, and clinical settings.
3 semester hours

PSYCHOLOGY 348
Psychology of Women
This course will cover various aspects of the psychology of women such as gender stereotypes and biases, gender comparisons social situations, women and work, love relationships, women and psychological disorders, and violence against women. Prerequisite Course: PSYC 103 and 201 or 202
3 semester hours

PSYCHOLOGY 355
Sport Psychology
A study of the psychological foundations of physical activity. An overview of the psychological and mental factors that influence and are influenced by participation and performance in sports, exercise and physical activity. Included are applications of the knowledge gained through research to everyday settings.
3 semester hours

PSYCHOLOGY 350
The Psychology of Wealth
A review of current research on the ways in which behavior is influenced by money and wealth. An overview of the cognitive, behavioral, developmental and clinical implications of money as a stimulus. A study of money-related behaviors including: attitudes, perceptions, socialization, and pathologies. The development of a psychological model of economic man.
3 semester hours

PSYCHOLOGY 370
Forensic Psychology
Surveys the overall intersection of psychology and the American court system. Emphasis will be placed on issues related to clinical psychology/psychiatry in the criminal justice system such as sanity evaluation, criminal profiling and assessment of dangerousness. Students will explore how forensic psychologists have been involved in the jury selection process and have contributed to our understanding of eyewitness testimony (limitations of memory) and the detection of deceit through the polygraph and other techniques. Finally, students will explore how professionals trained in developmental, organizational, and clinical psychology interact with the court system when they serve as “expert witnesses” in a variety of civil and probate matters.
3 semester hours

PSYCHOLOGY 380
Biological Psychology
The biological mechanisms underlying human behavior. Focus on evolution, genetics, and the anatomy and physiology of the human brain and nervous system as they affect and are affected by sensory systems, movement, waking and sleeping, homeostasis, hormones, sexual behavior, emotions, learning, memory, and language.
3 semester hours
PSYCHOLOGY 381
Drug Effects and Behavior
Fundamentals of psychopharmacological research with emphasis on human drug-taking behavior. A discussion of the various psychoactive drugs and implications of their use.
3 semester hours

PSYCHOLOGY 395
Senior Thesis in Psychology
Students work individually with their advisor to produce an integrative review or conduct empirical research on a specific topic within psychology.
3 semester hours

PSYCHOLOGY 407
Psychology of Consciousness
Study of all aspects of consciousness. Topics include sleep and dreams, meditation and prayer, yoga, daydreaming, creative insights, extrasensory perception, spiritual experiences, drug-induced states, hallucinations, and the mind-body issue.
3 semester hours

Retailing

RETAILING 102
Merchandising Mathematics
A functional and realistic approach to retailing principles and operations by the application of mathematical formulas and procedures. Emphasis on income statements, pricing techniques, markup, markdown, sales volume, inventory control, merchandising terminology, and merchandising planning. Math placement test must be taken.
3 semester hours

Required: A grade of at least a "C" to enter Retailing 304

RETAILING 180
Seminar in Professional Development
Surveys retail and related career areas, entry requirements and employment opportunities. Students are provided with opportunities to develop pertinent retailing related resumes, professional portfolios and interview techniques, as well as letters of application. Detailed study of the current job market and business ethics are also included.
3 semester hours

RETAILING 201
Retail Advertising and Fashion Promotion
Principles and methods of advertising and promotion for producers, manufacturers and retailers with emphasis on the retailers most often used media — the newspaper. Varying advertising approaches of the mass merchandiser, the prestigious department store and the specialty store are included. Additionally, students work on individual or group assignments in special events planning, visual merchandising, direct marketing, publicity, newspaper and magazine advertising. The role of the retail buyer and product developer in the advertising function in the planning and budgeting of ads is also included.
3 semester hours

RETAILING 203
Fashion and Retail Buying I
The study of buying theory and techniques for department stores and specialty retailers. Examines the buying function and examines how buyers’ responsibilities vary in different types of merchandising organizations. Study of the principles, procedures, and techniques practiced by merchandisers of fashion goods in determining resources to select, and assortment to buy includes private label development.
3 semester hours

RETAILING 205
Textiles I
Basic concepts of textiles dealing with fibers, yarns and methods of fabric construction. Specific laboratory assignments devoted to natural and synthetic fiber identification and testing. $50 lab fee.
3 semester hours

RETAILING 206
Textiles II
Continuation of textile concepts including the study of films, foams, laminated fabrics, fiber webs, knitted constructions, knotted fabrics, laces and flocked fabrics. In depth study of aesthetic and functional fabric finishes with emphasis on specific needs of the clothing and home furnishings industries. Laboratory work applies industry testing standards to individual fabrics. Woven, knitted, and applied fabric patterns are explored using a variety of mediums including CAD. CAM software. Students are responsible for submitting testing results and aesthetic development projects in addition to preparing sample books of commercially produced designs and functional finishes. Prerequisite: RETL 205. $50 laboratory fee.
3 semester hours

RETAILING 207
Strategies of Selling
Development of professional selling techniques necessary for efficiency and success in all phases of retailing and wholesaling. Expertise in a retail product line is developed through a product research project.
3 semester hours

RETAILING 213
Retail Human Resource Management I
An examination of personnel management within retail organizations. Topics include a survey of personnel theories, practices, and labor legislation in regard to personnel functions. Emphasis is on the special problems encountered by retailers with respect to employee recruitment, training, placement, scheduling, satisfaction, turnover, evaluation, and executive development.
3 semester hours

RETAILING 280
Industry Internship
Paid work experience in a faculty-approved retail organization. Six week full-time on-the-job assignment combined with written research into corporate structure and marketing strategy. Holiday selling season of sophomore year. Prerequisite: 2.5 Q.P.R. Student must maintain 2.5 Q.P.R. during the internship semester. Fashion Merchandising and Retailing majors only.
3 semester hours

RETAILING 300
Mass Merchandising and Marketing
An analytical study of national and multinational mass merchandising organizations that include origin, concepts, operations, technology, and profitability. Comparison of in-store mass merchandisers and non-store catalog retailers, on-air merchandisers, and

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on-line marketers. Students research one in-store and one non-store mass merchandiser of their choice in depth. Students prepare a catalog, an on-air, and an e-tailing presentation using a mass market approach. Students utilize “CATALOG,” “STORY-BOARD,” “SHOW and SELL,” and “VIRTUAL MERCHANDISING” CAD/CAM software to prepare presentations. Prerequisites: RETL 201, RETL 204, RETL 207 and RETL 213; open to juniors and seniors only.

3 semester hours

RETAILING 304  
Fashion and Retail Buying II  
Inventory and stock control procedures, analysis of consumer demand in the buying and marketing of fashion products. Six month budget planning of sales, goods, and promotional activities. Spreadsheets and computer applications are used to plan, analyze, and adjust buying and promotional activities by revisions in quantities and merchandise assortments. Practice in buying from a variety of domestic and international resources. Prerequisites: RETL 102 with a grade of “C” or better and RETL 203.

3 semester hours

RETAILING 307  
Surface Design I  
Introduction to the business of Textile Surface Design. Course focus is on applied surface designs using natural and geometric motifs as they apply in a variety of fashion markets including infant’s and children’s, women’s, men’s, domestics and paper goods. Students research current market design and color trends. Using classic, modern, or ethnic motifs students work with layout, repeat size and color ways. Students develop their own collection libraries in paper and disc formats. Students design applied patterns and alternative color ways using “DESIGN and REPEAT” and “EASY COLORING” CAD/CAM software. Students prepare portfolios of their best designs. Open to juniors and seniors only. Prerequisites: RETL 205, RETL 206, Design 103. $50.00 lab fee.

3 semester hours

RETAILING 308  
Advanced Textiles  
This course provides an overview of the history and importance of historical fabrics and their relevance in today’s market. The course includes studying the historical changes of fabrics, improvements in dyeing and weaving techniques as well as importance of designers that produce these fabrics. A portfolio of fashion is required as well as discussion and research on new ecological fibers. Oral presentations and a NYC market trip to textiles companies is required.

1-3 credits

RETAILING 313  
Retail Management II  
A study of the management decisions faced by the retail executive in today’s marketplace. Topics include locations, retail store layout, security, the customer service mix, retail credit arrangements and their cost-benefit relationships. Human resource concerns include recruitment, personnel changes, retraining and layoffs; employee benefits and their impact on both morale and budgets. Students research in-depth one of the ten top international retailers for practical solutions to a profitable retail environment. Prerequisite: Retailing 213, Retailing 201, and Marketing 305; junior and seniors majors only. May not be taken same semester as Fashion Merchandising 270.

3 semester hours

RETAILING 330  
International Fashion Marketing/Product Development  
An examination of international trade for textile and apparel industries. This course studies supporting agencies, foreign manufacturing, distribution, financing, transportation, tariffs and customs regulation. The student will be required to research exporting and importing a product and to prepare both a written and oral presentation. Prerequisites: RETL 205 and RETL 206.

3 semester hours

RETAILING 399  
Independent Study in Fashion Merchandising, Textiles or Related Retailing Techniques  
Independent study in fashion merchandising, textiles or related retailing techniques. Prerequisite: B.S. Degree Fashion Merchandising and Retailing seniors only; permission of chair. A three-credit internship is possible which combines one-credit of work experience with two-credits of independent research.

1-3 credits

Science

SCIENCE C101  
Our Environment: The Earth  
The scientific examination of our planet focusing on the interaction of astronomy, biology, chemistry, geology, and physics, in the formation, evolution, and dynamics of the Earth.  
2 lecture periods; 1 two-hour laboratory; 3 semester hours

SCIENCE C102  
Humans and the Environment  
A scientific examination of the human organism and the interactions between humans and the environment as they affect not only humans but also the health and viability of home planet Earth.  
2 lecture periods; 1 two-hour laboratory; 3 semester hours

SCIENCE C106  
Microbes in Our World  
A course designed to provide the student with an understanding of the role of microbes in our lives, and their real and alleged effects on the environment. Emphasis is placed on both the beneficial and the detrimental effects of microbes on humans and the environment.  
2 lecture periods; 1 two-hour laboratory; 3 semester hours

SCIENCE C201  
Our Environment: The Oceans  
The scientific examination of the geological, physical, chemical, and biological characteristics of the oceans. The course will include laboratory and field studies of local marine environments. Prerequisite: SCI C101 or SCI C102 or an equivalent course.  
2 lecture periods; 1 three-hour laboratory; 3 semester hours

Social Sciences

SOCIAL SCIENCES C201  
Introduction to the Social Sciences I  
A survey of the development of the social sciences, how they were shaped by historical forces, and their role in understanding society. The emergence of economics, anthropology, sociology, psychology, and political science from social philosophy. Prerequisite:
ENGL C101 or department permission. A Core Heritage Course.
3 semester hours.

SOCIAL SCIENCES 207
World Regional Geography
A survey of world physical and human geographic patterns. Each world region will be analyzed in terms of its environment and resource distributions, agricultural systems and rural development, population growth and characteristics, and patterns of urbanization and industrial growth. Considerable emphasis will be placed on the non-Western world, issues of sustainable development, and the changing nature of geography. Students will be required to write one research paper on a particular world region of their choice.
3 semester hours

SOCIAL SCIENCES 300
Seminar in Social Science Methods
An introduction to the methods of research and criticism employed in history, economics, anthropology, sociology, psychology, and political science. Social Sciences majors will gain experience in both statistical and interpretative methods that will be useful for their senior thesis. PC access required. Prerequisite: Sophomore standing. Required of Social Sciences majors in the junior year.
3 semester hours

SOCIAL SCIENCES 395
Senior Thesis
Students work individually with their advisors, preferably starting in the second semester of the junior year, to research and write a thesis on a topic related to the social sciences. This topic may be the extension of an idea first developed in the Seminar on Social Science Methods. Prerequisite: SOSC 300. Required of Social Science majors in the senior year.
3 semester hours

SOCIAL SCIENCES 398
Internship
Professional, supervised, unpaid work in an organization related to career goals. Prerequisite: Permission of advisor and School Director.
3 semester hours

SOCIAL SCIENCES 399
Independent Study
For the student who wishes to specialize in advanced projects not covered by regular course offerings. Individual or small group conferences with designated advisor. Prerequisite: Permission of advisor and School Director.
1-6 semester hours

Social Sciences • Sociology

SOCIOLOGY 101
Principles of Sociology
3 semester hours

SOCIOLOGY 102
Sociology of Social Problems
Analysis of major problems in modern society; existing methods for dealing with these problems.
3 semester hours

SOCIOLOGY 118
Introduction to Criminal Justice
This course is intended to introduce you to the field of criminal justice and criminology. More specifically, we will explore how the American criminal justice system interacts with society and reacts to societal issues. In turn this will help us understand how society functions in response to the criminal justice system.
3 semester hours

SOCIOLOGY 204
Marriage and the Family
Courtship, marriage patterns, social sexual adjustment. Social interaction within the family. The family and society.
3 semester hours

SOCIOLOGY 231
Cultural Anthropology
Origins and growth of culture. Pattern of culture as related to personality and social structure. Comparative cultures.
3 semester hours

SOCIOLOGY 270
Sociology of Deviance
Specialization into deviance; social typing; deviant subcultures; deviant identity; accommodation to deviance; public and informal regulation of deviance; treatment approaches to deviance; theoretical frameworks. Implications for policy-making. Prerequisite: SOC 101
3 semester hours

SOCIOLOGY 299
Selected Topics in Sociology
A course with variable topic focus; dependent upon student needs and the expertise of the instructor.

SOCIOLOGY 310
Race and Ethnicity
Racial and ethnic stratification; causes and consequences of prejudice and discrimination; problems of assimilation and pluralism; racial and ethnic conflict in the U.S. and in other societies.
3 semester hours

SOCIOLOGY 311
Juvenile Delinquency
Analysis of delinquency causation, methods of treating delinquents, juvenile court procedures, interrelationship of police and youth, and problems of prevention.
3 semester hours

SOCIOLOGY 315
Criminology
A critical examination of the conditions under which crime and delinquency occur. Theories of crime and punishment. Treatment of offenders.
3 semester hours

SOCIOLOGY 348
Religion & Society
A sociological and anthropological analysis of religion as a universal social institution, with emphasis upon theories of the origins of religion, relationships of religion to other social institutions, study of selected Western and non-Western religions in their socio-cultural contexts, religion as a source of social equilibrium and conflict, types of religious movements.
3 semester hours

SOCIOLOGY 355
Globalization
This course examines the phenomenon of globalization as an economic, political, and cultural reality. The focus of lecture and discussion will arise through consideration of treatment of the issue by current social theorists: e.g., Roland Robertson, Peter Berger, Immanuel Wallerstein, Mike Featherstone, Thomas Friedman. Critics of globalization will also be read and considered: e.g., Lourdes Beneira, John Cavanaugh, Joseph Stiglitz.
3 semester hours
SOCIOLOGY 399
Independent Study
For the student who wishes to specialize in advanced projects not covered by regular course offerings. Individual or small group conferences with designated advisor. Prerequisite: Permission of advisor and School Director.
1-6 semester hours

Spanish

SPANISH 101
Elementary Spanish I
Introduction to Spanish, stressing pronunciation, aural comprehension, and basic conversation. The fundamental principles of grammar. Training in reading comprehension and writing. 3 semester hours

SPANISH 102
Elementary Spanish II
Continuation of Spanish 101. Prerequisite: SPAN 101. 3 semester hours

SPANISH 103
Intermediate Spanish I
Conversation based on the reading of modern prose texts. Drill in written and oral self-expression. A review of the principles of grammar. Prerequisite: Spanish 102 or two years of high school Spanish. 3 semester hours

SPANISH 104
Intermediate Spanish II
Continuation of Spanish 103. Prerequisite: SPAN 103 or three years of high school Spanish. 3 semester hours

SPANISH 275
Topics in Spanish Language and Literature
A reading seminar using literary works of representative authors, dramatists, poets, and others. Discussion of language problems amongst speakers of Spanish. The course may be given in Spanish only or a mix of Spanish and English, according to student needs. Prerequisite: If given in Spanish, SPAN 104. 3 semester hours

SPANISH 398
Internship
Professional, supervised, unpaid work in an organization related to career goals. Prerequisite: Permission of advisor and School Director. 3 semester hours

SPANISH 399
Individual Study
Special projects on topics not studied in detail in regular courses, or projects on topics included in regular courses when those courses are not available. Prerequisite: Permission of School Director. 1-6 semester hours

Theatre

THEATRE 103
Introduction to Theatre
The art of the theatre: its literature, structure, and aesthetics. Contributions of the playwright, actor, architect, director, designer, and producer are examined through lectures, presentations by visiting artists, class discussion, projects, and attendance at theatrical performances. 3 semester hours

THEATRE 233
Role Study and Characterization I
The creative processes by which an actor may construct an interpretation are studied in theory and pursued in practice with heavy emphasis upon scenes. 3 semester hours

THEATRE 234
Role Study and Characterization II
The approaches to acting of Stanislavski and Boleslavsky including principles of sense memory and affective memory are examined, discussed, and applied. 3 semester hours

World Religion

WORLD RELIGION 102
Introduction to Eastern Religions
This course offers students a comparative and historical introduction to Hinduism, Buddhism, Confucianism, and Taoism. Attention is given to primary texts and rituals, historical and doctrinal development, socio-cultural setting and political impact. 3 semester hours

WORLD RELIGION 103
Introduction to Western Religions
This course offers students a comparative and historical introduction to Judaism, Christianity, and Islam. Attention is given to primary texts and rituals, historical and doctrinal development, socio-cultural setting and political impact. 3 semester hours

WORLD RELIGION 204
Hinduism
This course introduces students to the major textual, practical, communal, doctrinal, and philosophical features of Hinduism. Special attention is given to Hindu mythology, the Upanishads, and the Bhagavad-Gita. 3 semester hours

WORLD RELIGION 205
Buddhism
This course introduces students to the major textual, practical, communal, doctrinal, and philosophical features of Buddhism. Special attention is given to Theravada, Mahayana, and Tantric texts. 3 semester hours

WORLD RELIGION 207
Judaism
This course introduces students to the major textual, practical, communal, doctrinal, and philosophical features of Judaism. Special attention is given to the Hebrew Bible (Tanakh) and the Holocaust. Differences among contemporary forms of Judaism (Orthodox, Reform, Conservative, and Reconstructionist) are studied in some detail. 3 semester hours

WORLD RELIGION 208
Christianity
This course introduces students to the major textual, practical, communal, doctrinal, and philosophical features of Christianity. Special attention is given to the New Testament. Differences among contemporary forms of Christian community (Roman Catholicism, Orthodoxy, and Protestantism) are studied in some detail. 3 semester hours
World Religion

WORLD RELIGION 210
Unification Philosophy
This course intends to familiarize students with the unique nature of Unification Philosophy and invite reflection on the ways in which it relates to the Western philosophical tradition. Students will review key areas of inquiry in Western philosophy as well as practical applications of such inquiry. In the process, learners will examine the ways in which these areas of inquiry are addressed in Unification Thought texts and supporting literature. It is expected that the general framework and method of Unification Philosophy, with whatever its strengths and limitations, will become clear through the learning process and encourage speculation and critical discourse on its potential for further development.
3 semester hours

WORLD RELIGION 216/PHILOSOPHY 216
Philosophy of World Religions
A comparison and analysis of the philosophical foundations of some of the world’s major religions. Among the religions studied are: Judaism, Christianity, Islam, Hinduism, Buddhism, and Confucianism.
3 semester hours

WORLD RELIGION 221
Religion and Fiction
An introduction to religion and literature, this course will examine ways in which works of fiction (both secular and more overtly religious narratives) address issues that are intrinsically religious, such as: the relation between human spirit and human nature, the presence of evil and suffering, the need for meaning and personal and communal fulfillment.
3 semester hours

WORLD RELIGION 229
Confucianism
An examination of the major figures, texts, and ideas of Confucianism. Attention is given to social setting and political influence.
3 semester hours

WORLD RELIGION 230
Taoism
An examination of the major figures, texts, and ideas of Taoism. Attention is given to the dialogue with Confucianism.
3 semester hours

WORLD RELIGION 275
Religion, Conflict, and Mediation
This course examines economic, political, and cultural aspects of religious conflict, and proposes a theory for conflict mediation that entails recognizing the key role played by religious institutions and ‘cultural rationality’ within society. Models of conflict mediation (Augsberger’s Conflict Mediation Across Cultures; Avruch’s Culture & Conflict Resolution; Said’s Peace and Conflict Resolution in Islam; Shrock-Shenk, Making Peace with Conflict: Practical Skills for Conflict Transformation) are studied. These theories are practiced in case studies and class models. The relationship of interreligious and conflict mediation is considered.
3 semester hours

WORLD RELIGION 278
Religion, Peace, and War
This course will explore the contributions of several world religions (typically a combination of Western and Eastern religions; e.g. Buddhism and Islam; Judaism and Hinduism) to issues of peace and war. Topics may include just war theory, pacifism, non-violent forms of resistance, Jihad, and ahimsa. Topics will also be situated within historically significant experiences of the various religions (e.g. consideration of Buddhism in Sri Lanka; the Israeli/Palestinian question).
3 semester hours

WORLD RELIGION 288
Internet Religion
Prerequisite WREL 102 or 103, at least one other WREL course, and Instructor’s permission. This course examines the impact of the internet on classical religious forms (ideas, practices). In a lab component, we explore whether religious ideas and practices undergo mutation when they are expressed virtually. We set the stage for this topic by examining Religions and the Silk Road, which sets forth the dynamic nature of religious change in the ancient world. Topics include: the nature of change within religious communities; social dimensions of belief and faith-oriented practice; solitary and virtual modes of religious experience; human nature and internet; addiction to virtuality; connectivity, self-expression, and orthodoxy.
3 semester hours

WORLD RELIGION 301
World Scriptures
A study of primary source readings in world religious literature. Attention is also given to critical research methods. In the course we will read from the Upanishads, Bhagavad-Gita, Dhammapada, Koran, Tanakh, New Testament, and the Analects.
3 semester hours

WORLD RELIGION 305*
Comparative Religious Ethics
A comparative study of Hindu, Buddhist, Christian, and Islamic accounts of human rights, ecology, family, violence, and economy. The possibility of developing a universal ethic is considered. Topics vary from semester to semester.
3 semester hours

WORLD RELIGION 345/ENGLISH 345
Calvinism and American Civilization
This course studies the extent of Calvinist cultural penetration of American civilization and examines the specific literary evidence linking seventeenth century Puritanism the primary vehicle of Calvinist thought in America later manifestations of Calvinism in eighteenth and nineteenth century culture. All reading in the course will be in works of intrinsic literary merit.
3 semester hours

WORLD RELIGION 348/SOCIOLOGY 348
Religion and Society
A sociological and anthropological analysis of religion as a universal social institution, with emphasis upon theories of the origins of religion, religious culture and practices. Topics vary from semester to semester.
3 semester hours

WORLD RELIGION 353
The Sermon in American Literature and Civilization
This course is intended to provide a basic familiarity with one of the first and still most significant genres in popular American literature. A study of the origins and formal traditions of the sermon in various American religious cultures will enable students to experience American civilization from a most intimate and yet social perspective, that of
communal worship.

3 semester hours

WORLD RELIGION 254
Religion and Science
Do science and religion belong to completely separate realms? Can they benefit each other? Will religious conflicts fade as scientific reason sweeps away the cobwebs of bias and superstition? Or will science run out of control without the guidance of religiously inspired ethics? In grappling with such controversial questions, this course examines historical and modern approaches to the relationship between science and religion. Based on a typology which classifies such approaches as tending towards “conflict,” “independence,” “dialogue,” and “integration,” we will examine the work of both religious and scientific thinkers who exemplify these trends or challenge the status quo.

3 semester hours

WORLD RELIGION 375
Religion and Genocide
This course examines religion and politics in the Middle East. Histories of Judaism, Christianity, and Islam, their shared and opposing religious and social ideas, are studied. Particular attention is paid to the state of Israel and the question of a Palestinian state. Topics also include the Six Day War, issues of sovereignty and land, terrorism, and geopolitics. Instructor’s permission may be required for this course.

WORLD RELIGION 374
Religion and Politics in the Middle East
This course examines the intersection of religion and politics in the current landscape of the societies of the Middle East. While the West has emphasized separation of church and state, numerous nations and political parties in the Middle East emphasize the relationship between the two and the guiding role that religion is meant to play in political decision making. This course also examines the impact that secularization has had upon religion in the Middle East and it notes how this has played a key role in the development of Islamic militarism and the strengthening of some of the religiously based political parties of the region. Instructor’s permission may be required for this course.

3 semester hours

WORLD RELIGION 395
Senior Thesis Seminar
Instructor’s permission may be required for this course. Prerequisites: Senior standing, world religions major. Introduction to and preparation of a senior research thesis.

May be taken for 6 semester hours
Graduate
Course of Instruction
Course of Instruction

Traditional Graduate courses are offered at two levels. Courses at the 400 level are open to graduate students and to a limited number of qualified undergraduates; 500, 600 and 700-level courses are open, in most cases, to graduate students only. For the convenience of graduate students involved in daytime professional work, most courses are scheduled Monday through Thursday between 4 and 10 p.m.; both 400, 500, 600 and 700-level courses (3 credit) meet either for a single 150-minute period or for two regular 75-minute periods, depending upon the nature of the course and the policy of the department. There are also alternative scheduling options available, such as weekend, online and blended classes. These policies do not apply to the College of Chiropractic, the College of Naturopathic Medicine, the Acupuncture Institute or the Nutrition Institute.

Some graduate courses are offered every year, but many are scheduled over a two-year or three-year cycle. It is, therefore, essential that graduate students should carefully plan entire programs with their graduate advisors so that they will be able to register for all required courses over the time span in which they expect to complete the degree. The University reserves the right to limit the number of students registered in any graduate course, and also the right to cancel any course for which there is insufficient enrollment.

Accounting

**Accounting**

**ACCOUNTING 600 Financial Accounting**
This course is an introduction to American financial accounting principles based on FASB and IASB, including the measurement, processing, and communication of accounting information. Users of such accounting information include business owners, managers, creditors, prospective investors, and others interested in the financial condition of an entity and the results of its operations. Topics covered include the accounting cycle, merchandising, services, fixed assets and corporate accounting issues. Prerequisite: Admission to graduate study.
3 semester credits

**ACCOUNTING 610 Intermediate Accounting**
This course applies generally accepted accounting principles to the preparation of financial statements, including balance sheets, income statements, statement of cash flows, and retained earnings statements. Accounting for leases, employee benefits, deferred taxes and other specialized accounting topics will also be explored. Prerequisites: ACCT 600 and completion of all core courses or concurrent registration in final core courses.
3 semester credits

**ACCOUNTING 620 Managerial and Cost Accounting**
This course provides an introduction to managerial and cost accounting used by management in conducting daily operations, planning future operations, and developing overall business strategies. The objective is to gain an understanding of the role of accounting in the management process of planning, directing, controlling, and improving the organization's objectives (goals) and to translate those objectives into a course of action. Prerequisites: ACCT 600 and completion of all core courses or concurrent registration in final core courses.
3 semester credits

**ACCOUNTING 625 Auditing**
This course examines laws and methods for conducting commercial audits. Ethics, attestation standards, controls and fraud detection are among the topics that will be discussed. Application of generally accepted account-
Accounting • Acupuncture

Acupuncture Practice and Techniques (APT)

ACUPUNCTURE PRACTICE AND TECHNIQUES 511

Point Location I

This course will serve as the foundation of the acupuncture point selection series. Meridian theory using concepts of the Jing Luo system, including main and secondary vessels will be reinforced. This course provides the student with knowledge and skills to physically locate acupuncture points of the lung, large intestine, stomach, spleen, heart, small intestine, urinary bladder, kidney, and pericardium channels. Students will focus on how to locate points effectively, accurately, and quickly as preparation for clinical application as well as college and national examinations. Students will also learn the major function(s) and indications(s) of the Lung, Large Intestine, Stomach, Spleen, Heart, Small Intestine, Urinary Bladder, Kidney and Pericardium channel points. Co-requirement/Prerequisite: ATD 513 Oriental Diagnosis 1, ABS 511 Anatomy 1.

1.5 lecture hours, 1 laboratory hour, 2 semester credits.

ACUPUNCTURE PRACTICE AND TECHNIQUES 512

Meridian Theory

Meridian (a.k.a. Channel) theory is the basis of diagnosis and acupuncture treatment. This course is designed to provide the necessary instruction and training for the student to be familiar with meridian theory including regular, extra and other meridian systems. Co-requirement/Prerequisites: ATD 512 Oriental Theory and ATD 513 Oriental Diagnosis 1.

2 lecture hours, 2 semester credits.

ACUPUNCTURE PRACTICE AND TECHNIQUES 523

Point Location II

This is a continuation of the previous course and will focus on the Triple Warmer, Gall Bladder, Liver, Governing Vessel (“Du”), Conception Vessel (“Ren”) and extra points. Additional instruction is given in regional point location and point combinations. Prerequisites: ATD 513 Oriental Diagnosis 1, ABS 511 Anatomy 1.

1.5 lecture hours, 1 laboratory hour, 2 semester credits.

ACUPUNCTURE PRACTICE AND TECHNIQUES 513

Clean Needle Technique

This course prepares the student for emergency situations both in and out of the office. CCAOM Clean Needle Technique and a review of Occupational Safety and Health Administration (OSHA) standards are presented. In addition the student will practice safe and proper needling. All opathic treatments along with natural remedies for common complications of acupuncture and related therapies are discussed. Course prepares the student for emergency situations commonly found in an acupuncture office. CPR certification in emergency procedures is achieved. Prerequisite: none.

2 lecture hours, 2 semester credits.

ACUPUNCTURE PRACTICE AND TECHNIQUES 614

Acupuncture Techniques I

This course covers the basic principles of acupuncture treatment for diseases involved with different pathogenic factors, tissues and organs. Special point selection based on Root-Branch, Origin-End, Path of Qi, Five Element and Eight Parameter diagnoses are covered. Indications and contraindications of moxibustion, scalp acupuncture and electrical acupuncture stimulation are covered. Prerequisites: APT 511 and APT 523: Point location I and II.

2 lecture hours, 2 laboratory hours, 3 semester credits.

ACUPUNCTURE PRACTICE AND TECHNIQUES 625

Acupuncture Techniques II

This course covers functions, indications and needle techniques of the Well, Spring, Stream, River, Sea, Source, Luo, Xicleft, Back Shu, Front Mu and Lower He-sea, Eight Influential, Eight Confluent and important crossing points. Continuing practice in needling, moxibustion and cupping techniques is included. In addition, the prevention and treatment of acupuncture complications is covered. Prerequisite: APT 614 Techniques I.

2 lecture hours, 2 laboratory hours, 3 semester credits.

ACUPUNCTURE PRACTICE AND TECHNIQUES 626

Auricular & Scalp Acupuncture

This course introduces the student to various forms of microsystem acupuncture, focusing on auricular and scalp systems. The student learns the respective maps of the scalp and ear, clinical applications and treatment strategies. Co-requirement/Prerequisite: APT 614 Acupuncture Techniques I.

1 lecture hour, 1 semester credit.

ACUPUNCTURE PRACTICE AND TECHNIQUES 618

Pediatric Acupuncture

The special diagnostic and treatment skills required for the treatment of patients less than 12 years of age are discussed. The balance of safety for the patient and treatment efficacy is emphasized. Prerequisite: APT 625 Acupuncture Techniques II.

1 lecture hour, 1 semester credit.

ACUPUNCTURE PRACTICE AND TECHNIQUES 637

Japanese Acupuncture Techniques

This course covers the unique treatment strategies and protocols developed by Japanese acupuncture masters. Prerequisite: APT 614 Acupuncture Techniques I.

1 lecture hour, 1 semester credit.
Acupuncture

Oriental Theory, Diagnosis and Application (ATD)

Oriental History and Philosophy
The student studies the different eras of Chinese history and the effects on Oriental Medicine theories. This course includes the study of the development of Naturalism, Philosophical and Religious Taoism, Confucianism, and Buddhism and their contributions to Chinese Medicine. For each philosophy, the course examines how the philosophy views the human relationship to nature, and the human relationship to the universe. In addition, the impact of philosophy and religion on the oriental medical paradigm is explored. Prerequisite: none.
1 lecture hour, 0 Laboratory hours, 1 semester credit

Oriental Medical Theory
This course includes the classic theories of yin and yang and the Five phases that are fundamental to understanding the Oriental medical relationship between humans and the universe. Normal physiology is studied through the fundamental substances (Qi, Blood, Essence, Spirit and bodily fluids), and organs. The basic theory of illness and diagnosis using four examinations (sight, listening and smelling, palpation, and asking) and Eight Parameters are covered. Co-requisites/Prerequisites: Anatomy 1 and Physiology 1.
2 lecture hours, 2 semester credits

Oriental Diagnosis 1
The basic theory and characteristics of the pathogenesis and pathogenic factors are covered including the seven emotions, disharmony of Yin and Yang, abnormalities in Qi, Blood, Spirit, Essence and Bodily fluids, and organ disharmonies are covered. Techniques in inquiry, palpation, tongue and pulse diagnosis are covered. Diagnoses incorporating the eight parameters as well as root and stem concepts are covered for each of the twelve zang-fu. Prerequisite/co- requisite: ADT 512 Oriental Medical Theory.
2 lecture hours, 2 semester credits

Oriental Diagnosis II
This course will provide the student with further understanding of Oriental Medicine diagnosis, expanding on concepts from Oriental Diagnosis I. Traditional Chinese Medicine organ diagnoses, eight principle and febrile disease diagnoses will be stressed. In addition, treatment principles and acupuncture treatments based on these diagnostic systems will be explored. Differential diagnoses of common disease entities will be explored. Differential diagnoses of common disease entities will be explored. Differential diagnoses of common disease entities will be explored. Students will also continue to practice pulse and tongue diagnosis. Prerequisite: ADT 513 Oriental Diagnosis I.
2 lecture hours, 2 semester credits

Oriental Theory, Diagnosis and Application 511
First Year Seminar 1
This course will help the student to negotiate their first year in the Acupuncture program. The student will be guided through overviews of Chinese Medicine as preparation for integrating material from the entire curriculum. The student will be introduced to Chinese Medical terminology as well as the range of resources and the different perspectives on this terminology and the concepts contained therein. In addition the student will be introduced to concepts of information literacy and its use in research methodology. Prerequisites: none.
1.5 lecture hours, 1.5 semester credits

Oriental Theory, Diagnosis and Application 512
First Year Seminar 2
This course will be a continuation of the first year seminar one. The student will be guided through the application and integration of concepts and skills acquired in the first semester curriculum. The student will begin applying these through the use of case studies and clinical examples. The basics of applying diagnosis and generation of treatment principles will be reinforced in a collegial setting. Group activities such as case analysis and grand rounds will also be introduced. Prerequisites: ATD 517.
1.5 lecture hours, 1.5 semester credits

Oriental Theory, Diagnosis and Application 513
East-West Pathology
This course compares and contrasts diagnosis and treatment between Western and Oriental diagnoses. Western medical diagnosis of these diseases is incorporated so that the student is able to collaborate with western physicians. Major and common categories of diseases including respiratory tract, infectious, gastrointestinal, genitourinary and musculoskeletal diseases are covered. Prerequisite: ADT 513 Oriental Diagnosis I.
2 lecture hours, 2 semester credits

Oriental Diagnosis 1
Second Year Seminar 2
This course will be a continuation of the second year seminar one. The student will be guided through the application of case analysis, integrative patient care, diagnostic, assessment and treatment application skills acquired in clinical observation and the first year's curriculum. The student will begin applying these through analyzing clinical cases. Advanced applications in 8-parameter, 5-element, zang-fu, wen bing and shan han lun diagnosis and treatment principles will be reinforced in a collegial setting using interdisciplinary case analysis and grand rounds. Prerequisites: ATD 617.
1.5 lecture hours, 1.5 semester credits

Oriental Diagnosis 2
Oriental Internal Medicine
This course focuses on the diagnosis and oriental treatment of major illness. Treatment planning includes acupuncture, qi gong, and massage. Diagnoses cover respiratory illnesses, gastrointestinal, genitourinary, gynecological, and psychological illnesses. Roots and 5 Element treatments are included. Prerequisite: ADT 513 Oriental Diagnosis I.
2 lecture hours, 2 semester credits

Oriental Diagnosis and Application 524
Advanced Tongue and Pulse Diagnosis
This course is designed to increase the diagnostic skills and clinical applications of these uniquely oriental diagnostic parameters. The student studies healthy and diseased tongues
Acupuncture

and pulses and discusses how findings in these areas change the treatment principles and strategies. Case studies from the clinical internship are used to increase both depth and breadth of skill. Prerequisite: ADT 524: Oriental Diagnosis II.

1 lecture hour, 1 semester credit

ORIENTAL THEORY, DIAGNOSIS AND APPLICATION 728

Case Study Organization and Applications

Students learn to transition from the development of pattern diagnosis to TCM treatment principles which then lead to point and modality applications. Emphasis is placed on an accurate assignment of symptoms to pattern diagnosis; logical treatment principles reflecting the priorities and totality of the patterns diagnosis; and the most efficacious acupuncture point and adjunctive modality prescriptions to help the patient achieve health. Prerequisite: ADT 524: Oriental Diagnosis II.

1 lecture hour, 1 semester credit

ORIENTAL THEORY, DIAGNOSIS AND APPLICATION 729

Oriental Gynecology

This course is designed to familiarize the student with oriental diagnosis and acupuncture treatments of common gynecologic conditions. Special emphasis is placed on understanding those points forbidden to needle or moxa in cases where the patient’s pregnancy status is unknown. Prerequisite: ATD 524: Oriental Diagnosis II.

1 lecture hour, 1 semester credit

Western Biomedicine (AWB)

BASIC SCIENCE 511

Anatomy 1

This course provides an in-depth study of the macroscopic human anatomy and covers the structure of the trunk and neck regions. Clinical aspects of the vascular and neurological relationships of these regions are emphasized. Instruction includes lectures and interactive media software. Prerequisite: none.

4 lecture hours, 4 semester credits

BASIC SCIENCE 522

Anatomy 2

This course is a continuation of Anatomy 1 and covers the structure of the head and extremities. Clinical aspects of the neurological and vascular relationships of the regions of the body are emphasized. Prerequisite: ABS 511 Anatomy 1.

4 lecture hours, 4 semester credits

BASIC SCIENCES 515

Physiology 1

This course emphasizes the function of cellular structures which regulate homeostasis as well as their role in cell division and genetic control of protein synthesis. Emphasis is placed on the role of the cell membrane in the control of cellular events. The effects of physiology on hormones, their role in homeostasis, and the functional changes associated with homeostasis are considered. Prerequisite: none.

2 lecture hours, 2 semester credits

BASIC SCIENCES 525

Physiology 2

This course is a study of physiology at the organ and systems level. Included is the study of the circulatory, respiratory, renal, cardiovascular, gastrointestinal and urogenital systems. Also included is the study of the endocrine system and its interrelationships with various organs and systems. There is an integration of normal physiology with pathophysiology and clinical concepts. Prerequisite: ABS 515.

2 lecture hours, 2 semester credits

WESTERN BIOMEDICINE 523

Pharmacology

This course examines the most commonly used pharmacologic agents to be encountered in the clinical setting. The general principles of pharmacology (pharmacodynamics and pharmacokinetics) are covered. Uses and side effects of antibiotics, anti-inflammatory agents, hormones and cardiac drugs are surveyed. Drug-nutrient and drug-herb interactions are discussed. Prerequisite: none.

1 lecture hour, 1 semester credit

CLINICAL SCIENCES 611

Pathology 1

This course is a study of the pathophysiological process and how this process alters the gross, microscopic and clinical manifestations of disease. Basic pathological processes of inflammation, repair, degeneration, necrosis, immunology and neoplasia are presented. Prerequisite: ABS 525 Physiology 2.

2 lecture hours, 2 semester credits

CLINICAL SCIENCES 624

Pathology 2

This course is the continuation of the pathological processes of various diseases. This course emphasizes the basis of systemic diseases of the cardiovascular, respiratory, gastrointestinal, urogenital, endocrine, hepatobiliary, renal and pancreatic systems. Prerequisite: ACS 611 Pathology 1.

4 lecture hours, 4 semester credits

CLINICAL SCIENCES 612

Clinical Diagnosis 1

This course covers the techniques used for physical examination for various systems of the body. Skills taught develop an appreciation for normal variations and abnormalities associated with disease states. The student is taught to recognize the signs and symptoms of common diseases. Prerequisites: ABS 511, ABS 521, ABS 515, ABS 252.

3 Lecture hours, 2 lab hours, 4 semester credits

CLINICAL SCIENCES 623

Clinical Diagnosis 2

This course is a continuation of Clinical Diagnosis 1. Prerequisite: ACS 612.

3 lecture hours, 2 lab hours, 4 semester credits

CLINICAL SCIENCES 724

Public Health

This course covers current environmental and public health concerns and issues. The course integrates health with diet, water and air pollutants, noise and substance abuse. Recognition of major communicable diseases is included. Prerequisite: ABS 525 Pathology 2.

2 lecture hours, 2 semester credits

CLINICAL SCIENCES 613

Lab Diagnosis

This course introduces the student to the appropriate use and interpretation of laboratory tests. Prerequisites: ABS 521 and ABS 525.

2 lecture hours, 2 semester credits

ANT 521

Nutrition

This course provides the foundation for therapeutic nutrition. It explores the biochemistry of macronutrients as well as vitamins and minerals. Deficiencies, toxicities, therapeutic uses and appropriate doses are examined. An assessment of dietary needs and the application of therapeutic nutrition in treating individual diseases and syndromes are also taught. Prerequisites: none.

2 lecture hours, 2 semester credits
Acupuncture

Herbal Medicine Survey (AHM)

BOTANICAL MEDICINE 521
Botanical Medicine
This course comprises a survey of plant and plant preparations most commonly used in Western traditions. The actions of the plant and plant products, as well as drug-herb interactions are considered. Prerequisites: ABS 515, Co-requisite: ACS 611.
2 lecture hours, 2 semester credits

HERBAL MEDICINE SURVEY 612
Introduction to Chinese Herbal Remedies
This survey course introduces the student to the diagnostic and treatment strategies specific to oriental herbal therapies. The student is introduced to major herbs and formulas of China, their uses, contraindications and drug-herb interaction. Patient safety issues are also addressed. Prerequisite: ATD 513 Oriental Diagnosis 1.
1 lecture hour, 1 semester credit

HERBAL MEDICINE SURVEY 613
Patent Remedies
This course will survey the major over-the-counter remedies used in China. Safety issues, use of animal products, endangered species, and the adulteration of common remedies is emphasized. Prerequisite: AHM 612: Introduction to Chinese Herbal Remedies.
2 lecture hours, 2 semester credits

HERBAL MEDICINE SURVEY 713
Oriental Dietetics
This class introduces the student to the eastern understanding of how food influences human health. Foods and food products are surveyed according to Asian categorization. Food groups are categorized by nature, temperature, taste, element, indications and contraindications. Treatment of the major categories of organ (zang-fu) disorders using foods and food combinations are covered. Prerequisite: ADT 513 Oriental Diagnosis 1.
2 lecture hours, 2 semester credits

Herbal Medicine Survey (AMR)

MOVEMENT AND RESPIRATION STUDIES 511
Taijiquan 1
This introductory course in therapeutic movement teaches the proper musculoskeletal alignment, breathing, and mental awareness affect the energy pathways by direct experience through practice of this traditional exercise. Prerequisite: none.
0 lecture hours, 1.5 laboratory hours, 1 semester credit

MOVEMENT AND RESPIRATION STUDIES 522
Taijiquan 2
This is a continuation of Taijiquan 1. Prerequisite: AMR 511 Taijiquan 1.
0 lecture hours, 1.5 laboratory hours, 1 semester credit

MOVEMENT AND RESPIRATION STUDIES 613
Qigong 1
This course teaches a variety of therapeutic exercises designed to increase the student’s awareness of anatomy and energy pathways as well as how to choose and teach appropriate exercises in a clinic setting. Prerequisite: AMR 522: Taijiquan 2
0 lecture hours, 1.5 laboratory hours, 1 semester credit

MOVEMENT AND RESPIRATION STUDIES 624
Qigong 2
This course is a continuation of Qigong 1, teaching exercises and detailing their clinical application. Prerequisite: AMR 613 Qigong 1.
0 lecture hours, 1.5 laboratory hours, 1 semester credit

MOVEMENT AND RESPIRATION STUDIES 627
Palpation/Massage
In this course students integrate the knowledge of anatomy with the skills of palpation. Basic soft tissue technique is taught as a way to understand muscular relationships. Students work to assess soft tissues and practice techniques. Prerequisite: ABS 522 Anatomy 2.
1 lecture hour, 2 laboratory hours, 2 semester credits

MOVEMENT AND RESPIRATION STUDIES 715
Oriental Massage I
The student learns Tui Na soft tissue manipulation technique as well as its history, theory, application, and indications. Treatment of childhood illness is the main focus. I don’t have experience in pediatric methods. My emphasis (assuming I take on this course in the fall) would be on musculoskeletal complaints. In addition, therapeutic techniques for the shoulder, neck, abdomen, back pain and headaches are covered. Prerequisite: ATD 513 Oriental Diagnosis 1.
1 lecture hour, 2 laboratory hours, 2 semester credits

MOVEMENT AND RESPIRATION STUDIES 726
Oriental Massage II
Shiatzu, deep tissue massage and other forms of Oriental massage are covered. Treatment plans for major musculoskeletal and gastrointestinal diagnoses are covered. Prerequisite: AMR 715 Oriental Massage 1.
1 lecture hour, 2 laboratory hours, 2 semester credits

Counseling, Communications and Practice management

PSYCHOLOGICAL ASSESSMENT 621
Psychological Assessment
The primary focus of this course is the diagnosis of the various psychiatric diseases according to the Diagnostic and Statistical Manual of Mental Disorders. Included are psychological assessment considerations and treatment modalities. Prerequisites: none.
2 lecture hours, 2 semester credits

APP 721
Practice Management
Students are taught the current procedural practices for the operation of a private practice. In addition, the practical aspects of operating a practice as a small business are discussed. Students are encouraged to begin thinking about their personal career path as a complementary medicine practitioner in private practice, group practice, hospital-based practice or as an AOM educator. Prerequisites: none.
2 lecture hours, 2 semester credits

ATD 617 Second Year Seminar 1 & ATD 617 Second Year Seminar 2 (see section above “Oriental Theory, Diagnosis and Application”)

Clinical Services (ACS)

CLINICAL SERVICES 711
Preceptorship I
The students observe and administer care in established acupuncture facilities under the supervision of licensed physicians and acupuncturists. This exposure to a variety of clinical settings helps prepare the student for both private practice and integrative patient care. Prerequisite: Completion of all first year courses.
0 lecture hours, 4 laboratory hours, 2 semester credits, 75 hours total
Clinical Services 722
Preceptorship II
This is a continuation of ACS 711. Students increase their clinical skills working under a variety of health care professionals, all of whom must have the appropriate credentials to practice in the field of acupuncture. Prerequisite: ACS 711. 3 semester credits, 220 total hours

Clinical Services 631
Clinical Internship I
Under the supervision of licensed faculty members, the interns start by observing patients for 50 clinic hours, then move into the area of direct patient care. All patient diagnoses and management plans are reviewed and approved by a clinic faculty member prior to the initiation of patient care. The student will begin to practice clean needle technique, removal and disposal of needles. The student will acquire proficiency in tongue and pulse diagnosis. Prerequisite: Pass Clinical Entrance Exam. 3 semester credits

Clinical Services 712
Clinical Internship II
Students continue to administer care to patients under the supervision of licensed faculty. Students are monitored as to their progress toward completing the qualitative and quantitative requirements necessary for the successful completion of the program. Eligibility for the internship is successful completion of the previous clinical internship. Prerequisite: ACS 631 Clinical Internship I. 3 semester credits

Clinical Services 723
Clinical Internship III
Students continue to administer care to patients under the supervision of licensed faculty. Students are monitored as to their progress toward completing the qualitative and quantitative requirements necessary for the successful completion of the program. Eligibility for the internship is successful completion of the previous clinical internship. Prerequisite: ACS 631 Clinical Internship I. 3 semester credits

Biomedical Engineering

Biomedical Engineering 410 (BMEG 410/ELEG 410)
Biosensors
This course will provide an overview of biosensors, including their use in pharmaceutical research, diagnostic testing, and policing the environment. Topics include the fabrication, characterization, testing, and simulation. The transducer phenomenology, biosensor structure, and sensor performance will also be covered. 3 semester credits

Biomedical Engineering 412 (BMEG 412/ELEG 412)
Bioelectronics
Discipline of biomedical Engineering has emerged due to integration of engineering principles and technology into medicine. This course is intended for engineers and engineering students interested in pursuing a career in biomedical engineering and health-related fields. This course will first introduce Applications of electrical engineering principles to biology, medicine, behavior, or health will be identified during first half of the semester. Second half of the course will focus on research, design, development and application of biosensors and Bioelectronics. 3 semester credits

Biomedical Engineering 415 (BMEG 415/ELEG 415)
Bioinformatics
Biology has become target of more algorithms than any other fundamental science. This course is about designing and developing algorithms for biological problems. Students will work with popular bioinformatics algorithms not only to understand algorithms design mythologies but also to identify strengths and potential weaknesses in traditional bioinformatics algorithms. 3 semester credits

Biomedical Engineering 440 (BMEG 440/MEEG 440)
Ergonomic Factors in Design
This course introduces the student to the concepts of ergonomics. Ergonomics is the study of fitting the workplace and devices to the capabilities of the human worker. Students will have an understanding of the beginning and evolution of the field of ergonomics. They will learn to recognize risk factors associated with repetitive stress disorders (e.g., carpal tunnel syndrome) and potential sprain/stain injuries as well as be familiar with the body areas affected. This course covers principles of physiology and biomechanics and how they apply to workstation and tool design. 3 semester credits

Biomedical Engineering 443 (BMEG 443/ELEG 443)
Digital Signal Processing
This is an introductory course in Digital Signal Processing (DSP) for graduate Electrical and Computer Engineering students. Sometime will be spent initially reviewing major concepts in signals and systems. Major topics to be covered in ELEG 443 include: time-domain analysis of discrete-time (DT) systems (convolution, difference equations), the transform, frequency analysis for DT signals and systems (DTFT, DFT, FFT), digital filter design, and selected advanced topics as time permits. 3 semester credits

Biomedical Engineering 446 (BMEG 446/ELEG 446)
Introduction to MEMS
MEMS (Micro Electro Mechanical Systems) refers to devices and systems with very small size in the range of microns. It is one of the most important high technologies developed in 20th century. This course covers the fundamentals of MEMS. It includes the introduction to MEMS, basic microfabrication techniques, MEMS materials and their properties, MEMS device design and simulation, working principle analysis, MEMS device fabrication sequence, MEMS packaging and assembly, signal testing, MEMS applications (inertial MEMS, MOEMS, BioMEMS, RFMEMS, etc.). 3 semester credits

Biomedical Engineering 451
Introduction to BioMEMS
This course will introduce to students the fundamentals of BioMEMS, the application of MEMS (Microelectromechanical Systems) for biological applications. The topics include microfabrication, microfluidics, bio-sensors, actuators, micro/nan drug delivery systems, micro total analysis systems and lab-on-a-chip devices, and detection and measurement systems. The main focus is to understand the fundamental challenges and limitations involved in designing and fabricating various BioMEMS and BioNEMS devices. 3 semester credits

Biomedical Engineering 506 (BMEG 506/MEEG 506)
Transport Phenomena in Biological Systems
This course provides understanding of the physical, chemical and biological processes governing the movement of mass and trans-
Biomedical Engineering

mission of forces throughout an organism, which are important to biomedical engineers in the design and operation of biomedical devices. Engineering fundamentals of transport phenomena (fluid flow, heat transfer, and mass transfer) will be discussed in biological applications. Mathematical modeling will be used to analyze the biological transport and biochemical interactions in physiological systems, such as cardiovascular and respiratory systems. Numerical modeling will also be introduced to simulate some biological processes to enhance mathematical understanding.

3 semester credits

BIOMEDICAL ENGINEERING 507
Algorithms in Bioinformatics
This course is tailored for students both in biomedical engineering and computer science and engineering department desiring to understand the issues concerning representing and analyzing genomes, sequence of proteins etc. The course is about applying the techniques (computational methods and systems) developed in computer science to solve problems in molecular biology such as DNA or protein sequences alignment problem, genome rearrangement problem, protein folding problems and so on. Hidden Markov Models (HMM), Bayesian Model, clustering, decision trees are some of the examples of machine learning methods that will be covered in the course.

3 semester credits

BIOMEDICAL ENGINEERING 508 (BMEG 508/MEEG 508)
Biomechanics
Biomechanics is the application of mechanical principles to living organisms that included bioengineering, research and analysis of mechanism in living organisms, and application of engineering principles to and from biological systems. This course can be carried forth on from the molecular level including collagen and elastin, all the way up to the tissue and organ level. Some simple applications of Newtonian mechanics can supply approximations on each level, but precise details demand the use of continuum mechanics.

3 semester credits

BIOMEDICAL ENGINEERING 510 (BMEG 510/ELEG 510)
Medical Machines
This course, provides very good introduction and understanding of Electrical Safety, Medical electronics and Medical Machines as applicable. Students often have different background and level of understanding of technical concepts; therefore we will develop necessary background in this course in first few weeks and gradually move from basic to advance topics as listed below in “Class Topics” section. This course will further help by developing approach to design devices and safety features. Behind every invention, law or device, there is always a need, a necessity. Students go from necessity to invention in the class. Since large number of electronic equipments are being used in hospitals and medical centers for patient care and diagnosis or carry out advanced surgeries. This course will enable students to learn the basics principles of different instruments used in medical science.

3 semester credits

BIOMEDICAL ENGINEERING 511 (BMEG 511/MEEG 511)
Designs and Development of Biomedical Instrument
This course offers the information to understand and design biomedical instruments. Biomedical instruments contains imaging and monitoring the environment, simulation and modeling, instrument testing, biosensors and diagnostics, instrument design and development, therapeutic devices, next generation instrument technology, clinical and regulatory, and etc. The in-depth descriptions of design methods for biomedical instrument will be included in the course.

3 semester credits

BIOMEDICAL ENGINEERING 513 (BMEG 513/ELEG 513)
Biomedical Image Processing
This course is an elective course. The content of this course include the fundamentals of Digital Image Processing and its applications in biomedical field. Sampling and Quantization of signals are mentioned in order to introduce the digital images, some basic relationship between pixels are mentioned. Introduction to Fourier Transforma, Discrete Fourier Transform and Fast Fourier Transformed are explained. MATLAB programming with Image Processing Toolbox will be introduced to empathize and rigid the understanding of students. Others important fundamental theorems, e.g., Image Enhancement, Image Segmentation, Representation and Description are also mentioned. Students are required to implement some programs using the theorems learnt in classes.

3 semester credits

BIOMEDICAL ENGINEERING 520 (BMEG 520/BIOL 520)
Physiology
The physiological and biochemical principles that control the function of the human body will be covered. Laboratory work will introduce the student to basic physiologic experimentation, interpretation and presentation of results.

3 semester credits

BIOMEDICAL ENGINEERING 530
Instrumentation and Laboratory Experience
This course can be taken in any semester. Working with the program director, engineering or life science, the students will get permission to enter the relevant lab and formulate an experimental plan with the faculty supervisor of that lab. At the end of the lab experience the student will present their lab notebook for inspection to the lab supervisors and the program director.

3 semester credits

BIOMEDICAL ENGINEERING 535 (BMEG 535/TCMG 535)
Foundations of Biotech Sciences and Management
This course defines biotechnology as the application of molecular biology for useful purposes. It simulates the real world science and business environments: Information and knowledge are complex, highly specific, fragmented, diverse and vast. No one individual or group or business entity or government agency is able to cover in-depth the entire science and business continuum to succeed and create value to society at large. Value creation has three different aspects: data, information and knowledge assimilation, degree of collaboration and methodology to establish successful knowledge management and business processes. The continuum of the biotechnology industry is shaped by scientific, legal, regulatory, social, economic, technological, political, financial and commercial factors. Understanding the dynamics and linked contributions of the interdisciplinary array of factors which affect commercialization of bioscience discoveries is essential to operate in the biotechnology industry. In this course we are dissecting the biotechnology industry to isolate the key drivers and study their interactions.

3 semester credits

BIOMEDICAL ENGINEERING 540 (BMEG 540/BIOL 540)
Advanced Cell and Molecular Biology
The general biological principles that govern all living organisms will be discussed. The
structure and function of cells with emphasis on gene activity at the molecular level, DNA replication and repair, transcription, translation, recombination, translocation and mutations. Techniques and experiments leading to important discoveries on DNA will be covered.

3 semester credits

BIOMEDICAL ENGINEERING 541 (BMEG 541/TCMG 541)

Foundations of Biotechnology and Bioentrepreneurship

This course is an introduction to the biotechnology industry to isolate the key drivers and study their interactions. Discoveries in science and fast developments in technology combined with financial availabilities offer many entrepreneurial opportunities.

3 semester credits

BIOMEDICAL ENGINEERING 546 (BMEG 546/ELEG 546)

Biosignal Processing

This is an introductory course in Bio-Signal Processing (DSP) for graduate Electrical and Computer Engineering students. Sometime will be spent initially reviewing major concepts in signals and systems. Major topics to be covered in ELEG 546 include: Concepts of signal and image processing, wavelets, classification and clustering, and applications of these concepts to EEG, ECG, EMG, MRI and CT Scans.

3 semester credits

BIOMEDICAL ENGINEERING 560 (BMEG 560/MEEG 560)

Advanced Tissue Engineering

This course deals with specific elements of tissue engineering design and analysis. Approaches to the regeneration of three tissue systems will be analyzed utilizing engineering design. Concepts ranging from tissue development and dynamic growth conditions to ultimate tissue properties will be addressed. Students will be required to acquire understanding and expertise from analysis of primary literature and will complete group presentations on directed approaches to tissue design and engineering in three tissue systems. To ensure in-depth understanding of different aspects of tissue engineering the groups will be required to focus on one or two key aspects in each mini design module.

3 semester credits

BIOMEDICAL ENGINEERING 561 (BMEG 561/ELEG 561)

Fundamental Analysis of Nanomaterials

The course will give an over view on several important analytical tools for nano materials characterization. Mechanical, electrical and electronic and biological property testing of the nano materials such as carbon nanotubes, metal nanoparticles, quantum dots, nanowires conformable nanoelectronics materials, polymer nanoparticles and biomedical nanomaterials will be discussed. Process and product evaluation by physical, chemical and microscopic methods for materials in nano-regime will be highlighted. Modern materials science depends on the use of a battery of analytical methods carried normally in specialized laboratories. This course explains the fundamental principles associated with the various methods and familiarize the students with them, their range of applicability and reliability especially when materials are of nanoscopic dimension.

3 semester credits

BIOMEDICAL ENGINEERING 562 (BMEG 562/ELEG 562)

Nanofabrication with Soft Materials

This is an advanced level graduate course focusing on fabrication of soft materials. Nanofabrication processes and nanosystem products will be discussed. Fundamentals associated with chips fabrications and linking them toward soft materials assembly will be detailed. Emerging nanotechnology based methods for soft and green electronics, mechanical parts, MEMS, PCBS will be covered. Gene chip, label free sensory assay using micro and nanofluidics will be discussed. Transfer printing, DNA-protein interactions using the chip and several nano-scale assemblies for soft materials fabrication will be discussed.

3 semester credits

BIOMEDICAL ENGINEERING 563 (BMEG 563/MEEG 563)

Modern Biology in Biomedical Engineering

This course is an introduction to the biotechnology industry to isolate the key drivers and study their interactions. Discoveries in science and fast developments in technology combined with financial availabilities offer many entrepreneurial opportunities.

3 semester credits

BIOMEDICAL ENGINEERING 564 (BMEG 564)

Nanotechnology and Nanomaterials

This course introduces the students with the progress of biomaterials used in biomedical engineering. Starting from early civilizations biomaterials this course discusses modern advanced level biomaterials and their engineering principles associated with their biomedical use. Hip, knee Prostheses, implants, grafts, sutures, stents, catheters materials and their application in Biomedical Engineering are covered. Designed biomaterials such as silicones, polyurethane, Teflon, hydrogels, bionanocomposites are detailed. Modern Biology and biomedical engineering such as protein absorption, bio-specifc medical materials, nonfouling materials, healing and foreign body reaction, controlled release etc are discussed. Surface-immobilized biomolecules in patterned surfaces are explained with specific examples of the use of immobilized biomolecules, immobilized cell ligands, and immobilization methods. Recent advances in biomedical engineering from the perspectives of inkjet printing of cells and tissues for 3D-medical textiles, nanofibers and films in biomedical engineering by electrostatic spinning, bio-inspired materials through layer by layer (LBL) assembly and biogels and advanced instrumentations in biomedical engineering are updated. Artificial red blood and skin substitutes, orthopedic biomaterials applications adhesives and sealants, diagnostics, biomedical sensors, extracorporeal artificial organs and ethical issues of biomedical engineering are discussed.

3 semester credits

BIOMEDICAL ENGINEERING 565 (BMEG 565/ELEG 565)

Biomedical Materials and Engineering

This course introduces the students with the progress of biomaterials used in biomedical engineering. Starting from early civilizations biomaterials this course discusses modern advanced level biomaterials and their engineering principles associated with their biomedical use. Hip, knee Prostheses, implants, grafts, sutures, stents, catheters materials and their application in Biomedical Engineering are covered. Designed biomaterials such as silicones, polyurethane, Teflon, hydrogels, bionanocomposites are detailed. Modern Biology and biomedical engineering such as protein absorption, bio-specific medical materials, nonfouling materials, healing and foreign body reaction, controlled release etc are discussed. Surface-immobilized biomolecules in patterned surfaces are explained with specific examples of the use of immobilized biomolecules, immobilized cell ligands, and immobilization methods. Recent advances in biomedical engineering from the perspectives of inkjet printing of cells and tissues for 3D-medical textiles, nanofibers and films in biomedical engineering by electrostatic spinning, bio-inspired materials through layer by layer (LBL) assembly and biogels and advanced instrumentations in biomedical engineering are updated. Artificial red blood and skin substitutes, orthopedic biomaterials applications adhesives and sealants, diagnostics, biomedical sensors, extracorporeal artificial organs and ethical issues of biomedical engineering are discussed.

3 semester credits

BIOMEDICAL ENGINEERING 566 (BMEG 566/ELEG 566)

Tissue Engineering

The objective of this course is to provide students a foundation for the understanding of cell based systems needed for tissue engineering. The structure-property-function relationships in normal and pathological mammalian tissues will be covered. A review of the current de-
development of biological substitutes to restore, maintain, or improve functions that includes strategies to regenerate metabolic organs and repair structural tissues, as well as cell-based therapies to deliver proteins and other therapeutic drugs will be discussed. There are a variety of very important materials issues in tissue engineering, which will be discussed in detail. Cells adherence to the extracellular matrix materials in the body and their enormous effect on cell behavior will be detailed. The physical and chemical properties of these materials will be examined and important materials used in tissue engineering will be discussed.

3 semester credits

BIOMEDICAL ENGINEERING 620
Team Based Research Project
This course must be taken in your last semester of course work or later. This is a team based project. Teams with members from both the life sciences and the quantitative sciences are strongly encouraged. You may have more than one advisor, but one faculty member needs to be identified as the primary advisor. Your capstone project may be based on a single project or multiple projects. Each project, however, must be experimental or simulation in nature and be interdisciplinary. The project results should be publishable in peer reviewed journals. All projects must be approved by the University’s BME program committee prior to student enrollment in the BME 620 course.

Business Capstone

BUSINESS CAPSTONE 797
Integration and Application: Strategy
This is a capstone course dealing with the development and implementation of business strategy and planning within a framework of ethical decision-making, globalization and managing accelerating change. The student is tested on his/her capability to apply all prior learning to solve actual strategic management problems. The final project of this course is project-based, and shall constitute an outcome assessment of what the student has learned in the MBA program. This project, normally an extensive and comprehensive case study, will be graded by several faculty members representing different and relevant disciplines. Prerequisites: Completion of all core and required courses and completion of all Major courses or concurrent registration with final Major courses. Normally, students enroll toward the end of their MBA program.

3 semester credits

BUSINESS CAPSTONE 781
Integration and Application: Business Simulation and Planning
Each student-executive will assess changing industry and competitive conditions, evaluate the strategies of competitors, carefully craft ways to secure a competitive advantage to increase their company’s market share by correctly forecasting industry-wide demands for individual market segments, and plan in advance for production capacity expansions to take advantage of growing market demands. The student has the opportunity to make decisions testing his or her ability to apply logic, insight, judgment and common sense and evaluate the resulting impact on profits, stockholder equity, customers or clients and investors.

3 semester credits

Prerequisites: Completion of all core and required courses and completion of all Major courses or concurrent registration with final Major courses. Normally, students enroll toward the end of their MBA program.

BUSINESS CAPSTONE 799
Integration and Application: Internship
This course should be taken towards the end of the student’s program of study and requires the approval of the student’s faculty advisor.

3 semester credits, 1 semester credit, 1 semester credit

Prerequisites: Completion of all Major courses or concurrent registration with final Major courses. Normally, students enroll toward the end of their MBA program.

Business Communications

BUSINESS COMMUNICATIONS 603
Business Written Communications
The purpose of this course is to improve the ability of students to effectively communicate with a variety of writing techniques. Students will not only learn and practice grammatical principles, but also learn to present tables and graphs, and to organize and coherently structure their written reports. Prerequisites: Admission to graduate study.

3 semester credits

BUSINESS COMMUNICATIONS 605
Business Oral Communications
The purpose of this course is to improve the ability of students to effectively communicate with a variety of oral presentation techniques. Students will not only learn and practice speech principles, but also learn to visually present tables and graphs, and to organize and coherently structure their oral communications. Prerequisites: Admission to graduate study.

3 semester credits

Business Law

BUSINESS LAW 600
Legal Environment of Business and Ethics
Students course focuses on how the legal environment of business impacts business decisions with broad ethical, international, and critical thinking examples throughout. Knowledge of the legal aspects of running a business will enable the student to conduct business within the legal framework and understand the ethical dimension of business decisions. Topics include: Introduction to Business Ethics and the Judicial and Legislative Process; Litigation, Alternative Dispute Resolution, and the Administrative Process; Business Crimes, Torts, and Contracts; the Constitution and Government
Regulation of Business; Business Organizations; Employment and Labor Laws; Consumer Protection and Environmental Regulation; and International Law and Ethical Conflicts. Prerequisites: Admission to graduate study.

3 semester credits

BUSINESS LAW 645
Employment and Labor Law
Students study the current employment and labor law in the U.S. and the historical development of these laws from common law to existing law. The course covers a wide range of legal and regulatory topics needed for human resources management including workplace safety, family leave, equal employment and pay, wrongful discharge, privacy, harassment, and illegal workers. In addition, development of global laws and laws related to employment and labor in other countries are reviewed. Prerequisites: MGMT 600, BLAW 600 and completion of all core courses or concurrent registration in final core courses. Normally students take MGMT 611 before or concurrent with BLAW 645.

3 semester credits

BUSINESS LAW 720
Business and Society: Intellectual Property and Anti-Trust Law
This course reviews the basic principles of U.S. intellectual property law (patents, copyrights, trade secrets, trademarks and the protection of ideas), with accompanying ethical issues; and explains how international treaties (e.g. Berne Convention) have affected global issues; and explains how international treaties (e.g. Berne Convention) have affected global intellectual property laws. Prerequisites: Admission to graduate study.

2 lecture hours, 2 semester hours

Biochemistry

BIOCHEMISTRY 511
Biochemistry, Metabolism, and Nutrition
This course covers the biochemical principles involved in maintaining functional homeostasis.

2 lecture hours, 2 semester hours

BIOCHEMISTRY 612
Biochemistry II
This course is a continuation of BC 511.

2 lecture hours, 2 semester hours

Business Procedures

BUSINESS PROCEDURES 715
Ethics
This is a risk management course that stresses the importance of ethical and legal business management procedures. Student learn risk management, jurisprudence, ethics, and the informed consent process. Successful completion will prepare the student to practice as an ethical health care provider.

1 lecture hour, 1 semester hour

BUSINESS PROCEDURES 721
Business Procedures: Billing and Coding
The successful student will be able to identify and discuss all the important aspects of patient communication, medical documenta-
tion and insurance protocols/coding. In addition, the successful student will be able to identify and apply appropriate billing protocols regarding filing insurance claim forms.

1 lecture hours, 1 semester hour

BUSINESS PROCEDURES 722

Business Procedures and Marketing

This is a business procedures course that stresses the importance of ethical and legal business management procedures. The classroom discussions cover strategic management, chiropractic and health care economics, marketing, and image building. Successful completion will prepare the student to enter chiropractic practice.

1 semester hour

BUSINESS PROCEDURES 813

Starting a Chiropractic Practice and Office Management

At the completion of this course the student will have a clear understanding and knowledge of the three basic choices when starting a chiropractic practice. They will also recognize their options related to selecting a business structure as well as being able to identify the type of practice they want to establish. In addition, the student should be able to recognize the different types of health insurance and manage care plans typically encountered in a chiropractic office as well as the importance of obtaining access into these insurance networks. Finally, the student should recognize the importance of report of findings, HIPAA (Federal) guidelines and basic hospital protocols. Prerequisites: all courses semesters I-VII.

1 lecture hour, 1 semester hour

Chiropractic Skills and Technique

CHIROPRACTIC SKILLS AND TECHNIQUE 511/511L

Chiropractic Examination Skills I: Palpation and Biomechanics of the Spine and Pelvis

This lecture and laboratory course addresses the biomechanics and chiropractic assessment procedures of the spinal and pelvic joints. The student is introduced to the concepts of biomechanics as they relate to the kinematics and kinetics of the spine and pelvis and the structure and functioning of the tissues of the musculoskeletal system. This information is coupled with the diagnostic tools of static and motion palpation as they pertain to the assessment of spinal joint functioning.

2 lecture hour, 2 semester hours/3 laboratory hours, 1.5 semester hours

CHIROPRACTIC SKILLS AND TECHNIQUE 522/522L

Chiropractic Examination Skills II: Extremity Biomechanics

This course is a continuation of CH511. Students continue to develop their skills of spinal assessment. Students are also introduced to the biomechanics and assessment procedures related to the extremities. Methods of spinal, soft tissue, and extremity assessment are reviewed and practiced. Prerequisites: CH511; Co-requisite AN512, AN526.

2 lecture hour, 2 semester hours/3 laboratory hours, 1.5 semester hours

CHIROPRACTIC SKILLS AND TECHNIQUE 613/613L

Technique Procedures I: Introduction to Full Spine Technique

This course introduces students to full spine adjutive procedures from occiput to the pelvis. The course begins with a review of biomechanics and assessment procedures presented in Technique 511 and 522. Selected spinal conditions are presented and discussed as it pertains to diagnosis, differential diagnosis and case management. Prerequisite: TE511/TE511L

1 lecture hour, 1 semester hour/3 laboratory hours, 1.5 semester hours

CHIROPRACTIC SKILLS AND TECHNIQUE 624/624L

Technique Procedures II: Intermediate Full Spine and Upper Extremity Adjusting

Principles of patient management and common clinical conditions of the head, neck, thoracic and upper extremity regions are presented. Evidence-based diagnostic and treatment protocols are stressed along with conservative and proper referral and co-management. The laboratory portion is a review and practice of new and previous techniques taught at UBCC. This course also serves as a critique course for other techniques utilized in practice. Prerequisites: TE613/TE613L, TE511/TE511L, TE522/TE522L.

2 lecture hours, 2 semester hours/4 laboratory hours, 2 semester hours

CHIROPRACTIC SKILLS AND TECHNIQUE 625/625L

Technique Procedures III: Soft Tissue

Students are introduced to the concepts of soft tissue diagnostic procedures and treatment procedures. These include the etiology, pathophysiology, diagnosis and treatment of soft tissue dysfunction and trauma.

Differential diagnosis and case management of soft tissue lesions are presented.

The laboratory portion covers the diagnosis and treatment of muscle hypertonic states. Prerequisites: TE511/TE511L, TE522/TE522L, AN512, AN526, DX612/DX612L.

2 lecture hours, 2 semester hours/2 laboratory hours, 1 semester hour

CHIROPRACTIC SKILLS AND TECHNIQUE 716/716L

Technique Procedures IV: Intermediate Full Spine and Lower Extremity Technique

Technique procedures, assessment procedures, and biomechanics are presented as they relate to the spine and lower extremity. Students continue to be introduced to new procedures which are practiced in lab. Prerequisites: TE624/TE624L.

2 lecture hours, 2 semester hours/4 laboratory hours, 2 semester hours

CHIROPRACTIC SKILLS AND TECHNIQUE 717L

Technique Procedures V: Soft Tissue II

This course will begin by reviewing soft tissue techniques taught in TE625/TE625L. Students then refine their palpatory and therapeutic soft tissue manual treatment skills. Prerequisites: TE716/TE716L.

2 laboratory hours, 1 semester hour

CHIROPRACTIC SKILLS AND TECHNIQUE 728/728L

Technique Procedures VI: Advanced Chiropractic Technique I (and Lab)

CHIROPRACTIC SKILLS AND TECHNIQUE 819

Technique Procedures VII: Advanced Chiropractic Technique II

This course is a review of all techniques taught at UBCC. This course also serves as a critique course for other techniques utilized in practice. Case management utilizing various chiropractic technique approaches are discussed and critically evaluated. Prerequisites: all courses semester I-VI.

1.5 lecture hours, 3 laboratory hours, 3 semester hours

Clinical Nutrition

CLINICAL NUTRITION 621

Clinical Nutrition I: Pathology and Assessment

This course introduces the student to disease states and abnormal conditions due to biochemical deficiencies and abnormal metabolic states. Students are introduced to the methods of nutritional assessment through history and observation. Prerequisites:
BC511, DX613, PH612, PA611.
1 lecture hour 1 semester hour

CLINICAL NUTRITION 712
Clinical Nutrition II: Treatment and Management
This course is a continuation of CN621. Students are presented with abnormalities of a nutritional origin and begin to develop a treatment and management plan. Prerequisites: CN621.
2 semester hours, 2 semester hours

Clinical Services

CLINICAL SERVICES 721
Clinical Services I
Students under the supervision of licensed faculty begin to administer care to patients at the UBCC Health Center. Students are introduced to the procedures and practices utilized by the health center through lectures and practical demonstrations. Students refine their skills in history taking, physical examination, radiology, technique, case management and clinical decision making. Prerequisites: all courses in semesters I-V.
2 lecture hour, 4 clinic hours, 3 semester hours

CLINICAL SERVICES 812
Clinical Services II
Under supervision of licensed faculty interns administer care to patients. Each patient diagnosis and management plan is reviewed and approved by a clinic faculty member prior to the initiation of patient care. Students are assessed via evaluation by faculty. Prerequisites: all courses semesters I-VI.
25 clinic hours, 12.5 semester hours

CLINICAL SERVICES 823
Clinical Services III
Interns continue to administer care to patients under the supervision and approval of licensed faculty. Interns are monitored as to their progress towards the qualitative and quantitative requirements as set forth by the UBCC Health Center. Assessment of an intern’s clinical competency is performed by faculty. Prerequisites: all courses semesters I-VII.
25 clinic hours, 12.5 semester hours

CLINICAL SERVICES 824
Clinical Services IV
Interns continue to administer care to patients under supervision of faculty. Progress is monitored by faculty.
25 clinic hours, 4 semester hours

Diagnosis

DIAGNOSIS 611/611L
Diagnostic Skills I: Physical Examination
This lecture and laboratory course is designed as an introduction to the skills required to examine and diagnose the skin, eyes, ears, nose and throat, as well as the cardiovascular, respiratory, gastrointestinal and genitourinary systems. Selected topics regarding the diagnosis of the neuromusculoskeletal system will also be covered, however, comprehensive coverage of this material will be accomplished in the various clinical orthopedic and neurology courses within the curriculum. The student will learn the selection of appropriate examination and diagnostic procedures which correspond to the patient’s history and complaint. The student will also expand upon their knowledge base from their previous course in medical interviewing (Diagnosis 521). The successful student will also learn how to select and use diagnostic equipment and specific procedures for carrying out these examinations. Integration of these skills into the comprehensive management of the patient will be emphasized which will allow the student to properly develop the clinical decision making skills required of a primary care physician. Prerequisites: DX611, BC511, PH612, PA611.
3 lecture hours, 3 semester hours

DIAGNOSIS 612/612L
Diagnostic Skills II: Orthopedics and Neurology
This lecture and laboratory course introduces students to the procedures necessary to examine the neuromusculoskeletal system. Normal and abnormal findings are presented and discussed. Emphasis is placed on students understanding of clinical anatomy and interpretation of positive tests and signs. Prerequisites: AN525, AN526, TE511, TE522, NS521, PP523.
2 lecture hours, 2 semester hours (611) 3 laboratory hours, 1.5 semester hours (611L)

DIAGNOSIS 612/612L
Diagnostic Skills II: Orthopedics and Neurology
This lecture and laboratory course is designed as an introduction to the skills required to examine and differentially diagnose the cardiovascular, respiratory, gastrointestinal and genitourinary systems. Selected topics regarding the endocrine and lymphatic system will also be covered. The student will learn the selection of appropri-
Chiropractic

ate examination, diagnostic and therapeutic procedures which correspond to the patient's history and complaint. The student will also expand upon their knowledge base from previous courses in medical interviewing, physical examination, and laboratory diagnosis and learn how to select and use diagnostic equipment, diagnostic tests and specific procedures used in the differential diagnosis of internal disorders. Integration of these skills into the comprehensive management of the patient will be emphasized which will allow the student to properly develop the clinical decision making skills required of a primary care physician. Prerequisites: DX611/DX611L, DX624, DX623/DX623L, PA622, PH612, DI623

5 lecture hours, 2 laboratory hours, 6 semester hours

DIFFERENTIAL DIAGNOSIS 722

Differential Diagnosis III: Neuromusculoskeletal

This course is a presentation of the diseases and conditions affecting the neuromuscular-skeletal system. Disorders affecting the spine, extremities, central and peripheral nervous system are reviewed. Neurological and orthopedic testing are covered as they relate to the differential diagnosis of these systems. Function of the human locomotor system and how other systems can affect it are stressed. Prerequisites: All Courses, Semesters I-IV.

4 lecture hours, 2 laboratory hours, 5 semester hours

Emergency Procedures

EMERGENCY PROCEDURES 711

Emergency Procedures

Training in first aid principles is given in lectures and demonstrations dealing with the care of emergencies and accidental injuries. Treatment of wounds, fractures, poisoning, lacerations, shock, hemorrhages, heat exhaustion, drowning and burns is taught. Students are trained and receive certification in the administration of CPR.

1 lecture hour, 2 laboratory hours, 2 semester hours

Microbiology and Public Health

MICROBIOLOGY 521

Clinical Microbiology, Introduction to Infectious Diseases I

This course introduces the student to the basic concepts of microbiology with emphasis on the structure, growth, metabolism and genetics of bacteria. Host-parasite relationships of representative bacterial, fungal, viral, and protozoan pathogens are examined. A survey of microbial diseases includes modes of transmission, symptoms, diagnosis, physical and chemical methods of disinfection, sterilization and treatment. Presentations include lecture, laboratory and case studies. Prerequisites: BC511, AN511

2 lecture hours, 2 semester hours

MICROBIOLOGY 612

Infectious Diseases II

This course is a continuation of MB521. Common infectious diseases are presented from a microbiological perspective. Prerequisites: MB521, PH521

2 lecture Hours, 2 semester hours

MICROBIOLOGY 623

Public Health I

This course covers the current environmental and public health concerns and issues. The course integrates health with diet, air and water pollutants, noise and substance abuse, compares community hygiene and industrial hygiene, defines epidemiology, and recognition of major communicable and non-communicable diseases. Prerequisite MB612.

2 lecture hours, 2 semester hours

MICROBIOLOGY 724

Public Health II: Community Health and Wellness

This course emphasizes interventions which promote wellness and prevent disease. Students will learn health risk assessment which will help motivate patients to make lifestyle changes that promote wellness and prevent disease.

2 lecture hours, 2 semester hours

Neuroscience

NEUROSCIENCE 521

Neuroscience I

This course focuses on the anatomy of the nervous system with special emphasis on sensory and motor systems. However all areas of the central nervous system are discussed to give the student a broad understanding of brain function. Clinical correlations are made which are applicable to each region or system of the CNS. The laboratory section of the course includes presentation of prosections and discussion of case studies. Instruction includes lecture, case studies and demonstration of prosections in the laboratory. Prerequisites AN511, AN512, AN514.

3 lecture hours, 3 semester hours

NEUROSCIENCE 612

Neuroscience II

This course is a continuation of NS521, with the focus on the physiology of the nervous system. The sensory and motor systems are discussed in detail. An emphasis is placed on the correlation of anatomical structure to physiological function and clinical dysfunction. The special sense organs and systems are studied in detail. The laboratory introduces students to neurological tests performed on patients, with an emphasis on understanding the underlying neuro-anatomy and neurophysiology that is the basis for these tests. Prerequisite: NS521, PP523, PH521, AN525.

3 lecture hours, 3 semester hours

Pathology

PATHOLOGY 611

Fundamentals of Pathology

This course is a study of pathophysiological processes and the gross, microscopic, and clinical manifestations of disease. Basic processes of inflammation, repair, degeneration, necrosis, immune response, and neoplasia are presented. This course is also an introduction to diseases of the lymphatic, hematoipoietic, and neuromus-culoskeletal systems. Laboratory includes the study of gross and microscopic changes as well as clinical presentations of various diseases and functional disturbances. Prerequisites: All anatomy courses, PH521, BC511

2 lecture hours, 1 laboratory hour, 2.5 semester hours

PATHOLOGY 622

Systems Pathology

This course is a continuation of PA611. This course emphasizes the pathological basis of systemic diseases of the cardiovascular, respiratory, gastrointestinal, urogenital, endocrine, and renal systems. The gross, microscopic, and clinical manifestations of various disease processes are presented. Prerequisites: PA611, PH612.

4 lecture hours, 2 laboratory hours, 5 semester hours
Physiology

**Physiology 521**

**Organ System Microscopic Anatomy and Physiology I**

This course will focus on understanding the microscopic anatomy and physiology of the organs of the immune and endocrine systems. Major emphasis will be placed on the role of non-specific and specific defense mechanisms in health maintenance and provide an introduction into immune system disruption as it relates to hypersensitivity and autoimmunity. The endocrine system will be studied in its primary role in cellular communication and maintenance of homeostasis. Special emphasis will be placed on the interaction and communication between the nervous and endocrine systems.

*Prerequisites:* AN511, PH521.

2 lecture hours, 2 laboratory hours, 2 semester hours

**Physiology 612**

**Organ System Microscopic Anatomy and Physiology II**

The microscopic anatomy and physiology of the cardiovascular, respiratory, digestive and reproductive systems will be introduced. An emphasis will be placed on the relationship of tissue organization and function of the organ systems. Laboratories in this class will utilize case studies to emphasize how an understanding of normal physiologic mechanisms and how they are crucial to understanding pathophysiology. Prerequisites: AN511, PH521.

4 lecture hours, 2 laboratory hours, 5 semester hours

**Physiology 713**

**Toxicology and Pharmacology**

This course is the study of drugs and chemicals and how they interact with the living organism. Pharmacology is a study of the sites, absorption, and metabolism of common drugs. Toxicology studies the adverse reactions of drugs and poisons. The therapeutic use and toxic effects of various drugs, chemicals, nutritional supplements and other substances are studied. Prerequisites: PH612, PA611, NS612, PA622.

2 lecture hours, 2 semester hours

Physiological Therapeutics

**Physiological Therapeutics 711/711L**

**Physiological Therapeutics I**

This course is an introduction to the clinical use of heat, cold, high volt galvanism, interventional current, low volt galvanism, ultrasound, electrical muscle stimulation, diathermy, and paraffin. The student is instructed on the development of a clinical management plan utilizing adjunctive therapies.

1 lecture hours, 2 laboratory hours, 1 semester hours

**Physiological Therapeutics II: Rehabilitation**

In this course current concepts of active rehabilitative management of injuries, dysfunctions and conditions of the spine and extremities common to the practice of chiropractic are presented. The student receives instruction in a variety of assessment and clinical management protocols including spinal stabilization, therapeutic exercise, PNF, stretching, sensorimotor training and patient education. The application of outcomes and psychosocial risk factors assessment in developing the treatment plan is addressed.

2 lecture hours, 2 laboratory hours, 2 semester hours

Principles and Practice

**Principles and Practice 511**

**Principles and Practice I: History and Philosophy**

This is a course in which the history of healing is traced from its known origins through discovery of chiropractic to the present day. The basic concepts of chiropractic philosophy are discussed, as well as their current interpretation and clinical significance. Particular emphasis is placed upon chiropractic as a distinct profession in the health care community.

2 lecture hours, 2 semester hours

**Principles and Practice 512**

**Principles and Practice II: Communications**

Introduction to the principles of evidence based practice. Students will be introduced to the resources used to search for quality evidence including search criteria, weighing of evidence and application and use of evidence in a clinical care setting. Students will also be introduced to the various resources of the UB library including searchable databases. 2 lecture hours, 2 semester hours

**Principles and Practice 523**

**Principles and Practice III: Subluxation Complex and Its Philosophical Concepts**

This course introduces students to the current concepts of the subluxation complex and how it is integrated with the science, art, and philosophy of chiropractic care. The course covers the various components of the subluxation complex, including biomechanical, pathophysiological, and neurological aspects. This information is correlated to the effects of chiropractic manipulation of the subluxation complex. Prerequisite: PP511, AN512.

2 lecture hours, 2 semester hours

**Principles and Practice 624**

**Principles and Practice IV: Research Methods and the Philosophy of Science**

In this course students will expand their knowledge of types of published studies. With emphasis on methodology, instrumentation, statistics and computer-based searches of the literature. Students will complete a proposal for either a Senior Paper or a Research Thesis.

2 lecture hours, 2 semester hours

Psychology

**Psychology 711 (Formerly PS 811)**

**Clinical Psychology**

This course is designed to familiarize students with current psychological theory and practice. Students are instructed in behavioral assessment and recognition of psychological disorders. Interviewing and counseling techniques are presented as well as criteria for appropriate referral of patients to providers of psychological services. Prerequisite: All courses, Semesters 1-V.

2 lecture hours, 2 semester hours

Radiology

**Diagnostic Imaging 521**

**Diagnostic Imaging I: Normal Anatomy – Spine**

This course introduces students to radiographic anatomy, variants, and congenital anomalies as they relate to the spine, pelvis, skull, viscera, and extremities. Concepts as they relate to image formation, film reading, and report writing are introduced. Prerequisites: AN 512, 2 lecture hour, 2 laboratory hours, 3 semester hours

**Diagnostic Imaging 612**

**Diagnostic Imaging II: Normal Anatomy Extremities**

This course is a continuation of D521. Stu-
Diagnostic Imaging III: Bone Pathology
This course introduces students to the clinical and radiographic manifestations of osseous structures due to neoplasia, tumor-like conditions, metabolic and endocrine disorders, and normal variants. Students are introduced to special imaging as related to further evaluation of these conditions. Prerequisites: DI612, PA611, PA612, all anatomy courses.

Diagnostic Imaging IV: Arthritis and Trauma
This course further develops students skills in the clinical and radiographic manifestations of osseous structures. Emphasis is placed on the interpretation and recognition of disorders due to inflammatory and non-inflammatory arthritides, and trauma. Special imaging as related to further evaluation of these conditions is presented. Prerequisite: DI623.

Diagnostic Imaging V: Chest and Abdomen
This course covers the interpretation of normal and abnormal clinical and radiographic manifestations of the internal organs. The chest, heart, and abdomen are studied on plain film as well as advanced imaging examination procedures. Prerequisites: all previous DI courses.

Diagnostic Imaging 726
Positioning and Physics
This course covers the mechanics of x-ray production, film processing, x-ray factors, and radiation safety and protection for doctor and patient. Also covered is the placement and positioning of patients for the taking of x-ray studies. Students are introduced to the policies and procedures utilized by the UBCC Health Center.

Research

Research 711
Thesis I
Students working with their advisor will start work leading to their published Senior Paper or Research Thesis.

Research 722
Thesis II
Students continue to work with their advisor on their Senior Paper or Research Thesis.

Research 813
Thesis III
Students continue to work with their advisor to complete their Senior Paper or Research Thesis.

Research 824
Thesis IV
Completion and Submission

Computer Engineering

Computer Engineering 408
Operating Systems
Structure and design issues in modern operating systems. Topics may include OS structure; Threads, CPU scheduling and synchronization of processes; deadlock management; main and virtual memory management; file management; file system interface; I/O structure. Prerequisite: Computer Science 102, Computer Engineering 312.

Computer Engineering 446 (CPEG 446/ELEG 446)
MEMS (Micro-Electro-Mechanical Systems)
Basic micro fabrication techniques, MEMS materials and their properties, MEMS device design and simulation, MEMS packaging and assembly; signal testing and MEMS reliability analysis. MEMS industrial applications in various areas will also be discussed. Students used ANSYS FEM software to design and simulate their behavior.

Computer Engineering 447
Logic Synthesis Using FPGAs
Logic design using textual design entry, VHDL, Behavioral, structural and data flow descriptions. Technology-dependent vs. technology-independent design. CPLD, SRAM and antifuse technologies. Rapid prototyping and retargeting designs. A major design project. Prerequisite: Computer Engineering 315.

Computer Engineering 458 (CPEG 458/ELEG 458)
Analog VLSI
Introduction to VLSI Design
Design and implementation of a very large scale integrated circuits. CMOS and BiCMOS technologies, basic topological structure of ICs, clocking characteristics, resistance, capacitance and power estimation, System-level design and implementation issues. Custom layout and verification using CAD tools. Synthesis of designs from VHDL descriptions. Term project will include the design and testing of an integrated circuit. Prerequisites: Computer Engineering 315 and Electrical Engineering 348.

Computer Engineering 460
Introduction to Robotics
Basic Robotics, including: position and velocity sensing, actuators, control theory, robot coordinate systems, robot kinematics, differential motions, path control, dynamics, and force control. Robot sensing, simulation of manipulators, automation, and robot programming languages are also investigated. Prerequisites: Computer Science 102, Electrical Engineering 360, Math 214 or 314 or permission of instructor.
**Computer Engineering**

**COMPUTER ENGINEERING 471**

*Data and Computer Communications*


*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 472**

*Computer Networks*

Introduction to fundamental concepts in the design and implementation of communication networks, their protocols, and applications. Topics to be covered include: overview of network architectures, applications (HTTP, FTP), network communication interfaces (e.g., sockets), transport (TCP, UDP), flow control, congestion control, IP, routing, IPv6, multicast, data link protocols, error detection/correction, multiple access, LAN, Ethernet, wireless networks, and network security. Prerequisite: Computer Engineering 471 or permission from instructor.

*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 473**

*Local Area Networks*

Examination of wired and wireless Local and Metropolitan Area Network technologies, protocols, and the methods used for implementing LAN and MAN based enterprise intranets. The IEEE 802 media access control (MAC) protocols are examined. The 802.2 logical link control, 802.3/Ethernet, 802.3 token bus, and the 802.5 token ring protocols are analyzed, and the construction of LAN-based enterprise intranets is examined through a detailed analysis of bridging, routing, and switching techniques. High-speed LAN technologies are discussed through an examination of FDDI, Fast Ethernet, 100VG AnyLAN, ATM LAN and fibre Channel protocols along with the standards for Gigabit and 10 Gigabit Ethernet. The new and emerging wireless LAN and MAN standards are also examined. The 802.11 (WiFi) wireless LAN and 802.15 (Bluetooth) wireless PAN standards are discussed.

Prerequisite: Computer Engineering 471.

*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 481**

*Mobile Communications*

This course covers the basic technologies in the field of wireless and mobile communications. The following topics are covered in the course: wireless transmission, media access control, satellite systems, broadcast systems, wireless LANs, wireless ATM, network layer protocols, transport protocols and support for mobility. Pre-requisites: Computer Engineering 471 or Computer Engineering 472 or permission of instructor.

*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 482**

*Network Administration*


*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 489**

*Software Engineering*

Structural development methodology for large software systems. Planning requirements, design, test, and validation. Advanced topics in software development. Prerequisite: Computer Science 102 and senior status.

*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 500**

*Graduate Co-op/Internship in Computer Engineering*

By arrangement.

*1-3 semester hours*

**COMPUTER ENGINEERING 510**

*Low Power VLSI Circuit Design*

Implementation of custom VLSI designs, digital and analog simulation, fault tolerant design, design for testability. A major project will include the implementation of a digital integrated circuit. Prerequisites: Computer Engineering 448D.

*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 540**

*Image Processing*

This is a project-oriented course. Students will learn and implement FFT with applications, image enhancement, image restoration, image compression, and image tomography. Projects will be conducted on workstations. Prerequisite: Electrical Engineering 443.

*3 lecture hours, 3 semester hours*

**COMPUTER ENGINEERING 548** (CPEG 548/ELEG 548)

*Low Power VLSI Circuit Design*

With the rapid development of mobile computing, low power VLSI design has become a very important issue in the VLSI industry. A variety of low-power design methods are employed to reduce power dissipation of VLSI chips. This course is designed to cover low-power design methodologies at various design levels (from system level to transistor level). The basic low-power design strategies will be introduced in the class. Students will use the learned knowledge to design low-power VLSI circuits. Upon completion of this course, students will be able to analyze the power consumption of VLSI circuits, and design low-power VLSI circuits using various strategies at different design levels. The major target is to design VLSI chips used for battery-powered systems and high-performance circuits not exceeding power limits.

*3 semester hours*
Computer Engineering • Computer Science

sage authentication. Authentication applications, electronic mail security, IP security, web security, firewalls, security in mobile network and other security systems. Prerequisites: Computer Engineering 471 or 473.

3 lecture hours; 3 semester hours

COMPUTER ENGINEERING 570
Advanced Robotics

Advanced robotics and automation topics and techniques, including: active robotic sensing, intelligent and integrated manufacturing systems, robotic inspection, observation under uncertainty, multisensor feedback control of manipulators and mobile robots, advanced simulation and monitoring of robotic systems, high level modeling and control, and other topics. Prerequisites: Computer Science 460, Computer Engineering 460 or permission of instructor.

3 lecture hours; 3 semester hours

COMPUTER ENGINEERING 584
Machine Perception

An introduction to sensing and machine vision. Vision algorithms that are usable in practical applications, sensing mechanisms and various types of sensed data representation, sense data processing and interpretation for different applications. Prerequisites: Computer Science 400, Computer Engineering 312 and Electrical Engineering 443.

3 lecture hours; 3 semester hours

COMPUTER ENGINEERING 585
Computer Vision

A project-oriented course designed to familiarize the student with the computer image display, processing, and various limitations. The processing includes edge detection, Hough transform, thinning algorithms, moment invariant methods, relaxation algorithms, among others. Prerequisite: Computer Science 400, Computer Engineering 312, Electrical Engineering 443.

3 lecture hours; 3 semester hours

COMPUTER ENGINEERING 597 A
Master’s Project

Lecture hours and topics to be arranged with Department Chair.

1 semester hour

COMPUTER ENGINEERING 597 B
Master’s Project

Lecture hours and topics to be arranged with Department Chair.

2 semester hours

COMPUTER ENGINEERING 597 C
Master’s Project (completion)

Lecture hours and topics to be arranged with Department Chair.

1 semester hour

COMPUTER ENGINEERING 598
Thesis in Computer Engineering

Lecture hours, semester hours and topics to be arranged with Department Chair.

3-6 semester hours

COMPUTER ENGINEERING 599
Independent Study in Computer Engineering

Independent study of advanced topics in Computer Engineering and submission of project report as required. Problem assignment to be arranged with and approved by the Department Chair.

3 semester hours

COMPUTER SCIENCE 400
Object-Oriented Programming Using C++

This course introduces the modern object oriented programming philosophy using C++ to the beginning graduate students. The emphasis is on developing the programming thought process in terms of objects and their interactions to each other. Concepts covered include data hiding, code reuse through inheritance, polymorphism, templates, exception handling, developing appropriate class hierarchy and code maintenance for large software projects. Prerequisites: Computer Science 102 or equivalent background.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 401
Java Programming

Object oriented programming, using Java, packages, interfaces, multi-threading, classes, inheritance, exceptions, interfaces, native methods, applets. Prerequisite: Computer Science 400.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 410
Advanced Object-Oriented Programming with JAVA

Covered topics include advanced features of Java, such as Database inter-connectivity (JDBC) with Servlets and JSP, remote method interface (RMI), distributed applications objects using CORBA and JNDI, Java Beans, introspection and reflection, Enterprise Java applications with EJB, interfacing Java to C++ with JNI, and additional advanced topics. A focus on developing components and packages. A major project is developed. Prerequisite: Computer Science 410.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 435
Unix System Programming

Introduction to shell programming and system in Unix/Linux environments. Various commands, tools, filters and specification languages are studied. System calls to deal with files, processes, pipes, three interprocess communication facilities (semaphores, shared memory, and message queue), and signals are introduced. Prerequisite: Computer Science 400.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 440
Windows Programming

This course covers Graphical User Interface (GUI), design and Windows programming using Visual C++ and Microsoft Foundation Class (MFC) library. Topics covered include windows architecture, message/event driven programming, designing Dialog based, SDI and MDI applications, Document/View architecture, Device Contexts, Database access using the MFC ODBC classes and ADO. A comprehensive project is assigned towards the end of the course, which covered important windows programming concepts. Prerequisite: Computer Science 400.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 450
Data Base Design

Database system architecture; management and analysis of files, indexing, hashing, and B+trees; the relational model and algebra; the SQL database language; database programming techniques; database design using Entity-Relationship, and extended E-R modeling; basics of normalization. Theoretical and practical issues in database design, programming, and implementations. Prerequisite: Computer Science 400.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 460
Introduction to Robotics

Basic robotics including: position and velocity sensing, actuators, control theory, robot coordinate systems, robot kinematics, differential motions, path control, dynamics and force control. Robot sensing, simulation of manipulators, automation and robot pro-
Computer Science

Programming, languages are also investigated. Prerequisite: Computer Science 102, Math 214 or 314, or permission of instructor.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 485
Software Design Patterns
Introduce design patterns and software architectures. Combines pattern theory with examples to show why and when to use patterns and how to implement them. How to apply design patterns at the enterprise level. The use of design patterns to design and implement systems of high stability and quality. Compare and contrast patterns, including differences between Mediator and Façade. Discuss relationships between patterns. Study how patterns are collaborated within domains to solve complicated problems.

3 semester hours

COMPUTER SCIENCE 500
Graduate Co-op/Internship in Computer Science
By arrangement.

1-3 semester hours

COMPUTER SCIENCE 502
Analysis of Algorithms
A course in advanced data structures and high-level algorithms. Varied uses of recursion. Graph representations and algorithms including traversals, path finding, closure, and spanning trees. Sorting files. Weighted and balanced trees; Hashing and collision handling. Complexity and analysis of algorithms. Prerequisite: Computer Science 102 or equivalent.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 504
Artificial Intelligence
Foundations of the theory of Artificial Intelligence. Game playing, pattern recognition, description of cognitive processes, heuristic decision procedures, general problem solving. Learning and robotics. Discussion of the relationship with human thought process. Extensive Lisp programming. Prerequisite: Computer Science 102 or permission of instructor.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 509
Automata Theory

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 520
Theory of Computation
Finite automata and Pushdown automata; Register machines; Recursive functions and sets; Languages, regular expressions; Context-free languages; Regular and context-free grammars. Pumping lemmas. Turing machines, Church-Turing thesis. Post-correspondence problem; Computability and complexity. Prerequisite: Computer Science 227 and knowledge of computer programming.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 545
Component Based Software Design
Modern component based software design approaches using both the Component Object Model (COM) as well as the CORBA technologies. In-depth look at the infrastructure of COM components presenting of concepts of classes, objects, inheritance, polymorphism, and dynamic linking. The distributed form of COM referred to as DCOM and its newest form is known as COM+, which integrates the transaction, and queuing capabilities are examined. A comparison of the CORBA technology is made by explaining its architecture and remoting capabilities. Prerequisite: Computer Science 440. Prerequisite by topic: 1. Good background in C++ programming, 2. Some knowledge of Windows Programming.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 551
Advanced Database
Advanced study of Relational databases including indexing structure, query optimization, rule and cost-based optimization, transactions and concurrency, recovery techniques, security, distributed database, data mining and other emerging database technologies. Prerequisite: Computer Science 450 or equivalent.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 555
Web-Based Application Development
Introduction to fundamental issues in designing a web-based application. Review of the web technologies such as HTML, VBScript, JavaScript, DHTML, Java, XML and server-side technologies using Active Server Pages (ASP), CGI and Java Server Pages (JSP). Design issues include the creation of layered and scalable applications by the use of COM components involving Microsoft Transaction Server and the Java approach of Enterprise Java Beans. Different projects are assigned to create dynamic, database-driven E-Commerce solutions involving, order tracking systems, inventory management, advertising management, creating score reports, personalizing the shopping experience and secure credit card transactions. Wireless E-Commerce applications and developing business-to-business application using XML, SOAP and Biztalk Servers. Prerequisite: Computer Science 400.

3 lecture hours; 3 semester hours

COMPUTER SCIENCE 560
Performance Evaluation and Analysis
This course covers the basic theory and practice of computer systems performance evaluation. The course focuses on three major aspects of performance analysis, measurement, simulation and analytical modeling using queuing theory. The topics will include measurement techniques, monitor tools, simulation models, stochastic processes, queuing theory and analytical modeling techniques. Prerequi-
Computer Science • Computer Science and Engineering

site: Background in computer architecture and probability and consent of the instructor.
3 lecture hours, 3 semester hours

COMPUTER SCIENCE 561
Network Security
3 lecture hours, 3 semester hours

COMPUTER SCIENCE 570
Advanced Robotics
Advanced robotics and automation topics and techniques, including: active robotic sensing, intelligent and integrated manufacturing systems, robotic supervision, observation under uncertainty, multisensor feedback control of manipulators and mobile robots, advanced simulation and monitoring of robotic systems, high level modeling and control, and other topics. Prerequisites: Introduction to Robotics (Computer Science 460 or Computer Engineering 460).
3 lecture hours, 3 semester hours

COMPUTER SCIENCE 580
Introduction to Neural Networks
3 lecture hours, 3 semester hours

COMPUTER SCIENCE 584
Machine Perception
An introduction to sensing and machine vision. Vision algorithms that are usable in practical applications, sensing mechanisms and various types of sensed data representation, sensor data processing and interpretation for different applications. Prerequisite: Computer Science 400, Computer Engineering 312.
3 lecture hours, 3 semester hours

COMPUTER SCIENCE 590
Parallel and Distributed Processing
Models of parallel computation including distributed, multiprocessor, multicomp

Parallel programming constructs. The mutual exclusion problem, synchronization and communication methods. Multi-computer topologies and topological embedding. Classes of parallel algorithms and design approaches. Performance analysis of parallel computation, including de-tailed and high level. A major project is required. Prerequisite: Computer Science 400.
3 lecture hours, 3 semester hours

COMPUTER SCIENCE 597 A
Master's Project
Lecture hours and topics to be arranged with Department Chair.
1 credit hour

COMPUTER SCIENCE 597 B
Master's Project (Completion)
Lecture hours and topics to be arranged with Department Chair.
2 credit hours

COMPUTER SCIENCE 597 C
Master's Project (Completion)
Lecture hours and topics to be arranged with Department Chair.
1 credit hour

COMPUTER SCIENCE 598
Thesis in Computer Science
Lecture hours, semester hours and topics to be arranged with Department Chair.
3-6 credit hours

COMPUTER SCIENCE 599
Independent Study in Computer Science
Independent study of advanced topics in Computer Science and submission of project report as required. Problem assignment to be arranged with and approved by the Department Chair.
3 credit hours

COMPUTER SCIENCE & ENGINEERING 692
Special Topics in Computer Science
Course offered to allow special topics courses in the general area of Computer Science that do not fit into any of the available areas of specialization.
3 lecture hours, 3 semester hours

COMPUTER SCIENCE & ENGINEERING 693
Special Topics in Computer Engineering
Course offered to allow special topics courses in the general area of Computer Engineering that do not fit into any of the available areas of specialization.
3 lecture hours, 3 semester hours

COMPUTER SCIENCE & ENGINEERING 694
Written Comprehensive Examinations
Students taking comprehensive examinations are required to register for CSE 694.
0 lecture hours, 0 semester hours

COMPUTER SCIENCE & ENGINEERING 698
Teaching Requirement
Ph.D. students assigned teaching courses to fulfill the teaching practicum of the Ph.D. in Computer Science and Engineering are required to register CSE 698.
0 lecture hours, 3 semester hours

COMPUTER SCIENCE & ENGINEERING 699
Seminar (Oral Exam)
Seminar is a zero credit course. It involves attending the regular departmental seminars and presenting one’s work in one of the seminars.
0 lecture hours, 0 semester hours

COMPUTER SCIENCE & ENGINEERING 710
Ph.D. Dissertation
The student is expected to work on the accepted topic and come up with original results. S/he has to report the results in the form of a Ph.D. dissertation. The student is encouraged to document the intermediate results in the form of technical reports. S/he is also encouraged to publish these results as they are discovered, in the international professional literature, i.e., refereed conference proceedings and journals. Proof of good work is the acceptance of the results by reputed journals. Intermediate results can also be discussed in departmental seminars. The completed dissertation must be distributed to the dissertation committee members at least two weeks before the dissertation defense.
The committee will read it and certify that the dissertation is a work of substantial merit and that it can be defended. It is the respon-
sibility of the student that the final draft of the dissertation addresses all legitimate concerns of the committee members. 
*Vary from 1-12 semester hours*

**Counseling**

**COUNSELING 500**  
*Principles of Applied Research*  
This course provides a grounding in the methodology of social science research as it pertains to the human service field. It addresses the following four content areas: 1) The nature of social science research; 2) Critical analysis of social science research, 3) Simple descriptive and inferential statistics, and 4) Action research design.  
*3 semester hours*

**COUNSELING 505 & 505H**  
*Helping Relationships*  
This course provides a definitive view of counseling including the characteristics of the counselor and the elements of the counseling process. Through experiential exercises and videotaped simulated counseling the student will attain skills such as attending, empathic listening, assessing and focusing on important client concerns, structuring the process, and facilitating change. COUN 505H is geared specifically to the needs of Human Resource professionals.  
*3-4 semester hours*

**COUNSELING 510**  
*The Counselor as Professional*  
This course serves as an orientation to the helping profession by addressing issues that impact on the provision of services such as ethics, law, certification, and professional role expectations. Completion of this course must precede internship.  
*3 semester hours*

**COUNSELING 516**  
*Social and Cultural Foundations of Counseling*  
This course examines how social and cultural factors impact on the individual and subsequently how the counselor attends to and addresses the different social forces and cultural differences in the counseling venue.  
*3 semester hours*

**COUNSELING 521 & 521H**  
*Group Process: Application and Theory*  
The course focuses on the dynamics of leadership and various membership roles. Alternative theoretical models of groups will be studied. An experiential group experience is required. Counseling 505 and 523 are prerequisites. COUN 521H is geared specifically to the needs of Human Resource professionals.  
*3-4 semester hours*

**COUNSELING 522**  
*Counseling Theories*  
This course provides an introduction to a lifespan approach to career and lifestyle development. Theories, research, and counseling strategies related to career and lifestyle issues are explored. Labor resources and information, career assessment tools, computer assisted career guidance, life roles, cultural considerations, and placement procedures are reviewed as interrelated factors to the study of career development. Counseling 505 and 523 are prerequisites.  
*3 semester hours*

**COUNSELING 523 & 523H**  
*Counseling Strategies*  
This course surveys the major theories and perspectives of counseling including the Psychoanalytic, Behavioral, Humanistic-Existential, Cognitive, Constructivist-Post Modern, and Systems approaches along with an integrated, eclectic or confluent perspective. Students gain an understanding of the role of theory, the philosophical basis of the theories, the divergent methods utilized, and the utility of each perspective. COUN 523H is geared specifically to the needs of Human Resource professionals.  
*3 semester hours*

**COUNSELING 524**  
*Strategies and Techniques of Counseling*  
Building on basic listening skills this course focuses on developing strategies and interventions that promote therapeutic movement for the client. Techniques of the various theoretical orientations will be presented and practiced. Simulated role plays and videotaped sessions provide active opportunities to develop the skills. This course has significant out of class expectations. Prerequisites include completion of at least 9 credits and Counseling 505 and 523.  
*3-4 semester hours*

**COUNSELING 525**  
*Appraisal Procedures for Counselors*  
In this course students become familiar with a variety of standardized assessment instruments, learn how to evaluate them, select several tests that are appropriate for use in an area of professional responsibility related to a real or anticipated counseling situation, and interpret test results in a supervised setting. Prerequisites include Counseling 505, 522 and 523.  
*3 semester hours*

**COUNSELING 526**  
*Addictions and Treatment*  
This course is designed to provide a practical experience for counselors learning to work with alcohol and other drug abusers and other addictions. Covered in the course will be a survey of the various psychoactive drugs and behavioral addictions along with diagnosis and treatment modalities in working with persons with addictions, and those affected by persons with additions. Prerequisites include Counseling 505, 521 and 523 (524 is recommended for the Community concentration).  
*3 semester hours*

**COUNSELING 527**  
*Foundations and Contextual Dimensions of Gerontological Counseling*  
This foundation course introduces students to the history and philosophy of gerontological counseling. All services and professional issues are considered through the normative experiences of aging related to the social, psychological, physical, cultural, and spiritual changes occurring during the older adult years. A discussion of common impairments is also included. Foundation topics include settings, roles and functions, ethical and legal issues, professional organizations, and diversity issues. Contextual dimension topics include types of delivery systems, support networks, community care options, social service needs, and assessment strategies for working with older adults.  
*3 semester hours*

**COUNSELING 528**  
*Gerontological Counseling Techniques and Methods*  
This course presents studies related to common impairments for older persons like chronic illness, Alzheimer’s disease, substance abuse, depression and suicide, sexual dysfunction/alternatives, and problems with prescription medications are presented in detail. Counseling strategies shown to be effective with older adults, both from a developmental/wellness and impairment perspective, are included within a framework of gender and cultural considerations. Counseling strategies...
Counseling

might include life review, family counseling, group work, art therapies, grief and loss counseling, wellness interventions, psycho-educational and social network interventions. Students are expected to practice via role plays the strategies reviewed in class.

3 semester hours

COUNSELING 529
Mid-Life Counseling
This course focuses on the mid-life client who, historically, has been neglected in theory, practice and general concern of professionals in counseling and related fields. Special problems and needs of the mid-life person are explored in the context of the human growth and development process over the total life span. Through class experiences, students will develop counseling procedures appropriate for this age group and their specific issues.

3 semester hours

COUNSELING 531
Computer Applications in Counseling and Human Resources
Hands-on experience with computer programs useful to counselors and human resource developers in a variety of work and study environments are presented in this course. Software samples relevant to a variety of counseling settings are studied and evaluated.

2 semester hours

COUNSELING 560
Human Development: A Lifespan Approach
This course provides a survey of major theories and issues in the field of human development. Topics include the nature of human development; research methods in the field of human development; biological bases for human development; the social, emotional and cognitive changes that occur across the lifespan; and how human development affects, and is affected by, family life, peer relationships, schooling, gender, values, and culture.

3 semester hours

COUNSELING 566
Personality and Psychopathology
This course can be used either as an elective or an alternative for those who do not have the pre-requisite undergraduate preparation for the program. The course provides perspective on personality development and the development of dysfunctional psychological conditions.

3 semester hours

COUNSELING 574
Practicum
Students participate in an exploratory field experience in selected community, agency, collegiate, or corporate settings. Departmental permission is required. Specific coursework may also be required depending upon concentration or setting.

1-3 semester hours

COUNSELING 575
Internship
In this course students participate in an intensive supervised field experience in selected clinical, collegiate, or corporate settings. For the Community Counseling concentration, prerequisites include departmental permission and the completion of 24 credits including Counseling 505, 510, 516, 521, 523, 524, & 560. For the Human Services concentration, prerequisites include departmental permission and the completion of 24 credits including Counseling 502X, 505, 510, 516, 521, 523, & 560. For the College Student Personnel and Human Resource Development concentrations, prerequisites include departmental permission and the completion of 24 credits including Counseling 505 or 505H, 521 or 521H, and 523 or 523H.

1-6 semester hours

COUNSELING 580D
Special Problems of Counseling
These courses, used as electives, may cover specific counseling perspectives such as solution-focused or cognitive therapies, psychopharmacology or specific applications of counseling such as grief, crisis, trauma or employee assistance.

1-6 semester hours

COUNSELING 590
Master's Project
This course is designed to assist the student in development of a scholarly masters project, which is the final product required for completion of the Master's Degree in Counseling.

1-3 semester hours

COUNSELING 622
Group Work Processes and Skills
A laboratory and seminar course in which students become actively involved in working with small groups. Emphasis in the supervised group and seminar sessions will be on the leader's role as a facilitator of individual growth within the group setting. Prerequisite: Counseling 505, 523, & 524 or departmental permission.

3 semester hours

COUNSELING 623
Counseling and Consultation Skills
This course explores the role and implications of the consultative process in various settings: with co-workers, with individuals and groups, with organizations and institutions. Participants will have an opportunity to increase skills in the consultative process; to exchange experiences, problems and concepts in practice on consultation; and to increase the number of alternatives one may use in the consultative process. By experiencing and learning from an actual consulting assignment, each participant has an opportunity to be more aware of self and increase the congruence between personal and professional life.

3 semester hours

COUNSELING 624
Group Strategies and Techniques for Developing Human Potential
Advanced treatment of the application of human relations skills and strategies in a workshop setting. Each participant contracts to develop specific skills in a minimum of one approach up to a maximum of six approaches from such areas as reality therapy, transactional analysis, psychodrama, gestalt, bio-energetics, Otto's human potential or other approaches. Prerequisite: Permission of instructor.

1-6 semester hours

COUNSELING 627
Life Work Plan
Upon student demand
This course provides opportunities to examine and share various career planning modules that can be used in a variety of settings. Participants will have the opportunity to experience one model in particular: Life Work Planning. The Life Work Planning experience is divided into two sections; Phase I encourages greater client self-awareness through various exercises and group interaction; Phase II provided clients with a variety of proven decision and planning tools. With these tools, clients can clarify their goals, decisions and plans; test their present direction; seek new directions; look for alternatives; and move toward action and greater control. Life Work Planning links clients' present realities with personal growth. Throughout the experience, they work alone, or in a sub-group of four or five people. The exercises and tools can be used again through-
Dental Hygiene

DENTAL HYGIENE 500
Leadership in Dental Hygiene
This course focuses on the theories, concepts, and principles of leadership skills related to personal behavior, communication, organizational and leadership styles. This course explores the opportunity to develop leadership roles appropriate to the dental hygiene profession.
3 lecture hours, 3 semester credits

DENTAL HYGIENE 507
Dental Health Services Administration/Management
This course is designed to familiarize the student with the administrative concepts necessary to effectively administer dental health facilities and departments. Emphasis is placed on leadership, decision making and problem solving skills. It examines political, social, and legal systems that affect dental hygiene administration and influence its role.
3 lecture hours, 3 semester credits

DENTAL HYGIENE 508
Curriculum Development and Management
This course provides the student with the study and development of models for dental hygiene curriculum design and implementation. The development and utilization of competencies and the evidence based instruction is emphasized.
3 lecture hours, 3 semester credits

DENTAL HYGIENE 509
Dental Public Health
This course is designed to prepare students for leadership roles in dental public health settings. Administration, grant writing, consumer advocacy, epidemiology, biostatistics, the assessment, planning, implementation, and evaluation stages of programs and alternative dental hygiene care is emphasized.

DENTAL HYGIENE 510
Foundations of Healthcare Management
The focus of this course is the healthcare system in the U. S., specifically how its entities work, how they interrelate and how it differs from healthcare systems in other countries with more government controlled systems.

DENTAL HYGIENE 511
Epidemiology
This course will provide the graduate student with the skills necessary to study health states in populations and its applications in basic science, general clinical research, and public health. Students will critique the dental hygiene literature as it applies to the subject of epidemiology.

DENTAL HYGIENE 513
SEMINAR IN PUBLIC HEALTH ISSUES
This course will explore current concepts and challenges facing dental healthcare delivery through the development of collaborations across healthcare disciplines, delivering culturally and linguistically competent healthcare, and evaluating current and proposed
dental healthcare workforce models. Initiatives serving the purpose of guiding national health promotion and disease prevention to improve the dental health of the U.S. Population and informing the american public on health matters will be examined.

DENTAL HYGIENE 516
Concentrated Practicum
This course provides the Graduate student with the opportunity to take an active role in the development of a practical experience at a site relevant to their specialized area of concentration. The student identifies a site and mentor to supervise the practicum prior to the start of the course. The practicum faculty advisor works closely with the student throughout the course providing strategies to help the student achieve a successful outcome.

1 lecture hour, 6 laboratory/clinic hours, 3 semester credits

DENTAL HYGIENE 520
Master's Thesis Preparation
Original research in a chosen topic relating to the graduate student's area of specialization will be studied, conducted, written and presented.

1 lecture hour, 8 laboratory/clinic hours, 4 semester credits

DENTAL HYGIENE 521
Master's Thesis Extension
1 credit

Design Management

DESIGN MANAGEMENT 400
Collaborative Design Studio I
Design Management is an inter-disciplinary field that combines various forms of design including graphic design and branding, interior design and architecture, industrial design, and fashion and textile design. Collaborative Design Studio I will begin to equip students with the skills they need to work with cross-functional teams. This is done through client-based design projects that originate from local Fortune 500 and other global organizations. Students will learn communication, team building, and leadership skills as they hone their design talents.

2 semester credits

DESIGN MANAGEMENT 401
Collaborative Design Studio II
Building on the foundation formed in Collaborative Design Studio I, students will again be grouped in inter-disciplinary teams to complete an innovative, client-based design project. The projects for this course will focus the students' attention on the triple bottom line: profitability, sustainability, and responsibility.

2 semester credits

DESIGN MANAGEMENT 500
Collaborative Design Studio III
Collaborative Design Studio III will continue to equip students with the skills they need to work with cross-functional teams on real world, client-based assignments. Students will learn communication, team building, and leadership skills as they hone their design talents.

2 semester credits

DESIGN MANAGEMENT 501
Collaborative Design Studio IV
Collaborative Design Studio IV will continue to equip students with the skills they need to work with cross-functional teams on real world, client-based assignments. Leadership skills will be given extra attention during the second year's teamwork.

2 semester credits

DESIGN MANAGEMENT 410
Design Management I
Design Management is a multifaceted, organic discipline whose exact definition can differ between organizations and Design Managers. In Design Management I, students will explore various definitions of Design Management with the goal of defining their own course of study. By reading and writing about relevant case studies, students will examine a wide variety of applications of design management. Students will be required to present their description of design management by the end of the term.

3 semester credits

DESIGN MANAGEMENT 411
Design Management II
As the student's concept of design management deepens, they will begin to explore the implications that design management has on an organization. Design Management II will describe the six core principles of the program: Marketing, Leadership, Finance, Legal, Operations, and Strategy, as well as the triple bottom line: Profitability, Responsibility, and Sustainability. Students will learn the ripple effect their design decisions have on an organization as they broaden their understanding of the filed of design management.

3 semester credits

DESIGN MANAGEMENT 500
Collaborative Design Studio III
Collaborative Design Studio III will continue to equip students with the skills they need to work with cross-functional teams on real world, client-based assignments. Students will learn communication, team building, and leadership skills as they hone their design talents.

2 semester credits

DESIGN MANAGEMENT 501
Collaborative Design Studio IV
Collaborative Design Studio IV will continue to equip students with the skills they need to work with cross-functional teams on real world, client-based assignments. Leadership skills will be given extra attention during the second year's teamwork.

2 semester credits

DESIGN MANAGEMENT 510
Design Management III
Students will continue to further their understanding of design management. Through relevant case studies, text readings, and lectures, students will develop a plan for the application of design management principles within their organization. The final project for this class includes an action plan for an organization where design management principles will make a meaningful impact on their triple bottom line.

3 semester credits

DESIGN MANAGEMENT 511
Design Management/Thesis IV
Design Management/Thesis IV requires students to develop an idea that embraces and explores a particular aspect of design management. Students will work independently on a paper that broadens the design management field. This unique challenge demands that the students demonstrate an understanding of the six core principles of the program: Marketing, Leadership, Finance, Legal, Operations, and Strategy, while injecting their own interpretation of design management based on their experience, talent, and culture.

3 semester credits

DESIGN MANAGEMENT 508
Internship/Co-op
Fairfield County and the surrounding tri-state area are rich in organizations in need of qualified design management interns. Through strategic partnerships and student initiative, internships will be established to give students first-hand experience as a design manager. Students will report on their experience and that report, coupled with his or her manager's evaluation, will form the basis for determining the student's grade. Internships are taken by domestic students; Co-ops are taken by international students.

1 semester credit

DESIGN MANAGEMENT 598
Special Projects
Special projects and independent study give students the opportunity to explore specifics of design management as they relate to their own area of expertise. Students will be encouraged to seek out opportunities to gain practical experience in the design and design management fields. This course should include field, library, and institutional research on a specific aspect of design management.

Student evaluation will be based on a report
submitted by the student.

2 semester credits

MARKETING 600
Marketing
This course explores the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual, organizational, and societal objectives. The underpinnings of marketing discipline will be taught through text, case studies, articles, and class discussion. Mastery of these principles will come through individual and group assignments to create marketing solutions for real-world products.

3 semester credits

MANAGEMENT 600
Leadership & Management
This course will introduce students to the primary tenets of leadership and management. Successful organizations foster innovation and efficiency. Students will evaluate the dynamics related to realizing organizational progress through the effective and efficient use of talent, structure, culture, methods, and technology. In addition to the required textbooks, students will research industry journals as a way to evaluate the application of leadership and management techniques in real settings across various industries.

3 semester credits

ACCOUNTING 600
Financial Accounting
This course will provide managers with the skills necessary to read, interpret, and apply information about an organization’s financial position. Managerial accounting and finance concepts will precede financial statement analysis. Topics covered include: how accounting data is generated in business operations, how financial statements are created, management of finance to maximize return on investment, and stakeholder equity. Students will participate in case work applying the principles presented in class.

3 semester credits

BUSINESS LAW 600
Legal Environment of Business & Ethics
This course focuses on how the legal environment of business impacts business decisions with broad ethical, international, and critical thinking examples throughout. Knowledge of the legal aspects of running a business will enable the student to conduct business within the legal framework and understand the ethical dimension of business decisions. Topics include: Introduction to Business Ethics and the Judicial and Legislative Process; Litigation, Alternative Dispute Resolution, and the Administrative Process; Business Crimes, Torts, and Contracts; The Constitution and Government Regulation of Business; Business Organizations; Employment and Labor Laws; Consumer Protection and Environmental Regulation; and International Law and Ethical Conflicts.

3 semester credits

INFORMATION SYSTEMS AND KNOWLEDGE MANAGEMENT 600
Information Systems & Technology
Information technology has become a key component for accomplishing strategic and operational goals in organizations today. As such, organizations expect their new employees to have a basic understanding of information technologies. To accomplish organizational goals and advance one’s career path, one needs to understand and apply information technologies effectively, efficiently, and creatively. The purpose of this course is to provide an introduction to information systems and technology and to familiarize students with the fundamental concepts and principles of information systems. The course is targeted for graduate students who have little or no background in information systems. Therefore, it focuses on breadth of coverage rather than depth in any specific area.

3 semester credits

MANAGEMENT 652
Small Business & Entrepreneurship
A comprehensive review of the marketing, operational, financial, product, service, and business strategy and plans that must be mastered and developed as foundation for start-up of a small business or entrepreneurial enterprise. In addition, growth of existing business through intrapreneurship is also covered. Students will develop a comprehensive business plan for a business of their choice which is acceptable to the professor.

3 semester credits

DESIGN MANAGEMENT 580X
New Product Commercialization
The objectives of this course are to understand and apply concepts and techniques of product commercialization. The course focuses on taking student-created product concepts and having student teams drive the concepts to become actual products. Product design, prototype creation, market analysis, and financial analysis all come together with the student team to create a viable product. If ideas are worthy, teams may work with the University’s CTech IncUBator to actually commercialize their products. Students are strongly encouraged to find a sponsor to actually commercialize their product ideas.

3 semester credits

ECONOMICS 600
Economics
This is a course for managers in both micro and macro economics. Topics addressed will include the prevailing patterns of economic institutions, national income analysis, international trade, prices and production; economic development, market structure and consumer decision analysis, competition, monopoly and monetary policy issues. Prerequisites: Admission to graduate study.

3 semester credits

ECONOMICS 710
Managerial Economics
Managerial economics deals with the application of economic theories to real-world business decisions. A course in managerial economics provides students with the fundamental analytical tools that can and should be used in marketing, finance, production, and strategic management. Managerial economic techniques seek to achieve the objectives of the business organization in the most efficient manner, while considering both explicit and implicit constraints on achieving the objectives. Some basic quantitative skills such as statistics and calculus are required. Prerequisites: ECON 600, MGMT 600, FIN 600 and completion of all core courses or concurrent registration in final core courses. This course may be taken as an elective with required Finance and Management concentration courses.

3 semester credits

Education
Note: Teacher Leadership courses are designated with the prefix of EDMM. Specific titles are listed with the programs of study in the chapter for graduate studies in the School of Education. Consult the division faculty for
detailed course descriptions.

EDUCATION 348 C, M
Directed Observation and Supervised Teaching in the Elementary or Middle School
This is a full-time field experience in a selected elementary or middle school. This meets requirements of Connecticut’s TEAM program. PRAXIS I must be passed. Departmental permission is required.
6 semester hours

EDUCATION 392
Directed Observation and Supervised Teaching in Secondary Schools
This is a field experience in selected secondary schools. This meets requirements of Connecticut’s TEAM program. Departmental permission is required. PRAXIS I must be passed.
6 semester hours

EDUCATION 440
Methods and Materials in Teaching Language Arts
This course focuses on the teaching and learning of the English language arts with an emphasis on instructional planning and assessment using current state and national standards.
ED 440C concentrates on the language arts processes and practices implemented in the elementary-level curriculum, grades K-6.
2 semester hours
ED 440M concentrates on the language arts processes and practices for middle school settings, grades 4-8, with an emphasis on interdisciplinary connections.
3 semester hours
ED 440J concentrates on the issues and pedagogy of teaching the English language arts and literature in secondary-level settings, grades 7-12.
3 semester hours

EDUCATION 441
Methods and Materials in Teaching Mathematics
This course deals with methods of teaching mathematics. Materials are examined for their use in diagnosis, remediation and enrichment.
ED 441C concentrates on the scope and sequence, as well as appropriate activities, for the elementary level.
ED 441M concentrates on the appropriate practices for middle school, grades 4-8, with an emphasis upon interdisciplinary connections.
ED 441J concentrates on the content and methodology of mathematics for secondary students.
ED 441 C — 2 semester hours
ED 441 M, J — 3 semester hours

EDUCATION 442
Methods and Materials in Teaching Social Studies
This course assists students in developing competencies in unit planning, instructional strategies, and the utilization of diverse materials and technology for teaching the social studies. Students design courses of study that integrate state and national standards; contemporary thinking about the teaching of social studies is stressed.
ED 442C concentrates on the activities, planning, and materials for social studies in elementary classrooms.
ED 442M concentrates on the content, practices, and planning appropriate for the middle level, grades 4-8. Interdisciplinary possibilities are examined.
ED 442J concentrates upon appropriate content, planning, and practices for 7-12 classrooms.
ED 442 C — 2 semester hours
ED 442 M, J — 3 semester hours

EDUCATION 443
Methods and Materials in Teaching Science
This course introduces teaching approaches, instructional materials, and contemporary thinking about science education.
ED 443 C concentrates upon the practices and materials of effective science for elementary level.
ED 443 M concentrates upon the appropriate content and practices for the middle grades, 4-8. Interdisciplinary possibilities are examined.
ED 443J concentrates upon the appropriate content and practices for the secondary science curriculum.
ED 443 C — 2 semester hours
ED 443 M, J — 3 semester hours

EDUCATION 444
Methods and Materials in Teaching Business
This course focuses on various purposes of the business curriculum in a school setting. It examines the range of teaching strategies and materials for classroom practices.
3 semester hours

EDUCATION 445
Methods and Materials in Teaching a Foreign Language
This course familiarizes the student with the major purposes of the study of foreign language in the schools. It introduces the strategies and classroom activities for effective teaching. It examines appropriate materials for teaching foreign languages.
3 semester hours

EDUCATION 447
Methods and Materials of Teaching English as a Second Language
This course explores the language needs of children who are learning English as a second language. It reviews and explains effective methods and strategies for teaching such students. The most appropriate materials are identified and utilized.
3 semester hours

EDUCATION 448
Methods of Teaching Art in the Public Schools, Elementary
This course focuses on the range of methods appropriate to teaching art in elementary, middle and secondary levels. Demonstrations and hands-on practice are core experiences.
3 semester hours

EDUCATION 449
Methods of Teaching a Foreign Language
This course is a structured observation in a public school. The goals of the course are to facilitate the students awareness of self, of school pupils, and of prospective teachers. The course is an elective for other majors. The number of semester hours taken should be determined with the student’s advisor.
1-6 semester hours

EDUCATION 500
Research Techniques and Report Writing
This is an introduction to the research process, to the understanding of published research, and to the application of research findings to education. The course prepares the student to write formal papers and research reports.
3 semester hours
**Education**

**EDUCATION 502**  
**Philosophical Foundations of Modern Education**  
This is an examination of basic philosophical problems which underlie the educational questions that confront society. The aim is to provide a foundation upon which a critical understanding of fundamental questions of modern culture and education can be developed.  
3 semester hours

**EDUCATION 503**  
**Diverse Students: Differentiated Instruction**  
This course focuses on pedagogy based on the philosophy that each student is a unique learner and that instruction should be provided that meets the needs of diverse students. Methods for addressing the needs of students' diverse strengths, background, experiences, gender, linguistic, and learning styles will be presented. It is recommended that the course will be taken after completion of EDU 564: Education of Students with Exceptionalities.  
3 semester hours

**EDUCATION 504**  
**Comparative and International Education**  
This is a comparative study of educational policies and practices in selected countries throughout the world. Global problems like peace, social and economic justice, and environmental quality are examined with a view to promoting global awareness in American education.  
3 semester hours

**EDUCATION 505**  
**Intercultural Relations: Teaching and Learning in Multicultural Environments**  
This course presents an overview of theories about educational, social and cultural problems of minority culture students, about teacher perceptions and expectations, about parental involvement. The course also critically analyzes policies and practices of multicultural and bilingual education. The thrust of the course is to develop appropriate and non-biased methods of teaching all children.  
3 semester hours

**EDUCATION 509**  
**Psychological Foundations In Education**  
This is concerned with the work of educators in general and teachers in particular. Topics include student characteristics (personality, growth, and development, adjustment, etc.) motivation, learning, measurement and evaluation, objectives, and teaching methods.  
3 semester hours

**EDUCATION 511**  
**Statutory Requirements**  
This course addresses the topic required for Connecticut licensure in teaching, including topics in health and intergroup relations.  
1 semester hour

**EDUCATION 515**  
**Clinical Experience—Internship Program**  
In the first semester interns will work under supervision in a learning environment, providing a variety of paraprofessional services to the schools.  
In the second semester the internship is designed to provide (1) a more in-depth perspective of teaching and learning through the development of a portfolio and (2) an opportunity to reflect on and document the impact of the internship experience.  
6 semester hours

**EDUCATION 530**  
**Child Growth and Development**  
This course is an investigation of child growth and development with emphasis on the implications for school-aged children. The needs, problems, and characteristics of children from infancy to adolescence are discussed. Social, emotional, cognitive physical and language developments are stressed.  
3 semester hours

**EDUCATION 536**  
**Adolescent Literature**  
This course surveys books and periodicals emphasizing criteria for selection and evaluation, procedures for establishing a program of literature in the schools, and opportunities to explore the interpretation of literature in the classroom through drama, story telling, book reporting, and choral speaking. Education 536C is focused on children’s literature. Education 536J concentrates on adolescent literature. Education 536M concentrates on a pre-adolescent literature.  
EDUC 536C – 2 semester hours  
EDUC 536M/J – 3 semester hours

**EDUCATION 537**  
**Middle Grades Interdisciplinary Teaching and Teams**  
This course focuses on the developmental levels of the middle school student, appropriate instructional climates for middle grade classrooms, and interdisciplinary planning across subjects in English, History/Social Studies, Math, and Science.  
3 semester hours

**EDUCATION 540**  
**American Culture and Education**  
This course addresses cultural issues related to education. Topics include multicultural issues in America and the interpretation of demography in relation to schooling. The search for national identity and educational alternatives are explored.  
3 semester hours

**EDUCATION 541**  
**Classroom Management in Teaching English as a Second Language**  
This course focuses on classroom management as an effective tool for a positive learning environment. Planning, implementing, and maintaining management procedures are discussed.  
2 semester hours

**EDUCATION 542**  
**Theory and Methods of Teaching English as a Second Language**  
This course addresses the foundations of second language learning theory, research, and discourse in educational settings. It also focuses on strategies for teaching dual language instruction with emphasis on a culturally responsive environment and on legal issues as they apply to schooling for English language learners.  
3 semester hours

**EDUCATION 543**  
**Second Language Acquisition**  
This course provides an overview of the major theories of first and second language acquisition. It applies these theories to classroom pedagogy and examines the influences of parents, siblings, and peers, as well as aspects of formal and informal education. It also examines the influence of region, culture, class, and gender on language acquisition; legal and ethical issues relative to language competency are addressed.  
3 semester hours

**EDUCATION 545**  
**English Language and Literature for Teachers**  
The purpose of this course is to give prospective teachers of English as a Second Language (ESL) a rich knowledge of literature with potential classroom applications for multicultural settings. Selection and analysis of language processes and literature for elementary and secondary-level classrooms are included.  
3 semester hours
EDUCATION 546
Linguistics for Teachers
This course acquaints teachers with the major analytical frameworks in linguistics. It surveys the discipline of linguistics, the study of human languages, contrastive features, and language systems.
3 semester hours

EDUCATION 558
Evaluation of Instructional Outcomes
This course gives students an orientation to the topics, issues, and concepts in the field of educational testing and measurement. Topics include methods for evaluating instructional programs, types of instruments for collecting data, and a variety of standardized, criterion-referenced, and performance-based assessments. The construction of teacher-made tests and the interpretation of different types of test scores are included.
3 semester hours

EDUCATION 560M
Human Growth and Development, Middle
This course provides an opportunity for the study of the subject matter of human development, with a concentration upon the uniqueness of the adolescent period. Theoretical models and methods of researching human growth and development including cognition, physical, social, emotional and moral development will be studied. Genetic and environmental influences of human development will be discussed. Implications for classroom instruction in the middle grades will be explored.
3 semester hours

EDUCATION 564
Education of the Exceptional Student
The focus of this course is placed upon the instructional methods and materials for exceptional students. General management techniques and administrative procedures are considered in light of the student's special needs in order to identify and work effectively with the major categories of exceptionality, including the learning disabled, the handicapped, and the gifted, etc. Requirements of the 94-124 law are examined.
3 semester hours

EDUCATION 565
Contemporary Problems in Education I
This is a study of foundations, issues and contemporary trends in education with their application to teaching in the schools. An effort will be made to encourage teachers to develop an understanding of their own philosophy of education and how it affects their teaching.
3 semester hours

EDUCATION 566
Contemporary Problems in Education II
This independent study fulfills the Final Degree Option for the Master's degree. Students pursue an individually planned project under advisement of a faculty member. Extensive reading supports the project. May be taken as an extension of ED 500 or ED 565.
3-6 semester hours

EDUCATION 571
Diagnosis and Intervention of Reading and Language Arts Difficulties
This course examines the range of problems that cause students difficulties in literacy processes. It examines assessment instruments and strategies for intervention and instruction in Reading and Language Arts.
3 semester hours

EDUCATION 572
Advanced Diagnosis of Reading and Language Arts Difficulties
This course is for students interested in working with learners experiencing profound difficulty in reading, writing, and other literacy processes. Students learn strategies for assessing students referred for specific literacy instruction. Both individual and group diagnostic assessments are used. Students learn how to interpret testing results and make recommendations for improvement. Prerequisite: EDUC 571
2 semester hours

EDUCATION 573
Early Literacy Instruction
This course concentrates on the theories, instructional applications, and materials for the teaching, learning, and assessment of literacy processes in early childhood and up to grade 2. Topics include emergent literacy, phonological awareness, and phonemic knowledge and instruction.
1 semester hour

EDUCATION 574
Developmental Reading in the Elementary School
This course focuses on the theories, instructional applications, and materials for the teaching, learning, and assessment of literacy processes in elementary classrooms. Topics include strategies in word recognition, vocabulary development, and comprehension. The developmental needs of beginning readers are emphasized.
3 semester hours

EDUCATION 575
Reading and Writing in the Content Areas
This course focuses on the teaching and learning of comprehension and composing processes and strategies for content area disciplines. Critical reading and study strategies for expository text materials are emphasized.
3 semester hours

EDUCATION 575M
Diagnosis and Intervention of Reading and Language Arts Difficulties
EDUC 575M concentrates on appropriate materials, strategies, and assessments for reading and writing in middle grade settings, 4-8. EDUC 575J concentrates on the comprehension and composing processes of students in secondary-level settings, grades 7-12.
3 semester hours

EDUCATION 576
Developmental Reading in Middle Grade Classrooms
This course focuses on the theories, instructional applications, and materials for the teaching, learning, and assessment of reading and related literacy processes in middle grade (4-8) classrooms.
3 semester hours

EDUCATION 580C
Special Problems in Elementary Education
This is intended for students interested in independent study or research of a selected topic or problem in consultation with a faculty member. By arrangement. Faculty permission required.
1-6 semester hours

EDUCATION 580J
Special Problems in Secondary Education
This is intended for students interested in independent study or research of a selected topic or problem in consultation with a faculty member. By arrangement. Faculty permission required.
1-6 semester hours

EDUCATION 580L
Special Problems in Behavioral Science Research and Computer Applications
This course is designed to enhance the efficiency and scope of one's research through the development of specific competencies needed for computer processing. Students will be exposed to computer-assisted instruc-
tion (C.A.I.) and computer managed instruction (C.M.I.), and will develop projects that focus on computer applications. By arrangement. Lab fee required.
1-6 semester hours

EDUCATION 590
Computer Literacy
This is designed to provide the student with hands-on experience in the use and application. The student will have the opportunity to evaluate existing course work and its application as well as the writing of elementary programs in Logo and Basic. Lab fee required.
1-3 semester hours

EDUCATION 591
Software Evaluation
This is designed to have students develop software evaluation criteria for the purpose of evaluating published computer programs. The student will have an opportunity to review educational programs.
1-3 semester hours

EDUCATION 592
Technology Literacy for Educators
This course is an introductory to expose students to a variety of technologies used by and with persons with exceptionalities. Students will gain hands-on skills in designing technology-based instructional materials for students. A focus on Universal Design for Learning is a the core of this course with a goal of providing students with the ability to adapt technology, instruction, and assessment to meet a range of students needs.
3 semester hours

EDUCATION 595
Thesis Research — Masters Level
This is a culminating experience option at the Master’s level for Education students. Offered by arrangement.
2-6 semester hours

Educational Leadership

EDUCATIONAL LEADERSHIP 551
Curriculum Development and Implementation
This is a study and development of models for curriculum design and implementation at all levels of schooling. Emphasis is placed on current research and practice relevant to curriculum design and the planning and monitoring of curriculum plans in educational settings. Such topics as: curriculum assumptions, goals and objectives, knowledge and content, curriculum evaluation, implementation and staff development strategies are examined.
3 semester hours

EDUCATIONAL LEADERSHIP 564
Special Education for Administration
This course builds on the foundation of ED 564, the emphasis is on the administrative aspects of Special Education programs for schools.
3 semester hours

EDUCATIONAL LEADERSHIP 601
Contemporary Educational Problems
This course will focus upon contemporary society and changing policy issues that confront managers and leaders of educational thought throughout the 21st Century. Seminal issues such as the impact of political forces upon federal, state, and local educational policies will be considered. Labor relations will be analyzed. Empowerment of teachers will be examined.
3 semester hours

EDUCATIONAL LEADERSHIP 611A
Organization, Administration, and Supervision of Reading and Language Arts Programs
This course focuses on the role of the Reading and Language Arts Consultant as an educational leader in schools and school districts and focuses on issues of organization, administration, and supervision of reading and language arts programs. Note: Students enrolled in this course must also concurrently enroll in EDLD 611 Administration: Organizing, and Staffing Educational Institutions. While EDLD 611 focuses on the broader issues of educational leadership in schools, EDLD 611A specifically focuses on reading and language arts programs and personnel.
1 semester hour

EDUCATIONAL LEADERSHIP 613
Leadership: Influencing People to Achieve Organizational Objectives
This is an investigation of concepts, research findings, and practices focusing on the development and change of educational organizations in relation to relevant goals and objectives. Emphasis is placed on such areas as leadership theory and behavior, organizational climate, human relations and communications within the organization, and change strategies. Theoretical concepts of leadership are integrated along with practical applications.
3 semester hours

EDUCATIONAL LEADERSHIP 618
Public School Finance
This is a study of educational fiscal control including: budget preparation and presentation, accounting procedures, tax structures, analyses of costs, comparative data and auditing. Includes federal, state and local phases of support of educational systems. Special emphasis is given to New York and Connecticut fiscal patterns.
3 semester hours

EDUCATIONAL LEADERSHIP 619
Public School Law
This is a study of the legal basis for public education in the United States; a study of state and federal statutes providing for education. An examination is made of statutes, court decisions, and policies and practices arising out of these factors. The legal status of boards, teachers, administrators, pupils and parents is examined with special emphasis on New York and Connecticut.
3 semester hours

EDUCATIONAL LEADERSHIP 621
Evaluation of School Effectiveness
This course examines the various ways to evaluate the effectiveness of a school’s performance: student achievement, faculty performance, faculty morale, provision for diverse student needs and development of student emotional growth. The course examines how data can and should affect instructional issues.
3 semester hours

EDUCATIONAL LEADERSHIP 652
Supervision: The Evaluation and Professional Development of Educators
This is a study of concepts and strategies focusing on the evaluation of teachers and other educators for purposes of performance improvement and quality assurance. Emphasis will be placed on research findings, current practices, and the achievement of competency related to classroom observation and evaluation, the planning and implementation of professional development, and the creation of organizational climate and human relationships conducive to effective evaluation and professional growth of educators.
3 semester hours

EDUCATIONAL LEADERSHIP 6804
Independent Study in Educational Management
Offered by arrangement.
1-6 semester hours
EDUCATIONAL LEADERSHIP 681A
Internship in Educational Management
A cooperatively guided administrative experience in a school system. Pre-requisite: Completion of major portion of the requirements for the Sixth Year Professional Diploma and permission of major advisor.
3 semester hours

EDUCATIONAL LEADERSHIP 682A
Special Topics in the Management of Educational Institutions
Special department offerings including workshops, conferences, institutes focusing on new developments in the field.
1-6 semester hours

EDUCATIONAL LEADERSHIP 683
Internship for the Reading and Language Arts Consultant
This course is a cooperatively guided administrative experience in the area of literacy education for those desiring to be certified as Reading and Language Arts Consultants. The internship includes a series of practicum experiences in a variety of school settings and includes research in the area of literacy education. Students gain practical field based experience through a range of tasks and situations characteristic of the position of the Reading and Language Arts Consultant in school settings.
6 semester hours

EDUCATIONAL LEADERSHIP 800D
Continuing Doctoral Seminar
The seminar meets periodically during the academic year and for two full weeks each summer, for three consecutive summers. It provides opportunities for students to work with scholars and leaders from a variety of disciplines to broaden perspectives on educational leadership and to develop an intellectual style for dealing with educational problems.
6 semester hours per year

EDUCATIONAL LEADERSHIP 801
Educational Program Development
Emerging trends, concepts and practices in the planning, design, and implementation of education programs intended to meet the individual and group needs of learners in a changing society are reinvestigated. Emphasis is placed on the roles and responsibilities of leaders in such processes as school/community educational goal setting, needs analysis, systematic program design, supervision and staff development. Students will focus on the application of new knowledge to the investigation and solution of program development in the field.
6 semester hours

EDUCATIONAL LEADERSHIP 804
Constitutional, Legal, and Political Issues Confronting Educational Leaders
Legal questions relating to personnel, students, community, religion, finance, school property, teacher organizations, equality of opportunity and other legal and political issues with which the educational leader must be familiar in order to be effective in decision-making and organizational development are investigated. Emphasis is placed on “landmark” judicial decisions, recent statutory developments, constitutional background. Students will read, analyze, and interpret significant Supreme Court decisions regarding educational matters as well as pertinent lower federal and state court decisions. The principal of “non judicial” remedies will be explored and the appeals process will be examined in detail.
6 semester hours

EDUCATIONAL LEADERSHIP 806 A & B
Quantitative Analysis and Evaluation Strategies
This course considers current techniques for designing, implementing and analyzing projects in education and typical models for facilitating decision-making. The elements of personnel and program assessment within the contemporary educational system are included. Strategies focusing upon experimental learning and community contact are featured, and the student will be exposed to collection and analysis of real data and related computer simulation activities. Statistical and evaluative investigations are emphasized which are both fundamental and sufficiently sophisticated for advanced decision-making and leadership. This course is required.
6 semester hours

EDUCATIONAL LEADERSHIP 810
Computer Application in Educational Leadership
This course covers creation of learning objects, including text, raster/vector graphics, animation, slideshows, conferencing components, and video for instructional Web. Use of digital image capture equipment, including digital cameras, camcorders, and scanners. Also covers basic HTML, PDF and OCR. Final project will be integration of elements into an instructional Web.
6 semester hours

EDUCATIONAL LEADERSHIP 845
Dissertation Preparation Seminar
During the third year of the program, students participate in seminars which focus on the selection and development of a dissertation proposal. Students are ordinarily expected to complete the major portion of their work on the dissertation proposal prior to the conclusion of the formal part of the program. This course is required.
3 semester hours each term (Fall & Spring), 6 semester hours final summer

EDUCATIONAL LEADERSHIP 850
Dissertation Research and Advisement
Individual research and advisement relative to a student’s dissertation topic is the “sine qua non” of this course. Doctoral candidates are required to register for Education Management 850 continuously until their dissertations have received final approval. Prerequisite: Successful completion of Comprehensive Examination.
0 semester hours
Electrical Engineering

Electrical Engineering 404
Digital VLSI
The objective of this course is to teach students the CMOS transistor design in VLSI circuits. (CMOS stands for complementary metal oxide semiconductor.) Supported by CAD tools, students will learn gate level design, IC design, fabrication, and layout of digital CMOS integrated circuits. With these skills, students will also be able to interact with integrated circuit fabrication process engineers after completing this course.
3 lecture hours; 3 semester hours

Electrical Engineering 405
Statistics for Engineers
From elements of probability, probability distributions and descriptive statistics to hypothesis testing, confidence intervals, linear regression and correlation, analysis of variance and engineering applications to include quality control.
3 lecture hours; 3 semester hours

Electrical Engineering 406 (EE 406/CPSC 406)
Soft Computing I
Modeling and solving engineering problems using computational methods. Topics include exact (provable) methods (linear and convex programming) and fast methods (heuristic search, genetic algorithm, neural networks, etc.).
3 lecture hours; 3 semester hours

Electrical Engineering 410 (EE 410/BMEG 410)
Biophysics
This course will provide an introduction to molecular biology, including its use in the medical field. Concepts include structure and function of biological macromolecules (DNA, RNA, proteins), thermodynamics of biological processes, and the role of biophysics in medicine.
3 lecture hours, 3 semester hours

Electrical Engineering 411
Fiber Optics
3 lecture hours; 3 semester hours

Electrical Engineering 416
Fiber Optics Lab
Hands on experience with fiber optic hardware. Fiber properties, sources, detectors, splices, connectors. Design and test fiber optic transmission and receiver circuits for both analog and digital transmission. Pre-requisite: Electrical Engineering 415.
3 semester hours

Electrical Engineering 417
Modern Electronics
See Electrical Engineering 348.
3 semester hours

Electrical Engineering 418 (EE 418/BMEG 418)
Wireless Communications
Evolution of Mobile Radio Communications to cell phones and personal communications: 2nd and 3rd and 4th generation. Concepts include cell fundamentals, path loss, fading, ghosts, modulation techniques, equalization, speech coding and networks.
3 lecture hours, 3 semester hours

Electrical Engineering 420 (EE 420/BMEG 420)
Satellite/Wireless Communication Systems
Detailing concepts and calculations from the entire field is enough to permit the kinds of analysis needed for major systems planning decisions. This course covers channel capacity, picture quality, signal to noise ratio, bit error rate, earth station antenna size and offers new materials on orbital mechanics and geometry. Pre-requisite: Electrical Engineering 441 or equivalent.
3 semester hours

Electrical Engineering 421
Fields and Waves
Solutions of static electric and magnetic fields are derived from Maxwell's equations and Gauss's law. Approximation, including multipole modelling, are used where exact solutions to theory do not exist. Also, the computer is used to solve these problems exactly without approximations. The course also introduces time varying fields and their link to the creation and propagation of radiation.
3 lecture hours; 3 semester hours

Electrical Engineering 427
Microwaves
Passive and Active elements for the generation, modulation, amplification and reception of microwaves. Radar and other microwaves systems. Pre-requisite: Field Theory.
3 lecture hours; 3 semester hours

Electrical Engineering 429
Radar Theory and Simulation
Radar Fundamentals, Radar Cross Section, Types of Radars, Radar Detection, Waveform Analysis, SNR, Compression and Wave Propagation, Target Indicator and Tracking. The course will include extensive use of MATLAB for programming and simulation.
3 lecture hours; 3 semester hours

Electrical Engineering 430
Distribution Power System Design
A comprehensive study of modeling of the distribution of power system components and planning, including load characteristics, application of power transformers, design of transmission lines, distribution sub-stations, primary systems and secondary systems, voltage drop and power loss calculations, application of capacitors, harmonics on distribution systems, voltage regulation, fault calculation and protection.
3 lecture hours; 3 semester hours

Electrical Engineering 434
RF Communications
Spectral analysis; modulation and demodulation system analysis, including AM, FM, pulse modulation and transmission of digital information. Signal design and system considerations. Pre-requisite: Electrical Engineering 234.
3 semester hours

Electrical Engineering 437
Digital Communications
3 lecture hours, 3 semester hours

Electrical Engineering 443 (EE 443/BMEG 443)
Digital Signal Processing
3 lecture hours, 3 semester hours
The purpose of this course is to provide students with technical background and knowledge in silicon microelectronic fabrication process. Upon finishing this course, students will be familiar with the basic semiconductor and VLSI microfabrication processes.

3 lecture hours, 3 semester hours

Electrical Engineering 449
Introduction to Wireless Sensor Networks
In recent years, tiny computing devices equipped with low-power radios and sensors—made possible due to advances in micro-electronics and radio technologies—have obliterated the wall between the physical world and the cyber world, spawning a virtually unlimited number of new applications—some of them beyond our wildest imaginations. Successful design of these massively distributed wireless sensor networks requires a synergistic combination of multiple aspects: from the physical layer to decision algorithms and more. This course will introduce the students to the application areas, various challenges commonly faced in this application, state-of-the-art solution techniques and fundamental new tools that have emerged in the recent years.

3 lecture hours, 3 semester hours

Electrical Engineering 451
Introduction to Nanotechnology
Nanotechnology is the science and engineering involved in the design, synthesis, characterization and application of materials and devices with the size in nanometer (10-9m) scale. As a newly emerged exciting high-technology, it has attracted intensive interest and heavy investments all over the world. Nanotechnology is a general-purpose technology which will have significant impact on almost all industries and all areas of society. It can offer better built, longer lasting, cleanser, safer and smarter products for home, communications, medicine, transportation, agriculture and many other fields. This course will cover basic concepts in nanoscience and nanotechnology.

3 lecture hours, 3 semester hours

Electrical Engineering 453
Pattern Recognition
Operation and Design of systems that recognize patterns in data, based primarily on statistical and neural network approaches. Topics include Bayesian decision theory, Parametric likelihood estimation, Nonparametric techniques, Linear discriminant functions and Neural Networks.

3 lecture hours, 3 semester hours

Electrical Engineering 454
Introduction to Audio Signal Processing
To introduce the fundamentals of speech processing and related applications. Course covers speech enhancement, speech coding, and speech recognition.

3 lecture hours, 3 semester hours

Electrical Engineering 456
Adaptive Signal Processing
This course introduces students to the field of adaptive signal processing as well as several practical aspects of adaptive systems. This course provides an in-depth analysis of various adaptation algorithms such as least mean square adaptive filters, recursive least squares algorithms, and Kalman filters etc. The subject learning is enhanced through experimentation of adaptation techniques using Matlab and/or Labview projects centered on applications such as adaptive noise/ interference cancellation, signal estimation/detection, and system identification etc.

3 lecture hours, 3 semester hours

Electrical Engineering 458 (ELEG 458/CPEG 458)
Analog VLSI
Modeling, design and analysis of analog VLSI circuits. CMOS processing and layout, current mirrors, Opamp, comparators, S/H voltage references, switched-capacitor circuits, data converters, filters and PLLs. Students design analog VLSI layouts, extract the netlists and simulate the circuit behavior. Transistors sizing will also be discussed. EDA tools PSPICE, Mentors Graphics are used.

3 lecture hours; 3 semester hours

Electrical Engineering 459
Audio Processing Lab
Introduction to TMS320C55x Digital signal Processor, Audio Signal Processing, Basic Principles of Audio Coding, Speech Enhancement Techniques, Quantization of Audio signals, Calculating LPC coefficient using C55x Intrinsic, Matlab Implementations of noise Reduction (NR), Mixed C55x Assembly and Intrinsic Implementations of Voice Activity Detection (VAD), Combining AEC with NR, Voice over Internet Protocol Applications, Overview of CELP Vocoders.

3 lecture hours; 3 semester hours

Electrical Engineering 460
Controls
Analysis of steady state and transient response of control systems. Laplace transforms meth-
Electrical Engineering

Adaptive Controls
Adaptive Controls provides a graduate level introduction to the basic concepts, techniques, and the state-of-the-art of adaptive control systems. Upon completion of the course, students are expected to be able to conduct design, research, and development in the field. The course covers real time system identification algorithms, model reference adaptive control, pole assignment adaptive control, self-tuning and gain scheduling control systems, stochastic adaptive control, model-predictive control, and robustness issues of adaptive control systems. Prerequisites: Digital Control System (or equivalent)

3 lecture hours; 3 semester hours

Electrical Engineering 479
Solar Energy and Solar Cells
This course offers a review of renewable energy (solar, winds, and tides) versus bio-energy (coal, oil, natural gas). The concept of light as electromagnetic radiation and pure energy as well as the concepts of converting sunlight into thermal energy will be discussed. Students will learn the semiconductor and electronic properties of solar cells, used to convert light into electricity. Secondary solar energy sources include solar Hydrogen and concentrator technology.

3 semester hours

Electrical Engineering 481
Analog Electronics Lab
With a set of 6 experiments and simulating them using P-Spice, the goal of this course is to teach the concepts from the theory of analog electronics. The user must have solid understanding of the basic electronics and circuit theory aka Network Analysis. Pre-requisite: Electrical Engineering 348, 234 or equivalents.

3 lecture hours; 3 semester hours

Electrical Engineering 482
Analog Integrated Circuit Design
Do a complete analysis of the 741 op-amp, including bandwidth, gain analysis, slew rate, power efficiency and I/O impedances. Analyze ROM, Ram, TTI, ECL, CMOS and more modern logic structures including Fanout, noise margin, latching, contention, logic and delay response. Pre-requisite: Electrical Engineering 348.

3 lecture hours; 3 semester hours

Electrical Engineering 483 (ELEG 483/MEEG 483)
Digital Integrated Circuit Design
Several integrated circuit architectures are analyzed at the transmitter level to find key parameters by hand analysis as well as computer simulation: rise time, fall time, noise margins, logic state, hysteresis/memory, fanout, and power dissipation. Analysis includes an analysis of the major logic families: TTL, CMOS, NMOS, ECL, PECL, differential logic.

3 lecture hours; 3 semester hours

Electrical Engineering 490
Alternative Energy Technologies
This is a graduate level course and aims to introduce the alternative energy technologies in photovoltaic cells (PV) and fuel cells. It will cover: the physics, energy conversion efficiency, and challenges in PV cells, the principles, the stack and system design in fuel cells.

3 lecture hours; 3 semester hours

Electrical Engineering 500
Graduate Co-op/Internship in Electrical Engineering
By arrangement.

1-3 semester hours

Electrical Engineering 503 (ELEG 503/MEEG 503)
Electronics Cooling
This course is designed to help students understand the thermal challenges and demands of the electronics field. Fundamentals and physics of thermodynamics, heat transfer and fluid mechanics will be introduced and shown how to apply them to the design and testing of electronic hardware. The thermal characteristics and thermal failure modes of electronic components, and reliability prediction techniques will be reviewed. Numerical simulation and commercial CFD packages will be introduced for thermal analysis. Students will have a good understanding of the heat transfer and fluid mechanics principles affecting proper thermal management of electronic components and develop skills to identify potential thermal design problems and develop reliable, cost-effective solutions.

3 semester hours

Electrical Engineering 510
Medical Machines
Electrical safety is studied by full analysis of grounding and modeling of the human body under various electric shock conditions. The ECG machine (for measuring heart performance) is analyzed as both an analog and a digital machine, with emphasis on cleaning up signal problems and extending the analysis of the data recorded. Other instruments that are analyzed include the blood sugar tester, the hospital thermistor, the lung pressure machine, the anesthesia vaporizer, the pulse oximeter and various cardiac output devices. Discussion made about the minimum alveolar concentration (MAC) as it applies to anesthesia. Discussion is also made about modern hearing aids and advances in eye replacement via electrical means. Pre-requisite: Electrical Engineering 510...
Electrical Engineering • Engineering

Biomedical and Biometric Signal Processing
The course teaches all of the basics of image processing as applied to biometrics analysis and medical imaging.  
3 lecture hours; 3 semester hours

Low Power VLSI Circuit Design
With the rapid development of mobile computing, low power VLSI design has become a very important issue in the VLSI industry. A variety of low-power design methods are employed to reduce power dissipation of VLSI chips. This course is designed to cover low-power design methodologies at various design levels (from system level to transistor level). The basic low-power design strategies will be introduced in the class. Students will use the learned knowledge to design low-power VLSI circuits. Upon completion of this course, students will be able to analyze the power consumption of VLSI circuits, and design low-power VLSI circuits using various strategies at different design levels. The major target is to design VLSI chips used for battery-powered systems and high-performance circuits not exceeding power limits.  
3 lecture hours; 3 semester hours

VLSI Testing
As VLSI continues to grow in its complexity, VLSI testing and design-for-testability are becoming more and more important issues. This course will cover VLSI testing techniques such as VLSI fault modeling (stuck-at-fault), automatic test generation, memory testing, design for testability (DFT), etc. VLSI scan testing and built-in self-test (BIST) will also be covered. Student will learn various VLSI testing strategies and how to design a testable VLSI circuit.  
3 lecture hours; 3 semester hours

VLSI: Digital System Design
This course will provide students with an in-depth understanding of the basic design methodologies of modern digital VLSI systems. Various perspectives of VLSI systems will be discussed, such as MOS transistor device characteristics, interconnect, time and power, clock distribution, packaging and I/O issues, VHDL system design and logic synthesis. Upon completing this course, students will have a comprehensive understanding about digital VLSI system design.  
3 lecture hours; 3 semester hours

Electrical Engineering 552
Random Signal Processing
Introduces students to the theory of probability and stochastic processes. Topics include basic probability; single and multiple random variables; stochastic processes such as Gaussian processes, Markov processes; Various applications.  
3 lecture hours; 3 semester hours

Electrical Engineering 562 (ELEG 5623/MEEG 562)
Nanofabrication with Soft Materials
This is an advanced level graduate course focusing on fabrication of soft materials. Nanofabrication processes and nanosystem products will be discussed. Fundamentals associated with chips fabrications and linking them toward soft materials assembly will be detailed. Emerging nanotechnology based methods for soft and green electronics, mechanical parts, MEMS, PCBS will be covered. Gene chip, label free sensory assay using micro and nanofluidics will be discussed. Transfer printing, DNA-protein interactions using chip and several nano-scale assemblies for soft materials fabrication will be discussed.  
3 semester credits

Electrical Engineering 596
Seminar
Lecture hours and topics to be arranged with instructor.  
1 credit hour

Electrical Engineering 597
Master’s Project
Lecture hours and topics to be arranged with Department Chair.  
3 credit hour

Electrical Engineering 598
Thesis in Electrical Engineering
Lecture hours, semester hours and topics to be arranged with Department Chair.  
3-6 credit hours

Electrical Engineering 599
Independent Study in Electrical Engineering
Independent study of advanced topics in Electrical Engineering and submission of project report as required. Problem assignment to be arranged with and approved by the Department Chair.  
3 credit hours

Engineering

Engineering 400
Engineering Colloquia Series
This course is a series of seminars covering a spectrum of engineering topics. National
and international distinguished speakers are invited to deliver the seminars. All Engineering students are required to register for the colloquia series.

Engineering 404
Optimization
Optimization is the maximization of an objective function involving multiple variables, subject to certain constraints. This course introduces the theory and application of optimization. Topics discussed include optimization, linear programming, the simplex algorithm, transportation, assignment, decision analysis. Software used includes Excel, spreadsheet and LINGO.

3 lecture hours; 3 semester hours

Finance

Finance 600
Financial Management
This course provides students with the opportunity to learn the basic tools and concepts of financial management. It will discuss important issues in modern finance, including the time value of money, valuation of stock and bonds, capital budgeting, risk and return tradeoff, portfolio analysis, capital asset pricing model and financing decisions. Basic accounting and statistics are essential to understanding the principles developed in this course. Prerequisites: Admission to graduate study.

3 semester credits

Finance 610
International Finance
This is an introductory course about international financial management with special emphasis on multinational enterprises (MNEs). A MNE is defined broadly as one that is incorporated in one country but has operating subsidiaries, branches or affiliates located in other countries. Today, almost all large companies are multinational with the 1,000 largest MNEs accounting for about 80% of the world’s industrial production. Main topics to be covered in this course include the foreign exchange market, exchange rate determination, foreign exchange risk management, and global debt and equity financing. The global financial environment such as the international monetary system and the balance of payments are also discussed. Prerequisites: FIN 600 and completion of all core courses or concurrent registration in final core courses.

3 semester credits

Finance 620
Investment Analysis
This course provides a framework for the analysis of individual securities such as stocks, bonds and other financial instruments. It develops a systematic framework for the construction of efficient portfolios and optimal investment strategies. It also discusses the investment environment that includes the financial markets and major financial institutions, the Federal Reserve, and the determination of interest rates. Various investment strategies used by practitioners are also discussed. Prerequisites: FIN 600 and completion of all core courses or concurrent registration in final core courses.

3 semester credits

Finance 625
Financial Derivatives and Risk Management
This course covers financial derivatives such as forward contracts, futures contracts, options and swaps. A derivative is a financial instrument that is derived from the value of an underlying asset. The underlying asset can be commodities, equities, bonds, foreign exchange, or indices such as a stock market index, consumer price index or even an index of weather conditions. These derivatives can not only be used for speculation and arbitrage, but more importantly, can also be used for risk management. Students will develop a working knowledge of how these derivatives are used and how they are priced. Prerequisites: FIN 600 and completion of all core courses or concurrent registration in final core courses.

3 semester credits

Finance 630
International Financial Management
This is an advanced course in international financial management. It will cover various aspects of financial management of multinational enterprises (MNEs), including the foreign exchange market, currency derivatives, global financial markets, international portfolio investment, cross-border direct investment, and foreign exchange and interest rate risk management. Prerequisites: FIN 600 and completion of all required Finance concentration courses or concurrent registration in final required concentration courses.

3 semester credits

Finance 640
Money and Banking
The course covers the nature and function of money and the role of depository institutions and central banks in influencing the supply of money and credit in the U.S. The course examines the changing financial environment and the influence of monetary policy on international trade, prices and the overall level of economic activity. Topics include the history of banking and financial institutions, regulation and the role of the Comptroller of the Currency and other regulators, bank operations, credit analysis, non-credit services, personal banking and the changing role of banks in the financial services environment. Prerequisites: FIN 600 and completion of all required Finance concentration courses or concurrent registration in final required concentration courses.

3 semester credits

Finance 644
Global Financial Services Regulation
A review of current U.S. Federal laws and regulations that govern the U.S. financial services industry, including the Federal Reserve Act of 1913; the Securities Acts of 1933, 1934 and 1940; the Monetary Control Act of 1980; the Riegle-Neal Act of 1944; and the Graham-Leach-Bliley Act of 1999. In addition, this course will review international regulatory arrangements including the FSA organizations of Great Britain and Japan. Laws protecting consumers in their interaction with financial services providers will be reviewed. The roles of the SEC, state insurance commissions and other self regulatory organizations such as the NYSE will be examined. Prerequisites: FIN 600, BLAW 600 and completion of all core courses or concurrent registration in final core courses.

3 semester credits

Finance 650
Cases in Finance
The focus of this course is the application of managerial finance principles (from FIN 400: Financial Management) to the financial decisions made by business. The purpose is to develop student analytical ability through the discussion and analysis of finance cases. Topics covered include financial concepts and planning; valuation, rates of return and leverage; cost of capital; dividend policy; sources and uses of investment and working capital; and international finance. Prerequisites: FIN 600 and completion of all core courses or concurrent registration in final core courses.
Finance

For the Global Financial Services concentration, this course should be taken as the final required Global Financial Services course.

3 semester credits

FINANCE 705
Advanced Financial Management and Policy
This course provides a general survey of the body of knowledge of corporate finance. Corporate finance is an area of finance dealing with the financial decisions corporations make and the tools and analyses used to make these decisions. The primary goal of corporate finance is to enhance corporate value and shareholder’s wealth. To achieve this goal, financial managers must make important decisions such as project evaluations and investment decisions, financing decisions, and dividend decisions. A solid understanding of the financial markets is also essential. The main concepts and principles in the study of corporate finance are also applicable to the financial problems of all kinds of firms. Basic accounting and statistics are essential to understanding the principles developed in this course.

3 semester credits

Prerequisites: FIN 600 and completion of all required Finance concentration courses or concurrent registration in final required concentration courses.

FINANCE 721
Management of Financial Institutions
This course covers the management of financial institutions (FIs), including depository institutions such as commercial banks and savings institutions, insurance companies, securities firms and investment banks, mutual funds, and finance companies. The focus is on risk measurement and management facing these FIs. The roles and operations of financial markets and various financial instruments and the impact of interest rates on the economy will also be discussed. Prerequisites: FIN 600 and completion of all required Finance concentration courses or concurrent registration in final required concentration courses.

3 semester credits

FINANCE 730
Financial Analysis and Modeling
This course introduces important financial models and shows how they can be solved numerically and/or simulated using computer technology (e.g., Excel). This class covers standard financial models in the areas of corporate finance, financial statement simulation, accounting model, portfolio problems, options, portfolio insurance, duration, and immunization. It will give tools for understanding the computational intricacies in finance. Too often, finance courses stop short of making a connection between textbook finance and the problems of real-world business. This course bridges this gap between theory and practice by providing a nuts-and-bolts guide to solving common financial and accounting models with spreadsheets. Prerequisites: FIN 600 and completion of all required Finance concentration courses or concurrent registration in final required concentration courses.

3 semester credits

FINANCE 735
Technical Analysis and Trading
This is a hands-on course that teaches principles and methods of selecting and managing stocks using professional trading software. Theoretical concepts and trading principles will be taught throughout the course and students will manage an e-portfolio in real-time with imaginary funds. Prerequisites: FIN 600 and completion of all required Finance concentration courses or concurrent registration in final required concentration courses.

3 semester credits

FINANCE 762
Insurance
The focus in the insurance course is on financial, accounting, and management principles of the insurance industry. Emphasis is on interactions between selling new business and maintaining adequate levels of surplus. Topics include how an insurance company operates; how coverage and investment decisions impact an insurer’s financial position; contract premium setting, coverages and limitations; and the role of the regulators. Prerequisites: FIN 600 and completion of all required Finance concentration courses or concurrent registration in final required concentration courses.

3 semester credits

FINANCE 767
Real Estate
The focus in the insurance course is on financial, accounting, and management principles of the insurance industry. Emphasis is on interactions between selling new business and maintaining adequate levels of surplus. Topics include how an insurance company operates; how coverage and investment decisions impact an insurer’s financial position; contract premium setting, coverages and limitations; and the role of the regulators. Prerequisites: FIN 600 and completion of all required Finance concentration courses or concurrent registration in final required concentration courses.

3 semester credits

FINANCE 768
Financial Planning
This course will examine the interrelationship of the various investment vehicles available to meet the demands of financial planning. Topics covered include the fundamentals of financial planning, risk and insurance, tax planning, retirement planning and estate planning. FIN 600 and completion of all required Finance concentration courses or concurrent registration in final required concentration courses.

3 semester credits
Global Development and Peace

GLOBAL DEVELOPMENT AND PEACE 401-501
Graduate Seminar in Qualitative Methods
This course is designed to introduce the student to qualitative research methods. Topics might include Content Analysis, Fieldwork and Observation, and Interviewing. The use of Grounded Theory will be examined as well as methodological issues of data collection, reduction, display, and interpretation. It is recommended that the student have a familiarity with quantitative research methods before taking this class, as this class will build on previously explored research topics.
3 Semester Hours

GLOBAL DEVELOPMENT AND PEACE 402-502
Graduate Seminar in Quantitative Methods
This course is designed to build upon the students’ previous research methods experience. Assuming a familiarity with survey research as a methodology, this course will examine further quantitative research methods and procedures. Key emphasis will be placed on regression analysis and other statistical means of data interpretation, such as ANOVA, MANOVA, t-Tests, f-tests and others.
3 Semester Hours

GLOBAL DEVELOPMENT AND PEACE 411-511
Issues in Economic Development
Course Description: This course explores current issues in economic development including poverty and poverty alleviation, strategies to overcome poverty and underdevelopment including microfinance, the roles of multilateral financial institutions, globalization, and the Washington Consensus. The course will also explore the roles of regional arrangements and development institutions in attempts to overcome underdevelopment. The theoretical underpinning of the course lies in the many schools of thought that have produced explanations of the causes and consequences of development and underdevelopment. The course attempts to plot strategies to achieve goals of economic development.
3 Semester Hours

GLOBAL DEVELOPMENT AND PEACE 422-522
International Conflict Negotiation
This course examines theories about and sources of conflict (resource allocation and shortage; ideological, religious, and cultural disagreement; power distribution; perceptions of security; etc) to set the stage for conflict analysis and negotiation. In conflict analysis, the impact of cultural-linguistic systems on agreements and disagreements is examined. Culturally sensitive strategies of negotiation, conflict resolution, and mediation also are examined and practiced. Students will write several case reports on situations of conflict and also prepare a medium-length (20 pp. or so) term paper.
3 Semester Hours

GLOBAL DEVELOPMENT AND PEACE 427-527
Culture and International Development
The course will examine development theory and the underlying cultural assumptions of Western models of socioeconomic development. It will also study the innovative non-Western models of development such as micro-credit in South Asian and the Confucian-influenced models of development in parts of East and Southeast Asia. This course will identify the ways in which Western cultural assumptions can clash with the cultural underpinnings of many less developed countries. Using the case study method, learners will identify ways in which potential clashes are anticipated based on a region’s history and its cultural underpinnings. Learners will assess the strategies currently used to address development-related challenges and, when appropriate, propose alternative strategies.
3 Semester Hours

GLOBAL DEVELOPMENT AND PEACE 437-537
Global Economy and Terrorism
This course identifies the underlying conditions needed for the realization of a stable global economy and it highlights the ways in which terrorism impacts on the stability of markets and on investment and lending trends and on interest rates in affected regions and states. The course also explores the “practical” rationale for terrorism as well as terrorism’s ideological and philosophical roots as well as the actual historical trajectory of terrorist organizations and states. Through the case study method, we will review those venues where
GLOBAL DEVELOPMENT AND PEACE 560
Sustainable Development
This course focuses on issues related to sustainable development and preservation of the environment. To a significant extent, the course is reliant on the case study method. Through a geographically diverse series of case studies, the course will highlight the challenges faced by the development process due to the unmet social and quality of life demands of growing populations in less developed countries vis-à-vis the need to preserve and maintain the environment and endangered ecosystems. Through the case study method, strategies for caring for threatened energy resources will be assessed. The course will also use the case study method to understand the challenges that exist in developing strategies of economic growth that allow for significant improvement in the quality of life of local populations as well as the protection of wetlands, endangered species, hydrologic cycles and clean water supply. 3 Semester Hours

GLOBAL DEVELOPMENT AND PEACE 591
Internship
Students will complete an eight-week cross-cultural internship with international organization or overseas school, agency or company. A written report by the student and an assessment of the student’s performance by the agency where the studentinterns will be submitted as the basis of evaluation. 3 semester hours

GLOBAL DEVELOPMENT AND PEACE 598
Tutorial
The tutorial is offered at the completion of the internship. The tutorial invites students in the Master of Arts in Global Development and Peace program to reflect on their internship experience based on the student’s experiences prior to and during the tutorial. The tutorial also prepares students for the program’s comprehensive exam that includes both an oral and a written component and is conducted in the final weeks of the tutorial class. As a part of the tutorial students also assemble a portfolio of all of the major papers and projects that they have completed during the program and a written reflection on that work. Prerequisite courses: GLDP 591 and completion of at least 21 semesters hours of the GLDP program.

GLOBAL DEVELOPMENT AND PEACE 599
Thesis
As a final project demonstrating competency, students are asked to write and defend a thesis. 3 semester hours

GLOBAL DEVELOPMENT AND PEACE 600
Thesis Extension
1 semester hour
The following courses taught by the School of Business also are available to Global Peace and Development students. Full course descriptions are available under the primary course listings.

MGMT 561
Economic, Regulatory, Political, Cultural and Societal Issues in Environmental and Energy Management

MGMT 560
Foundations of Environmental and Energy Management

GRADUATE STUDIES IN BUSINESS 541 / MKTG 550
Global Market Management

GRADUATE STUDIES IN BUSINESS 562 / MGMT 598
Advanced Intellectual Property Management

GRADUATE STUDIES IN BUSINESS 511 / FIN 500
International Trade and Finance

GRADUATE STUDIES IN BUSINESS 524 / FIN 525
International Financial Management

GRADUATE STUDIES IN BUSINESS 528 / FIN 543
Technical Analysis & Trading

GRADUATE STUDIES IN BUSINESS 537 / MGMT 532
Global Program and Project Management

GRADUATE STUDIES IN BUSINESS 538 / MGMT 533
Information Technology Strategy and Governance

GRADUATE STUDIES IN BUSINESS 539 / MGMT 534
Strategic Sourcing and Vendor Management

GRADUATE STUDIES IN BUSINESS 580 / MGMT 523
Leadership, Teams & Managing Change

GRADUATE STUDIES IN BUSINESS 541 / MKTG 550
Global Market Management

GRADUATE STUDIES IN BUSINESS 543 / MKTG 543
Problems in Marketing Research

GRADUATE STUDIES IN BUSINESS 548 / MKTG 530
e-Marketing

GRADUATE STUDIES IN BUSINESS 549 / MKTG 551
Product Management, Innovation and Commercialization
Graduate Studies in Business

*Former course numbers for Graduate Studies in Business.

**Graduate Studies in Business 400**
(GSB 400/ACCT 400)
**Accounting Concepts**
Introduction to American financial accounting principles based on FASB, including the measurement, processing, and communication of accounting information for use by a variety of users including business owners, managers, creditors, prospective investors, and others interested in the financial condition of an entity and the results of its operations. Topics covered will include the accounting cycle, merchandising, services, fixed assets and corporate accounting issues. Prerequisite: Admission to graduate study.
3 semester hours

**Graduate Studies in Business 410**
(GSB 410/CON 400)
**Economic Analysis**
This is a course for managers in both micro and macro economics. Topics addressed will include the prevailing patterns of economic institutions, national income analysis, international trade, prices and production; economic development, market structure and consumer decision analysis, competition, monopoly and monetary policy issues. Prerequisite: Admission to graduate study.
3 semester hours

**Graduate Studies in Business 420** (GSB 420/FIN 400)
**Financial Management**
This course is intended to provide a practical and theoretical market valuation-oriented framework for analyzing financial decision problems faced by investors and corporations. Lectures and readings will provide an introduction to the Markowitz diversification concept, Portfolio Analysis, Capital Asset Pricing Model (CAPM), Arbitrage Pricing Theory (APT), project evaluation, mortgage problems and derivative securities like Interest Rate Swaps, Options and Futures, and related issues. Prerequisite: Admission to graduate study.
3 semester hours

**Graduate Studies in Business 430** (GSB 430/MGMT 400)
**Organizational Behavior**
This course permits students to examine both theory and practice of interpersonal, group process and organizational behavior. Individual and small group projects develop and illustrate principles of relationships, communications, role assignment, leadership and conflict management in organizations. Experiential designs permit learning through group participation, case analysis and individual problem solving. Prerequisite: Admission to graduate study.
3 semester hours

**Graduate Studies in Business 431**
(GSB 431/MGMT 450)
**Foundations of Business Process and Operations Management**
The student is introduced to process management methods which are fundamental to delivery of products and services. Topics covered include capacity analysis and planning, inventory management, design of jobs for quality and cost effectiveness, demand forecasting, work flow management, queuing theory, project management and total quality management. Prerequisite: Admission to graduate study.
3 semester hours

**Graduate Studies in Business 440**
(GSB 440/TEXT 400)
**Marketing Concepts**
The process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services, to create exchanges that satisfy individual, organizational, and societal objectives will be explored. The underpinnings of the marketing discipline will be taught through text, articles and class discussion. Mastery of these principles will come through a variety of individual and group assignments to create marketing solutions for real-world products. Prerequisite: Admission to graduate study.
3 semester hours

**Graduate Studies in Business 441**
(GSB 441/MKTG 400)
**Foundamentals of Information Technology**
An examination of information system goals, development, and utilization. This course develops the fundamental knowledge, philosophy, and skills necessary for requirements specification, development and utilization of computer-based information systems and how various businesses are developed and run in the world of e- and m-commerce and information technology. Prerequisite: Admission to graduate study.
3 semester hours

**Graduate Studies in Business 451** (GSB 451/ITIS 400)
**Fundamentals of Information Technology**
An introduction to basic statistical methodology and its applications to business decision making. Main topics include probabilities, discrete and continuous probability distributions, probability sampling techniques, sampling distributions, interval estimation and hypothesis testing. Students are encouraged to use software packages to perform statistical analysis. Prerequisite: Admission to graduate study.
3 semester hours

**Graduate Studies in Business 452** (GSB 452/STAT 400)
**Statistical Decision Theory**
This course provides an introduction to statistical decision theory, and its applications to business decision making. Main topics include probabilities, discrete and continuous probability distributions, probability sampling techniques, sampling distributions, interval estimation and hypothesis testing. Students are encouraged to use software packages to perform statistical analysis. Prerequisite: Admission to graduate study.
3 semester hours

**Graduate Studies in Business 500**
(GSB 500/ACCT 500)
**Managerial Accounting**
This course provides an introduction to managerial and cost accounting used by management in conducting daily operations, planning future operations, and developing overall business strategies. The objective is to gain an understanding of the role of accounting in the management process of planning, directing, controlling, and improving the organization’s objectives (goals) and to translate those objectives into a course of action. Prerequisite: Graduate Studies in Business 400.
3 semester hours

**Graduate Studies in Business 501**
(GSB 501/ACCT 501)
**Intermediate Accounting**
This course applies generally accepted accounting principles to the preparation of financial statements, including balance sheets, income statements, statement of cash flows, and retained earnings statements. Accounting for leases, employee benefits, deferred taxes and other specialized accounting topics will also be explored. Prerequisite: Graduate Studies in Business 400.
3 semester hours

**Graduate Studies in Business 502**
(GSB 502/ACCT 510)
**International Accounting**
Examines the diverse accounting practices employed by different countries and their effects on multi-national firms’ operation, as well as
efforts to standardize IAS/FASB rules. Performance evaluation in multi-national enterprises, impact of differences in national accounting principles and practices, and accounting under central planning is also examined. Discussion topics include the critical problem areas such as taxation, transfer pricing, financial planning, and information systems within an international framework. Prerequisite: Graduate Studies in Business 400. 3 semester hours

GRADUATE STUDIES IN BUSINESS 504 (GSB 504/ACCT 520)
Auditing
Laws and methods for conducting commercial audits will be examined. Ethics, attestation standards, controls and fraud detection are among the topics that will be examined. Application of generally accepted accounting practices to the review of financial statements, as well as the responsibility of the certified public accountant to the various users of the statements will also be explored. Prerequisite: Graduate Studies in Business 400. 3 semester hours

GRADUATE STUDIES IN BUSINESS 505 (GSB 505/ACCT 530)
Fundamentals of Personal Taxation
An overview of the major types of personal taxes used by governments to raise revenue. This course places an emphasis on the taxation of individuals and tax planning considerations for the individual. Prerequisite: Graduate Studies in Business 400. 3 semester hours

GRADUATE STUDIES IN BUSINESS 506 (GSB 506/ACCT 511)
Advanced Financial Accounting
An overview of selected accounting topics of interest to international business students. Topics include current practice in accounting for business mergers or acquisitions, accounting for stock investments in affiliated companies, an introduction to consolidated financial statements, accounting for branch operations and an introduction to accounting for state and local governmental units. Prerequisite: Graduate Studies in Business 400. 3 semester hours

GRADUATE STUDIES IN BUSINESS 508 (GSB 508/ACCT 502)
Financial Reporting and Analysis
An overview of generally accepted accounting principles underlying the content of financial statements including alternative inventory valuation methods, lease accounting, segment reporting and reporting for employee benefit plans. Study and analysis of actual corporate annual reports and government and not-for-profit financial statements. Prerequisite: Graduate Studies in Business 400. 3 semester hours

GRADUATE STUDIES IN BUSINESS 509 (GSB 509/ACCT 531)
Fundamentals of Business Entity Taxation
An overview of the major types of corporate and business entity taxes used by governments to raise revenue. This course places an emphasis on the tax issues of different business forms, tax management and tax planning considerations for the business entity. Prerequisite: Graduate Studies in Business 400. 3 semester hours

GRADUATE STUDIES IN BUSINESS 510 (GSB 510/MGMT 550)
Managerial Economics
This course is an advanced examination of the role of economics in management decision-making, focusing on applied price theory with case analysis. The course provides advanced level analysis and application of micro and macro economic theories to managerial issues and the decision making process. Prerequisite: Graduate Studies in Business 410. 3 semester hours

GRADUATE STUDIES IN BUSINESS 511 (GSB 511/FIN 500)
International Trade and Finance
International trade and finance in the world economy. Topics include the foreign exchange market, exchange rate behavior and international parity conditions, foreign exchange risk management, and global debt and equity financing. The international environment within which such management is conducted will also be discussed. Prerequisite: Graduate Studies in Business 410, 420 and 452. 3 semester hours

GRADUATE STUDIES IN BUSINESS 520 (GSB 520/FIN 505)
Advanced Financial Management and Policy
This course is intended to provide advanced techniques for financial management, from the viewpoint of both the financial officer or manager and creditor or stockholder. The course will examine recent developments in both financial theory as well as on Wall Street, including advanced derivatives, for example exotic options and real options, etc. Decisions are analyzed using sources and uses of funds, capital budgeting, portfolio theory and the capital asset pricing model frameworks. Prerequisite: Graduate Studies in Business 420. 3 semester hours

GRADUATE STUDIES IN BUSINESS 521 (GSB 522/FIN 541)
Investment Analysis
This course is intended to provide a practical and theoretical market valuation-oriented framework for analyzing financial decision problems faced by investors. Topics introduced will include Markowitz diversification concept, Portfolio Analysis, Capital Asset Pricing Model (CAPM), Arbitrage Pricing Theory (APT), and derivative securities, like Interest Rate Swap, Options and Futures. This course will also cover topics on Financial Engineering for the new financial innovation. Prerequisite: Graduate Studies in Business 420. 3 semester hours

GRADUATE STUDIES IN BUSINESS 522 (GSB 523/FIN 542)
Financial Futures, Options, and Swaps
This course will provide a practical and theoretical framework for analyzing financial decision problems faced by investors using options and related financial instruments. Real price data will be used to practice strategies for risk arbitrages and hedging using computer software. Strategies using various kinds of options will be analyzed and arbitrage opportunities will be developed and analyzed. Students will also learn how to design their own strategies for different situations. Equity, Index, Futures, Foreign currency, Interest Rate, and Commodity options are all analyzed. Prerequisites: Graduate Studies in Business 420. 3 semester hours

GRADUATE STUDIES IN BUSINESS 524 (GSB 524/FIN 525)
International Financial Management
This is an advanced course in international financial management covering various aspects
of financial management of multinational enterprises (MNEs), including global financial markets, international portfolio investment, cross-border direct investment, and foreign exchange and interest rate risk management. Prerequisites: Graduate Studies in Business 420. 3 semester hours

GRADUATE STUDIES IN BUSINESS 527 (GSB 527/Fin 540)  
Financial Analysis and Modeling Methodology  
This class offers practical exposure to quantitative financial modeling using the analytical tools available in Excel. Theories addressed and modeled include Markowitz Mean Variance Model, Black-Scholes and Binomial models, immunization strategies and other important financial modeling theories. Prerequisites: Graduate Studies in Business 420. 3 semester hours

GRADUATE STUDIES IN BUSINESS 528 (GSB 528/Fin 543)  
Technical Analysis & Trading  
This is a hands-on course that teaches principles and methods of selecting and managing stocks using professional trading software. Theoretical concepts and trading principles will be taught throughout the course and students will manage an e-portfolio in real-time with imaginary funds. Prerequisite: Graduate Studies in Business 420. 3 semester hours

GRADUATE STUDIES IN BUSINESS 530 (GSB 530/MGMT 530)  
Foundations of Management and Organization  
Concepts, methods and research, which are applicable and useful in the management of organizations, are broadly surveyed to increase student's awareness of the breadth and complexity of management processes. Fundamentals of business strategy, organizational structuring, leading, communicating and controlling are examined within contexts of the historical evolution of management thought, concern for high business ethics, and meeting global competition. Prerequisite: Graduate Studies in Business 430. 3 semester hours

GRADUATE STUDIES IN BUSINESS 531 (GSB 531/MGMT 531)  
Small Business and Entrepreneurship  
A comprehensive review of the marketing, operational, financial, product, service and business strategy and plans that must be mastered and developed as foundation for start-up of a small business or entrepreneurial enterprise. In addition, the growth of existing business, through Intrapreneurship, is also covered. Students are required to develop a comprehensive business plan for a business of their choice and which is acceptable to the instructor. Prerequisites: Completion of all core courses. 3 semester hours

GRADUATE STUDIES IN BUSINESS 532 (GSB 532/MGMT 540)  
Advanced Business Process and Operations Management  
Students in this course apply the methods from GSB 431 to projects of their own design and choosing, employing systems designed for application to process management issues. Emphasis is put on quantitative and databased problem-solving and decision-making processes applied by the professional manager for the improvement of product or service development quality and customer satisfaction. Business process improvement techniques such as lean, SixSigma and others will be covered. Prerequisite: Graduate Studies in Business 431 and 452. 3 semester hours

GRADUATE STUDIES IN BUSINESS 533 (GSB 533/MGMT 511)  
Human Resources Management.  
An in-depth survey of current theory, research and practice in the management of human resources in organizations. Job design, recruitment, selection, performance feedback, goal-setting, training, employee rights, safety, compensation and benefits issues are reviewed within the context of their application in the United States as a world standard for such practices, with comparisons to customs and practices in the international arena. Intensive research into current human resource topics are required. Prerequisite: Graduate Studies in Business 430. 3 semester hours

GRADUATE STUDIES IN BUSINESS 534 (GSB 534/MGMT 512)  
Organizational Development  
The theory and practice of organization development and evolution is explored. Principles of managing change are discussed. Types and levels of intervention are evaluated. Sources of resistance to organizational change are examined and methods for overcoming that resistance are studied. Students apply theory and technology experientially to intervention projects with groups or organizations they currently have access to and evaluate the effectiveness of the approaches used. Prerequisite: Graduate Studies in Business 430. 3 semester hours

GRADUATE STUDIES IN BUSINESS 535 (GSB 535/MGMT 535)  
Finance and Accounting for Non-financial Managers  
This course will provide managers with the skills required to read, interpret and apply information about an organization's financial position. Managerial accounting and finance concepts will be presented, followed by financial statement analysis. Topics presented from a managerial perspective will include how accounting data is generated during business operations, how financial statements are created, management of finance to maximize return on investment and stakeholder equity and other related topics. Students will be required to participate in case work applying the principles presented in the class. This course is not intended for those seeking to pursue a career in either the financial or accounting services fields. Prerequisite: Graduate Studies in Business 400 and 420. 3 semester hours

GRADUATE STUDIES IN BUSINESS 536 (GSB 536/MGMT 522)  
Conflict & Negotiation  
The development of conflict-management and negotiating skills are taught in this course with particular emphasis on achieving effective and efficient outcomes within a global and multicultural context. Experiential exercises, readings and discussions will demonstrate various strategies for a broad range of negotiating scenarios, e.g., buyer-seller, management-labor, personal salary increase, etc. Prerequisite: Graduate Studies in Business 430. 3 semester hours

GRADUATE STUDIES IN BUSINESS 537 (GSB 537/MGMT 532)  
Global Program and Project Management  
This course focuses on the managerial aspects of how to more effectively manage, plan and execute programs/projects with a focus on high quality deliverables arriving on time, within budget, within scope and to the customer's satisfaction. Areas covered will include program and project management life cycle phases, executive sponsorship, portfolio investment management selection and prioritization, requirements, scope and project charters, planning, development, estimating, staffing, leadership, scheduling, risk management, change management, project metrics, vendor
integration and management and other related topics. This course is based on current and emerging best practices and principles. It will also discuss PM certification requirements and provide real world case studies. Prerequisite: Graduate Studies in Business 430 and 431.
3 semester hours

GRADUATE STUDIES IN BUSINESS 538 (GSB 538/ MGMT 533)
Information Technology Strategy and Governance
This course covers information technology plans, strategy, business/IT alignment, governance, environmental, ethical, economic, regulatory, compliance and technical issues and trends with a focus on planning, organizing, justifying, controlling, implementing and integrating concepts and real world experiences. It discusses business and IT balanced scorecards, metrics and key performance indicators. Current and emerging best business and technology strategy and governance best practice frameworks such as COBIT, CMMI, Pmbok, Kano, Voc, Qdf, Itim, Prince2, Itil, select ISO standards and others will be covered with emphasis on lessons learned, critical success factors and pragmatic solutions. Individual and team projects and case studies are integrated into the course. Prerequisite: Graduate Studies in Business 430.
3 semester hours

GRADUATE STUDIES IN BUSINESS 539 (GSB 539/ MGMT 534)
Strategic Sourcing and Vendor Management
This course covers the rewards and risks of outsourcing and vendor management and identifies where outsourcing should be used and not used. The objectives of the course are to help students understand how to plan, direct, manage and more effectively participate in outsourcing initiatives in terms of the feasibility of outsourcing (off-shore, near-shore, rural-shore, best shore), vendor selection, contract negotiation, vendor management and evaluation, risk assessment and terminating outsourcing deals. Prerequisite: Graduate Studies in Business 430 and 431.
3 semester hours

MANAGEMENT 541
Foundations of Bio Tech Sciences and Management
This course covers the comprehensive scope of knowledge of major issues and technologies in the bio technology field. This includes regulatory, robotic, imaging, cybernetics, bio-informatics, genetics, ethics and related areas. Individual and team projects and case studies are integrated into the course. Prerequisite: Graduate Studies in Business 530 and GSB 451.
3 semester hours

MANAGEMENT 551
Foundations of Doing Business in India
The course provides the fundamental knowledge of how to do business in India. It covers the economic, financial (tax), political, cultural, regulatory, infrastructure, environmental, marketing, trade, labor force and education system, demographic and technology issues, trends and practices. It identifies the various trade agreements and their implications in doing business in or with Chinese organizations. It also exposes students to U.S. federal, state and local government resources available to help establish business and trade relationships in China. Prerequisite: Graduate Studies in Business 410, 420 and 430.
3 semester hours

MANAGEMENT 552
Foundations of Doing Business in China
The course provides the fundamental knowledge of how to do business in China. It covers the economic, financial (tax), political, cultural, regulatory, infrastructure, environmental, marketing, trade, labor force and education system, demographic and technology issues, trends and practices. It identifies the various trade agreements and their implications in doing business in or with Chinese organizations. It also exposes students to U.S. federal, state and local government resources available to help establish business and trade relationships in China. Prerequisite: Graduate Studies in Business 410, 420 and 430.
3 semester hours

MANAGEMENT 560
Foundations of Environmental and Energy Management
This course covers the assessment of current and potential environmental and energy management issues, opportunities and threats. Key issues such as global warming, pollution, global energy supply and demand needs will be discussed. Alternative energy sources are reviewed, including examination of energy technologies in each fuel cycle stage for fossil (oil, gas, synthetic), solar, biomass, wind, hydro, nuclear, and geothermal energy types, along with storage, transmission, and conservation issues. Prerequisite: Admission to the graduate program.
3 semester hours

MANAGEMENT 561
Economic, Regulatory, Political, Cultural and Societal Issues in Environmental and Energy Management
This course will focus on the relationship and impact that international relations, international business, and foreign policy have on world trade, commerce, and finance with respect to environmental and energy management issues. The course will provide the student with a better understanding of how the complexity of international differences affects political, economic, cultural and social behaviors related to environmental and energy policies, regulations and international commerce. Prerequisite: Graduate Studies in Business 570.
3 semester hours

MANAGEMENT 570
Foundations of Healthcare Management and Administration
This course focuses on a systematic exploration of the health care system in the United States, government interactions and regulations, delivery systems, healthcare insurance and financing, health care providers, innovations in healthcare services and alternative strategies. Prerequisite: Admission to the graduate program.
3 semester hours

MANAGEMENT 571
Foundations of Service Management and Engineering
With the rapid growth of the services industry, this course integrates topics from eco-
nometrics, engineering, law, technology and organizational theory to deal with how firms change over time to become more service oriented or become service business and the mechanisms and tools by which they seek innovation and competitive advantage in the service sector. The services life cycle is reviewed. In addition, enabling technologies and how different disciplines help to answer questions about how business services combine, evolve, standardize and mature are covered. Prerequisite: Graduate Studies in Business 410, 451, 453 and 560.

3 semester hours

GRADUATE STUDIES IN BUSINESS 540
(GSB 540/MKTG 540)
Buyer Analysis
This course will take up special topics in buyer behavior. The leading models of buyer behavior in both industrial and consumer settings will be analyzed. The qualitative and quantitative marketing research tools necessary to understand buyer behavior dynamics in any market will be stressed. Cases will be drawn from market situations around the world. Prerequisite: Graduate Studies in Business 440.

3 semester hours

GRADUATE STUDIES IN BUSINESS 541
(GSB 541/MKTG 550)
Global Market Management
Strategy planning, implementation and control for market entry and development. Topics include social, political and economic changes affecting marketing opportunity; focused versus dispersed marketing efforts; marketing in developed and undeveloped countries; and marketing systems required for the various strategic alternatives. Prerequisite: Graduate Studies in Business 440.

3 semester hours

GRADUATE STUDIES IN BUSINESS 542
(GSB 542/MKTG 560)
Mass Merchandising & Retailing
An analytical study of national and multinational mass merchandising organizations that include origin, concepts, operations, technology and profitability. Comparison of in-store mass-merchandisers and non-store catalog retailers, on-air merchandisers and on-line marketers. Students prepare a catalog, an on-air, and an e-tailing presentation using a mass market approach. Students utilize “CATALOG”, “STORY-BOARD”, “SHOW and SELL”, and “VIRTUAL MERCHANDISING” CAD/CAM software to prepare presentations. Prerequisite: Graduate Studies in Business 441 and approval of faculty advisor.

3 semester hours

GRADUATE STUDIES IN BUSINESS 543
(GSB 543/MKTG 543)
Problems in Marketing Research
Approaches to sampling, designing survey instruments, developing the right statistical design for analysis of data and analyzing resultant data both quantitatively and qualitatively are explored in this course. Effective methods for organization and reporting of research results are studied and put to practice by the student. Effective research methodology is emphasized. Prerequisite: Completion of all Core courses.

3 semester hours

GRADUATE STUDIES IN BUSINESS 544
(GSB 544/MKTG 561)
Fashion & Retail Buying
Inventory and stock control procedures, analysis of consumer demand in the buying and marketing of fashion products. Six month budget planning of sales, goods and promotional activities. Spreadsheets and computer applications are used to plan, analyze and adjust retailing activities by revision in quantities and merchandise assortments. Practice in buying from a variety of domestic and international resources. Prerequisite: Graduate Studies in Business 441 and approval of faculty advisor.

3 semester hours

GRADUATE STUDIES IN BUSINESS 545
(GSB 545/MKTG 562)
Advanced Textiles & Product Development
A study of the history of textiles and of current material resources, production, distribution, and marketing techniques and consumption within the textile and apparel industries and their interrelationships. A portfolio of the history of fabrics and a swatch booklet of fashion fabrics is required. Prerequisite: Graduate Studies in Business 441 and approval of faculty advisor.

3 semester hours

GRADUATE STUDIES IN BUSINESS 546
(GSB 546/MKTG 552)
Services Marketing
The course addresses the unique problems of marketing intangibles in the broad spectrum of service industries. The course focuses on the development, implementation and control of strategy, systems and people for effective service operations. This is a case study course. Prerequisite: Graduate Studies in Business 440.

3 semester hours

GRADUATE STUDIES IN BUSINESS 548
(GSB 548/MKTG 530)
e-Marketing
This course examines the nature of marketing in the evolving virtual worlds of Internet and mobile commerce and the impact of emerging technologies on the strategy of traditional “brick-and-mortar” companies. Various business and marketing models will be analyzed and evaluated. This course requires extensive Internet research for student projects. Prerequisite: Graduate School of Business 440.

3 semester hours

GRADUATE STUDIES IN BUSINESS 549
(GSB 549/MKTG 551)
Product Management, Innovation and Commercialization
This course covers new product development, innovation and commercialization, as well as the product management life cycle. Topics covered include the feasibility and investment prioritization of new products or product enhancements, raising capital for new product development, market and customer needs analysis, make versus buy alternatives and product launch and commercialization issues and considerations, including promotion, pricing, distribution, competition, pre and post sales support, systems and infrastructure support, customer service and related areas. Student will work on individual and team projects that will include the development of a new product market/business plan. Prerequisite: Graduate School of Business 431/Graduate School of Business 420.

3 semester hours

GRADUATE STUDIES IN BUSINESS 551 (GSB 551/ITIS 540)
Decision Modeling and Simulation
Study of the formulation and simulation of business models to enhance the decision making process. Topics include scope, nature and types of simulation models and languages. Emphasis is on basic concepts, techniques in modeling, interpretation, validation, and optimization. Computer simulation and queuing models will be developed and evaluated. Prerequisites: Completion of all Core courses, advanced Excel skills and comfort in applying statistical techniques. Instructor may test students for acceptable knowledge during the first class.

3 semester hours
Graduate Studies in Business

Graduate Studies in Business 552 (GSB 552/ITIS 530)
Internet Applications and Opportunities

The focus of this course is to acquaint the student with the structure of electronic and mobile commerce through incorporating technologies. Subjects include e-commerce vs. e-business, design vs. technology, e-business architecture, effective web-site design and maintenance, HTML, XML, CRM, ERP, standards, security, information search and retrieval, and data warehousing. Course format includes discussion and case analysis, and both individual and small group projects. Prerequisites: Graduate Studies in Business 451. Instructor may test students for acceptable knowledge during the first class. 3 semester hours

Graduate Studies in Business 553 (GSB 553/ITIS 550)
Information Technology Security

This course covers the fundamentals of information technology security including threat and risk management, impact analysis and mitigation strategies. It identifies the major causes of threats (e.g. natural and man-made) and develops contingency and disaster prevention and recovery plans. It discusses information technology continuity plans and strategies. It deals with physical, cyber and personnel security. It also defines the overall responsibilities for the protection of an organization's information technology assets. Prerequisites: Graduate Studies in Business 451. Instructor may test students for acceptable knowledge during the first class. 3 semester hours

Graduate Studies in Business 554 (GSB 554/ITIS 520)
Information Systems Requirements, Analysis, Design and Deployment

A course in the analysis, design, and development of business systems. Students will learn a variety of development models and tools available for systems development, deployment and management. The role of all systems constituents is addressed through discussion of the specification, decision-making, and review of designs, documentation, program specifications, and system improvement. Course level and content is suitable for managerial as well as the more technically oriented. Prerequisites: Graduate Studies in Business 451 and 555. Instructor may test students for acceptable knowledge during the first class. 3 semester hours

Graduate Studies in Business 555 (GSB 555/ITIS 551)
Enterprise Architecture and Knowledge Management

This course covers enterprise data issues and opportunities from a knowledge management and business intelligence perspective. It focuses on the enterprise data architecture, data policy, data distribution, database management systems, data warehouse, mining and mart, business intelligence, knowledge management, chief architect and capturing lessons learned. Prerequisites: Graduate Studies in Business 451. 3 semester hours

Graduate Studies in Business 557 (GSB 557/ITIS 552)
Information Services Infrastructure, Service Management and Delivery

This course covers the fundamentals of data networking, including signaling, routing and technologies underlying the explosive growth of e- and m-commerce. The managerial issues relevant to network utilization, security and service delivery will be addressed as the underlying communications technologies are discussed. Prerequisite: Graduate Studies in Business 451. 3 semester hours

Graduate Studies in Business 559 (GSB 559/ITIS 553)
Enterprise Information Systems

This course will examine the role of information systems in business and how they provide the information required by management. Modular, best of breed, and other systems strategies and configurations, as well as their managerial implications, will be examined. The course is case-based and provides the student hands-on experience learning and utilizing Software's MAS200 ERP system to complete case problems. Other enterprise systems will be discussed as well, including SAP and Oracle. Prerequisite: Graduate Studies in Business 451. 3 semester hours

Information Technology 521 (ITIS 521)
Healthcare Management and Administrative Technologies and Systems

This course covers the health care systems, processes and technologies as they relate to the constituents in the health care industry – patients, providers, regulators, insurance companies and their interactions. Also covered are electronic records, privacy and the applicable regulations. Prerequisite: Graduate Studies in Business 451. 3 semester hours

Graduate Studies in Business 560 (GSB 560/MBMB 580)
Business and Society: Intellectual Property and Anti-Trust Law

This course reviews the basic principles of United States Intellectual Property law (patents, copyrights, trade secrets, trademarks and the protection of ideas), with accompanying ethical issues; and explains how international treaties (e.g. Berne Convention) have affected global trade. It covers select anti-trust laws in the United States, and what they cover. It analyzes to what extent parties outside the United States, doing business in or with the United States, are subject to United States' anti-trust and intellectual property laws. Prerequisite: Admission to graduate study. 3 semester hours

Graduate Studies in Business 561 (GSB 561/MBMB 597)
Business Strategy (Capstone)

A capstone course dealing with the development and implementation of business strategy and plan within a framework of ethical decision-making, globalization and managing accelerating change. It tests the capability of the student to apply all prior learning to solve actual strategic management problems. The final project of this course is project-based and shall constitute, therefore, an outcome assessment of what the student has learned in the MBA program. This project, normally an extensive and comprehensive case study, will be graded by several faculty members representing different and relevant disciplines. Prerequisite: Final semester for completion of M.B.A. Program. 3 semester hours

Graduate Studies in Business 562 (GSB 562/MBMB 598)
Advanced Intellectual Property Management

Protection of a business' intellectual property assets can make the difference between success and failure. This course will discuss the strategies and methods available for protection of intellectual property in the global environment. Students will work through the American patent, copyright and trademark processes, including how to prepare and file applications for each. Students completing this course should be able to pass the Patent Agent exam. Global business issues, such as protection of ideas in an off-shoring arrangement, IP co-development and other issues, will also be addressed. Prerequisite: GSB 560, MEEG 490 or instructor approval. 3 semester hours
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<tr>
<td>GSB 570/MGMT 539</td>
<td>International Issues</td>
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<td>This course focuses on current international issues that affect business operations at home and abroad. Changing business environments are discussed and analyzed. Students are required to formulate new global business strategies in light of emerging international trends and events. In some cases, students may supplement their study by field trips and on-site analysis. Prerequisite: Graduate Studies in Business 440. 3 semester hours</td>
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<tr>
<td>GSB 580/MGMT 523</td>
<td>Leadership, Teams &amp; Managing Change</td>
<td></td>
<td>This course focuses on the development of leadership skills important in the effective management of change. Through role-playing exercises, videotapes, diagnostic tools, seminar discussion, selected readings, and a group project, students will learn theory and build interpersonal skills necessary for providing leadership in diverse multicultural groups and organizations. The course will address the managerial issues present in organizations undergoing accelerating change and adopting a culture of creativity. Creating and sustaining high performance multicultural and interdisciplinary traditional and virtual teams is covered. Prerequisite: Graduate Studies in Business 430. 3 semester hours</td>
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<tr>
<td>GSB 581/MGMT 531</td>
<td>Business Games</td>
<td></td>
<td>Each student-executive will assess changing industry and competitive conditions, evaluate the strategies of competitors, carefully craft ways to secure a competitive advantage to increase their company’s market share by correctly forecasting industry-wide demands for individual market segments, and plan in advance for production capacity expansions to take advantage of growing market demands. The student gets the opportunity to make decisions testing his or her ability to apply logic, insight, judgment and common sense and evaluate the resulting impact on profits, stockholder equity, customers or clients and investors. Prerequisite: Final semester for completion of MBA program or approval by faculty advisor. 3 semester hours</td>
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<tr>
<td>GSB 582/MGMT 596</td>
<td>Internship</td>
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<td>This course should be taken towards the end of the student’s program of study and requires the approval of the student’s faculty advisor. 3 semester hours</td>
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<tr>
<td>GSB 595</td>
<td>Independent Study in Business</td>
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<td>This course is reserved for a special project that cannot be done any other way and to help a student complete the MBA when no other alternative is available. Prerequisite: Written approval to register by the Director and the Department Chair. 3 semester hours</td>
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<tr>
<td>GSB 599</td>
<td>Thesis Project</td>
<td></td>
<td>Completion of a report based on field, library and institutional research to demonstrate ability to conduct investigations in a managerial discipline and simulation techniques. Prerequisite: Final semester of graduate study and approval of faculty advisor. 3 semester hours</td>
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<tr>
<td>GSB 599</td>
<td>Thesis Project</td>
<td></td>
<td>Completion of a report based on field, library and institutional research to demonstrate ability to conduct investigations in a managerial discipline and simulation techniques. Prerequisite: Final semester of graduate study and approval of faculty advisor. 3 semester hours</td>
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**Information Systems and Knowledge Management**

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<tr>
<td>GSB 580/MGMT 560</td>
<td>Information Systems and Technology</td>
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<td>Information technology has become a key component for accomplishing strategic and operational goals in organizations today. As such, organizations expect their new employees to have a basic understanding of information technologies. To accomplish organizational goals and advance one’s career path, one needs to understand and apply information technologies effectively, efficiently, and creatively. The purpose of this course is to provide an introduction to information systems and technology and to familiarize students with the fundamental concepts and principles of information systems. The course is targeted for graduate students who have little or no background in information systems. Therefore, it focuses on breadth of coverage rather than depth in any specific area. Prerequisites: Admission to graduate study. 3 semester credits</td>
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**Information Systems and Knowledge Management Development and Design**

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<tr>
<td>GSB 539/MGMT 569</td>
<td>Information Systems and Knowledge Management</td>
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<td>This course introduces a variety of development methods and tools available for information systems development and its management. This is a hands-on course and is targeted at beginning graduate students who have basic knowledge in the area of MIS. Topics to be covered include techniques and issues related to software development life cycle (SDLC), systems analysis and systems design along with other topics such as BPR (Business Process Reengineering) and ERP (Enterprise Resource Planning). Systems analysis and design methods covered in this course include data flow diagram (DFD) and entity-relationship (ER) approach. Prerequisites: ITKM 600 and completion of all core courses or concurrent registration in final core courses. 3 semester credits</td>
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**Knowledge Management and Business Intelligence**

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<tr>
<td>GSB 560</td>
<td>Knowledge Management and Business Intelligence</td>
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<td>This course will explore various issues of creating, storing, sharing and applying knowledge in organizational environment. The course introduces guiding theories and concepts of knowledge management and examines various tools used in the processes. Then the course also explores business and management topics in knowledge management, including general issues in evaluating informal systems like knowledge management systems and the relationship of knowledge management to the work, etc. Prerequisites: ITKM 600 and completion of all core courses or concurrent registration in final core courses. 3 semester credits</td>
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**Database Organization and Management**

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<tr>
<td>GSB 561</td>
<td>Database Organization and Management</td>
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<td>This course introduces the fundamental concepts and implementations of the relational database systems. Most of class time will be spent on the relational model and SQL as well as the Entity-Relationship model. You will be proficient in designing and programming database systems using Database management systems such as MS ACCESS. We also will focus on the web-based database design using Visual Basic as a frontend. Prerequisites: ITKM 600 and completion of all core courses or concurrent registration in final core courses. 3 semester credits</td>
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Information Systems and Knowledge Management • Instructional Technology

Information Systems

AND KNOWLEDGE MANAGEMENT 655
Business Programming with Visual Basic .Net
The purpose of this course is to provide an introduction to a modern business programming. This course is designed to provide students with the fundamental concepts and implementations of a newly developed programming language (Visual Basic .Net). It is designed for students who have little or no background in programming languages. Learning any programming language needs lots of hands-on practices, so students are expected to practice themselves what they learn in class. Prerequisites: ITKM 600 and completion of all core courses or concurrent registration in final core courses.
3 semester credits

Information Systems

AND KNOWLEDGE MANAGEMENT 720
Electronic and Mobile Business
The goal of this course is to prepare current and future executives, managers, and strategists to be leaders and create value in the New Economy – to gain understanding and insight on how the functions of management and marketing in the New Economy have changed as well as how new technology and media forms have created a radically different business environment. The course examines the impact of the evolving virtual worlds of Internet and mobile commerce on the strategy of traditional “brick-and-mortar” companies. Up-to-date information will be utilized from current publications to provide the student with the ability to work in the new wireless world. This new business frontier requires most firms to significantly change their business strategy and presents unprecedented new opportunities for fast acting entrepreneurs. Prerequisites: Completion of all required Information Technology and Knowledge Management or Marketing required concentration courses or concurrent registration in final required concentration courses. Course is Cross-Listed with MKTG 720.
3 semester credits

Information Systems

AND KNOWLEDGE MANAGEMENT 735
Seminar in Data Warehousing and Mining
The course will provide students with fundamental concepts in building a large scale database system in conjunction with knowledge acquired from the Database Organization and Management (ITKM 654) course. The course will introduce major data storage tools useful in data mining such as data warehousing, data mart and OLAP (On-Line Analytic Processing), then discuss the relevant theories and concepts relating to data mining and its applications. This course requires extensive involvement from students. Prerequisites: ITKM 654 and completion of all required Information Technology and Knowledge Management required concentration courses or concurrent registration in final required concentration courses.
3 semester credits

Instructional Technology

INSTRUCTIONAL TECHNOLOGY 600
Cognitive Foundations of Education
Cognitive Foundations of Education
This course explores cognitive models of understanding, learning and memory, with applications to instruction. Students will use cognitive and neural net models to design
Instructional Technology

learning environments, and examine the effects of using various technologies on cognition and performance improvement.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 605
Instructional Systems Design
Examines strategies, trends, issues and research findings related to the design and development of standards-based instructional systems and programs. Focuses on both behavioral and cognitive strategies for instructional design including the theory and research background related to each approach. Students will apply these strategies in assessment of needs, analysis, design, development, management and evaluation of an instructional system or program. Requires development of an instructional program or unit for a teaching or training application.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 606
Technology, Methods and Materials
Covers technology-enhanced instructional methods and curriculum development. Students will create a unit plan consisting of a set of lessons that integrate the use of technology in teaching and learning. Also cover fundamentals of classroom management.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 610
New Technologies for Learning 1
Covers creation of learning objects, including text, raster/vector graphics, animations, slideshows, conferencing components, and videos for instructional Web. Use of digital image capture equipment, including digital cameras, camcorders, and scanners. Also covers basic HTML, PDF and OCR. Final project will be integration of elements into an instructional Web.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 615
New Technologies for Learning 2
A continuation of New Technologies for Learning 1, completing coverage of learning objects and introducing their utilization in the implementation of instructional systems. Students will complete projects via integration of components using high-level authoring systems and programming.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 617
Visually Enhanced Curriculum Development
An introduction to the principles of visualization for the creation and enhancement of both screen-based and paper-based instructional materials. Using a digital tablet accessory or integrated screen tablet, students will work with image editing software to develop digital drawing, painting, composition, and layout techniques. Project work culminates in an integrated set of visually enhanced instructional resources.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 618
Audio Enhanced Curriculum Development
An introduction to the principles of audio for the creation and enhancement of classroom ambiance, instructional presentations, and interactive instructional materials. Using audio and midi recording/editing software, students will develop techniques for the creation, editing, and embedding of voice segments, sound effects, and music sequences. Project work culminates in an integrated set of audio enhanced instructional resources.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 620
Multimedia Curriculum Development
An introduction to multimedia authoring for classroom and/or training applications using Flash. Students will collaborate on the development of a graded sequence of laboratory projects, and then produce a unique presentation suitable for use in their instructional setting.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 625
Digital Video for Instruction
A practical introduction to digital video and its applications in instruction. Topics include capture technologies, camera techniques, non-linear editing, effects, sound engineering, lighting, pre/post-production, and distribution.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 630
Networks and Distributed Learning Systems
Covers concepts, security, acceptable use, and applications of client-server, peer-to-peer, and wireless networks in distributed learning environments. Hands-on activities utilize standard open source network operating system solutions (Linux/Moodle).
3 semester credits

INSTRUCTIONAL TECHNOLOGY 631
Cyber Ethics and School Law
Examine the rights and responsibilities of teachers and students as they interact in the world of technology. Course content includes: privacy on the internet, spamming, protecting children, copyright law, cryptography issues, causing personal harm through the internet as well as harassment in cyberspace. Covers the effect of the IDEA and ADA and other legislated mandates, including Title 17 – The Children’s Internet Protection Act on teachers in the classroom. Issues of diversity (learning, cultural, linguistic, gender, sex, etc.) in relation to the law, technology, and classroom teaching are discussed and strategies of dealing with these issues are developed. Students will demonstrate their ability to use Lexis/Nexis as a resource and search tool.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 633
Administrative Computing Applications
Covers applications of computers in public school central and district office operations, and independent schools. Topics include budget and equipment management, payroll, grades, scheduling, billing, school store, admissions, networks, development, integrated and distance learning systems, project management, distributed file management, and data warehousing. Use of decision support systems and what-if analysis for strategic planning is also addressed.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 640
Graphical User-Interface Design
A survey of proven strategies for improving the human computer interface and usability in instructional systems. Topics include usability testing, interface building tools, direct manipulation and virtual environments, menu selection and form fill-in, command and natural languages, interaction devices, response time and delay, presentation style, window management strategies, help and tutorial systems, and visualization.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 645
Intelligent Tutoring Systems
This course covers the utilization of intelligent tutoring systems (ITS) in instruction. Topics include procedural and declarative knowledge representations, learner domains, teacher strategies, and implementations using a high-level, easy-to-use popular ITS authoring tool.
3 semester credits

INSTRUCTIONAL TECHNOLOGY 650
Internet Programming
An introduction to the creation of dynamic Web sites for educational and training applications. Covers forms processing using bots and CGI,
Understanding different approaches to educational technology includes reviewing evaluation studies, for observation and measurement. Other research designs and selecting procedures of constructing hypotheses, developing requiring and disseminating information, methodologies for local and remote diagnosis of hardware and software problems, and policies fair use and maintenance.

3 semester credits

INSTRUCTIONAL TECHNOLOGY 655
Animation and Simulation for Instruction
This course presents a systematic survey of educational technology 685. The purpose of this course is to introduce students to the primary tenets of leadership and management. Successful organizations foster both innovation and efficiency. Students will evaluate the different dynamics related to realizing organizational progress through the effective and efficient use of talent, structure, culture, methods, and technology. In addition to the required textbooks, students will be required to research industry journals as a way to evaluate the application of leadership and management techniques in real settings across various industries. Prerequisites: Admission to graduate study.

3 semester credits

INSTRUCTIONAL TECHNOLOGY 670
Computer Maintenance and Help Desk
This course focuses on the managerial aspects of how to effectively manage, plan and execute programs/projects with a focus on high quality deliverables arriving on time, within budget, within scope and to the customer's satisfaction. Areas covered will include program and project management life cycle phases, executive sponsorship, portfolio investment management selection and prioritization, requirements, scope and project charters, planning, development, estimating, staffing, leadership, scheduling, risk management, change management, project metrics, vendor integration and management and other related topics. This course is based on current and emerging best practices and principles. Project Management certification requirements and real world case studies are discussed. Prerequisites: MGMT 600, MGMT 610 and completion of all core courses or concurrent registration in final core courses.

3 semester credits

MANAGEMENT 632
Global Program and Project Management
This course presents a systematic survey of research principles, methods and practices in educational and learning technologies. Content will focus on the role of research in acquiring and disseminating information, methods of constructing hypotheses, developing research designs and selecting procedures for observation and measurement. Other topics include reviewing evaluation studies, understanding different approaches to educational research, analyzing data, and writing a research proposal.

3 semester credits

INSTRUCTIONAL TECHNOLOGY 680
Adaptive Technologies
An introductory course to expose students to a variety of technologies used by and with persons with exceptionalities. Students will gain hands-on skills in designing technology-based instructional materials for students with a wide range of exceptionalities. A focus on Universal Design for Learning is at the core of this course—with a goal of providing students with the ability to adapt technology, instruction, and assessment to meet a range of student needs. Exposure to adaptive and assistive technologies, as well as state-of-the-art software and hardware, will take place during the course.

3 semester credits

INSTRUCTIONAL TECHNOLOGY 685
Research Methods and Thesis
This course presents a systematic survey of current theory, research and practice in the management of human resources in organizations. Job design, recruitment, selection, performance feedback, goal-setting, training, employee rights, safety, compensation and benefits issues are reviewed within the context of their application in the United States as a world standard for such practices, with comparisons to customs and practices in the international arena. Intensive research into current human resource topics is required. Prerequisites: MGMT 600, MGMT 610 and completion of all core courses or concurrent registration in final core courses.

3 semester credits

MANAGEMENT 640
Assessment
This course presents a systematic survey of current theory, research and practice in the management of human resources in organizations. Job design, recruitment, selection, performance feedback, goal-setting, training, employee rights, safety, compensation and benefits issues are reviewed within the context of their application in the United States as a world standard for such practices, with comparisons to customs and practices in the international arena. Intensive research into current human resource topics is required. Prerequisites: MGMT 600, MGMT 610 and completion of all core courses or concurrent registration in final core courses.

3 semester credits

MANAGEMENT 650
Foundations of Business Process and Operations Management
The student is introduced to process management methods which are fundamental to delivery of products and services. Topics covered include capacity analysis and plan-
Management

ning, inventory management, design of jobs for quality and cost effectiveness, demand forecasting, work flow management, queuing theory, project management and total quality management. Prerequisites for Operations Major: MGMT 600 and completion of all core courses or concurrent registration in final core courses. Prerequisites for Management Major and Human Resources Management Major: MGMT 600 and completion of required major courses or concurrent registration in final required major courses.

3 semester credits

MANAGEMENT 652
Foundations of Business Process and Operations Management
This course focuses on the development of the entrepreneurial spirit and develops specific skills to fulfill plans that develop from that creative and persevering spirit. Many different aspects of entrepreneurial ability will be emphasized including a strong work ethic, leadership, team building and the development of business relationships. The course also covers the growth of an existing business through entrepreneurship. Students will conceive, develop and present a comprehensive business plan intended to obtain external financial support or internal organizational support. Prerequisites for Small Business and Entrepreneurship Major: MGMT 600 and completion of all core courses or concurrent registration in final core courses. Prerequisites for Management Major: MGMT 600 and completion of required Management Major courses or concurrent registration in final required Major courses.

3 semester credits

MANAGEMENT 654
Small Business and Entrepreneurship
This course focuses on the development of the entrepreneurial spirit and develops specific skills to fulfill plans that develop from that creative and persevering spirit. Many different aspects of entrepreneurial ability will be emphasized including a strong work ethic, leadership, team building and the development of business relationships. The course also covers the growth of an existing business through entrepreneurship. Students will conceive, develop and present a comprehensive business plan intended to obtain external financial support or internal organizational support. Prerequisite: MGMT 652

This course is intended for students in their next to last semester of study.

3 semester credits

MANAGEMENT 656
Small Business Practicum II: Management, Operations and Marketing
The course is a hands-on course that provides the concepts and practical tools needed to start a small business. The course offers instruction in accounting concepts specific to small businesses experience with accounting software. Understanding of financing opportunities including bank loans and venture capital will enable the student to obtain financing for a small business. Students will also study basic financial management principles relevant to small businesses. The course also focuses on setting up the legal structure for the business by enabling the student to choose the appropriate organizational form and to study the regulatory and employment laws specific to small businesses. Prerequisite: MGMT 654

This course is intended for students in their next to last semester of study.

3 semester credits

MANAGEMENT 712
Organizational Development
The course is a hands-on course that provides the concepts and practical tools needed to start a small business. The course offers instruction in accounting concepts specific to small businesses experience with accounting software. Understanding of financing opportunities including bank loans and venture capital will enable the student to obtain financing for a small business. Students will also study basic financial management principles relevant to small businesses. The course also focuses on setting up the legal structure for the business by enabling the student to choose the appropriate organizational form and to study the regulatory and employment laws specific to small businesses. Prerequisites: MGMT 610 and completion of all required Management Major courses or concurrent registration in final required major courses.

3 semester credits

MANAGEMENT 722
Conflict & Negotiation
The development of conflict-management and negotiating skills are taught in this course with particular emphasis on achieving effective and efficient outcomes within a global and multicultural context. Experiential exercises, readings and discussions will demonstrate various strategies for a broad range of negotiating scenarios, e.g., buyer-seller, management-labor, personal salary increase, etc. Prerequisites for Management Major or Human Resources Management Major: MGMT 600 and MKTG 600 and completion of all required major courses or concurrent registration in final required Major courses. Course is cross-listed with MKTG 722.

3 semester credits

MANAGEMENT 723
Leadership, Teams and Managing Change
This course focuses on the development of leadership skills important in the effective management of change. Through role-playing exercises, videotapes, diagnostic tools, seminar discussion, selected readings, and a group project, students will learn theory and build interpersonal skills necessary for providing leadership in diverse multicultural groups and organizations. The course will address the managerial issues present in organizations undergoing accelerating change and adopting a culture of creativity. Creating and sustaining high performance multi-cultural and interdisciplinary traditional and virtual teams is covered. Prerequisites for Management Major or Human Resources Management Major: MGMT 610 and completion of all required major courses or concurrent registration in final required major courses.

3 semester credits

MANAGEMENT 725
Counseling
The course surveys counseling theory, counseling strategies, and appraisal procedures. The purpose is to enable the human resources manager to identify potential employee problems such as addiction, mid-life issues, and psychological disorders. This training will facilitate the ability of the manager to refer employees for professional counseling and intervention. There will also be emphasis on resolving workplace interpersonal conflicts. Prerequisite: MGMT 610 and completion of all required Human Resources Management Major courses or concurrent registration in final required major courses.

3 semester credits

MANAGEMENT 733
Strategic Information Systems
The primary objective of the course is to develop an understanding of the need to construct Operations and Information Systems
Management

Strategies that support corporate level strategies and simultaneously coordinate with other functional level strategies. An emphasis will be placed on cross-functional decision making in Finance, Operations, and Marketing. The central focus of the course will be operational strategy aligning with current information systems and technologies. Information systems strategy decisions will be discussed as they relate to operations and the integration of operations with other functional areas. Prerequisites: Completion of Management or Information Technology or Knowledge Management required major courses or concurrent registration in final required major courses. 3 semester credits

MANAGEMENT 734
Strategic Sourcing and Vendor Management
This course covers the rewards and risks of outsourcing and vendor management and identifies where outsourcing should be used and not used. The objectives of the course are to help students understand how to plan, direct, manage and more effectively participate in outsourcing initiatives in terms of the feasibility of outsourcing (off-shore, near-shore, rural-shore, best shore), vendor selection, contract negotiation, vendor management and evaluation, risk assessment and terminating outsourcing deals. Prerequisites for Management Major or Operations Major: MGMT 610, MGMT 650 and completion of required major courses or concurrent registration in final required major courses. 3 semester credits

MANAGEMENT 740
Advanced Business Process and Operations Management
Students in this course apply the methods from MGMT 650 to projects of their own design and choosing, employing systems designed for application to process management issues. Emphasis is put on quantitative problem-solving and decision-making processes applied by the professional manager for the improvement of product or service development quality and customer satisfaction. Business process improvement techniques such as lean and Six Sigma will be covered. Prerequisites for Management Major or Operations Major: MGMT 610, MGMT 650 and completion of required major courses or concurrent registration in final required major courses. 3 semester credits

MANAGEMENT 742
Strategic Sourcing and Vendor Management
This course examines the somewhat recent economic evolution from a primarily manufacturing model to a more information driven economy with an emphasis on the impact of these changes on professional careers. Students will review and assess the primary attributes of IT, such as data management and software as a way to evaluate the potential role of technology in administering professional activities. In the final module, students will develop a personal strategy by reflecting on their individual attributes as a way to further develop their unique talents in the workplace. Prerequisites for Management Major and Operations Major: MGMT 610, MGMT 650 and completion of required major courses or concurrent registration in final major required courses. Students may take MGMT 742 or MGMT 744 but not both. 3 semester credits

MANAGEMENT 744
Society and Technology
This course examines the complicated relationship between society and technology. The coursework will review the role technology has played in human development in areas, such as commerce, the environment, politics, warfare, health, and wealth distribution. Students will evaluate the holistic impact of these applications with an emphasis on moral issues, such as balancing the need for progress with the need for social justice. Students will also explore the possibilities and challenges related to emerging technological innovation. Prerequisites for Management Major or Operations Major: MGMT 610, MGMT 650 and completion of major required courses or concurrent registration in final major required courses. Students may take MGMT 742 or MGMT 744 but not both. 3 semester credits

MANAGEMENT 750
Foundations of Doing Business in China
The course provides the fundamental knowledge of how to do business in China. It covers the economic, financial (tax), political, cultural, regulatory, infrastructure, environmental, marketing, trade, labor force and education system, demographic and technology issues, trends and practices. It identifies the various trade agreements and their implications in doing business in China or with Indian organizations. It also exposes students to U.S. federal, state and local government resources available to help establish business and trade relationships in China. Prerequisites for Management Major and Operations Major: MGMT 610 and completion of major required courses or concurrent registration in final major required courses. 3 semester credits

MANAGEMENT 751
Foundations of Doing Business in India
The course provides the fundamental knowledge of how to do business in India. It covers the economic, financial (tax), political, cultural, regulatory, infrastructure, environmental, marketing, trade, labor force and education system, demographic and technology issues, trends and practices. It identifies the various trade agreements and their implications in doing business in India or with Indian organizations. It also exposes students to U.S. federal, state and local government resources available to help establish business and trade relationships in India. Prerequisite: Completion of International Business Major required courses or concurrent registration in final major required courses. 3 semester credits

MANAGEMENT 760
Foundations of Healthcare Management and Administration
This course focuses on a systematic exploration of the health care system in the United States, government interactions and regulations, delivery systems, healthcare insurance and financing, health care providers, innovations in healthcare services and alternative strategies. Prerequisite: Completion of required Management Major required Major courses or concurrent registration in final major required courses. 3 semester credits

MANAGEMENT 771
Foundations of Service Management and Engineering
With the rapid growth of the services industry, this course integrates topics from economics, engineering, law, technology and organizational theory to deal with how firms change over time to become more service oriented or become service business and the mechanisms and tools by which they seek innovation and competitive advantage in the service sector. The services life cycle is reviewed. In addition, enabling technologies and how different disciplines help to answer questions about how business services combine, evolve, stan-
dardize and mature are covered. Prerequisites for Management Major or Operations Major: MKTG 610, MKTG 650 and completion of required major courses or concurrent registration in final required major courses.

3 semester credits

MANAGEMENT 779
Foundations of Service Management and Engineering
This course focuses on current international issues that affect business operations at home and abroad. Changing business environments are discussed and analyzed. Students are required to formulate new global business strategies in light of emerging international trends and events. In some cases students may supplement their study by field trips and on-site analysis. Prerequisite for International Business Major: Completion of required major courses or concurrent registration in final required major courses.

3 semester credits

Marketing

MARKETING 600
Marketing
The course will explore the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services, to create exchanges that satisfy individual, organizational, and societal objectives. The underpinnings of the marketing discipline will be taught through text, case, articles and class discussion. Mastery of these principles will come through a variety of individual and group assignments to create marketing solutions for real-world products. Prerequisite: Admission to graduate study.

3 semester credits

MARKETING 610
Business Research
Students will study the basic concepts and tools of business research. The purpose is to give students an understanding of basic research that will enable them to utilize and conduct research for any business area. Consequently, there is a focus on scientific method principles including sampling, survey instruments, experimental design, scientific procedures, statistical analysis, and analyzing results both quantitatively and qualitatively. Effective methods for organization and reporting of research results are studied and put to practice by the student. The use of secondary sources, data bases and library research techniques will be presented. Prerequisite: STAT 600 and completion of all core courses or concurrent registration with final core courses.

3 semester credits

MARKETING 612
Customer Analysis
This course will take up special topics in customer behavior utilizing knowledge not only from research on consumer behavior but from a variety of disciplines including psychology, sociology and anthropology. The leading models of customer behavior in both industrial and consumer settings will be analyzed. The qualitative and quantitative marketing research tools necessary to understand buyer behavior dynamics in any market will be stressed. Prerequisite: MKTG 600 and completion of all core courses or concurrent registration in final core courses.

3 semester credits

MARKETING 620
Strategy and Advanced Marketing Concepts
This course focuses on advanced topics in strategy, marketing research, promotion, pricing, supply chain management and product development and management. The focus on strategy will enable the student to develop competitive advantage through the enhancement of customer value. The course explores specific topics in marketing beyond those learned in the introductory marketing course. The purpose is to provide all students with an in depth understanding of the marketing concepts through lecture, case analysis and team projects. Prerequisite: MKTG 600, MKTG 612 and completion of all core courses or concurrent registration in final core courses.

3 semester credits

MARKETING 650
Global Market Management
This course analyzes strategy, planning, implementation and control for market entry and development. Topics include social, political and economic changes affecting marketing opportunity; focused versus dispersed marketing efforts; marketing in developed and undeveloped countries; and marketing systems required for the various strategic alternatives. The focus will be on creating competitive advantage in the global marketing environment. Prerequisite for Marketing Major: MKTG 600, MKTG 610 and completion of all required Marketing Major courses or concurrent registration in final required Major courses. Prerequisite for International Business Major: MKTG 600 and completion of all core courses or concurrent registration in final core courses.

3 semester credits

MARKETING 710
Marketing Research
This is an advanced course in marketing research theory and application. The purpose is to provide the student with an in-depth understanding through the application of research concepts with hands-on projects. The student will design and implement survey and experimental designs. Advanced approaches to sampling target populations, designing survey instruments, utilizing the best statistical analysis, and analyzing resultant data both quantitatively and qualitatively are explored in this course. Effective methods for organization and reporting of research results are studied and put to practice by the student. Prerequisite: MKTG 610 and completion of all required Marketing Major courses or concurrent registration in final required Major courses.

3 semester credits

MARKETING 720
Electronic and Mobile Business
The goal of this course is to prepare current and future executives, managers, and strategists to be leaders and create value in the New Economy – to gain understanding and insight on how the functions of management and marketing in the New Economy have changed as well as how new technology and media forms have created a radically different business environment. The course examines the impact of the evolving virtual worlds of Internet and mobile commerce on the strategy of traditional “brick-and-mortar” companies. Up-to-date information will be utilized from current publications to provide the student with the ability to work in the new wireless world. This new business frontier requires most firms to significantly change their business strategy and presents unprecedented new opportunities for fast acting entrepreneurs. Prerequisites for Information Technology and Knowledge Management: MKTG 600, ITKM 600, and completion of all required Information Technology and Knowledge Management Major courses or concurrent registration in final required Major courses. Prerequisites for Marketing: MKTG 600, ITKM 600, and completion of all required Marketing Major courses or concurrent regis-
Data Mining and Data-Driven Marketing
This course enables the student to use data to make marketing management decisions. The student will learn to use statistical tools and analytical techniques to transform data into useful information that will result in the development of segmentation, targeting and positioning of marketing mixes that create additional customer value and enhance overall customer satisfaction. Hands-on experience with the tools and techniques will be valuable to students as they pursue a marketing career. Prerequisites: MKTG 610, MKTG 612 and completion of all required Marketing Major courses or concurrent registration in final required Major courses.
3 semester credits

Conflict and Negotiation
The development of conflict-management and negotiating skills are taught in this course with particular emphasis on achieving effective and efficient outcomes within a global and multicultural context. Experiential exercises, readings and discussions will demonstrate various strategies for a broad range of negotiating scenarios, e.g., buyer-seller, management-labor, personal salary increase, etc. Prerequisites for Marketing Major: MGMT 600 and MKTG 600 and completion of all required Marketing Major courses or concurrent registration in final required Major courses. Course is cross-listed with ITKM 722.
3 semester credits

Game Theory and Strategy
The course examines the theoretical and applied value of game theory for businesses. The purpose is to enable the student to understand the strategy and tactics relevant to many different power relationships. It utilizes the 2 by 2 game matrix to understand the interdependence of outcomes and the domain of possible types of relationships. Buyer-seller relationships and competitive strategies will be analyzed. Prerequisite: MKTG 610 and completion of all required Marketing Major courses or concurrent registration in final required Major courses.
3 semester credits

Customer Relationship Management
This course emphasizes the long term organizational value of developing relationships with customers. The first focus is on the use of data to provide increased value for the firm. Students will understand how to create value for the customer with a systematic analysis of customer needs. The second focus is on the nature of interpersonal relationships in a business setting that develops long lasting business relationships. Prerequisite: MKTG 610, MKTG 612 and completion of all required Marketing Major courses or concurrent registration in final required Major courses.
3 semester credits

Personal Sales and Sales Management
The purpose of this course is to develop the student’s ability to engage in real world professional sales and sales management. The foundation of personal sales is to be able to communicate effectively in both one-on-one sales situations and in group presentation situations. Psychological theory related to persuasion and interpersonal relationships will be used to provide the foundation for specific sales techniques. Practical experience in persuading, prospecting, negotiating, referrals, closing the transaction, and responding to buyer concerns will be utilized. The course will also focus on the management of a sales force including methods of compensation, motivation, hiring and retaining sales people, and the legal and ethical aspects of selling. Prerequisite: MKTG 610, MKTG 612 and completion of all required Marketing Major courses or concurrent registration in final required Major courses.
3 semester credits

Product Management, Innovation and Commercialization
This course covers new product development, innovation and commercialization, as well as the product management life cycle. Topics covered include the feasibility and investment prioritization of new products or product enhancements, raising capital for new product development, market and customer needs analysis, make versus buy alternatives and product launch and commercialization issues and considerations, including promotion, pricing, distribution, competition, pre and post sales support, systems and infrastructure support, customer service and related areas. Student will work on individual and team projects that will include the development of a new product market/business plan. Prerequisite for Marketing: MKTG 600, MKTG 610 and completion of all required Marketing Major courses or concurrent registration in final required major courses. Prerequisite for Management: MKTG 600, MKTG 610 and completion of all required Management Major courses or concurrent registration in final required major courses. Prerequisite for International Business: MKTG 600, MKTG 610 and completion of all required International Business Major courses or concurrent registration in final required major courses.
3 semester credits

Services Marketing
The course addresses the unique problems of marketing intangibles in the broad spectrum of service industries which are an increasing part of U.S. and world industry. The course focuses on the development, implementation and control of strategy, systems and people for effective service operations. The course uses case studies, additional readings and lecture to enable the student to pursue a career in the services industry. Prerequisite: MKTG 600, MKTG 612 and completion of all required Marketing Major courses or concurrent registration in final required major courses.
3 semester credits

Supply chain Management and Logistics
The course focuses on the management of material and goods outside of the factory. A variety of topics will be pursued including country sourcing, forecasting, distribution system design, order fulfillment, channel relationships, inventory deployment, and procurement. Students will understand the problems associated with supply chain integration within an organization and between organizations. The impact of the internet and the dynamically changing technology including virtual chains and logistics will be examined. Cases will be used to understand the competitive advantage created by integrated, low cost supply chains. Prerequisite: MKTG 610 and completion of all required Marketing Major courses or concurrent registration in final required Major courses.
3 semester credits
**Mathematics • Mechanical Engineering**

**Mathematics**

**Mathematics 401**

**Advanced Analysis for Scientists and Engineers I**
Partial differential equations, Bessel functions, Legendre polynomials. Fourier series, boundary and initial value problems, topics in vector analysis, tensor analysis. Prerequisite: Math 301 (Differential Equations). One semester of advanced calculus strongly recommended. 3 semester hours

**Mathematics 402**

**Advanced Analysis for Scientists and Engineers II**
Functions of a complex variable, conformal mapping, calculus of residues, operators. Prerequisite: Math 301 (Differential Equations). One semester of advanced calculus, or permission of the instructor. 3 semester hours

**Mathematics 403**

**Functions of a Complex Variable I**
The general theory of functions of a complex variable. Complex algebra, analytic functions and their mappings, complex integration, infinite series, Taylor and Laurent expansion, isolated singularities, residue theory. Prerequisite: One year of advanced calculus. 3 semester hours

**Mathematics 404**

**Functions of a Complex Variable II**
Continuation of Mathematics 403. Additional topics include insofar as time permits, harmonic functions, conformal mapping and applications, normal families. Riemann mapping theorem, analytic continuation, Riemann surfaces, infinite products, entire functions. Prerequisite: Math 403. 3 semester hours

**Mathematics 407**

**Introduction to Modern Analysis**
Metric Spaces, sequences and series, continuity differentiation, Riemann-Stieltjes integral, functions of several variables. 3 semester hours

**Mathematics 411 & 412**

**Introduction to Applied Mathematics 1 & 2**
Introduction to Hilbert Space, Fourier Series, calculus of variations, boundary value problems, Green’s functions and integral equations. 3 semester hours

**Mathematics 414**

**Numerical Analysis**
Interpolation, numerical differentiation and integration, numerical solution of differential equations, least squares, error analysis. Prerequisite: Math 215 (Calculus and Analytic Geometry III) or equivalent. 3 semester hours

**Mathematics 415**

**Advanced Numerical Analysis**
Convergence, numerical stability, round off error, truncation error arising from the approximation of differential and integral equations. 3 semester hours

**Mathematics 421**

**Mathematical Statistics I**
Probability theory, discrete and continuous distributions, transformations, moment generating functions, characteristic functions, central limit theorem, sampling distributions. Prerequisite: Math 215 (Calculus and Analytic Geometry III) or equivalent. 3 semester hours

**Mathematics 422**

**Mathematical Statistics II**
Continuation of Mathematics 421. Additional topics include estimation, testing of hypothesis, confidence intervals, regression, and analysis of variance. Prerequisite: Math 423 or Math 323. 3 semester hours

**Mathematics 431**

**Introduction to Topology and its Application**
Elements of point set theory; introduction to topological spaces including metric spaces; separation and countability axioms; connectedness; compactness; completeness. Prerequisite: One year of advanced calculus. 3 semester hours, offered as needed

**Mathematics 451**

**Linear Algebra and Matrix Theory I**
Linear vector spaces, bases, dimension, inner product, norm, orthogonality. Linear transformations, matrices, matrix algebra, Hamilton-Cayley Theorem, eigenvalues and eigenvectors, rank. Prerequisite: Math 391 (Modern Algebra) or equivalent. 3 semester hours

**Mathematics 453**

**Modern Algebra I**
Groups, rings, fields, ideals, polynomials. Prerequisite: Math 391 (Modern Algebra) or equivalent.

**Mechanical Engineering**

**Mechanical Engineering 407**

**Modern Materials and Advanced Manufacturing Technologies**
This course focuses on the study of modern industrial materials and the process of developing creative solutions through conceptual analysis and synthesis on different advanced and automated manufacturing processes. The course will help students to learn the emerging topics in the material and manufacturing industries. The topics cover the study on today’s popular industrial materials, material selections and industrial applications, and their related manufacturing techniques in US industry. Topics also include the introduction of quality control (QC) process that is important to the production with the high quality. The course has two class projects which will guide and help students to learn the ways of preparing for professional research and keep track of the latest technologies in modern materials, advanced and automated manufacturing processes. Pre-requisites: Engineering 111, Mechanical Engineering 223. 3 lecture hours; 3 semester hours

**Mechanical Engineering 410**

**Advanced Fluid Dynamics**
Advanced topics in applied fluid mechanics. Review of continuity, momentum, and energy equations for viscous, incompressible fluid; voracity and circulation concepts and theorems. Selected topics from the following areas: Complex potential, conformal mapping and
Mechanical Engineering


3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 421
Computer Aided Engineering Design
This course applies 3-D CAD system e.g., Pro E to industrial product and system design. These CAD systems are very practical and powerful 3-D CAD tools and they have been widely used in the industry. The first half of the class focuses on learning fundamentals of the 3-D system, its popular applications and its related techniques. The special topics of design concept are also included. The second half covers several practical projects. Students will combine the design techniques with the real project and use 3-D tools to design the product or part of industrial system. All projects will be presented by students in class. Pre-requisites: Engineering 111, Physics 111. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 422
Advanced Computer Aided Project Design
This advanced course focuses on some hot and very practical topics in today’s industrial design applications. Also, some useful knowledge, such as PLC (Program Logic Control), calculation and selection of industrial motors, fundamentals of automation, sensor technology, and selection of material on different industrial applications are included. Several more complicated projects in this class will help students learn how to manage the different engineering projects and understand all related design issues which will improve the future production and manufacturing process. Pro-E will be used as a 3-D CAD tool to design these advanced engineering projects. All projects should be presented by students in the class. Pre-requisites: Mechanical Engineering 421. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 423
Computer Aided Manufacturing (CAM) and NC Machining
This course applies manufacturing and various numerical controlled software for designing computer-aided manufacturing and NC machining systems, processes and algorithms. This course is heavy in implementation of various manufacturing technologies and programming of NC machines. Pre-requisites: Engineering 111, Physics 111, Mechanical Engineering 421. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 424
Advanced CAM & Automation.
This course teaches students to simulate advanced manufacturing processes by learning high level functions in Pro-Engineer/Pro-Manufacturing software package. This course will cover the topics of some advanced and special manufacturing technologies, including laser cutting & welding, water jet cutting & cleaning, and plasma cutting & welding. Automation related topics will also be introduced, including the analysis and application of PLC control systems in manufacturing facilities and modern production systems. Several advanced and real projects will help students to be proficient in using this CAD/CAM package and learn more of US industrial & engineering knowledge through the instructor's lectures & guidance and also the students' self-motivated work. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 429 (MEEG 429/LEG 429)
Electronics Cooling
This course is designed to help students understand the thermal challenges and demands of the electronics field. Fundamentals and physics of thermodynamics, heat transfer and fluid mechanics will be introduced and shown how to apply them to the design and testing of electronic hardware. The thermal characteristics and thermal failure modes of electronic components, and reliability prediction techniques will be reviewed. Numerical simulation and commercial CFD packages will be introduced for thermal analysis. Students will have a good understanding of the heat transfer and fluid mechanics principles affecting proper thermal management of electronic components and develop skills to identify potential thermal design problems and develop reliable, cost-effective solutions. 3 semester hours

MECHANICAL ENGINEERING 430
Design & Innovation
The objective of this course is to convey a sense of Design and Innovation in the development of products. To accomplish this the class shall review a number of case studies and participate in the design of a project.

In addition to the semester project we shall discuss a number of topics of concern to Design and Engineering through illustrated talks (slides/tapes) and when available with guest designers and engineers. Pre-requisites: Engineering 111, Engineering 300. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 440
Ergonomic Factors in Design
This course introduces the student to the concepts of ergonomics. Ergonomics is the study of fitting the workplace and devises to the capabilities of the human worker. Students will have an understanding of the beginnings and evolution of the field of ergonomics. They will learn to recognize risk factors associated with repetitive stress disorders (e.g., carpal tunnel syndrome) and potential sprain/strain injuries as well as be familiar with the body areas affected. This course covers principles of physiology and biomechanics and how they apply to workstation and tool design. Pre-requisites: Engineering 111. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 452
Advanced Vibrations
Brief review of systems with one and two degrees of freedom. Rayleigh’s method. Application of Lagrangian and matrix methods to discrete systems with many degrees of freedom; normal mode theory; vibrations of finite continua; solution methods and mathematical properties. Numerical and computer methods. Sensitivity analysis. Applications to machines and structures. Pre-requisites: Mechanical Engineering 315 or equivalent. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 453
Finite Element Methods in Mechanical Engineering
Formulation of finite element characteristics using energy methods. Convergence criteria. Consistent load and mass matrices. In-plane and axisymmetric analysis using simple and higher-order triangular and quadrilateral elements. Finite element analysis of plate-bending problems. Isoparametric concepts and formulation; applications to two-and three-dimensional stress analysis. Topics from the following areas will be chosen as time allows: buckling and vibration studies using discrete element techniques; finite element applications in fluid flow and heat transfer. Prerequisite: Mechanical Engineering 450 or permission of instructor. Pre-requisites: Basic Structural Mechanics, Math 214, Math 215,
Mechanical Engineering

Engineering 111 or consent of instructor. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 454
Advanced Dynamics
Orthogonal coordinate systems and their transformations. Particle kinematics in inertial and noninertial rotating coordinate systems. Dynamics of systems of particles and rigid bodies. Virtual work and generalized coordinates. Lagrange's equations and Hamilton's principle for holonomic and non-holonomic systems with applications. Lagrange multipliers. Prerequisites: Undergraduate Dynamics, Mathematics 301. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 456
Mechanics of Composite Materials
Introduction to the mechanics of laminated filamentary composites. Prediction of stiffness and strength of laminated plates. Applications. Prerequisites: Undergraduate Strength of Materials, Mechanical Engineering 223. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 458
Fatigue and Fracture Mechanics
Brittle fracture of structures, elastic stress analysis of cracked components, static and dynamic failures, plane stress and plane strain, elastic-plastic fracture mechanics, fatigue crack growth and life prediction under constant and variable amplitude loading, environmental effects. Term work is mainly design problems and is computer oriented. Pre-requisites: Undergraduate Strength of Materials, Mechanical Engineering 223. 3 lecture hours; 3 semester hours; 1 design semester hour

MECHANICAL ENGINEERING 463
Advanced Heat Transfer
Topics in conduction, convection and radiation heat transfer. Numerical methods, phase change, boundary layer principles, gas and solar radiation, combined heat and mass transfer. Prerequisite: Mathematics 301, Physics 209, Mechanical Engineering 208. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 479
CNC Machine Control and Milling
This course introduces the CNC milling machine to students. Included are machine and shop safety, CNC coding, material selection, machine maintenance, proper use of the coolant systems and tools. Routine machine procedures and implementation are covered in preparation for several machine operations to develop student skills. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 490
Intellectual Property and Technology
This course is designed for graduate students who have an undergraduate degree in Engineering, Computer Science, Mathematics, Physics, Biology, Industrial Design, etc. Students need not have any familiarity with United States law but they must be prepared to read extensively under the instructor's guidance, statutes and cases decided by the Federal and State courts. Pre-requisites: Undergraduate degree in Engineering or Sciences. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 500
Graduate Co-op/Internship in Mechanical Engineering
By arrangement. 1-3 semester hours

MECHANICAL ENGINEERING 512
Computational Fluid Dynamics (CFD)
This course is intended as an introduction to the field of computational Fluid Dynamics. It will help students to develop practical skills in CFD and the use of commercial CFD packages, such as FLUENT. Students will apply these skills to relevant engineering applications and gain an appreciation of the limitations and advantages of CFD modeling. 3 semester hours

MECHANICAL ENGINEERING 523
Advanced Composite Materials
Composite materials are ideal for structural applications where high strength-to-weight and stiffness-to-weight ratios are required. Aircraft and spacecraft are typical weight sensitive structures in which composite materials cost-effective. Usually, composite materials consist of two separate components, the matrix and the filler. The matrix is the component that holds the filler together and the filler makes the material strong. Most aerospace-application composites have strong, stiff long fibers as the fillers. The fiber makes the material behaves differently in different directions. This anisotropic behavior introduces complication in the analysis of the composite material. The course introduces the student to the basic concepts of the mechanical behavior of composite materials. Specific topics include the stress-strain relation for a lamina, mechanics of composite materials, bending, buckling, and vibration of composite plates with various laminations, fatigue, fracture mechanics, and joints of composite structures. 3 lecture hours; 3 semester hours

MECHANICAL ENGINEERING 530 (MEEG 530/TCMG 530)
Foundations of Manufacturing Management
The objectives of the course are to understand and apply concepts and techniques in manufacturing management. The course includes the management of people (both traditional and high performance systems and teams), lean manufacturing techniques as used on the factory floor, and recent concepts such as Factory Physics. The course focuses on those issues that are important in supervising and managing a modern manufacturing operation. Prerequisites: graduate standing. 3 semester hours

MECHANICAL ENGINEERING 546 (MEEG 546/TCMG 546)
Engineering Economics and Management
The course covers the concepts and methods that will assist engineering and technology managers and professionals to make alternative investment and funding decisions regarding projects, programs, products, business expansion and other alternatives using the financial calculations involving time value of money (IRR, ROI, NPV), uncertainty and risk. Topics include engineering and related financial evaluation techniques and formulas, choosing among alternatives, sensitivity analysis, economic analysis, opportunity costs, depreciation, amortization, probability, cost estimating and systems and others. Prerequisites: TCMG 484. 3 semester hours

MECHANICAL ENGINEERING 562 (MEEG 562/BMEG 562/ELEG 562)
Nanofabrication with Soft Materials
This is an advanced level graduate course focusing on fabrication of soft materials. Nanofabrication processes and nanosystem products will be discussed. Fundamentals associated with chips fabrication and linking them toward soft materials assembly will be detailed. Emerging nanotechnology based methods for soft and green electronics, mechanical parts, MEMS, PCBS will be covered. Gene chip, label free sensory assay using micro and nanofluidics will be discussed. Transfer printing, DNA-protein interactions using the chip and several nano-scale assemblies for soft materials fabrication will be discussed. 3 semester credits
of manufacturing forms that the approach places these issues within the rightful context. It emphasizes the essential requirement to link with other functions in order to determine the best strategies for the business as a whole.

3 lecture hours, 3 semester hours

MECHANICAL ENGINEERING 597 A
Master's Project
Lecture hours and topics to be arranged with Department Chair.
1 credit hour

MECHANICAL ENGINEERING 597 B
Master's Project
Lecture hours and topics to be arranged with Department Chair.
2 credit hours

MECHANICAL ENGINEERING 597 C
Master's Project (completion)
Lecture hours and topics to be arranged with Department Chair.
1 credit hour

MECHANICAL ENGINEERING 598
Thesis in Mechanical Engineering
Lecture hours, semester hours and topics to be arranged.
3-6 semester hours

MECHANICAL ENGINEERING 599
Independent Study in Mechanical Engineering
Independent study of advanced topics in Mechanical Engineering and submission of project report as required. Problem assignment to be arranged with and approved by the Department Chair.
3 semester hours

MECHANDICAL ENGINEERING 570
Welding Engineering
Welding is the most common method of joining materials and has been widely used in industries. This course is intended to provide knowledge of welding engineering and its application in developing and designing safe and durable welded structures.
3 semester hours

MECHANICAL ENGINEERING 572
Production Technology and Techniques
This course is to introduce up-to-date technology, techniques and systems of the global manufacturing industry. American manufacturing situation would be analyzed and Japanese manufacturing success is also explored. Comprehensive and readable description of manufacturing practice is researched. Pre-requisites: Engineering 111, Engineering 300.
3 semester hours

MECHANICAL ENGINEERING 573
Supply Chain Management
The goal of this course is to cover not only high-level supply chain strategy and concepts, but also to give students a solid understanding of the analytical tools, to understand supply chain design, planning, and operation driven the performance of a firm. It also conveys how supply chain drivers used on a conceptual level during supply chain design and operation leading to performance improvement.
3 credits with 14 sessions

MECHANICAL ENGINEERING 574
Principles of Logistics
This course presents materials management, logistics theory and concepts in today’s manufacturing and commercial environments. It integrates all of the functional areas of the business as well as incorporating logistics into corporate operation. They are examined in light of how they interrelate with other functions for the firms. Pre-requisites: Engineering 111, Engineering 300.
3 semester hours

MECHANICAL ENGINEERING 575
Manufacturing Strategy
This course provides the necessary strategic perspective for manufacturing managers’ sights and sustaining manufacturing excellence in the competitive manufacturing environment. The strategic perspective

Naturopathic Medicine

Basic Sciences

BASIC SCIENCES 511
Anatomy I
This course provides an in depth study of the macroscopic human anatomy and it covers the structure of the trunk and posterior neck. Clinical aspects of the vascular and neurological relationships of these regions will be emphasized. Instruction includes lectures and laboratories with the dissection of human cadavers and the study of bones, models and interactive multimedia software.
4 lecture hours, 3 laboratory hours; 5.5 semester credits

BASIC SCIENCES 512
Histology
This course is the study of the normal microscopic anatomy of the body and its relationship to function at the cellular, tissue, and organ level. Included is the study of the microstructure of epithelia, connective tissue, muscle, nervous system, digestive system, circulatory, reproductive systems and the endocrine system. Where indicated, there is an integration of normal histology with physiological and clinical concepts.
2 lecture hours, 2 laboratory hours; 3 semester credits

BASIC SCIENCES 514
Biochemistry I
The biochemistry I lecture/lab series introduces the student to the fundamentals of protein structure, DNA replication, gene expression, transcription, and translation. Laboratory exercises require the student to apply information acquired in lecture to basic science and clinically oriented problems that are frequently encountered in practice.
2 lecture hours, 1 laboratory hour; 2.5 semester credits

BASIC SCIENCES 524
Biochemistry II
The biochemistry II lecture/lab series introduces the student to the fundamentals of bioenergetics. Laboratory exercises require the student to apply information acquired in lecture to basic science and clinically oriented problems that are frequently encountered in practice.
2 lecture hours, 1 laboratory hour; 2.5 semester credits

BASIC SCIENCES 515
Physiology I
This course is the study of physiology at the molecular and cellular level. Included is the study of the function of all major tissues and organ systems. Clinical concepts and correlations are discussed.
3 lecture hours, 2 laboratory hours; 4 semester credits

BASIC SCIENCES 521
Anatomy II
This course is a continuation of Anatomy I and it covers the structure of the head, an-
and subcortical motor and sensory systems. The organization of cortical and cranial nerves. The study of bones, models and interactive multimedia software. Prerequisites: NBS511, NBS512.

4 lecture hours, 3 laboratory hours; 5.5 semester credits

BASIC SCIENCES 522
Microbiology
This course covers a comprehensive overview of structure, function, growth and genetics of microorganisms. Host-parasite relationships of representative bacterial, viral, fungal and parasitic agents of human diseases are examined. An organism approach is used to survey microbial and parasitic diseases, with emphasis on modes of transmission, mechanisms of virulence, symptoms, diagnosis, treatment and prevention of associated diseases. Presentations include lecture and case studies.

4 lecture hours; 4 semester credits

BASIC SCIENCES 523
Embryology
This course covers the developmental process of humans from conception to birth including the formation of tissues, organs and systems of the body, integrating histology and anatomy.

1.5 lecture hours; 1.5 semester credits

BASIC SCIENCES 525
Physiology II
This course is a study of the physiology at the organ and systems level and its interrelationships. Included is the study of the circulatory, endocrine, respiratory, renal, gastrointestinal, urogenital and nervous system. There is an integration of normal and pathological physiology and clinical concepts. Prerequisites: BS512, BS514, BS515.

3 lecture hours, 2 laboratory hours; 4 semester credits

BASIC SCIENCES 525
Neuroscience
This course covers the anatomy and physiology of the central nervous system and of the cranial nerves. The organization of cortical and subcortical motor and sensory systems including the basal ganglia, cerebellum, and the brainstem is covered as well as higher cortical functions and parcellation of function in the cerebral cortex.

2 lecture hours; 2 semester credits

NUTRITION 611
Nutrition I
This course provides the foundation for therapeutic nutrition. It explores the biochemistry of the macronutrients as well as the known vitamins and minerals in detail. Toxicities, deficiencies, therapeutic uses and appropriate doses are examined. Dietary requirements for micro and macro nutrients are covered. Prerequisites: BS525, BS514, CS611.

2 lecture hours; 2 semester credits

NUTRITION 621
Nutrition II
This course is a continuation of Nutrition I. Prerequisite: NNT611.

2 lecture hours; 2 semester credits

NUTRITION 711
Nutrition III
This course explores the use of food as medicine. Therapeutic diets, dietary manipulation and supplementation are discussed in detail. Emphasis is on restoring normal physiological function and structural integrity by providing the normal components of living systems. Nutritional evaluation, specialized diets, and nutritional counseling are covered. Prerequisite: NNT621.

2 lecture hours; 2 semester credits

NUTRITION 721
Nutrition IV
This course builds on the information taught in Nutrition III. Students will be expected to synthesize knowledge from biochemistry and basic nutrition for application to clinical conditions and lifespan issues. An explorative approach will be utilized in classroom with an emphasis on clinical application. Prerequisite: NNT711.

2 lecture hours; 2 semester credits

Clinical Sciences

CLINICAL SCIENCES 611
Pathology I
The pathology I lecture/lab series introduces the student to the fundamental basis of disease by studying pathophysiology on both cellular and genetic scales. Such studies include cell death and adaptation, inflammation, tissue regeneration and fibrosis, hemodynamic disorders, neoplasia, genetic diseases, and infectious disease. Each
Naturopathic Medicine

pathophysiologic process studied is placed in a clinical context by reviewing associated physical, radiographic, gross, and microscopic findings. Laboratory exercises require the student to apply information acquired in lecture to various clinical scenarios that are more frequently encountered in practice. The course concludes with the beginning of the study of diseases by organ system. Prerequisites: BS511, BS512, BS513, BS515.

3 lecture hours, 2 laboratory hours; 4 semester credits

CLINICAL SCIENCES 621
Pathology II
The pathology II lecture/lab series is a continuation from Pathology I of the study of diseases in each organ system and considering effects on multiple organs systems. Each pathophysiologic process studied is placed in a clinical context by reviewing associated physical, radiographic, gross, and microscopic findings. Pathology laboratory exercises require the student to apply information acquired in lecture to various clinical scenarios which are more frequently encountered in practice. Prerequisite: CS611.

3 lecture hours, 2 laboratory hours; 4 semester credits

CLINICAL SCIENCES 612
Clinical Diagnosis I
This course applies the knowledge of pathology, physical exam, and laboratory testing to develop the skills necessary to determine appropriate diagnoses for patients manifesting the signs and symptoms of disease. The material is covered for each organ system with an emphasis on the integration of information from multiple systems. Prerequisites: BS521, BS522, BS525.

5 lecture hours, 5 semester credits

CLINICAL SCIENCES 622
Clinical Diagnosis II
This course is a continuation of Clinical Diagnosis I. Prerequisite: CS612.

5 lecture hours, 5 semester credits

CLINICAL SCIENCES 613
Public Health/Epidemiology
This course covers the current environmental and public health concerns and issues. The course integrates health with diet, air and water pollutants, noise, and substance abuse, compares community hygiene and industrial hygiene, defines epidemiology, and recognition of major communicable and non-communicable diseases. Prerequisite: BS522.

2 lecture hours, 2 semester credits

CLINICAL SCIENCES 614
Immunology
This course covers specific and non-specific components of the human immune system and the role played by each in protection from microbes and non-living agents. Hypersensitivity reactions, immunodeficiency, autoimmune diseases, immune responses to cancer and psychoneuro-immunology are also discussed. Prerequisites: BS525, BS522.

2 lecture hours, 2 semester credits

CLINICAL SCIENCES 612L
Physical Examination Lab I
This laboratory course begins the development of the skills required to conduct specialized and complete physical examinations. The course begins with learning to take a complete patient medical history. The student will learn the selection of appropriate examination and diagnostic procedures that correspond to the patient's history and complaints. This course is offered in conjunction with the courses in Laboratory and Clinical Diagnosis. The integration of the skills gained in these courses begins the process of developing the clinical decision-making ability required of a naturopathic physician.

2 laboratory hours, 1 semester credit

CLINICAL SCIENCES 622L
Physical Examination Lab II
This course is a continuation of Physical Examination I. Students will complete the process of learning physical examination skills for all systems of the human body.

2 laboratory hours, 1 semester credit

CLINICAL SCIENCES 613
Laboratory Diagnosis I
This course covers the principle laboratory tests used to evaluate and diagnose disease states. The student will learn the selection of appropriate laboratory and diagnostic procedures that correspond to the patient's history and complaint. The student will also expand upon their knowledge base from previous courses in physiology and biochemistry in learning about and understanding the rationale behind common laboratory procedures, including serum chemistries, CBC, and urine studies.

2 lecture hours, 2 semester credits

CLINICAL SCIENCES 623
Laboratory Diagnosis II
This course is a continuation of Laboratory Diagnosis I.

2 lecture hours, 2 semester credits

CLINICAL SCIENCES 613L
Laboratory Diagnosis Lab I
In this course students will learn to do in-office laboratory procedures including venipuncture. Co-requisite: NCS 613.

1.5 laboratory hours, 0.75 semester credit

CLINICAL SCIENCES 623L
Laboratory Diagnosis Lab II
This course is a continuation of Laboratory Diagnosis Lab II. Co-requisite: NCS 623.

1.5 laboratory hours, 0.75 semester credit

CLINICAL SCIENCES 617
Medical Genetics
This course covers the basis, the diagnosis, and the transmission of chromosomal and genetic disorders. The role of genetics and disease and the prenatal diagnosis of genetic and chromosomal abnormalities will be discussed. Special emphasis will be placed on preparing the students to recognize potential genetic abnormalities in a clinical setting, on methodologies to educate and inform patients on the genetic basis of their particular disease and on the resources available for additional testing, treatment or counseling. Prerequisites: BS515

1 lecture hour, 1 semester credit

CLINICAL SCIENCES 711
Diagnostic Imaging I
This course covers radiographic anatomy, and imaging techniques. A basic introduction to imaging, including radiography, computer tomography (CT), magnetic resonance imaging (MRI), ultrasound, and bone scan (scintigraphy) is discussed. The basic concepts of these techniques and their use in diagnosis are discussed. This course will also cover basic radiographic anatomy of the skeletal system and viscera. Prerequisites: NCS 611, 612, 621, 622.

2 lecture hours, 2 semester credits

CLINICAL SCIENCES 722
Diagnostic Imaging II
This course is a continuation of Diagnostic Imaging I.

2 lecture hours, 2 semester credits
Naturopathic Medicine

Imaging I with progressive emphasis on the use of imaging techniques to diagnose disease. Prerequisite: NCS 711
2 lecture hours, 2 semester credits

CLINICAL SCIENCES 714 AND 723
Clinical Forum I and II
These courses explore the clinical applications of the basic sciences and the clinical courses taught concurrently in this semester. Case presentations and clinical skills are emphasized through a problem-based learning format using naturopathic principles as the foundation.
2 laboratory hours; 1 semester credit each

CLINICAL SCIENCES 715
Emergency Procedures
This course will familiarize the students with emergency situations and procedures that may be seen in the Emergency Department or private practice. The student will learn to discern emergent presentations by review of clinical scenarios and be able to elicit a proper history and physical exam to properly refer or treat the patient in the confines of their scope of practice.
2 lecture hours, 2 semester credits

CLINICAL SCIENCES 721
Pharmacology I
Dose response relationships, pharmacokinetics, pharmacodynamics, pharmacogenetics, drug toxicity, signal transduction and second messengers are covered. Drug interactions, indications/contraindications, food/herb interactions are discussed. The pharmacology and toxicology of the drugs of the nervous, respiratory and cardiovascular systems will be examined.
Prerequisites: BS515, 525, 514, 524
2 lecture hours; 2 semester credits

CLINICAL SCIENCES 812
Environmental Medicine
This course focuses on the health effects of pollutants in the home, workplace as well as in the air, water, earth, and food supply. Diagnosis and treatment of health conditions caused by these pollutants is covered with special emphasis on treating the chemically sensitive patient or those with environmental illness. Prerequisites: CS 621, 622
1.5 lecture hours; 1.5 semester credits

Homoeopathic Medicine

HOMEOPATHIC MEDICINE 621
Homeopathy I
This course lays the foundation of the basic laws and principles of Homeopathy upon which future courses will build. The principles as set forth by Hahnemann in his Organon are the bases of the course. The student will also become thoroughly acquainted with the use of repertory.
2 lecture hours, 2 semester credits

HOMEOPATHIC MEDICINE 711
Homeopathy II
This course will continue the examination of Homeopathy, with emphasis on the concept of acute prescribing, case taking, and analysis. Students will continue their discussion and understanding of basic remedies, especially the drug pictures of the major polycrest remedies. Prerequisite HM621
3 lecture hours, 3 semester credits

HOMEOPATHIC MEDICINE 721
Homeopathy III
Students will continue their study of the hierarchy of symptoms as they are expressed in the repertory and will begin to recognize the keynote symptoms of various remedies and be able to distinguish among them. The differences between constitutional and acute prescribing will be discussed.
Prerequisite: HM711
3 lecture hours, 3 semester credits

Naturopathic Obstetrics

NATUROPATHIC OBSTETRICS 811
Obstetrics
This course addresses itself to health care appropriate to the special circumstances of pregnancy. Topics covered include diagnosis of pregnancy, pre-natal care, therapeutics for early pregnancy, management of minor complaints of pregnancy, infertility, an overview of normal fetal development, labor and birth, and the post-partum care of mothers and infants. Prerequisites: CS622, CS623.
2 lecture hours, 2 semester credits

NATUROPATHIC PRACTICE 722
Cardiology
This course covers the pathophysiology, advanced diagnosis and treatment of cardiovascular diseases. Both conventional and naturopathic therapies are covered, and upon completion students will be able to understand and apply this knowledge to the care of patients with cardiac disease and know when to refer for specialized diagnosis and treatment. Prerequisites: CS 611, 612, 613, 621, 622, 623.
2 lecture hours, 2 semester credits

NATUROPATHIC PRACTICE 725L
Gynecology Lab
Physical examination practicum relevant to gynecology, including breast and pelvic exams. Prerequisite NNP714.
Naturopathic Medicine

1 laboratory credit; 0.5 semester credit

NATUROPATHIC PRACTICE 713
Gastroenterology
This course examines the digestive tract and associated organs, and disorders associated with it. Physical examination, imaging, and laboratory techniques necessary to understand and diagnose these disorders are discussed along with their naturopathic treatment. Prerequisites: CS 611, 612, 613, 621, 622, 623.
1.5 lecture hours; 1.5 semester credits

NATUROPATHIC PRACTICE 825
Minor Surgery
Minor surgical procedures as defined by the scope of practice for naturopathic physicians are taught. The course covers common minor surgery office procedures such as suturing techniques, wound care, local anesthesia, and bandaging techniques. Topics also include recognizing and treating infection, burns, and conditions requiring referral for surgical intervention. Prerequisites: CS622.
1.5 lecture hours; 1 laboratory hour; 2 semester credits

NATUROPATHIC PRACTICE 811
Eye, Ear, Nose and Throat
The diagnosis and naturopathic and allopathic treatment of diseases of the eyes, ears, nose, and throat are discussed. Upon completion of this course students will be able to diagnose common and important diseases, know when to refer patients for specialty diagnosis and treatment, and will be able to apply naturopathic principles and modalities in case management. Prerequisites: CS 611, 612, 613, 621, 622, 623.
1 lecture hour; 1 laboratory hour; 1.5 semester credits

NATUROPATHIC PRACTICE 812
Endocrinology
This course covers the diagnosis and naturopathic and conventional management of diseases and imbalances of the endocrine system. Upon completion, students will be able to recognize and diagnose hormonal disorders, know when to refer patients for specialty diagnosis and treatment, and be able to apply naturopathic principles and modalities in endocrine case management. Prerequisites: CS 611, 612, 613, 621, 622, 623.
1.5 lecture hours; 1.5 semester credits

NATUROPATHIC PRACTICE 813
Neurology
This course constitutes a review of the neurological exam with emphasis on diagnosis of neurological conditions. It will include naturopathic treatment and management of diseases of the nervous system as they are discussed. Prerequisites: CS 611, 612, 613, 621, 622, 623; BS 525.
1.5 lecture hours; 1.5 semester credits

NATUROPATHIC PRACTICE 821
Geriatrics
This course covers the aging process and the new field of anti-aging medicine. Conventional geriatrics topics are discussed as well as topics on geriatric illnesses and their Naturopathic interventions. Prerequisites: CS 611, 612, 613, 621, 622, 623.
1 lecture hour; 1 semester credit

NATUROPATHIC PRACTICE 814
Urology/Proctology
This course covers disorders of the urinary system, male genitalia, and the anal-rectal region. Diagnosis and conventional and naturopathic management of cases are covered. Prerequisites: CS 611, 612, 613, 621, 622, 623.
1.5 lecture hours; 1.5 semester credits

NATUROPATHIC PRACTICE 823
Oncology
This course covers the diagnostic, prognostic and preventative and epidemiological information for common cancers. Various theories of cancer are discussed as well as both conventional and non-conventional treatments. Case studies are used to help cement the concepts covered in relation to various malignancies. At the conclusion of this course students will be prepared to screen for common cancers and co-manage patients with cancer. Prerequisites: CS 611, 612, 613, 621, 622, 623.
1.5 lecture hours; 1.5 semester credits

NATUROPATHIC PRACTICE 824
Dermatology
The diagnosis and treatment of diseases, which manifest in skin lesions are discussed. Naturopathic treatment and prevention are taught. Prerequisites: CS 611, 612, 613, 621, 622, 623.
1.5 lecture hours; 1.5 semester credits

**Naturopathic Principles and Practice**

**PRINCIPLES AND PRACTICE 511**

**History of Naturopathic Medicine**

This course will examine the historical, socioeconomic, and political foundations of Naturopathic Medicine and its eclectic blend of healing arts and fundamental roots; Botanical Medicine, Nature Cure, Physical medicine, Hydrotherapy, Homeopathy, Energy Medicine, and Ancient Healing systems from around the globe.

2 lecture hours; 2 semester credits

**PRINCIPLES AND PRACTICE 522**

**Philosophy of Naturopathic Medicine II**

Naturopathic medicine, Hydrotherapy, Homeopathy, Energy Medicine, and Ancient Healing systems from around the globe.

1 laboratory credit; 0.5 semester credit

**PRINCIPLES AND PRACTICE 811**

**Practice Management I**

Students are taught the current procedural practices for the operation of a private practice. In addition, the practical aspects of operating a practice as a small business are discussed. Students are encouraged to begin thinking about their personal career path in naturopathic medicine. Prerequisites: CS 611, 612, 613, 621, 622, 623.
2 lecture hours; 2 semester credits
Naturopathic Medicine

Medical Jurisprudence and Ethics
This course covers the basics of law as it applies to medical practice. Informed consent, confidentiality and professional liability are discussed. Naturopathic licensing laws in various jurisdictions are contrasted and compared along with an in depth review of the practice act in Connecticut. Prerequisite: PS712.
1.5 lecture hours; 1.5 semester credits

PRINCIPLES AND PRACTICE 622
Practice Management II
This course introduces the student to the business procedures and practice used in the successful operating of a naturopathic practice. Prerequisite: PP721.
1.5 lecture hours; 1.5 semester credits

Oriental Medicine

ORIENTAL MEDICINE 611
Oriental Medicine I: Fundamentals
This course introduces the fundamental philosophy, diagnostic techniques and therapeutic techniques of Oriental medicine and Traditional Chinese Medicine (“TCM”). The purpose of the course is to allow the student to integrate the basic philosophical concepts of Oriental Medicine into naturopathic practice. This includes applying TCM principles and Oriental medical philosophy to the human body, having a basic appreciation for relationships between the Oriental zangfu (“organs”), and having a fundamental understanding of the Oriental modes of diagnosis, as found in the “Four Examinations” and “Eight Principles” including pulse, tongue, facial, palpatation, and questioning techniques. The basic tenets of clean needle technique and safe needle insertion as they relate to acupuncture and moxibustion will also be covered. Prerequisites: BS521, BS525.
2 lecture hours; 2 semester hours

ORIENTAL MEDICINE 621
Oriental Medicine II
This course is a continuation of Oriental Medicine I. Prerequisite: OM 611
2 lecture hours; 2 semester hours

Further study in OM may be taken through the Acupuncture Institute. Refer to the catalog section on Acupuncture.

Physical Medicine

PHYSICAL MEDICINE 522
Living Anatomy: Palpation
This laboratory course introduces how to locate and palpate the bony landmarks, attachments/origins, and the superficial musculature of the entire body. It is an adjunct to the Anatomy courses and a precursor to the courses in physical medicine.
1.5 laboratory hours; 0.75 semester credits

PHYSICAL MEDICINE 521
Hydrotherapy
This course introduces students to the physiological principles the clinical application of the therapeutic use of water, heat, and cold. In the laboratory portion of this course students learn procedures by administering and receiving treatments and determining appropriate applications. Prerequisites: BS521.
0.5 lecture hour; 1.5 laboratory hours; 1.25 semester credits

PHYSICAL MEDICINE 612
Physiological Therapeutics
This course covers the physics, clinical, and contraindications of the use of heat, cold, high-volt galvanism, interferential current, low-volt galvanism, ultrasound, electrical muscle stimulation, diathermy, and paraffin. Upon completion, students will be able to use these modalities both individually and in conjunction with other therapies in the treatment of musculoskeletal and other disorders. Prerequisites: BS 511, 515, 521, 525.
1 lecture hour; 2 laboratory hours; 2 semester credits

PHYSICAL MEDICINE 621
Orthopedic Assessment
Students in this course will learn to diagnose orthopedic injuries and diseases. Those conditions that can be safely treated in a general practice setting are distinguished from those requiring referral to a specialist. Prerequisite: BS 511, 515, 521, 525.
1 lecture hour; 2 laboratory hours; 2 semester credits

PHYSICAL MEDICINE 711
Naturopathic Manipulative Therapeutics I
This course will be a basic presentation of the principles and practices of manipulation of the axial spine. Lecture will include discussion of the neurological rational for manipulation, as well as, various methods of manipulation both force and non-force techniques. Soft tissues techniques such as Post-Isometric Relaxation Technique and Positional Release Technique will be discussed and taught in lab. Palpation, neurological and orthopedic evaluation will be performed prior to any manipulative procedures. Prerequisites: PM 621
2 lecture hours; 4 laboratory hours; 4 semester credits

PHYSICAL MEDICINE 721
Naturopathic Manipulative Therapeutics II
This course will extend NPM711 by introducing principles and biomechanics of extremities as well as gait analysis. Non-force techniques such as Sacral-Occipital Technique(SOT) and Cranial-Sacral Techniques will be reviewed. Prerequisites: PM711
2 lecture hours; 4 laboratory hours; 4 semester credits

PHYSICAL MEDICINE 821
Therapeutic Exercise/Sports Medicine
This course provides an overview of exercise as a preventative and therapeutic tool. Students will learn to perform a fitness assessment and describe and monitor exercise programs for persons with a variety of common disease conditions as well as treatments for sports injuries. Prerequisite: PM721
2 lecture hours; 2 semester credits

Psychology

PSYCHOLOGY 511
Mind-Body Medicine I
This course introduces the concept of the role of stress in the development of disease and explores energetic models of healing and the scientific basis of mind-body medicine. The focus is on learning, experiencing, and practicing mind-body techniques for stress reduction and self-assessment.
1 lecture hour; 0.5 laboratory hour; 1.25 semester credits

PSYCHOLOGY 521
Counseling Skills I
This course provides an introduction to developing the naturopathic practitioner/patient relationship via the development of communication skills. Professional issues such as ethics, confidentiality, trust, appropriate boundaries, and relationship building are included. Specific communication skills related to effective patient interviewing are practiced experimentally using exercises in class. Students practice the skills of attending, empathy, active listening, and focusing on important client concerns to identify and
Natural Medicine

begin collaborative goal setting.
1 lecture hour; 1 laboratory hour; 1.5 semester credits

PSYCHOLOGY 621
Psychological Assessment
This course covers the diagnosis of psychiatric disorders according to the Diagnostic and Statistical Manual of Mental Disorders IV. Included is the development of the DSM, psychological assessment considerations, referral options, and treatment modalities including psychotherapeutic, psychotropic, and alternative interventions. Special attention is paid to addictions and eating disorders. Prerequisite: PS521.
2 lecture hours; 2 semester credits

PSYCHOLOGY 711
Counseling Skills II
This course introduces current holistic counseling theories and inventions through lectures, assignments, readings, and experimental exercises. Counseling skills with reference to actual cases are explored using problem-based learning methods. Students will demonstrate basic interviewing techniques and strategies for engaging and motivating the client through reciprocal dialogue during the developmental stages of a counseling relationship. This course emphasizes the basic counseling skills required of a physician in daily practice, in addition to the special circumstances of bereavement, crisis management, and chronic and terminal illness. Prerequisites: PS521, 621.
1 lecture hour; 1 laboratory hour; 1.5 semester credits

PSYCHOLOGY 712
Mind-Body Medicine II
This course covers key issues in the relationship between a physician and client. It includes an examination of ethical issues, confidentiality, and development of trust, setting appropriate boundaries, and dealing with patients with life-threatening illnesses. Prerequisites: PS521, 621.
2 lecture hours; 2 semester credits

Research

RESEARCH 511
Research Methodology/Statistics
This course introduces students to biomedical research principles, epidemiology, biostatistics, and accessing the medical literature with an emphasis on complementary and alternative medicine research.
1.5 lecture hours; 1.5 semester credits

RESEARCH 711
Thesis I
In this course the student performs a literature search in a naturopathic area of interest and presents a proposal for a Senior Paper (literature survey only) or a Senior Research Paper (also includes original research) that must be approved by the Research Committee.
1 lecture hour; 1 semester credit

RESEARCH 811
Thesis II
With the advice and guidance of the faculty research advisor, the student completes a Senior Paper in conformity with the guidelines adopted by the Research Committee. Prerequisite: RS711.
1 lecture hour; 1 semester credit

Clinical Education

CLINICAL EDUCATION 621
Clinical Entry
This course provides an introduction to clinic policy, procedures and requirements, including standard operation procedures, and the roles and responsibilities of the student clinician as stated in the current Clinic Student Handbook. There is an overview of case management issues, charting and lab procedures. The class prepares students for entry into the clinic. Prerequisite: Completion of all year 1 & 2-year courses concurrent with the completion of this course
1 semester hour; 1 semester credit

Cardio-Pulmonary Resuscitation (CPR) - Prior to entering the clinic, it is the student’s responsibility to obtain certification in CPR for the Health Care Professional. A list of training sites will be available.

CLINICAL EDUCATION 712
Clinical Education I
Students begin to gain practical clinical skills by working under the supervision of licensed naturopathic physicians and other healthcare providers in the Clinic and in Preceptorships. Students learn primarily through observation and are given limited responsibility in the clinical setting during this semester. Performance objectives are focused on basic clinical procedures. Prerequisite: NCE 621 and Clinic Entrance Exam. Course runs May – Dec.
16 laboratory hours; 8 semester credits

CLINICAL EDUCATION 722
Clinical Education II
This is a continuation of the clinical training begun in Clinical Education I and includes the ongoing development of clinical skills and case management under supervision of licensed physicians. Students gradually assume increased responsibility as secondary caregivers under the supervision of licensed physicians. Prerequisite: NCE 712 Course runs Jan – May.
16 laboratory hours; 8 semester credits

CLINICAL EDUCATION 812
Clinical Education III
Interns assume the role of primary care giver under the direct supervision of a licensed physician. Physical examination, diagnostic assessment and treatment skills are honed while specific performance objectives of clinical training are met. Minimum summer hours requirements must be met. Prerequisite: NCE 722 Course runs May – Dec.
20 laboratory hours; 10 semester credits

CLINICAL EDUCATION 822
Clinical Education IV
In this final semester of clinical training students examine, diagnose and treat patients in preparation for providing primary care as a naturopathic physician. 144 Preceptor hours must be completed. Prerequisite: NCE 812. Course runs Jan – May.
20 laboratory hours; 10 semester credits

Elective courses

CLINICAL SCIENCES 822E
Practicum in IV Therapy (Elective)
The student will learn the indications and contraindications for various IV therapies in the naturopathic practice. Preparation and administration (including osmolality) of various IV solutions using proper aseptic techniques will be emphasized. Lectures will be followed by hands-on in-class experience.
1 lecture hour; 1 laboratory hour; 1.5 semester credits

Nutrition

NUTRITION 481
Nutrition • Physician Assistant

Nutritional Science
The following nutritional science courses are offered only in the master’s program in Nutrition. This program is available on the main campus and online.

560 A Path physiologic Basis of Metabolic Disease
560 B Biochemistry of Nutrition
560 C Vitamins and Minerals
560 D Clinical Biochemistry
560 E Assessment of Nutritional Status
560 F Nutritional Therapeutics
560 H Developmental Nutrition
560 J Research in Nutrition
560 L Nutrition and Exercise
560 M Biostatistics
560 P Botanical Medicine
560 R Nutrition and Culture

NUTRITION 560A
Path physiologic Basis of Metabolic Disease
A study of the underlying mechanisms of disease and the complex interrelationships between critical systems including respiratory, urinary, cardiovascular, digestive, nervous and endocrine. Lectures will include fluid and electrolyte imbalances, acid and base imbalances, inflammation, hypersensitivity, infection, necrosis, and neoplasms. The influence of various nutrients on systemic function will be stressed. Prerequisite: Anatomy & Physiology I, II.
4 semester hours

NUTRITION 560B
Biochemistry of Nutrition
A lecture course covering the static and dynamic aspects of the biochemistry of carbohydrates, lipids, amino acids, proteins, nucleic acids, cat ions, anions, enzyme kinetics, hormones and vitamins in the healthy individual. Integration and control mechanisms of the various metabolic pathways are particularly emphasized. Prerequisite: Introduction to Biochemistry.
4 semester hours

NUTRITION 560C
Vitamins and Minerals
Basic and clinical aspects of nutrient homeostasis concentrating on vitamin and mineral metabolism at the cellular and tissue level. Lectures will include specific functions, requirements, sources, assay methods, effects of deficiencies and excesses of each vitamin and mineral. Prerequisite: Nutrition 560B.
4 semester hours

NUTRITION 560D
Clinical Biochemistry
A lecture course dealing with the biochemistry of disorders arising from acid/base imbalance and the abnormal metabolism of the carbohydrates, lipids, proteins, nucleic acids, bile pigments, vitamins, and hormones. Prerequisite: Nutrition 560B.
3 semester hours

NUTRITION 560E
Assessment of Nutritional Status
Clinical and laboratory analytical procedures for evaluation of nutrient status, including blood and other tissue analysis, dietary records and questionnaires, case history, physical examination, anthropometrical methods, etc.
3 semester hours

NUTRITION 560F
Nutritional Therapeutics
A survey of diseases with primary or secondary nutritional implications and related nutritional strategies. For each disease covered, the etiology, pathology, epidemiological, and prevailing methods of treatment will be presented. The mechanism of action of various nutritional therapies and the role of nutrition in support of other treatments and modalities will be explored.
4 semester hours

NUTRITION 560H
Developmental Nutrition
Nutritional considerations and health related concerns of growth and development. Special attention will be given to pregnancy/lactation, fetal/neonatal, and infant/pediatric stages of development. Nutritional needs of the adolescent and elderly will be discussed.
3 semester hours

NUTRITION 560J
Research in Nutrition
Independent research project with faculty guidance, based on literature survey or original research. Project approval is required. Prerequisite: Advanced standing, permission of advisor.
3 semester hours

NUTRITION 560L
Nutrition and Exercise
An instructional class for nutritionists detailing proper dietary protocols for enhancing endurance and performance during exercise and sports. Elective.
3 semester hours

NUTRITION 560M
Evidence Based Nutrition.
The course describes the analytical approaches for searching and interpreting clinical research data reported in the literature using evidence based practice with emphasis on the application of those data in clinical practice. Biological variation, experimental design, data and fact differences, matching analysis to design, integrity in analysis, and bias in design and analysis, are considered in detail.
3 semester hours

NUTRITION 560P
Botanical Medicine
A study of the use of herbs in nutritional practice. Discussions on individual herbs will include botany, mechanism of action, pharmacological/toxicological properties, clinical application, product standardization, and recommended dosages.
3 semester hours

NUTRITION 560R
Nutrition and Culture
This course reviews nutrition principles, examines dietary patterns, and outlines the cultural importance of food in various ethnic and American societies. This course is designed to provide an overview of the cultural aspects of food, the societal influences and origins of food traditions. It will cover aspects of American (including Native American) and selected ethnic cuisines. Material will cover a brief overview of culinary history and future trends.
3 semester hours

Physician Assistant (MSPA)

PHYSICIAN ASSISTANT 505
Information Literacy
This course provides students with the basic terminology, concepts and methods of research in order to be able to locate, evaluate and apply current evidence to clinical practice.
3 credits

PHYSICIAN ASSISTANT 511
Anatomy I with Lab
This course is designed to provide an introduc-
Physician Assistant

This course familiarizes students with concepts of cellular and molecular biology; different types of mutations and their effects; inheritance patterns; genetic testing techniques; counseling referrals and key resources with an emphasis on accurately creating and interpreting the pedigree in regards to disease identification and/or susceptibility, therapeutic options and future clinical applications of genetics in primary care.

3 credits

PHYSICIAN ASSISTANT 551
History and Physical Exam I with Lab
This on-going course focuses on developing the skills of obtaining a comprehensive history and a problem focused history; performing a comprehensive screening exam and an appropriate problem focused exam; the ability to integrate and interpret the findings from any of these to create a foundation for further clinical evaluation. Emphasis is placed on identifying normal versus abnormal findings and on accurate and appropriate documentation.

3 credits

PHYSICIAN ASSISTANT 552
History and Physical Exam II with Lab
This on-going course builds on H&P I in developing skills of obtaining a comprehensive history and a problem focused history; performing a comprehensive screening exam and an appropriate problem focused exam; the ability to integrate and interpret the findings from any of these to create a foundation for further clinical evaluation. Emphasis is placed on identifying normal versus abnormal findings and on accurate and appropriate documentation.

3 credits

PHYSICIAN ASSISTANT 553
History and Physical Exam III with Lab
This on-going course builds on H&P I and II in developing skills of obtaining a comprehensive history and a problem focused history; performing a comprehensive screening exam and an appropriate problem focused exam; the ability to integrate and interpret the findings from any of these to create a foundation for further clinical evaluation. Emphasis is placed on identifying normal versus abnormal findings and on accurate and appropriate documentation.

4 credits

PHYSICIAN ASSISTANT 556
Patient Education and Counseling
This course is a practical, evidence based approach to educate and counsel patients in order to improve lifestyle, increase adherence and reduce medical errors.

2 credits

PHYSICIAN ASSISTANT 561
Health, Wellness and Nutrition Throughout the Lifespan
This course will emphasize disease prevention, health promotion during various stages of life with emphasis on the pediatric and geriatric population.

2 credits

PHYSICIAN ASSISTANT 571
Clinical Pharmacology I
This course introduces the student to the basic principles of pharmacology, including mechanisms of action; absorption, distribution, metabolism, and excretion; pharmacokinetics; interactions with other drugs and with food; problems with special populations (prenatal, neonatal, elderly); rational drug usage for clinical disorders (therapeutics): clinical measures; and toxicology.

3 credits

PHYSICIAN ASSISTANT 572
Clinical Pharmacology II
This course builds on Clinical Pharmacology I with more advanced principles of pharmacology, including mechanisms of action; absorption, distribution, metabolism, and excretion; pharmacokinetics; interactions with other drugs and with food; problems with special populations (prenatal, neonatal, elderly); rational drug usage for clinical disorders (therapeutics): clinical measures; and toxicology.

3 credits

PHYSICIAN ASSISTANT 602
Information Literacy and Medical Writing
This course builds on Information Literacy I by integrating and applying those skills by requiring students to write in various scientific and medical formats.

2 credits

PHYSICIAN ASSISTANT 603
Medical Ethics
This course presents the student with the four topic method of evaluation of Ethical issues. Each student will look at the ethical issue presented looking at Medical indications, patient preferences, quality of life and contextual features to provide a response to the ethical dilemma. The course will provide a foundation for the student to work through ethical dilemmas provided by the professor. During this course the student will identify and evaluate ethical issues of their own and touch upon options and solutions and provide the stu-
Physician Assistant

dent with the ability to employ those methods throughout their career.

2 credits

PHYSICIAN ASSISTANT 604
Professional Practice and Policy
This course incorporates the history, development, certification, licensure, reimbursement and key organizations of the PA profession as well as the role of the PA in public health and state and federal policy making.

2 credits

PHYSICIAN ASSISTANT 608
Global Health
This course offers the student the opportunity to investigate the impact of health issues in other countries and the interactive affect on all populations in terms of epidemiology, disease, disasters, economics, health initiatives, ethics and policy.

2 credits

PHYSICIAN ASSISTANT 611
Clinical Medicine I with Lab
This ongoing body systems based course integrates all the skills and learning from the curriculum as related to medical problems encountered in the primary care setting. Emphasis is on the integration of anatomy, physiology, pathophysiology, microbiology, history and exam findings and diagnostic procedures in order to formulate a differential diagnosis; on ordering and interpreting diagnostic tests in order to develop a working diagnosis; and on developing and implementing treatment plans including as needed therapeutic procedures, pharmacology, referral and patient education and counseling.

8 credits

PHYSICIAN ASSISTANT 613
Clinical Medicine III with Lab
This ongoing body systems based course integrates all the skills and learning from the curriculum as related to medical problems encountered in the primary care setting. Emphasis is on the integration of anatomy, physiology, pathophysiology, microbiology, history and exam findings and diagnostic procedures in order to formulate a differential diagnosis; on ordering and interpreting diagnostic tests in order to develop a working diagnosis; and on developing and implementing treatment plans including as needed therapeutic procedures, pharmacology, referral and patient education and counseling.

8 credits

PHYSICIAN ASSISTANT 620
Fundamentals of Surgery
This course presents the fundamentals of the approach to surgery and the surgical patient. Emphasis is on pre, intra and post operative care; surgical skills and techniques; management of complications, and patient education and counseling.

4 credits

PHYSICIAN ASSISTANT 632
Integrative Medicine and Practice I
This ongoing course exposes students to the philosophies, concepts, techniques and practice of a variety of alternative and complementary medicine.

1 credit

PHYSICIAN ASSISTANT 633
Integrative Medicine and Practice II
This ongoing course exposes students to the philosophies, concepts, techniques and practice of a variety of alternative and complementary medicine.

2 credits

PHYSICIAN ASSISTANT 634
Integrative Medicine and Practice III
This ongoing course exposes students to the philosophies, concepts, techniques and practice of a variety of alternative and complementary medicine.

2 credits

PHYSICIAN ASSISTANT 642
Medical Seminar
This ongoing course utilizes a variety of techniques designed to supplement and integrate content from all didactic courses, including but not limited to: small group interaction; problem based learning; case based learning; simulation lab; reflective discussion and literature critique.

2 credits

PHYSICIAN ASSISTANT 643
Medical Seminar II
This ongoing course utilizes a variety of techniques designed to supplement and integrate content from all didactic courses, including but not limited to: small group interaction; problem based learning; case based learning; simulation lab; reflective discussion and literature critique.

2 credits

PHYSICIAN ASSISTANT 644
Medical Seminar III
This ongoing course utilizes a variety of techniques designed to supplement and integrate content from all didactic courses, including but not limited to: small group interaction; problem based learning; case based learning; simulation lab; reflective discussion and literature critique.

2 credits

PHYSICIAN ASSISTANT 646
Medical Seminar
This is a continuation of the didactic course. During this course, presented in the supervised clinical experience period, topics in Clinical Medicine, Integrative Medicine, Global Health and Medical Ethics are presented.

2 credits

PHYSICIAN ASSISTANT 651
Clinical Clerkship I
One of the core supervised clinical clerkships for the Physician Assistant student.
Physician Assistant • Statistics • Technology Management

4 credits
*PHYSICIAN ASSISTANT 652
Clinical Clerkship II
One of the core supervised clinical clerkships for the Physician Assistant student.
4 credits

*PHYSICIAN ASSISTANT 653
Clinical Clerkship III
One of the core supervised clinical clerkships for the Physician Assistant student.
4 credits

*PHYSICIAN ASSISTANT 654
Clinical Clerkship IV
One of the core supervised clinical clerkships for the Physician Assistant student.
4 credits

*PHYSICIAN ASSISTANT 655
Clinical Clerkship V
One of the core supervised clinical clerkships for the Physician Assistant student.
4 credits

*PHYSICIAN ASSISTANT 656
Clinical Clerkship VI
One of the core supervised clinical clerkships for the Physician Assistant student.
4 credits

*PHYSICIAN ASSISTANT 657
Clinical Clerkship VII
One of the core supervised clinical clerkships for the Physician Assistant student.
4 credits

*All students are required to complete all of the seven core supervised clinical clerkships. The clinical clerkship sequence will be individually assigned to students.

Statistics

STATISTICS 600
Statistics and Quantitative Analysis
This course is an introduction to basic statistical methodology and its applications to business decisions. Topics include probabilities, discrete and continuous probability distributions, probability sampling techniques, sampling distributions, interval estimation and hypothesis testing. The basics of specific statistical tests will be presented including chi square, correlation, multiple regression and analysis of variance. Students will use software packages to perform statistical analysis. Prerequisite: Admission to graduate study.
3 lecture hours; 3 semester hours

Technology Management

TECHNOLOGY MANAGEMENT 400
This course focuses on strategic marketing, entrepreneurial, intrapreneurial and innovation issues, opportunities and best practices in helping organizations grow in a complex global environment, which have emerged in the last few years such as the growing importance of strategic marketing, voice of the customer, customer service and innovation in helping companies grow as well as achieve and sustain competitive advantage. The business impact of new technologies which enable marketing and innovation are covered. The course also examines the principles of entrepreneurship and intrapreneurship in developing new products, services and processes. In addition to individual assignments, students are assigned to team projects to develop product or service market plans either for start-up businesses or within the context of a corporate venture. Prerequisite: Admissions to graduate studies.
3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 424
Total Quality Management and Continuous Process Improvement.
This course presents a comprehensive summary of methods for managing quality and continuous process improvements. The course objective is to develop an operational familiarity with contemporary methods found to be effective. Topics covered include statistical process control, quality function deployment, concurrent design, the house of quality, the Taguchi method, Six Sigma, lean and others. It also covers continuous process improvement methodologies and techniques. This course is intended for those students who do not plan to specialize in quality management. Prerequisite: Admissions to graduate studies.
3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 490 (TCMG 490/MEEG 490)
Intellectual Property and Technology.
This course is designed for graduate students who have an undergraduate degree in Engineering, Computer Science, Mathematics, Physics, Biology, Industrial Design, etc. Students need not have any familiarity with United States law but they must be prepared to read extensively under the instructor’s guidance, statutes and cases decided by the Federal and State courts. Pre-requisites: Admissions to graduate studies.
3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 495
Contemporary Issues in Communications and Quantitative Methods
The course is designed to help students improve their communications (e.g. oral, written, and formal presentation) skills and quantitative methods and techniques used in business, technology and engineering disciplines.
3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 500
Graduate Co-Op/Internship in Technology Management.
Students will work for a company in a role that is appropriate for an MS - TM graduate, or near graduation. Through this experience students will apply management principles and theory in a practical setting. The student will write a paper summarizing the tasks and accomplishments encountered within the organization, as well as make managerial
recommendations for improvement of the company, or division in which s/he was employed. Prerequisite: Final semester of study and the Director, TM Program approval.

1-3 semester hours

TECHNOLOGY MANAGEMENT 505 (TCMG 505/MGMT 532)
Global Program and Project Management.
This course focuses on the managerial aspects of how to more effectively manage, plan and execute programs/projects with a focus on high quality deliverables arriving on time, within budget, within scope and to the customer’s satisfaction. Areas covered will include program and project management life cycle phases, executive sponsorship, portfolio investment management selection and prioritization, requirements, scope and project charters, planning, development, estimating, staffing, leadership, scheduling, risk management, change management, project metrics, vendor integration and management and other related topics. This course is based on current and emerging best practices and principles. It will also discuss PM certification requirements and provide real world case studies. Prerequisite: TCMG 484.

3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 508 (TCMG 508/MKTG 551)
Product Management, Innovation and Commercialization.
This course covers new product development, innovation and commercialization, as well as the product management life cycle. Topics covered include the feasibility and investment prioritization of new products or product enhancements, raising capital for new product development, market and customer needs analysis, make versus buy alternatives and product launch and commercialization issues and considerations, including promotion, pricing, distribution, competition, pre and post sales support, systems and infrastructure support, customer service and related areas. Students will work on individual and team projects that will include the development of a new product market/business plan. Prerequisite: TCMG 400.

3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 510 (TCMG 510/MGMT 536)
Foundations of Corporate, Government and Information Security and Continuity Management.
The course covers natural and terrorist hazards and incidents that could impact the continuity of business, government and information services, their detection, evaluation and containment, prevention and recovery management principles and practices. Topics covered include assessment of threats, risk management and mitigation, incident management, business continuity/contingency planning and disaster recovery programs. Case studies of natural and made-made disasters such as 9/11, Katrina and others are analyzed in terms of lessons learned. Student will work on individual and team projects that will include the development of a business continuity plan. Prerequisite: Admission to graduate studies.

3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 511 (TCMG511/MGMT 511)
Human Resources Management.
An in-depth survey of current theory, research and practice in the management of human resources in organizations. Job design, recruitment, selection, performance feedback, goal-setting, training, employee rights, safety, compensation and benefits issues are reviewed within the context of their application in the United States as a world standard for such practices, with comparisons to customs and practices in the international arena. Intensive research into current human resource topics are required. Prerequisite: TCMG 523.

3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 512 (TCMG 512/MGMT 598)
Advanced Intellectual Property Management.
Protection of a business’ intellectual property assets can make the difference between success and failure. This course will discuss the strategies and methods available for protection of intellectual property in the global environment. Students will work through the American patent, copyright and trademark processes, including how to prepare and file applications for each. Students completing this course should be able to pass the Patent Agent exam. Global business issues, such as protection of ideas in an off-shoring arrangement, IP co-development and other issues, will also be addressed. Prerequisite: TCMG 490 or Director, TM program approval.

3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 520 (TCMG 520/ITIS 520)
Information Systems Requirements, Analysis, Design and Deployment.
A course in the analysis, design, and development of business systems. Students will learn a variety of development models and tools available for systems development, deployment and management. The role of all systems constituents is addressed through discussion of the specification, decision-making, and review of designs, documentation, program specifications, and system improvement. Course level and content is suitable for managerial as well as the more technically oriented. Prerequisites: ITIS 400 or Director, TM program approval.

3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 522 (TCMG 522/ITIS 521)
Healthcare Management and Administrative Technologies and Systems.
This course covers the health care systems, processes and technologies as they relate to the constituents in the health care industry — patients, providers, regulators, insurance companies and their interactions. Also covered are electronic records, privacy and the applicable regulations. Prerequisite: ITIS 400.

3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 523 (TCMG 523/MGMT 532)
Leadership, Teams & Managing Change.
This course focuses on the development of leadership skills important in the effective management of change. Through role-playing exercises, videotapes, diagnostic tools, seminar discussion, selected readings, and a group project, students will learn theory and build interpersonal skills necessary for providing leadership in diverse multicultural groups and organizations. The course will address the managerial issues present in organizations undergoing accelerating change and adopting a culture of creativity. Creating and sustaining high performance multicultural and interdisciplinary traditional and virtual teams is covered. Prerequisite: Admissions to graduate studies.

3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 525 (TCMG525/MGMT 535)
Finance and Accounting for Managers.
This course provides managers with the skills required to read, interpret and apply information about an organization’s financial position. Managerial accounting and finance concepts will be presented, followed by financial statement analysis. Topics presented from a managerial perspective will include how accounting data is generated during business operations, how financial
Technology Management

This course covers information technology plans, strategy, business/IT alignment, governance, environmental, ethical, economic, regulatory, compliance and technical issues and trends with a focus on planning, organizing, justifying, controlling, implementing and integrating concepts and real world experiences. It discusses business and IT balanced scorecards, metrics and key performance indicators. Current and emerging best business and technology strategy and governance best practice frameworks such as COBIT, CMMI, PMBOK, Kano, VOC, QFD, ITIL, Prince2, ITIL, select ISO standards and others will be covered with emphasis on lessons learned, critical success factors and pragmatic solutions. Individual and team projects and case studies are integrated into the course. Prerequisite: ITIS 400 or Director, TM program approval.

3 lecture hours; 3 semester hours

Technology Management 539 (TCMG 539/MGMT 539)

International Issues.

This course focuses on current international issues that affect business operations at home and abroad. Changing business environments are discussed and analyzed. Students are required to formulate new global business strategies in light of emerging international trends and events. In some cases, students may supplement their study by field trips and on-site analysis. Prerequisite: TCMG 523 and TCMG 505 or Director, TM program approval.

3 lecture hours; 3 semester hours

Technology Management 540

Advanced Simulation and Modeling Techniques

The purpose of this course is to provide an in depth coverage of the use of simulation and modeling as an analysis tool for the study of production and distribution processes. The course aims to develop a sense of critical thinking, learning and problem solving. Topics include: problem formulation, data collection and analysis, random variable generation, and statistical analysis of output. Utilizes a major simulation language, SIMAN.

3 lecture hours; 3 semester hours

Technology Management 545

Technology New Venture Creation.

This course is for graduate students interested in starting a technology venture, joining a small firm intent upon rapid growth, or pursuing a career in consulting, venture capital, or the management of a technology business or venture for larger companies. The course will provide an opportunity to identify and analyze new business and technology venture issues and opportunities. Select topics covered include: evaluating market opportunities, designing profitable business models, producing a solid business plan, raising capital (multiple rounds), protecting intellectual
Technology Management

The course provides the fundamental knowledge of how to do business in India. It covers the economic, financial (tax), political, cultural, regulatory, infrastructure, environmental, marketing, trade, labor force and education system, demographic and technology issues, trends and practices. It identifies the various trade agreements and their implications in doing business in or with Indian organizations. It also exposes students to U.S. federal, state and local government resources available to help establish business and trade relationships in India. Prerequisite: TCMG 400.

3 lecture hours; 3 semester hours

Technology Management 553 (TCMG 553/ITIS 553) Enterprise Information Systems.

This course will examine the role of information systems in business and how they provide the information required by management. Modular, best of breed, and other systems strategies and configurations, as well as their managerial implications, will be examined. The course is case-based and provides student hands-on experience learning and utilizing Sage Software’s MAS200 ERP system to complete case problems. Other enterprise systems will be discussed as well, including SAP and Oracle. Prerequisite: TCMG 484.

3 lecture hours; 3 semester hours

Technology Management 554 (TCMG 554/ITIS 554) Foundations of Doing Business in U.S.A.

The course provides the fundamental knowledge of how to do business in the U.S. It examines the business environment in the U.S. and assesses the challenges and opportunities for doing business in a highly dynamic marketplace. The course will examine the commercial, political, economic, legal, organization, and cultural dimensions in entering this market. Through case studies, readings and discussions, the student will acquire the analytical tools and skills required to better understand and implement business strategies to maximize these opportunities.

3 semester hours; 3 semester hours

Technology Management 555 (TCMG 555/ITIS 555) Infrastructure Systems.

This course covers the fundamentals of data networking, including signaling, routing and technologies underlying the explosive growth of e- and m-commerce. The managerial issues relevant to network utilization, security and service delivery will be addressed as the underlying communications technologies are discussed. Prerequisite: ITIS 400.

3 semester hours; 3 semester hours

Technology Management 557 (TCMG 557/ITIS 557) Infrastructure Systems.

This course covers the fundamentals of data networking, including signaling, routing and technologies underlying the explosive growth of e- and m-commerce. The managerial issues relevant to network utilization, security and service delivery will be addressed as the underlying communications technologies are discussed. Prerequisite: ITIS 400.

3 semester hours; 3 semester hours

Technology Management 558 (TCMG 558/MKTG 530) E-Marketing.

This course examines the nature of marketing in the evolving virtual worlds of Internet and mobile commerce and the impact of emerging technologies on the strategy of traditional “brick-and-mortar” companies. Various business and marketing models will be analyzed and evaluated. This course requires extensive Internet research for student projects. Prerequisite: TCMG 400.

3 semester hours; 3 semester hours


This course covers the assessment of current and potential environmental and energy management issues, opportunities and threats. Key issues such as global warming, pollution, global energy supply and demand needs will be discussed. Alternative energy sources are reviewed, including examination of energy technologies in each fuel cycle stage for fossil (oil, gas, synthetic), solar, biomass, wind, hydro, nuclear, and geothermal energy types, along with storage, transmission, and conservation issues. Prerequisite: Admission to graduate studies.

3 lecture hours; 3 semester hours


The course will focus on a review of the environmental and energy management safety, hazard identification and disaster prevention policies, laws, concepts and issues. U.S. and international laws, regulations and standards will also be covered. The course will provide the student with a better understanding of how the complexity of this topic impacts economic, political, cultural and societal opportunities in environment and energy management.

3 semester hours; 3 semester hours

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management. Prerequisite: TCGM 560.

3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 570 (TCMG 570/MGMT 570)
Foundation of Health Care Management and Administration.

This course focuses on a systematic exploration of the health care system in the United States, government interactions and regulations, delivery systems, healthcare insurance and financing, health care providers, innovations in healthcare services and alternative strategies. Prerequisite: TCMG 523.

3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 571 (TCMG 571/MGMT 571)
Foundations of Service Management and Engineering

With the rapid growth of the services industry, this course integrates topics from economics, engineering, law, technology and organizational theory to deal with how firms change over time to become more service oriented or become service business and the mechanisms and tools by which they seek innovation and competitive advantage in the service sector. The services life cycle is reviewed. In addition, enabling technologies and how different disciplines help to answer questions about how business services combine, evolve, standardize and mature are covered. Prerequisite: Admissions to graduate studies.

3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 573 (TCMG 573/MEEG 573)
Supply Chain Management

The goal of this course is to cover not only high-level supply chain strategy and concepts, but also to give students a solid understanding of the analytical tools, to understand supply chain design, planning and operation and how it impacts the performance of a firm. It also conveys how supply chain drivers used on a conceptual level during supply chain design and operation lead to performance improvements. Prerequisite: Admissions to graduate studies.

3 lecture hours; 3 semester hours

PRINCIPLES OF LOGISTICS

This course presents materials management, logistics theory and concepts in today's manufacturing and commercial environments. It integrates all of the functional areas of the business as well as incorporating logistics into corporate operation. They are examined in light of how they interrelate with other functions for the firms. Prerequisite: ENGR 111, ENGR 300 and Admissions to graduate studies.

3 lecture hours; 3 semester hours

TECHNOLOGY MANAGEMENT 597AB
Master's Project

A capstone course dealing with the development and implementation of business strategy and plan within a framework of ethical decision-making, globalization and managing accelerating change. It tests the capability of the student to apply and integrate all prior graduate learning to solve actual strategic management problems, develop a business plan and conduct organizational performance and governance assessments. The final project of this course is project-based and shall constitute, therefore, an outcome assessment of what the student has learned in the MS - TM program. Prerequisite: Final semester for completion the of MS - TM Program.

3-6 semester hours

TECHNOLOGY MANAGEMENT 597 C
Masters Project (Completion)

Topics to be arranged. Prerequisite: Approval of the Director, TM Program.

1 semester hour

TECHNOLOGY MANAGEMENT 598
Thesis in Technology Management

Completion of a report based on field, library and institutional research to demonstrate ability to conduct investigations in a technology management discipline. Approval of the Director, TM Program.

3 – 6 semester hours

TECHNOLOGY MANAGEMENT 599
Independent Study in Technology Management

This course is reserved for a special project that cannot be done any other way and to help a student complete the MS when no other alternative is available. Prerequisite: Approval of the Director, TM Program.

3 semester hours
Faculty
### Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Occupation</th>
<th>Institution</th>
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</thead>
<tbody>
<tr>
<td>Janet Albert</td>
<td>Associate Professor of Fashion Merchandising</td>
<td>B.S., Syracuse University; M.A., New York University</td>
</tr>
<tr>
<td>*Rida Ali</td>
<td>Adjunct Assistant Professor of Nutrition</td>
<td>B.S., Cairo University; M.S., University of California, Davis; Ph.D., Rutgers, The State University, New Brunswick</td>
</tr>
<tr>
<td>*William Anderson</td>
<td>Adjunct Instructor of Music (Guitar)</td>
<td>B.F.A., S.U.N.Y. at Purchase</td>
</tr>
<tr>
<td>Christina Arbogast</td>
<td>Assistant Professor of Clinical Sciences, Naturopath</td>
<td>B.S., University of Oregon; N.D., Bastyr University</td>
</tr>
<tr>
<td>*David Aresco</td>
<td>Adjunct Lecturer of Pharmacology</td>
<td>B.S., Massachusetts College of Pharmacy</td>
</tr>
<tr>
<td>*Beth Atlas-Rubenstein</td>
<td>Adjunct Assistant Professor of Clinical Sciences</td>
<td>B.A., University of Rochester, D.C., National College of Chiropractic</td>
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<tr>
<td>Michael J. Autouri</td>
<td>Professor of Biology</td>
<td>B.S., M.S., Ph.D., St. John's University</td>
</tr>
<tr>
<td>Newsha Azizi</td>
<td>Assistant Professor of Clinical Sciences</td>
<td>B.Sc, Msc, University of Toronto, DC, Canadian Memorial Chiropractic College</td>
</tr>
<tr>
<td>Christian Bach</td>
<td>Assistant Professor of Technology Management and Biomedical Engineering</td>
<td>BBA, MBA Graduate School of Business Administration, Zurich, Switzerland; M.S., Albert-Ludwig University, Freiburg in Breisgau, Germany; MBA, Ph.D., University of Albany/SUNY</td>
</tr>
<tr>
<td>Hassan Bajwa</td>
<td>Assistant Professor of Electrical Engineering</td>
<td>B.S., Polytechnic University of New York; M.S., The City College of New York; Ph.D., The City University of New York</td>
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<tr>
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Dean
Associate Dean
Robert F. Gilmore, Ph.D.

Assistant Dean and Director of the MBA Program
Ward Thrasher, J.D.

School of Education
Dean
Allen Cook, Ed.D.

School of Engineering
Dean
Tarek M. Sobh, Ph.D., P.E.

Associate Dean
Khaled Elleithy, Ph.D.

Biomedical Engineering
Director
Prabir K. Patra, Ph.D.

Computer Engineering and Computer Science
Chairman
Stephen Grodzinsky, Ph.D.

Electrical Engineering
Chairman
Lawrence V. Hmurcik, Ph.D.

Mechanical Engineering
Chairman
Jani Macari Pullis, Ph.D.

Technology Management
Chairman
Jani Macari Pullis, Ph.D.

Director-Systems Operations
Abdelshakour Abuzneid, M.S.

DIVISION OF GRADUATE STUDIES

Vice President for Graduate Studies and Research
Tarek Sobh, Ph.D.

Associate Dean for Graduate Programs
Khaled Elleithy, Ph.D.

Associate Dean for Business Development and Outreach
Gad Selig, Ph.D.

School of Business
Dean
Associate Dean
Robert F. Gilmore, Ph.D.

Assistant Dean and Director of the MBA Program
Ward Thrasher, J.D.

School of Education
Dean
Allen Cook, Ed.D.

School of Engineering
Dean
Tarek M. Sobh, Ph.D., P.E.

Associate Dean
Khaled Elleithy, Ph.D.

Computers and Information Systems
Chairman
Stephen Grodzinsky, Ph.D.

Electrical Engineering
Chairman
Lawrence V. Hmurcik, Ph.D.

Mechanical Engineering
Chairman
Jani Macari Pullis, Ph.D.

Technology Management
Chairman
Jani Macari Pullis, Ph.D.

Director-Systems Operations
Abdelshakour Abuzneid, M.S.
Administration

School Administrative Manager
Susan J. Kristie, A.A., B.S.

Computer Lab Assistant Manager
Omar Abuzaghleh, M.S.

Lab Engineer
Jack Toporovsky, M.S.

International College
Dean
Thomas J. Ward, Ed.D.

Division of Health Sciences
Vice Provost for Health Sciences
David M. Brady, N.D., D.C., C.C.N., D.A.C.B.N.

Health Sciences coordinator
Amanda Christie, M.F.A

Acupuncture Institute
Director
Jennifer Brett, N.D., L.Ac.

Assistant Director
Charles T. Ford, L.Ac.

Clinic Director
James D. Fitzpatrick, Jr., L.Ac.

College of Chiropractic
Dean
Francis A. Zolli, D.C., Ed.D.

Associate Dean
Anthony Onorato, D.C.

College of Naturopathic Medicine
Dean
Guru Sandesh Singh Khalsa, N.D.

Associate Dean
Elizabeth Pimentel, N.D.

Fones School of Dental Hygiene
Dean
Margaret Zayan, R.D.H., M.P.H., Ed.D.

Director of Clinical Affairs
Marcia Lorentzen, R.D.H., M.S.

Human Nutrition Institute
Director
David M. Brady, N.D., D.C., C.C.N., D.A.C.B.N.

Assistant Director
Karen Siclare, M.S.

Physician Assistant Institute
Director
Daniel S. Cervonka, P.A.-C, M.P.H.

Associate Director
Martha Petersen, P.A.-C, M.P.A.S.

Medical Director
Monica Lockwook, M.D.

School of Continuing and Professional Studies
Dean
Michael J. Giampaoli, M.B.A.

Associate Dean and Director of IDEAL Academic Advising
Yvrose Romulus, B.S.

Director of Distance Education
Kris Bickell, M.S.

Associate Dean
Mary Jane Dubner, M.A.

Director of IDEAL Faculty
Rich Laria, M.B.A.

Director of Stamford Center
Maureen Maloney, M.S.

Director of Waterbury Center
Karen Ringwood, M.A.

OFFICE OF SPONSORED RESEARCH
Vice President for Graduate Studies and Research
Tarek M. Sobh, Ph.D.

Director, Office of Sponsored Research
Christine D. Hempowicz, Ed.D.

WAHLSTROM LIBRARY
Associate Vice President for Information Technology and Chief Information Officer
Diane Mirvis, M.S.L.S.

OFFICE OF THE REGISTRAR
Registrar
Christian Hansen, M.A.

Student Affairs
DIVISION OF STUDENT AFFAIRS
Dean of Students
Kenneth Holmes, M.A.

Administrative Assistant to the Dean of Students
Denise Spada

Assistant Dean of Students
Edina Oestreicher, M.S.

Director of Health Services
Melissa Lopez, R.N., B.S.N., M.P.H.

Director of Counseling Services
Joseph Tonelli

Director of Intramurals and Wheeler Recreation Center

Director of Residential Life and Judicial Affairs

Director of Career Services
Antonia Colognesi, M.S.

Director of International Student Affairs
Yumin Wang, M.B.A.

Director of Intercollegiate Athletics
Jay Moran, B.G.S.

Director of Campus Activities and Community Service
Collen Powers, M. Ed.

OFFICE OF ADMISSIONS
Dean of Admissions
Bryan J. Gross, M.Ed.

Director of Graduate Admissions
Ryan Knox, J.D.

Director of International Admissions
Steven Boyd, M.B.A.

Director of Health Sciences Admissions
Michael Grandison, B.A.

Associate Director of Systems and Operations
David Teo, B.S.
Administration

**Division of International Programs**
Vice President for International Programs
Thomas J. Ward, Ed.D.

Executive Assistant to the Dean and Vice President
Guljana Torikai

**English Language Institute**
Director
Meg Cooney, M.Ed.

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**Division of University Relations**
Executive Director of University Relations
Mary-Jane Foster, B.A.

Director of Alumni Relations
Susan Butler, B.A.

Director of Annual Giving
Megans Ellenberg, B.A.

Director of Institutional Grants
Gabrielle Jazwiecki, B.A.

Director of Special Events
Denise Pundy

Database Services/Prospect Research Administrator
Kelly Campion-Socol, M.S.

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**Division of Administration and Finance**
Vice President for Administration and Finance
Susan Williams M.B.A., C.P.A.

Administration and Finance Manager
Marlene Diaz, A.A.S.

**Finance**
Controller
Thomas DeBrizzi, Jr., B.S., C.P.A.

Director of Budget
Evelyn Wens, M.B.A.

Director of Accounts Payable/Purchasing
Jacqueline Reeves, M.B.A.

Director of Payroll
Nancy Branchesi

Student Support Services Director
Jonathan Mador, M.S.

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**Information Technology**
Associate Vice President for Information Technology and Chief Information Officer
Diane Mirvis, M.S.L.S.

Director of Information Technology
(SunGard Higher Education)
Joel Rubin, M.B.A.

**Communications and Public Affairs**
Executive Director of Communications and Public Affairs
Larry Orman, M.B.A.

Director of Public Information and Media Affairs
Leslie Geary, B.A.

Web Manager
Daniele Alves, B.A.

**Human Resources**
Director of Human Resources
Melitha Przygoda, Ed.D.

Assistant Director of Human Resources
Tracy A. Brockman-Diaz, B.A.

**Dining Services**
General Manager of Food Services
(Sodexo Food Services)
Jenn Currier

**Bookstore**
Bookstore Manager
Gary Reeves

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**Division of Facilities Management**
Vice President of Facilities
George Estrada

Assistant to the Associate Vice President for Facilities
Kathleen Marini

Executive Director of Facilities, Planning and Construction
David Cote, B.S., P.E.

Director of Special Projects
Gregory Breland, M.S.S.E.

Executive Director of Security
April Vournelis

Associate Executive Director of Security
Richard Loehn

Director of Facilities Maintenance
(Unicco)
Gary W. Hamann, A.S.M.E.
Alumni of the University of Bridgeport reside in every state of the nation and in most countries around the world. Founded in 1931 with fewer than a dozen members, the Alumni Association has grown to include more than 35,000 members.

Alumni are always encouraged to visit the campus to attend events or just to indulge in nostalgia. An active and committed volunteer Board of Directors continues to manage the Association’s affairs, with a number of activities planned each year. From athletic events to regional receptions and celebrations of alumni achievements, the calendar is always full.

A university can only measure its success through the achievements of its alumni. The University of Bridgeport boasts a plethora of prominent graduates. They serve as corporate CEO’s and university presidents, automobile designers, commissioners of education, political leaders, television stars and prominent athletes. Their accomplishments reflect well on their alma mater, which in turn extends its gratitude.

We would like to hear from you. Please email us at alumni@bridgeport.edu or call us at 203-576-4133.
The Student Right-to-Know and Campus Security Acts
And Family Educational Rights and Privacy Act (FERPA)

The Student Right-to-Know and Campus Security Acts

The University is in compliance with the Student Right-to-Know Act of 1990 and Campus Awareness and Campus Security Acts of 1990. Reports, disclosures and other data are available in the University’s Student Handbook, the Key to U.B., the Campus Public Safety Office and/or other official University publications.

The University of Bridgeport Campus Public Safety Office keeps statistics concerning the occurrence on campus of certain criminal offenses, which were reported to them or to the local police. These statistics are published and distributed annually to the entire University of Bridgeport campus community, and to other interested parties.

For further information, contact the Director of Campus Security, Dean of Students, or the University Attorney.

FERPA

The University of Bridgeport has designated the following types of information as directory information which may be disclosed without consent: Student's full name and alias, if applicable; address; University assigned email address; telephone listings; major field of study; degrees and awards received; dates of attendance; classification; participation in officially recognized sports or activities; weight and height of members of athletic teams; photographs; and enrollment status (undergraduate or graduate, full-time or part-time).

Parents or eligible students have the right to refuse to permit the University of Bridgeport to designate any or all of those types of information as directory information with respect to a particular student, thereby preventing its disclosure as directory information. Forms indicating the intent of the parents or eligible students to request information be withheld can be obtained in the Office of the Registrar, and must be submitted within the first five class days to be effective to avoid disclosure.

Notification of Rights Under FERPA

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. Among these rights are:

1. Among these rights are to inspect and review the educational records within 45 days of the day the University receives the request for access. Students should submit to the Registrar a written request that identifies the record(s) they wish to inspect. The University Registrar will make arrangements for access and notify the student of the time and place where records may be inspected. If the Registrar does not maintain the records requested the Registrar will advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of their educational record that he/she believes is in accurate or misleading. Students should ask the University to amend the record that they believe is inaccurate or misleading. They should write the Registrar, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his/her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. One exception, which permits disclosure without consent, is disclosure to school officials with legitimate educational interests. A school official is:

- A person employed by the University in an administrative, supervisory, academic or research, or support staff position, including health or medical staff.
- A person elected to the Board of Trustees.
- A person or entity employed by or under contract to the University to perform a special task, such as security, building and grounds, information technology, food service, an attorney, auditor, collection agency or other outside vendor.
- A student serving on an official committee, such as a disciplinary or grievance committee, or who is assisting another school official in performing his or her tasks.

A school official has a legitimate educational interest if the official is:

- Performing a task that is specified in his or her position description or contract agreement, or is customarily performed by such person at the university.
- Performing a task related to a student’s education.
- Performing a task related to the discipline of a student.
- Providing a service or benefit relating to the student or student’s family, such as health care, counseling, job placement or financial aid.
- Maintaining the safety and security of the campus.

Upon request, the University discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

The Dean of Students or designee has the authority to notify parents or guardians when dependent students under the age of 21 are found to be in violation of the University alcohol and/or drug policies for:

- possession of a keg or large volume, 2) dispensing alcohol to a minor, 3) possession or distribution of controlled substances, 4) under age possession or open container in a public space for a second time; or in cases where a student is subject to residence hall separation, suspension, expulsion or required emergency medical care because the student became ill from the consumption of alcohol and/or drugs. The notification is permissive and at the discretion of the university. The notification of parents
The Student Right-to-Know and Campus Security Acts And Family Educational Rights and Privacy Act (FERPA)

or guardians is indicated when: 1) the violation involved harm or threat of harm to persons or property, or 2) the violation involved an arrest in which the student was taken into custody.

Nothing in these guidelines shall prevent university officials from notifying parents or guardians of a health or safety emergency, or when a student, under the age of 21 is found to have violated university policy with respect to the use and/or consumption of alcohol or drugs. Whenever possible, students will be informed that parental notification is planned in advance of their parents receiving the notice. The notification of parents is simply an act of notice and is not subject to appeal.

The Dean of Students or designee may disclose the name and a summary of the information regarding the final outcome of a hearing if the student is found to have committed an act of violence.

Students may file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

Family Policy Compliance Office
US Department of Education
400 Maryland Avenue, S.W.
Washington, DC 20202-4605

FERPA: Notice for Directory Information

The Family Educational Rights and Privacy Act (FERPA), a Federal law, requires that the University of Bridgeport with certain exceptions, obtain your written request prior to the disclosure closure of personally identifiable information from a student’s educational records. However, the University may disclose appropriately designated “directory information” without written consent. Examples include:

- The annual yearbook;
- News releases
- Honor roll or other recognition lists;
- Graduation programs; and
- Sports activities sheets, such as weight and height of team members

Directory information which is information that is generally not considered harmful or an invasion of privacy if released, can also be disclosed to outside organizations. Outside organizations include, but are not limited to companies that manufacture class rings or publish yearbooks.

If you do not wish the University to disclose directory information without prior written consent you must notify the University by the 10th day of class in a semester. The student must contact the Registrar’s Office, located on the Garden Level of Wahlstrom Library and fill out the appropriate paperwork. If a student makes such a request, the University has the option or either (1) withholding all information of the types specified and omitting the student’s name from any published list involving such information or (2) seeking the student’s written permission to release the information.

The University of Bridgeport has designated the following information as directory information:

- Student’s name
- Address
- University electronic mail address
- Telephone listing
- Date and place of birth
- Hometown
- Citizenship
- Family relations
- Marital status
- Previous schools or training
- Academic year
- Dates of attendance and/or graduation
- Major field of study or academic specialty
- Instructors and courses
- Participation in sports and other officially recognized activities (including position, role, or function)
- Membership in officially recognized honorary, professional, academic, or social organizations
- Academic honors or achievements
- Special awards or recognitions received, scholarships, fellowships, assistantships
- Offices or honorary positions to which elected or appointed
- Eligibility for and performance records in athletics or other recognized forms of competition
- Height and weight of members of athletic teams
- Place and nature of employment
- Post-graduation plans
- Positions or achievements
- Hobbies, interests, and community activities
- Publications or papers presented
- Title of honors or graduate thesis
- For students seeking employment on job interviews, such additional information as has been furnished or cleared by the student with the understanding that it will be used in connection with applications or employment inquiries Religious affiliation, if volunteered by the students, will be revealed to the campus ministry, local churches, synagogues, and mosques.
Map to the University of Bridgeport
Directions to the University of Bridgeport

Connecticut Turnpike (I-95)
Exit 27

I-95 SOUTH (TOWARD NEW YORK)
Take Exit 27. At the bottom of the ramp, turn left onto Lafayette Street. At the first light, turn left onto South Frontage Road and bear right. At the next light, turn right (by Harbor Yard Stadium and Arena) onto Broad Street. Proceed approximately one mile south, Broad Street turns right into Waldemere Avenue. At the first stop sign, turn right onto Park Avenue (arches to Seaside Park will be on your left). Go one block and turn right on Linden Avenue. Visitor parking is on left.

I-95 NORTH (TOWARD NEW HAVEN)
Take Exit 27 and proceed straight off the exit ramp, bear right. At the fourth light, turn right (by Harbor Yard Stadium and Arena) onto Broad Street. Proceed approximately one mile south, Broad Street turns right into Waldemere Avenue. At the first stop sign, turn right onto Park Avenue (arches to Seaside Park will be on your left). Go one block and turn right on Linden Avenue. Visitor parking is on left.

Merritt Parkway
(Route 15)

SOUTH ON ROUTE 15 (TOWARD N.Y.)
Take Exit 52 (South fork) and bear left to Route 8/25 Connector to Exit 1 (Prospect Street/Myrtle Avenue). At the bottom of the ramp take a right onto Prospect Street to Park Avenue. Take a left on Park Avenue. Proceed South on Park Avenue, approximately one-half mile to the campus. Wahlstrom Library is on your left.*

NORTH ON ROUTE 15 (FROM N.Y.)
Take Exit 49S (South) to Route 25/8 Connector to Exit 1 (Prospect Street/Myrtle Avenue). At the bottom of the ramp take a right onto Prospect Street to Park Avenue. Take a left on Park Avenue. Proceed South on Park Avenue, approximately one-half mile to the campus. Wahlstrom Library is on your left.*

Directions from Campus
(Due to long-term construction I-95, the following are recommended routes back to I-95N & S and Routes 8 and 25N)

TO CONNECTICUT TURNPIKE (I-95)
From University of Bridgeport campus, travel North for one mile on Park Avenue. Take a right onto Washington Avenue. Follow signs to I-95.

TO ROUTES 8 AND 25 NORTH
From University of Bridgeport campus, travel North for one-half mile on Park Avenue. Take a right onto Prospect Street. Follow signs to Routes 8 and 25 North.

SOUTH ON ROUTES 8 AND 25
Take Exit 1 (Prospect Street/Myrtle Avenue). Continue straight off the exit ramp until the third traffic light, turn left onto South Frontage Road and bear right. At the third traffic light, turn right (by Harbor Yard Stadium and Arena) onto Broad Street. Proceed approximately one mile south, Broad Street turns right into Waldemere Avenue. At the first stop sign, turn right onto Park Avenue (arches to Seaside Park will be on your left). Go one block and turn right on Linden Avenue. Visitor parking is on left.

*Office of Admissions is on the 6th floor.
Campus Map

Building List
11 Arnold Bernhard Arts & Humanities Center
6 Bookstore
2 Carlson Building
23 Carstensen Hall
29 College of Chiropractic
19 Cortright Hall
33 Charles A. Dana Hall of Science
28 Eleanor Naylor Dana Building
30 Harvey Hubbell Gymnasium
27 Health Sciences Building
34 Knights Field
3 Mandeville Hall
7 Marina Dining Hall
31 Norseman Hall
25 North Hall
15 Wheeler Recreation Center
26 South Hall
2 John J. Cox Student Center
15 Technology Center
1 Wahlstrom Library

Dormitories
8 Barnum Hall
24 Bodine Hall
17 Chaffee Hall
16 Cooper Hall
27 Health Sciences Building
24 Schine Hall
9 Seeley Hall

Function
Academic Resource Center ........... 1
(5th floor)
Acupuncture Institute .............. 27
Admissions (6th floor) .......... 1
Alumni .................. 19
Art Gallery .................. 11
Athletic Office ................. 30
Bookstore .................. 6
Bursar (Ground floor) ........ 1
Career Services (6th floor) .... 1
Cafeteria (Basement) ............ 4
Catholic Services .............. 23
Counseling Services .......... 27
Dining .................. 7
Dental Health Clinic .......... 27
University Relations .......... 19
duPont Tower Room (9th floor) ... 11
Financial Aid (Ground floor) .... 1
Fones School of Dental Hygiene ... 28
International Student Affairs .. 1
(5th floor)
Information .................. 4
Interfaith Services ............ 23
Handicapped Services .......... 4
Health Services .............. 27
Hillel .................. 23
Library .................. 1
Minority Students Services .... 4
Nutrition Institute .......... 28
Personnel (7th floor) ........ 1
Public Relations ............. 19
Public Safety .............. 31
Recital Hall (Littlefield) ...... 11
Registrar (Ground floor) .... 1
Residence Halls Office (Back Entrance) ......... 9
Security .................. 31
Soccer Field ............. 34
Student Services & Activities .. 4
Theater (Mertens) ........ 11

University Administration
President's Office ............... 1
Academic Affairs ............. 1
Alumni/University Relations .. 1
Business & Finance (7th floor) .... 19
Student Services ........... 4

Deans and Directors
Arts and Sciences ............ 33
Acupuncture Institute ........ 28
Business ................... 3
Shintaro Akatsu School of Design .... 11
Chiropractic ................. 29
Education/Human Resources .... 2
Engineering ................ 5
Fones School of Dental Hygiene .... 28
General Studies ............. 33
Health Sciences .............. 27
Health Technology ........... 28
International College ........ 2
Naturopathic Medicine ....... 27
Nutrition Institute .......... 28
Physician Assistant Institute ... 28

Parking
Parking facilities are available at no charge to UB students and community.